



CITY OF TSHWANE METROPOLITAN MUNICIPALITY

TENDER NUMBER:

GICT 02 2022/23

TENDER DESCRIPTION:	TENDER TO PROVIDE, OPERATE AND MAINTAIN THE ICT CORPORATE NETWORK EQUIPMENT AND THE EXPANSION OF THE EXISTING CORPORATE NETWORK AS AND WHEN FOR A PERIOD OF THREE (3) YEARS
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NAME OF BIDDER:

CSD NUMBER:

VENDOR NUMBER (WHERE APPLICABLE)

Prepared by:
City of Tshwane Metropolitan Municipality
Tshwane House
320 Madiba Street
Pretoria CBD
0002

Tel: 012 358 9999

BID CLOSING DATE	13 JULY 2022
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Only bidders registered on the central supplier database (CSD) and with a CSD number will be considered for this tender, as this is a requirement from the National Treasury.



CITY OF TSHWANE METROPOLITAN MUNICIPALITY

DEPARTMENT: INFORMATION AND COMMUNICATION TECHNOLOGY

Bids are hereby invited from suppliers for the following bid:

Bid number	Description	Department	Contact person	Compulsory briefing session	Closing date
GICT 02 2022/23	TENDER TO PROVIDE, OPERATE AND MAINTAIN THE ICT CORPORATE NETWORK EQUIPMENT AND THE EXPANSION OF THE EXISTING CORPORATE NETWORK AS AND WHEN FOR A PERIOD OF THREE (3) YEARS	GROUP SHARED SERVICES INFORMATION AND COMMUNICATION TECHNOLOGY	Technical enquiries: LeRoy Olivier (012) 358 4994 leroyo@tshwane.gov.za	N/A	13 July 2022 at 10:00

THE DOCUMENT IS DOWNLOADABLE ON THE E-TENDER PORTAL.

Each quotation shall be enclosed in a sealed envelope that bears the correct identification details and shall be placed in the tender box located at:

City of Tshwane Metropolitan Municipality
Tshwane House
320 Madiba Street
Pretoria CBD
0002

Documents must be deposited in the bid box not later than **10:00 on 13 July 2022** when bids will be opened in public.

Bidders must contact the following officials for any enquiries:

- Technical enquiries: LeRoy Olivier (012) 358 4994 leroyo@tshwane.gov.za
- Supply chain enquiries: Relebogile Malatswane (012) 358 2735 or RelebogileM@tshwane.gov.za

Bids will remain valid for a period of 90 days after the closing date.

Bids received after the closing date and time will not be considered. The City of Tshwane does not bind itself to accept the lowest or any other bid in whole or in part.

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VERY IMPORTANT NOTICE ON DISQUALIFICATIONS

A bid that does not comply with the peremptory requirements stated hereunder will be regarded as not being an “acceptable bid”, and such a bid will be rejected. An “acceptable bid” means any bid which, in all respects, complies with the conditions of the bid and the specifications as set out in the bid documents, including the conditions as specified in the Preferential Procurement Policy Framework Act, 2000 (Act 5 of 2000) and related legislation as published in *Government Gazette 22549*, dated 10 August 2001, in terms of which provision is made for this policy.

1. If any pages have been removed from the bid document and have therefore not been submitted or if a copy of the original bid document has been submitted.
2. If the bid document is completed using a pencil. Only black ink must be used to complete the bid document.
3. The bidder attempts to influence or has in fact influenced the evaluation and/or awarding of the contract.
4. The bid has been submitted after the relevant closing date and time.
5. If any bidder who, during the last five years, has failed to perform satisfactorily on a previous contract with the municipality, municipal entity or any other organ of state after written notice was given to that bidder that performance was unsatisfactory.
6. The accounting officer must ensure that, irrespective of the procurement process followed, no award may be given to a person –
 - (a) who is in the service of the state;
 - (b) if that person is not a natural person, of which any director, manager, principal shareholder or stakeholder is a person in the service of the state; or
 - (c) who is an advisor or consultant contracted to the municipality in respect of a contract that would cause a conflict of interest.
7. Bid offers will be rejected if the bidder or any of his/her directors are listed on the Register of Bid Defaulters in terms of the Prevention and Combating of Corrupt Activities Act, 2004 (Act 12 of 2004) as a person prohibited from doing business with the public sector.
8. Bid offers will be rejected if the bidder has abused the City of Tshwane supply chain management system.
9. Failure to complete and sign the certificate of independent determination or disclosure of wrong information.

Failure to comply with the above will lead to immediate disqualification.

Bidder

CERTIFICATE OF AUTHORITY FOR SIGNATORY

Status of concern submitting tender (delete whichever is not applicable):

COMPANY/PARTNERSHIP/ONE-PERSON BUSINESS/CLOSE CORPORATION/JOINT VENTURE

A. COMPANY

If the bidder is a company, a certified copy of the resolution of the board of directors that is personally signed by the chairperson of the board, authorising the person who signs this bid to do so and to sign any contract resulting from this bid, and any other documents and correspondence in connection with this bid or contract on behalf of the company, must be submitted with this bid.

An example is shown below:

By resolution of the board of directors on 20.....,
Mr/Ms has been duly
authorised to sign all documents in connection with
Bid Number

SIGNED ON BEHALF OF THE COMPANY:

IN HIS/HER CAPACITY AS

DATE:

SIGNATURE OF SIGNATORY:

WITNESSES: 1.

2.

B. PARTNERSHIP

The following particulars in respect of every partner must be furnished and signed by every partner:

Full name of partner	Residential address	Signature
.....
.....
.....

We, the undersigned partners in the business trading as, hereby authorise to sign this bid as well as any contract resulting from the bid and any other documents and correspondence in connection with this bid or contract on our behalf.

..... Signature Signature Signature
---------------------------	---------------------------	---------------------------

..... Date Date Date
----------------------	----------------------	----------------------

C. ONE-PERSON BUSINESS

I, the undersigned,, hereby confirm that I am the sole owner of the business trading as

..... Signature Date
---------------------------	----------------------

D. CLOSE CORPORATION

In the case of a close corporation submitting a bid, a certified copy of the founding statement of such corporation shall be included with the bid with a resolution by its members, authorising a member or other official of the corporation to sign the documents and correspondence in connection with this bid or contract on behalf of the company.

An example is shown below:

By resolution of the members at the meeting on 20..... at
....., Mr/Ms, whose signature appears below, has been duly authorised to sign all documents in connection with Bid Number

SIGNED ON BEHALF OF THE CLOSE CORPORATION:

IN HIS/HER CAPACITY AS:

DATE:

SIGNATURE OF SIGNATORY:

WITNESSES: 1.

 2.

E. CERTIFICATE OF AUTHORITY FOR JOINT VENTURES

This returnable schedule is to be completed by joint ventures.

We, the undersigned, are submitting this bid offer in joint venture and hereby authorise Mr/Ms , authorised signatory of the company..... , acting in the capacity of the lead partner, to sign all documents in connection with the bid offer and any contract resulting from it on our behalf.

NAME OF FIRM	ADDRESS	DULY AUTHORISED SIGNATORY
Lead partner		Signature: Name: Designation:
		Signature: Name: Designation:
		Signature: Name: Designation:
		Signature: Name: Designation:

SHARED SERVICES: ICT DIVISION

TENDER TO PROVIDE, OPERATE AND MAINTAIN THE ICT CORPORATE NETWORK EQUIPMENT AND THE EXPANSION OF THE EXISTING CORPORATE NETWORK AS AND WHEN FOR A PERIOD OF THREE (3) YEARS

BID NUMBER

GICT 02 2022/23

1. INTRODUCTION AND PURPOSE

The tender goes towards proving Council with a necessary network and telecoms equipment needed to extend the current network, to maintain and improve the current network, to monitor, protect and secure the network

2. BACKGROUND

Provide the background detail of the bid, i.e.:

- **How was this bid/project identified?**
The services requested in this tender is currently being provided on a tender that was awarded in March 2019 and lapses on 31 March 2022. Given the SC processes that normally needs to run its course and that the tender lapses in March 2022, 3 months after the end of year recess, the department want to have the tender processed and approved before the time that no service lapse occurs here.
- **The aim and objectives of the project:**
Is to continue to provide in all Voice and Data services and related switching equipment needs to Council, as is presently being done on a the abovementioned tender. This will ensure that market related, state of the art, now relevant Voice and Data Networking solutions and equipment be provided to Council.
- **The leading department must indicate the location of the project:**
This project will be driven by Shared Services: ICT Division, and the applications and solutions thus obtained will be used council wide by all other departments in council and related stake holders.
- **List all the stakeholders involved:**
The Executive Mayor, Office of the Speaker, Office of the City Manager, All Political Office Bearers, Chief Operating Officer, Chief Financial Officer, Group Head, Divisional Heads, Directors, Deputy Directors and all personnel below the level of DD.
- **Are there any permissions/approvals required? If so, by whom, including land owners:**
None – expect for the approval of the different SCM committees with the eventual approval to be granted by Council/Mayco
- **Who will benefit directly and indirectly from this bid/project and how?**
All officials and Political Office Bearers in Council contacting Council in any way during the carrying out of their responsibilities and doing business for and with Council
- **What control and monitoring measures are envisaged?**
 - The standard SCM and financial management measures as will apply to all tenders and services provided to Council will be applicable here.
- **Tender Sections:**

- The tender consists of 8 interrelated parts that together will provide a full Voice and Data Networking solutions and related hardware, software to thus be deployed. These sections are:
 - Part 1: Introduction and General Background information
 - Part 2: General Specifications applicable to all parts of the tender
 - Part 3: Expansion of the current network: Supply, Delivery, Deployment, Configuration and Maintenance of New Equipment in the Network as and when required
 - Part 4: Operate and Maintain the existing Alcatel/Huawei network.
 - Part 5: Compliancy of any new Equipment & Solutions with regards the current deployed Network Solutions
 - Part 6: Health and Safety Considerations
 - Part 7: References to the Scope of Work ito Occupational Health and Safety Act and regulations: Health and Safety.
 - Part 8: Health and Safety Plan
 - Part 9: Service Level Agreement (SLA) applicable to Part 3 and 4 of this tender submission
 - Part 10: Price Schedules
- **Duration of the contract**

The successful bidders will be appointed for a period of 3 years (36 months). The duration includes the Training of technical users, maintenance and support, software and hardware.

The successful Bidder should note that the migration and implementation of the service must be completed and operational within a maximum of 3 (three) months from the award date which forms part of the 3 Years (36 Month) agreement.

Successful bidders shall be subjected to SCM annual review to ensure that the tendered prices are still in line with the market related prices and all savings generated by unit price decreases be passed along to Council.

3. PROJECT PURPOSE AND SCOPE

Purpose

The City of Tshwane (CoT) is dependent on Information and Communication Technology (ICT) in almost every segment of its operations.

Bidders are invited to submit a proposal to the City of Tshwane (CoT) to provide such hardware and support services to ensure reliable functioning and sufficient capacity exist for all the CoT communication infrastructure and related services. The services entail the supply and maintenance of the ICT Corporate Alcatel network equipment(that is open standards compliance) as well as the expansion of the existing network. The purpose of this document is to:

- Provide the prospective Vendor/s with sufficient information to understand and respond to the requirements.
- Ensure that comparable information is obtained from Vendors.
- Provide a structured framework for the subsequent quantitative and qualitative evaluation of proposed solutions.

Scope

To provide and maintain the CoT with the necessary network and telecoms equipment needed to extend the current network, to maintain and improve the current network, to monitor, protect and secure the network. The document will have the following parts :

- Part 1: Introduction and General Background information
- Part 2: General Specifications applicable to all parts of the tender
- Part 3: Expansion of the current network: Supply, Delivery, Deployment, Configuration and Maintenance of New Equipment in the Network as and when required
- Part 4: Operate and Maintain the existing Alcatel/Huawei network.
- Part 5: Compliancy of any new Equipment & Solutions with regards the current deployed Network Solutions
- Part 6: Health and Safety Considerations
- Part 7: References to the Scope of Work into Occupational Health and Safety Act and regulations: Health and Safety.
- Part 8: Health and Safety Plan
- Part 9: Service Level Agreement (SLA) applicable to Part 3 and 4 of this tender submission
- Part 10: Price Schedules

The tenderers must include CVs of certified personnel to deploy new equipment and maintain the current network equipment for the duration of the contract. The pricing schedule is mostly based on the existing Alcatel/Lucint and Huawei Product range deployed and used within the City.

ACRONYMS LIST

Acronym	Meaning
AAA	Authentication, Authorization And Accounting
AC	Alternating Current
ACL	Access Control List
ACLMAN	Access Control List Manager
ADSL	Asymmetric Digital Subscriber Line
AES	Advanced Encryption Standard
AP	Access Point
ARP	Address Resolution Protocol
ASA	Authenticated Switch Access
ASCII	American Standard Code for Information Interchange
ASIC	Application-Specific Integrated Circuit
BC	Business Case
BGP	Border Gateway Protocol
BPDU	Bridge Protocol Data Unit
CAC	Call Admission Control
CAT5e	Category 5 Cable
CAT6	Category 6 Cable
CBC	Cipher Block Chaining

CBD	Central Business District
CCMP	Counter Mode Cipher Block Chaining Message Authentication Code Protocol
CE	Customer Edge
CLI	Command Line Interface
CPIX	Consumer Price Index
CPU	Central Processing Unit
CV	Curriculum Vitae
DC	Direct Current
DCBX	Data Center Bridging Capabilities Exchange Protocol
DES	Data Encryption Standard
DHCP	Dynamic Host Configuration Protocol
DMZ	De-Militarized Zones
DNS	Domain Name System
DoS	Denial Of Service
DPNSS	Digital Private Network Signaling System
DSS1	Digital Subscriber Signalling System No 1
DTE/DCE	Data Terminal Equipment/Data Circuit-Terminating Equipment
DWDM	Dense Wavelength Division Multiplexing
ECMP	Equal Cost Multipath Protocol
ERP	Ethernet Ring Protection
ETS	Enhanced Transmission Selection
FCAPS	Fault, Configuration, Administration, Performance and Security
FCC	Federal Communications Commission
FCoE	Fibre Channel over Ethernet
FIP	Fibre Channel over Ethernet Initialization Protocol
FTP	File Transfer Protocol
Gig	Gigabit
GM	Group Mobility
GRE	Generic Routing Encapsulation
HIC	Host Integrity Check

HOL	Head Of Line
HTTP	Hypertext Transfer Protocol
HTTPS	Hypertext Transfer Protocol Secure
ICMP	Internet Control Message Protocol
IDS	Intrusion Detection Systems
IEEE	Institute of Electrical and Electronics Engineers
IGMP	Internet Group Management Protocol
IKE	Internet Key Exchange
IP	Internet Protocol
IP PBX	Internet Protocol Private Branch Exchange
IPSEC	Internet Protocol Security
ISDN	Integrated Services Digital Network
ISO	International Organization for Standardization
ITIL	Information Technology Infrastructure Library
kbps	kilo bits per second
L2	Layer 2
L2TP	Layer 2 Tunneling Protocol
L3	Layer 3
L4	Layer 4
LACP	Link Aggregation Control Protocol
LAN	Local Area Networks
LDAP	Lightweight Directory Access Protocol
LLDP	Link Layer Discovery Protocol
LPS	Learned Port Security
MAC	Media Access Control
Mb	Mega Bits
Mbps	Mega Bits Per Second
MC-LAG	Multi-Chassis Link Aggregation Group
MD5	Message Digest 5
MDI/MDIX	Medium Dependent Interface/MDI Crossover

MFMA	Municipal Finance Management Act
MFR	Multilink frame relay
MIB	Management Information Base
MISTP	Multiple Instance Spanning Tree Protocol
MLPPP	Multilink PPP
MPLS	Multiprotocol Label Switching
MPPE	Microsoft Point-to-Point Encryption
MTU	Maximum Transmission Unit
NAC	Network Access Control
NAP	Network Access Policy
NAT	Network Address Translation
NETBEUI	NETBIOS Extended User Interface
NIC	Network Interface Card
NMS	Network Management System
NOC	Network Operations Center
NTP	Network Time Protocol
OEM	Original Equipment Manufacturer
OHSA	Occupational Health And Safety Act
OS	Operating System
OSPF	Open Shortest Path First
OTDR	Optical Time Domain Reflectometer
P/S	Power Supply
PBX	Private Branch Exchange
PC	Personal Computer
PFC	Priority-based Flow Control
PKI	Public Key Infrastructure
PoE	Power Over Ethernet
PSU	Power Suply Unit
QoS	Quality of Service
Qsig BC	ISDN Based Signalling Protocol Basic Calling

Qsig GF	ISDN Based Signalling Protocol Generic Function
RADIUS	Remote Authentication Dial-In User Service/Server
RFP	Request For Proposal
RIP	Routing Information Protocol
RMON	Remote Monitoring
RoHS	Restriction on Hazardous Substances
RTSP	Real Time Streaming Protocol
RU	Rack Units
SCM	Supply Chain Management
SFN	Software Defined Networking
SFTP	Secured File Transfer Protocol
SHA	Secure Hash Algorithm
SIP	Session Initiation Protocol
SLA	Service Level Agreement
SLB	Server Load Balancing
SNMP	Simple Network Management Protocol
SNTP	Simple Network Time Protocol
SOAP	Simple Object Access Protocol
SP	Service Provider
SPI	Smart Plug In
SSH	Secure Shell
SSID	Service Set Identifier
SSL	Secure Sockets Layer
STP	Spanning Tree Protocol
TACACS	Terminal Access Controller Access-Control System
TAPI	Telephony Application Program Interface
TCO	Total Cost Of Ownership
TCP	Transmission Control Protocol
TFTP	Trivial File Transfer Protocol
TKIP	Temporal Key Integrity Protocol

UDP	User Datagram Protocol
USB	Universal Serial Bus
UTM	Unified Threat Management
UTP	Unshielded Twisted Pair
VLAN	Virtual Local Area Networks
VoIP	Voice over Internet Protocol
VPN	Virtual Private Network
VRF	Virtual Routing And Forwarding
VRPP	Virtual Router Redundancy Protocol
WAN	Wide Area Network
WEP	Wired Equivalent Privacy
Wi-Fi	Wireless Fidelity
WLAN	Wireless LAN
WMM	Wi-Fi Multimedia
WPA	Wi-Fi Protected Access
WRR	Weighted Round Robin
WSDL	Web Service Description Language

4. DELIVERABLES

To provide and maintain the CoT with the necessary network and telecoms equipment needed to extend the current network, to maintain and improve the current network, to monitor, protect and secure the network. The document will have 8 parts:

- **Part 1: Introduction and General Background Information**
- **Part 2: General Specifications applicable to all parts of the tender:** Provides for general service-related specs that applies to all aspects of this tender.
- **Part 3: Expansion of the current network and services provided in lieu of the V & D network deployed:** This includes the Supply, Delivery, Deployment, Configuration and Maintenance of New Equipment and Services in the Network as and when required. All equipment offered must comply with the technical specifications as provided for in this document. Vendors can submit equivalent and or similar products as long as it is 100% conforming to the technical specification of that particular item and 100% compatible with existing equipment that is open standards. Model numbers and technical pamphlets to be supplied. Any vendor submitting a bid, must have the highest possible partnership with the OEM of the proposed equipment.
- **Part 4: Operate and Maintain the Current Voice and Data Network:** In the main, the tender is about support and maintenance of the existing data and voice network and peripheral, and other related services thus to be provided. The City has invested heavily in the Alcatel range of products and to protect this investment, the successful bidder must be able to maintain

the current Alcatel products on the corporate network. This will also include the Voice (Fixed Line & Cellular Services) and Data Communications Audit service.

- **Part 5: Compliancy of any new Equipment & Solutions with regards the current deployed Network Solutions**
- **Part 6: Health and Safety Considerations**
- **Part 7: Reference to the Scope of Work into OHS**
- **Part 8: Health and Safety Plan**
- **Part 9: Service Level Agreement (SLA) applicable to Part 3 and 4 of this tender submission**
- **Part 10: Price List for all equipment and services requested**

5. STAGES OF EVALUATION

The following tender will be evaluated according to the following stages:

Stage 1: Administrative Compliance

Stage 2: Pre-Qualification

Stage 3: Mandatory Compliance

Stage 4: Functionality Criteria

Stage 5: Preference Point System

STAGE 1: ADMINISTRATIVE COMPLIANCE

All the bids will be evaluated against the administrative responsiveness requirements as set out in the list of returnable documents.

STAGE 2: PRE-QUALIFICATION APPLICABLE TO THE BID

The following pre-qualification will apply to the following bid:

in terms of Regulation 4 (c) of the PPPFA regulation of 2017 that only the following may respond

Bidders that do not meet subcontracting requirements are considered as being not acceptable tenders and must be disqualified and may not be considered for further evaluation or award.

(C) a tenderer subcontracting a minimum of 30% to-
EME or QSE which is at least 51% owned by black people

- Bidders must submit the subcontractor's CSD report.
- Bidders must submit proof of subcontracting agreement, between the main tenderer and the subcontractor. Proof of subcontracting arrangement may include a subcontracting agreement between main bidders and the subcontractor.
- Bidders must submit proof of subcontracting agreement, between the main tenderer and the subcontractor. Proof of subcontracting arrangement must include a subcontracting agreement between main bidders and the subcontractor.

STAGE 3: MANDATORY REQUIREMENTS

- Provide a valid, ICASA License in terms of the service to be provided to Council. Copy of the license must be attached to the submission. (*Individual Electronic Communications Service Licence (IECS) and Individual Electronic Communications Network Service Licence (IECNS), issued by the Independent Communications Authority of South Africa (ICASA),*
- Supply a letter of accreditation by original equipment manufacturer (OEM).
- Proof of Professional Liability and Public Indemnity Insurance to the value of R5m
- The minimum skills/qualification level expected (proof to be submitted as part of this tender submission) of the project manager is: Certificate in Project Management, ITIL Foundation, Intermediate Excell Skills, Excellent understanding of ICT networking principles, ie, Data & Voice and WiFi networking.

STAGE 4: FUNCTIONALITY CRITERIA

Bidders complying with ALL the requirements on the 1st stages will be evaluated against the Functional Evaluation Criteria as set below. Bidders must score 70 points or more out of a total 100 points allocated for Functional Criteria. Bidders that score less than 70 points will be disqualified and will not be evaluated further.

CRITERIA	SUB-CRITERIA	SCALE	WEIGHT	HIGHEST POSSIBLE SCORE
Bidder's previous performance and experience in similar sized networks. <i>Bidders to provide references on work successfully completed. These references must specifically state the periods of experience and whether the person supplying the reference were satisfied with the work completed.</i> <i>All references must be on the letterhead of the company supplying the reference</i>	Services of similar projects (at least 2000 users and more, fully networked work premises/offices of at least 100 satellite offices or more) for a period of 5 years or more 2000 to 5000 5001 to 7500 7501 to 10 000	1 2 3	10	30
	References letters for of similar projects 2 reference letters 3 reference letters 4 or more reference letters	2 3 4	5	20
Local Economic participation (The bidders must have an office within the boundaries of the CoT) <i>Bidders shall submit their rates and taxes as proof. The rates and taxes submitted by bidders should be in the name of the company or the</i>	In Tshwane In Gauteng Outside Gauteng	3 2 1	5	15 18

<i>name of the director(s). Lease agreement can also be attached if there are no rates and taxes.</i>				
<p>Company key personnel experience. The Service Provider must provide proof of its personnel's experience level on similar size networks as Council has deployed. Personnel certification for proposed OEM support. This will apply to the existing equipment base deployed as well as all new equipment thus deployed.</p> <p><i>Attach curricula vitae of professional team members.</i></p>	Project Manager or coordinator: 5 years' or more experience			
	1 to 2 years	1	3.75	15
	3 to 4 years	2		
	4 to 5 years	3		
	6 and above	4		
	Admin Support Officer: 5 Years' or more experience			
	1 to 2 years	1	2.5	10
	3 to 4 years	2		
	4 to 5 years	3		
	5 and above	4		
	Service-Related Technicians: 2 per tender/service section: 5 years' or more experience			
	1 to 2 years	1	2.5	10
3 to 4 years	2			
4 to 5 years	3			
5 and above	4			
HIGHEST POSSIBLE SCORE				100

STAGE 5: PREFERENCE POINT SYSTEM

Indicate whether the preferential points to be used will be the 80/20 or 90/10 points system in terms of the Preferential Procurement Policy Framework Act, 2000 (Act 5 of 2000) Regulations 2017.

90 points for price

10 points for B-BBEE status (service provider to submit the certified copy of the B-BBEE level rating certificate).

6. SUBCONTRACTING/ALLOCATION SPLITTING OF DIFFERENT PARTS OF THE TENDER

6.1 Subcontracting

- Bidders must submit proof of subcontracting agreement, between the main tenderer and the subcontractor. Proof of subcontracting arrangement may include a subcontracting agreement between main bidders and the subcontractor.
- Main contractors/ suppliers are discouraged from subcontracting with their subsidiary companies as this may be interpreted as subcontracting with themselves and / or using their subsidiaries for fronting. Where primary contractor subcontracts with a subsidiary this must be declared in tender documents.
- The main contractor is also responsible therefore that the proposed subcontractor is fully able to do the work said subcontractor is appointed for.
- Tenders that do not meet subcontracting requirements are considered as being not acceptable tenders and must be disqualified and may not be considered for further evaluation or award.

6.2 Splitting the tender into various part to award to different service providers/vendors

- This tender has been expanded lto the different services and systems to be requested for as part of this Voice and Data networks tender, as the previous tender did not provide in detail for a large number of services/systems for which a need has been identified over the last 3 years, being the running time of this current tender.
- Thus a number of related services such as the Call Cabinet, Cloud Hosting, CRM, Call Dispatching (TMPD & EM), etc, has been added to the list of services requested under this tender. Council reserves the right here to allocate any part of the tender to any service provider, and it must not be expected that the tender as a whole will be awarded to one service provider alone.

7. TYPE OF AGREEMENT REQUIRED

Council has the mandate to award here as it deems fit based on the SCM evaluation process that will be carried out here. The decision to split the tender up and award it in this way will be at Council's discretion and will be final.

ICT tenders, as with this tender has a SLA provided for in the tender. This is provided for in Part E of the tender wherein a service relevant SLA per section of the tender is required. As this tender consists of 3 different aspects of cellular services to be provided to Council, each section (Service) has its own unique relevant SLA applicable to it provided for in the detailed Bid Specifications.

8. VALIDITY PERIOD

The validity period for the tender after closure is 90 days.

9. MATERIAL NUMBER

The material and equipment to be acquired on this tender will be as per the attached pricing schedules Part 2 to 2.8 of **the attached tender Price List (Part 10)**

10. PRICING SCHEDULE

The material and equipment to be acquired on this tender will be as per the attached pricing schedules Part 2 to **2.8 of the attached Tender Price List (Part 10)**

PRICING DATA

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1 PRICING INSTRUCTIONS

1.1 General

1.1.1 This section provides the tenderer with guidelines and requirements with regard to the completion of the Price Schedule. The Schedule has to be completed in black ink and the tenderer is referred to the Tender Specifications in regard to the correction of errors.

1.1.2 The Price Schedule shall be read with all the documents which form part of this Contract.

1.1.3 The following words shall have the meanings hereby assigned to them:

Unit: The unit of measurement for each item of work in terms of the Specifications and the Project Specifications.

Quantity: The number of units of work for each item.

Rate: The payment per unit of work at which the tenderer tenders to do the work.

Price: The product of the quantity and the rate tendered for an item.

Lump sum: An amount tendered for an item, the extent of which is described in the Price Schedule, the Specification and the Scope of Work, but the quantity of work of which is not measured in any units.

1.2 Units of Measurements

The units of measurement described in the Price Schedule are metric units. Abbreviations used in the Bill of Quantities are as follows:

mm	=	millimetre	h	=	hour
m	=	metre	kg	=	kilogram
km	=	kilometre	t	=	ton (1000kg)
m ²	=	square metre	no.	=	number
m ² .pass	=	square metre pass	sum	=	lump sum
ha	=	hectare	MN	=	meganewton
m ³	=	cubic metre	MN.m	=	meganewton-metre
m ³ .km	=	cubic metre-kilometre	PC sum	=	Prime Cost sum
l	=	litre	Prov sum	=	Provisional sum
kl	=	kilolitre	%	=	Per cent
MPa	=	megaspascal	kW	=	kilowatt

1.3 Rates

This price list has columns for quantity, rate and price for the goods. Entries in these columns are made as follows:

- 1.3.1 If the Supplier is to be paid an amount for the goods which is a fixed price for an item or a fixed price for each of a series of items, the tendering supplier enters the amount in the price column only, the other two columns being left blank.
- 1.3.2 If the Supplier is to be paid an amount for the goods which is the unit rate for each item multiplied by the quantity of the item supplied, (i.e. a 'Price Schedule' arrangement) - the tendering supplier enters the rate which is then multiplied by the quantity (which has been entered either by him or by the Purchaser) to produce the price which is also entered.
- 1.3.3 If the Supplier is to be paid an amount for an item of the goods which is the rate multiplied by the quantity supplied -whatever that quantity turns out to be (i.e. a 'schedule of rates' arrangement) - the tendering supplier enters the rate only, the other two columns being left blank. The tendering supplier's offer cannot include a total of the prices which covers all the items which the Supplier has to supply if any of the supply is dealt with using items with a rate only.
- 1.3.4 Rate only entries must not be made for work covered by other items.

CORRECTION OF ENTRIES MADE BY TENDERER

Any entry made by the Tenderer in the Price Schedule, forms, etc, which the tenderer desires to change, shall not be erased or painted out. A line shall be drawn through the incorrect entry and the correct entry shall be written above in black ink and the full signature of the Tenderer shall be placed next to the correction.

2 PRICING SCHEDULES

2.1 ITEMIZED BILL OF QUANTITIES: DATA EQUIPMENT

<u>Item Nr</u>	<u>Item Code</u>	<u>Item Description</u>	<u>Unit Price (excl vat)</u>
OmniSwitch 6360 Series (Standard Access Switch)			
1.1.001	OS6360-P10	OS6360-P10 GigE fixed chassis 8 RJ-45 PoE 10/100/1G BaseT, 2 10/100/1G BaseT, 2 fixed SFP (1G) uplink ports. 1RU size, internal AC power supply (120W PoE budget) Includes US power cord, guides. Order 19" rack mount kit separately.	
1.1.002	OS6360-P24	OS6360-P24 GigE fixed chassis 24 RJ-45 PoE 10/100/1G BaseT, 2 fixed RJ45/SFP combo (1G), 2 fixed SFP+ (1G/10G) uplink/stacking ports. 1RU size, internal AC PSU (180W budget). Includes US power cord, guides, and 19" rack mount hardware.	
1.1.003	OS6360-P24X	OS6360-P24X GigE fixed chassis 24 RJ-45 PoE 10/100/1G BaseT, 2 fixed RJ45/SFP combo (1G/10G), 2 fixed SFP+ (1G) uplink or 10G stacking ports. 1RU size, internal AC PSU (380 budget). Includes US power cord, guides, and 19" rack mount hardware.	
1.1.004	OS6360-P48	OS6360-P48 GigE fixed chassis 48 RJ-45 PoE 10/100/1G BaseT, 2 fixed RJ45/SFP combo (1G), 2 fixed SFP+ (1G/10G) uplink/stacking ports. 1RU size, internal AC PSU (350W budget). Includes US power cord, guides, and 19" rack mount hardware.	
1.1.005	OS6360-P48X	OS6360-P48X GigE fixed chassis 48 RJ-45 PoE 10/100/1G BaseT, 2 fixed RJ45/SFP combo (1G/10G), 2 fixed SFP+ (1G) uplink or 10G stacking ports. 1RU size, internal AC PSU (760W budget). Includes US power cord, guides, and 19" rack mount hardware.	
1.1.006	OS6360-PH24	OS6360-PH24 GigE fixed chassis 24 RJ-45 PoE 10/100/1G BaseT, 2 fixed RJ45/SFP combo (1G), 2 fixed SFP+ (1G) uplink or 10G stacking ports. 1RU size, internal AC PSU (380W budget). Includes US power cord, guides, and 19" rack mount hardware.	
1.1.007	OS6360-CBL-1M	1 meter long 10Gbs SFP+ direct stacking cable for OS6360 24 and 48 port models	
1.1.008	OS6360-CBL-3M	3 meter long 10Gbs SFP+ direct stacking cable for OS6360 24 and 48 port models	
1.1.009	OS6360-RM-19-L	Simple L-bracket for mounting a single OS6360-10/-P10 switch in a 19 rack	
1.1.010	OS6360-SW-PERF	Performance software license allowing the 2 RJ45/SFP+ combo ports of the OS6360-PH24 model to operate at 10G speed	
1.1.011	OS6360-WALL-MNT	Wall mounting kit for OS6360-10 products. Contains universal mounting brackets and screws for wall mounting an OS6360-10/P10 switch	
1.1.012	PP3N-OS6360	3 Yr Partner Support Plus for OS. Includes 24x7 phone support, problem diagnosis, access to support portal, software updates and upgrades. Next business day AVR, please check availability per country.	

1.1.013	PP3N-OS6360-10	3 Yr Partner Support Plus for OS. Includes 24x7 phone support, problem diagnosis, access to support portal, software updates and upgrades. Next business day AVR, please check availability per country.	
Subtotal Ex Vat			
OmniSwitch 6465 Series (Industrial Basic Switches)			
1.1.014	OS6465-P6	Hardened GigE fan-less switch. 4x10/100/1000 RJ-45 PoE+ (2x60W PoE), 2x100/1000 Base-X SFP,RS-232 Console, Alarm relay: 1 In 1 out & USB port. Includes user manual, access card & TS-35/7.5 /15 DIN rail mounting hardware. Order Power Supply separately.	
1.1.015	OS6465-P12	Hardened GigE fan-less switch. 4x10/100/1000 RJ-45 PoE+ (2x60W PoE), 2x100/1000 Base-X SFP,RS-232 Console, Alarm relay: 1 In 1 out & USB port. Includes user manual, access card & TS-35/7.5 /15 DIN rail mounting hardware. Order Power Supply separately.	
1.1.016	OS6465-BPN	OS6465 modular DIN Rail 75W AC power supply. Provides system & PoE power to one OS6465-P6 or OS6465-P12 switch. Ships with country specific power cord & TS-35/7.5 or 15 DIN rail mounting hardware	
1.1.017	PP3N-OS6465	3YR Partner SUPPORT Plus for all OS6465 models. Includes 24x7 Remote Tel Support, Diagnosis, SW Upgrades, Access to support portal, and next day AVR. OmniSwitch 6465 Power Supplies are included in advance hardware replacement.	
Subtotal Ex Vat			
OmniSwitch 6560 Series (MultiGig Switches)			
1.1.018	OS6560-P24X4	OS6560-P24X4 GigE fixed chassis 24 RJ-45 PoE 10/100/1G BaseT, 2 fixed SFP (1G), 4 fixed SFP+ (1G/10G) uplink/stacking ports. 1RU size, 600W AC power supply. Includes United States power cord, guides, and 19" rack mount hardware.	
1.1.019	OS6560-P24Z8	OS6560-P24Z8 Multi-GigE fixed chassis in 1RU size. Includes 8 RJ-45 100/1G/2.5G BaseT HPoE, 16 RJ-45 10/100/1G BaseT PoE and 2xSFP+ 1G/10G) ports, 300W AC supply, country specific power cord, user guides, and 19 rack mount hardware.	
1.1.020	OS6560-P48X4	OS6560-P48X4 GigE fixed chassis 48 RJ-45 PoE 10/100/1G BaseT, 2 fixed SFP (1G), 4 fixed SFP+ (1G/10G) uplink/stacking ports. 1RU size, 920W AC power supply. Includes country specific power cord, guides, and 19" rack mount hardware.	
1.1.021	OS6560-PXZ24	OS6560-P24Z24 bundle with 920W supply: Multi-GigE fixed chassis in 1RU size. Includes 24 RJ-45 100/1G/2.5G BaseT HPoE, 4xSFP+ (1G/10G) and 2x20G stacking ports, 920W AC supply, country specific power cord, user guides, and 19" rack mount hardware.	
1.1.022	OS6560-X10	OS6560-X10 10GigE fixed chassis 8 SFP+ 10GigE, 2 QSFP+ (20G) stacking ports. 1RU size, internal AC power supply. Includes a country specific power cord, guides, and 19" rack mount hardware.	
1.1.023	OS6560-BP-PX	OS6560-BP-PX modular 920W AC PoE backup power supply. Provides system and PoE backup power to one OS6560 PoE switch. Ships with country specific power cord.	
1.1.024	PP3N-OS6560	3YR Partner SUPPORT Plus for all OS6560 models. Includes 24x7 Remote Tel Support, Diagnosis, SW Upgrades, Access to support portal, and next day AVR. OmniSwitch 6560 Power Supplies are included in advance hardware replacement.	
Subtotal Ex Vat			

OmniSwitch 6860 Series (Advanced Switches)		
1.1.025	OS6860N-P48M	Multi-GigE L3 1RU chassis with 36 100/1G/2.5G BaseT 95W bt PoE, 12 100/1G/2.5G/5G/10G BaseT 95W bt PoE and 2 QSFP28 VFL ports.1 uplink slot.Includes 920W AC PS, power cord, 19in rack-mount kit and micro-USB to USB console cable. Uplink module not included
1.1.026	OS6860NPH48M	OS6860N-P48M:Multi-GigE L3 1 RU chassis with 36 10/100/1G/2.5G BaseT 95W bt PoE, 12 100/1G/2.5G/5G/10G BaseT 95W bt PoE, uplink slot and 2 QSFP28 VFL ports.Includes 600W AC PS, power cord, 19" rack-mount kit and a micro-USB-to-USB console cable
1.1.027	OS6860NPX48M	OS6860N-P48M:Multi-GigE L3 1 RU chassis with 36 10/100/1G/2.5G BaseT 95W bt PoE, 12 100/1G/2.5G/5G/10G BaseT 95W bt PoE, uplink slot and 2 QSFP28 VFL ports.Includes 2000W AC PS, power cord, 19" rack-mount kit and a micro-USB-to-USB console cable
1.1.028	OS6860N-P48Z	Multi-GigE L3 1RU chassis with 36 10/100/1000 BaseT 60W bt PoE, 12 100/1G/2.5G/5G BaseT 95W bt PoE, 4 fixed SFP28 (1G/10G/25G) MACsec ports and 2 QSFP28 VFL ports.Includes 920W AC PS, power cord, 19in rack-mount kit and a micro-USB to USB console cable
1.1.029	OS6860N-U28-D	GigE L3 1RU chassis with 24 100/1000 BaseX SFP, 4 1G/10G SFP+, 4 SFP28 (1G/10G/25G) ports and 2 QSFP28 VFL ports. All ports except VFL are MACsec capable. Includes DC PS, 19in rack-mount kit and micro-USB-to-USB console cable
1.1.030	OS6860N-U28	GigE L3 1RU chassis with 24 100/1000 BaseX SFP, 4 1G/10G SFP+, 4 SFP28 (1G/10G/25G) ports and 2 QSFP28 VFL ports. All ports except VFL are MACsec capable. Includes AC PS, country-specific power cord, 19in rack-mount kit and micro-USB-to-USB console cable
1.1.031	OS6860NPH48Z	OS6860N-P48Z: Multi-GigE L3 1 RU chassis with 36 10/100/1000 BaseT 60W bt PoE, 12 100/1G/2.5G/5G BaseT 95W bt PoE, 4 SFP28 (1G/10G/25G) MACsec and 2 QSFP28 VFL ports.Includes 600W AC PS, power cord, 19" rack-mount kit and a micro-USB-to-USB console cable
1.1.032	OS68-CNI-U1	OS68-CNI-U1: One uplink module for OS6860N Premium models with 1 25/100G QSFP28 port. Port is 256-bit MACsec capable
1.1.033	OS68-QNI-U2	OS68-QNI-U2: One uplink module for OS6860N Premium models with 2 10/40G QSFP+ ports. Both ports are 256-bit MACsec capable
1.1.034	OS68-VNI-U4	OS68-VNI-U4: One uplink module for OS6860N Premium models with 4 1/10/25G SFP28 ports. All ports are 256-bit MACsec capable
1.1.035	PP3N-OS6860	3YR Partner SUPPORT Plus for all OS6860 Basic and Enhanced models. Includes 24x7 Remote Tel Support, Diagnosis, SW Upgrades, Access to support portal, and next day AVR. OS6860 Power Supplies and OS6860-FT are included in AVR.
Subtotal Ex Vat		
OmniSwitch 6865 Series (Advanced Industrial Switches)		
1.1.036	OS6865-P16X	OS6865-P16X: Hardened Gigabit Ethernet L3 fan-less chassis 12 RJ-45 10/100/1000 BaseT PoE+ ports (4 are 75W PoE capable),2 SFP, 2 SFP+, RS232 Console, USB ports. Includes AR SW, AC PSU, Power cord, user manuals access card, power shelf, 19" rack mount kit.
1.1.037	OS6865-U12X	OS6865-U12X Hardened Gigabit Ethernet L3 chassis 4 100/1000 BaseX SFP, 4 10/100/1000 BaseT PoE+ ports (all are 75W PoE capable), 2 SFP+, RS-232 Console, USB ports. Includes AC PSU, power cord, user manuals access card, 19" rack mount kit

1.1.038	OS6865-U28X	OS6865-U28X Hardened Gigabit Ethernet L3 1RU chassis.20 100/1000 BaseX SFP, 4 SFP+, 4x75W PoE capable 10/100/1000 BaseT PoE+, RS-232 Console, USB, 2x20G VFL/stacking ports. Includes AC PSU, power cord, user manuals access card, 19 rack mount kit	
1.1.039	OS6865-BP	OS6865-BP modular 180W AC backup power supply. Provides system and PoE power to one OS6865 switch, includes power cord and chassis connection cable	
1.1.040	ISFP-10G-C1M	10 Gigabit Industrial direct attached copper cable (1m, SFP+)	
1.1.041	OS6865-REAR-MNT	Mounting bracket & Side mounting rails kit to stabilize the rear of OS6865-U28x in rear mounted tray configuration	
1.1.042	PP3N-OS6865	3YR Partner SUPPORT Plus for all OS6865 models. Includes 24x7 Remote Tel Support, Diagnosis, SW Upgrades, Access to support portal, and next day AVR. OmniSwitch 6865 Power Supplies are included in advance hardware replacement.	
Subtotal Ex Vat			
OmniSwitch 6900 Series (Core POD switches)			
1.1.043	OS6900-C32-F	1RU 100GE L3 fixed chassis with 32 100G QSFP28 ports. QSFP28 ports operate as 100GE, 40GE, 4x25GE or 4x10GE. Front to back cooling. Includes AC power supply and cord. Ships with manuals access card and rack mounts. US	
1.1.044	OS6900T48-F	1RU 10GE L3 fixed chassis with 48 10G-BaseT ports and 6 100G QSFP28 ports. 10GT ports operate at 1/10G. QSFP28 ports operate as 100GE/40GE/4x25GE/4x10GE. Front to back cooling. Includes dual AC power supplies,cord,manuals access card and rack mounts.	
1.1.045	OS6900V48-F	1RU 25GE L3 fixed chassis with 48x25G SFP28 ports and 8x100G QSFP28 ports. SFP28 ports operate as 1/10/25GE. QSFP28 ports operate as 100GE/40GE/4x25GE/4x10GE. Front to rear cooling. Includes dual AC PS units,cord,manuals access card and rack mounts.	
1.1.046	OS6900X48-F	1RU 10GE L3 fixed chassis with 48 10G SFP+ ports and 6 100G QSFP28 ports. SFP+ ports operate as 1/10GE. QSFP28 ports operate as 100GE/40GE/4x25GE/4x10GE. Front to back cooling. Includes dual AC power supplies,cord,manuals access card and rack mounts.	
1.1.047	OS6900X48E-F	1RU L3 fixed chassis, MACSec on all ports with 40 1/10GE SFP+, 8 10/25GE SFP28 and 4 100G QSFP28 ports. QSFP28 ports operate as 100GE/40GE/4x25GE/4x10GE. Front to back cooling, includes dual AC power supplies,cord and rack mounts. US.	
1.1.048	OS6900-V72-F	1RU 25GE L3 fixed chassis with 48 25G SFP28 and 6 100G QSFP28 ports. SFP28 ports operate as 25GE or 10GE. QSFP28 ports operate as 100GE or 40GE. Front to back cooling. Includes AC power supply and cord. Ships with manuals access card and rack mounts. US	
1.1.049	OS6900-BP-F	OS6900-BP-F Modular AC backup power supply. Front to back cooling. Provides backup system power to one 6900 switch. Ships with country specific power cord.	
1.1.050	OS6900C-BP-F	Modular 650W AC backup power supply. Front-to-back cooling. Provides system power to one OS6900-V72 or C32 switch. Includes country specific power cord.	
1.1.051	OS6900X-BP-F	Modular 400W AC backup power supply. Front-to-back cooling. Provides system power to one OS6900-X48C6 or T48C6 switch. Includes country specific power cord. US	

1.1.052	OS6900-USB-RJ45	Spare USB to RJ-45 interface adaptor for the OS6900. Ships with the OS6900 units.	
1.1.053	OS6900C-FTKIT-F	Replacement fan tray kit for OS6900-V72 and C32. Front-to-back cooling. Fan tray kit contains 6 spare fan tray units.	
1.1.054	OS6900-FT-F	OS6900-F-FT OS6900 replacement fan tray front to back cooling.	
1.1.055	OS6900Q-FT-F	OS6900Q-FT-F : OS6900Q replacement fan tray for OS6900-Q32 and OS6900-X72; front to back cooling	
1.1.056	OS6900-SW-DC	Data Center Software for support of DCBX, FCoE and EVB on OS6900. One license required per chassis	
1.1.057	PP3N-OS6900	3YR Partner SUPPORT Plus for all OS6900 models. Includes 24x7 Remote Tel Support, Diagnosis, SW Upgrades, Access to support portal, and next day AVR. OS6900 power supplies, modules, fan trays are included in AVR .	
Subtotal Ex Vat			
OmniSwitch 9900 Series (Core Chassis Switches)			
1.1.058	OS9907-RCB-A	OS9907 redundant bundle with AC power. Redundant base bundle includes 1 x OS9900 Chassis, 2 x OS99-CMM management module, 2 x OS9907-CFM fabric module, 2 x OS99-PS-A power supplies, and fully featured AOS software w/ advanced IP routing SW IPv4/IPv6).	
1.1.059	OS9907-CHAS	OS9900 11-slot chassis with 7 front accessible CMM/NI slots and 4 rear accessible fabric slots. There are 4 power supply slots and includes 3 x fan trays.	
1.1.060	OS99-CMM	OS9900 Chassis Management Module w/SSL DES,3DES,RC2,RC4). The OS99-CMM includes a processor module, 2x 40G QSFP ports and its AOS software w/ advanced IP routing SW IPv4/IPv6)	
1.1.061	OS9907-CFM2	OS9907 Chassis Fabric Module. The OS9907-CFM2 is the second generation fabric card for the OS9907 chassis. This fabric card provides a high performance fabric plane for the OS9907 chassis and provides inter-module connectivity for the data traffic.	
1.1.062	OS99-CNI-U8	OS9900 100 Gigabit network interface card offers 8 unpopulated wire rate QSFP28 100GE ports. This Enhanced network interface card is MPLS, MACSEC ready, and provides large table support for L2, L3, and ACL policies.	
1.1.063	OS99-GNI-P48	OS9900 Gigabit network interface card offers 48 wire rate RJ-45 10/100/1000M Base-T ports with PoE. This Enhanced network interface card is MPLS, MACSEC HW ready, and provides large table support for L2, L3, and ACL policies.	
1.1.064	OS99-XNI-48	OS9900 10 Gigabit network interface card offers 48 1/10G wire rate 10GBase-T ports. This Enhanced network interface card is MPLS, MACSEC HW ready, and provides large table support for L2, L3, and ACL policies.	
1.1.065	OS99-XNI-U48	OS9900 10 Gigabit network interface card offers 48 1/10G wire rate unpopulated SFP+ ports. This Enhanced network interface card is MPLS, MACSEC HW ready, and provides large table support for L2, L3, and ACL policies.	
1.1.066	OS99-ZNI-P48	OS9900 Multi-Gigabit network interface card offers 32 RJ-45 10G Base-T and 16 RJ-45 1/2.5/5/10G Base-T wire rate PoE ports. This Enhanced network interface card is MPLS, MACSEC ready, and provides large table support for L2, L3, and ACL policies.	

1.1.067	OS99-PS-A	OS9900 series AC power supply. Provides up to 3KW of power, auto-ranging 110VAC-240VAC. Includes United States power cord.	
1.1.068	OS9907-FAN-TRAY	OS9907 Fan Tray. Spare.	
1.1.069	PP3N-OS9900	3YR Partner SUPPORT Plus for OS9900. Includes 24x7 Remote Tel Support, Diagnosis, SW Upgrades, Access to support portal, and next day AVR. OS9900 Distributor Pack, modules, Power Supplies, and fan tray included in AVR.	
Subtotal Ex Vat			
Transceivers			
1.1.070	ISFP-GIG-EZX	1000Base-EZX Industrial grade Gigabit SFP transceiver. Supports single mode fiber, 120 km, 1550nm, LC Connector, Digital Diagnostic Monitoring (DDM), Extended Temperature -40/85C.	
1.1.071	ISFP-GIG-LH40	1000Base-LH Industrial Gigabit Ethernet optical transceiver SFP MSA. Supports single mode fiber over 1310 nm wavelength nominal with an LC connector. Typical reach of 40 km on 9/125 m SMF.	
1.1.072	ISFP-GIG-LH70	1000Base-LH Industrial Gigabit Ethernet optical transceiver SFP MSA. Supports single mode fiber over 1550nm wavelength nominal with an LC connector. Typical reach of 70 km on 9/125 m SMF.	
1.1.073	ISFP-GIG-LX	1000Base-LX Industrial Gigabit Ethernet optical transceiver SFP MSA. Supports single mode fiber over 1310nm wavelength nominal with an LC connector. Typical reach of 10 km on 9/125 m SMF.	
1.1.074	ISFP-GIG-SX	1000Base-SX Industrial Gigabit Ethernet optical transceiver SFP MSA. Supports multimode fiber over 850nm wavelength nominal with an LC connector. Typical reach of 300m on 62.5/125 m MMF or 550m on 50/125 m MMF.	
1.1.075	ISFP-GIG-T	1000Base-T Gigabit industrial Ethernet Transceiver SFP MSA - Supports category 5, 5E, and 6 copper cabling up to 100m. SFP supports 10/100/1000 Mbit/s and full-duplex mode.	
1.1.076	SFP-GIG-EXTND	Extended 1000Base-SX Gigabit Ethernet optical transceiver (SFP MSA). Multimode fiber over 850nm wavelength (nominal) LC connector. Reach of up to 2 km on 62.5/125 m MMF and 50/125 m MMF. Requires SFP-GIG-EXTND or GBIC-GIG-EXTND at the remote termination.	
1.1.077	SFP-GIG-EZX	1000Base-EZX Gigabit SFP transceiver. Supports single mode fiber, 120 km, 1550nm, LC Connector, Digital Diagnostic Monitoring DDM.	
1.1.078	SFP-GIG-LH40	1000Base-LH Gigabit Ethernet optical transceiver SFP MSA. Supports single mode fiber over 1310 nm wavelength nominal with an LC connector. Typical reach of 40 Km on 9/125 m SMF.	
1.1.079	SFP-GIG-LH70	1000Base-LH Gigabit Ethernet optical transceiver SFP MSA. Supports single mode fiber over 1550nm wavelength nominal with an LC connector. Typical reach of 70 Km on 9/125 m SMF.	
1.1.080	SFP-GIG-LX	1000Base-LX Gigabit Ethernet optical transceiver SFP MSA. Supports single mode fiber over 1310nm wavelength nominal with an LC connector. Typical reach of 10 Km on 9/125 m SMF.	
1.1.081	SFP-GIG-SX	1000Base-SX Gigabit Ethernet optical transceiver SFP MSA. Supports multimode fiber over 850nm wavelength nominal with an LC connector. Typical reach of 300m on 62.5/125 m MMF or 550m on 50/125 m MMF.	

1.1.082	SFP-GIG-T	1000Base-T Gigabit Ethernet Transceiver SFP MSA - Supports category 5, 5E, and 6 copper cabling up to 100m. SFP works at 1000 Mbit/s speed and full-duplex mode. Supports 10/100/1000 Mbit/s as well when combined with OS6850-U24X and OS6400-U24.	
1.1.083	ISFP-10G-ER	10 Gigabit industrial optical transceiver SFP+. Supports monomode fiber over 1550nm wavelength nominal with an LC connector. Typical reach of 40Km	
1.1.084	ISFP-10G-LR	10 Gigabit industrial optical transceiver SFP+. Supports single mode fiber over 1310nm wavelength nominal with an LC connector. Typical reach of 10 Km.	
1.1.085	SFP-10G-24DWD80	10 Gigabit DWDM optical transceiver SFP+ MSA, 1558.17 nm/Channel 24 100GHz ITU Grid), 80 km, LC Connector.	
1.1.086	SFP-10G-C1M	10 Gigabit direct attached copper cable 1m, SFP+	
1.1.087	SFP-10G-C3M	10 Gigabit direct attached copper cable 3m, SFP+	
1.1.088	SFP-10G-C7M	10 Gigabit direct attached copper cable 7m, SFP plus	
1.1.089	3HE05830CA	XFP - 10GE SR - LC ROHS 6/6 -40/85C	
1.1.090	3HE05831CA	XFP - 10GE LR - LC ROHS 6/6 -40/85C	
1.1.091	3HE05832CA	XFP - 10GE ER - LC ROHS 6/6 -40/85C	
1.1.092	3HE05833CA	XFP - 10GE ZR - LC ROHS 6/6 -40/85C	
1.1.093	SFP-10G-ER	10 Gigabit optical transceiver SFP+ Supports mono-mode fiber over 1550nm wavelength nominal with an LC connector. Typical reach of 40Km	
1.1.094	SFP-10G-LR	10 Gigabit optical transceiver SFP+. Supports mono-mode fiber over 1310nm wavelength nominal with an LC connector. Typical reach of 10Km	
1.1.095	SFP-10G-SR	10 Gigabit optical transceiver SFP+. Supports multimode fiber over 850nm wavelength nominal with an LC connector. Typical reach of 300m	
1.1.096	SFP-10G-T	10 Gigabit copper transceiver (SFP+). 10GBase-T 10 Gigabit Ethernet Transceiver (SFP MSA) - Supports category 6a/7 cabling copper cabling up to 30m. This transceiver supports 10Gbs full-duplex mode only.	
1.1.097	SFP-10G-ZR	10 Gigabit industrial optical transceiver SFP+. Supports data transmission at 1550nm over up to 80km single mode fiber. LC connector type.	
1.1.098	XFP-10G-ER40	10 Gigabit Ethernet optical transceiver XFP MSA. Supports single mode fiber over 1550nm wavelength nominal with an LC connector. Typical reach of 40 Km on 9/125 m SMF.	
1.1.099	XFP-10G-LR	10 Gigabit Ethernet optical transceiver XFP MSA. Supports single mode fiber over 1310nm wavelength nominal with an LC connector. Typical reach of 10 Km on 9/125 m SMF.	
1.1.100	XFP-10G-SR	10 Gigabit Ethernet optical transceiver XFP MSA. Supports multimode fiber over 850nm wavelength nominal with an LC connector. Typical reach of 300m on 50/125 m MMF.	
1.1.101	XFP-10G-ZR80	10 Gigabit Ethernet optical transceiver XFP MSA. Supports single mode fiber over 1550nm wavelength nominal with an LC connector. Typical reach of 80 Km on 9/125 m SMF.	

1.1.102	QSFP-40G-AOC20M	40 Gigabit QSFP+ direct attached active optical cable. 20 m.	
1.1.103	QSFP-40G-C1M	40 Gigabit direct attached copper cable 1m, QSFP+	
1.1.104	QSFP-40G-C3M	40 Gigabit direct attached copper cable 3m, QSFP+	
1.1.105	QSFP-40G-C40CM	40 Gigabit direct attached copper cable 40 cm, QSFP+	
1.1.106	QSFP-40G-C7M	40 Gigabit direct attached copper cable 7m, QSFP+	
1.1.107	QSFP-40G-LR	Four channel 40 Gigabit optical transceiver QSFP+. Supports single mode fiber over 1310nm wavelength. Typical reach 10 km. Duplex LC receptacles	
1.1.108	QSFP-40G-SR	Four channel 40 Gigabit optical transceiver QSFP+. Supports link lengths of 100m and 150m respectively on OM3 and OM4 multimode fiber cables. Single MPO receptacle	
1.1.109	QSFP-40G-SR-BD	Dual channel 40 Gigabit optical transceiver (QSFP+). Supports multimode fiber over 850nm wavelength (nominal) with duplex LC connector. Supports link lengths up to 100 meters on OM3 MMF or 150 meters on OM4 MMF.	
1.1.110	QSFP-4X10G-C1M	40 Gigabit to 4 x 10 Gigabit direct attached copper splitter cable 1m, QSFP+	
1.1.111	QSFP-4X10G-C3M	40 Gigabit to 4 x 10 Gigabit direct attached copper splitter cable 3m, QSFP+	
1.1.112	QSFP-4X10G-C5M	40 Gigabit to 4 x 10 Gigabit direct attached copper splitter cable 5m, QSFP+	
1.1.113	QSFP-4X10G-SR	40 Gigabit to 4 x 10 Gigabit Multi-fiber Push-On MPO fiber splitter transceiver	
1.1.114	QSFP-100G-A20M	100 Gigabit QSFP28 direct attached active optical cable. 20 m.	
1.1.115	QSFP-100G-C1M	100 Gigabit direct attached copper cable 1m, QSFP28	
1.1.116	QSFP-100G-C3M	100 Gigabit direct attached copper cable 3m, QSFP28	
1.1.117	QSFP-100G-C5M	100 Gigabit direct attached copper cable 5m, QSFP28	
1.1.118	QSFP-100G-CLR4	100 Gigabit optical transceiver QSFP28. Supports link lengths of 2Km over single mode fiber cables. Single MPO	
1.1.119	QSFP-100G-CWDM4	100 Gigabit optical transceiver QSFP28. Supports link lengths of 2Km over single mode fiber cables. Single MPO. CWDM4	
1.1.120	QSFP-100G-LR4	100 Gigabit optical transceiver QSFP28. Supports link lengths of 10Km over single mode fiber cables. Single MPO	
1.1.121	QSFP-100G-SR4	100 Gigabit optical transceiver QSFP28. Supports link lengths of 70m on OM3 and 100m on OM4 multimode fiber cables. Single MPO	
1.1.122	3HE04821BA	CFP - 100G LR4 10KM LC	
1.1.123	3HE06699BA	CFP - 100G ER4 40KM LC	
1.1.124	3HE06771AA	CFP - 100G SR10 100M MPO	
1.1.125	3HE08312AA	CFP2 - 100G SR10 100M MPO	

1.1.126	3HE08217AA	CFP2 - 100G LR4 10KM LC	
1.1.127	3HE09255AA	CFP2 – OTU4 ER4 40KM LC ROHS6/6 0/70C	
1.1.128	3HE09498AA	CFP4 - 100G LR4 10KM LC	
1.1.129	3HE10551AA	QSFP28 - 100G SR4 100M MPO ROHS6/6 0/70C	
1.1.130	3HE10550AA	QSFP28 - 100G LR4 10KM LC ROHS6/6 0/70C	
1.1.131	3HE09326AA	SFP+ 10GE SR - LC ROHS6/6 -40/85C	
1.1.132	3HE09327AA	SFP+ 10GE LR - LC ROHS6/6 -40/85C	
1.1.133	3HE09328AA	SFP+ 10GE ER - LC ROHS6/6 -40/85C	
1.1.134	3HE09329AA	SFP+ 10GE ZR - LC ROHS6/6 -40/85C	
1.1.135	GT-905A	10/100/1000Base-T to mini-GBIC Managed Media Converter (LC,MM/SM)-distance depend on SFP module	
Subtotal Incl Vat			

Wireless LAN			
1.1.136	OAW-AP1301-RW	OmniAccess Stellar Indoor AP1301. Dual radio 2.4/5Ghz 2x2 802.11ax, omni antenna. 2x 1GE up, 1x RS-232 Console, USB, 48V DC. AP mount to be ordered separately. Not for use in US, Egypt, Israel, Japan.	
1.1.137	OAW-AP1311-RW	OmniAccess Stellar Indoor AP1311. Dual radio 2.4/5Ghz 2x2 802.11ax, omni antenna. 1x1 scanning and BLE radio. 2x 1GE up, 1xGE down, 1x RS-232 Console/ Modbus IIoT, USB, 48V DC. AP mount to be ordered separately. Not for use in US, Egypt, Israel, Japan.	
1.1.138	OAW-AP1321-RW	OmniAccess Stellar Indoor AP1321. Dual radio 5GHz 4x4:4 / 2.4GHz 2x2:2 802.11ax, integrated omni antenna. 1x1 scanning radio and BLE radio. 1x 2.5GbE, 1x 1GbE, USB, 48V DC. AP mount order separately. Not for use in US, Egypt, Israel, Japan	
1.1.139	OAW-AP1322-RW	OmniAccess Stellar Indoor AP1322. Dual radio 5GHz 4x4:4 / 2.4GHz 2x2:2 802.11ax, external antenna connectors. 1x1 scanning radio and BLE radio. 1x 2.5GbE, 1x 1GbE, USB, 48V DC. AP mount order separately. Not for use in US, Egypt, Israel, Japan	
1.1.140	OAW-AP1361-RW	OmniAccess Stellar Outdoor AP1361. Dual radio 5GHz 4x4:4 / 2.4GHz 2x2:2 802.11ax, integrated omni. 1x1 scanning radio and BLE radio. 2.5GbE, 1GbE, 1GbE SFP, USB, 48V DC. AP mount order separately. Not for use in US, Egypt, Israel, Japan	
1.1.141	OAW-AP1361D-RW	OmniAccess Stellar Outdoor AP1361D. Dual radio 5GHz 4x4:4 / 2.4GHz 2x2:2 802.11ax, integrated directional antenna. 1x1 scanning radio and BLE radio. 2.5GbE, 1GbE, 1GbE SFP, USB, 48V DC. AP mount order separately. Not for use in US, Egypt, Israel, Japan	
1.1.142	OAW-AP1362-RW	OmniAccess Stellar Outdoor AP1362. Dual radio 5GHz 4x4:4 / 2.4GHz 2x2:2 802.11ax, external antenna connectors. 1x1 scanning radio and BLE radio. 2.5GbE, 1GbE, 1GbE SFP, USB, 48V DC. AP mount order separately. Not for use in US, Egypt, Israel, Japan	
1.1.143	OAW-AP-MNT-W	Mounting kit, Type A wall mount and ceiling mount with screws. Applicable for OmniAccess Stellar AP1101, AP12xx and AP13xx Indoor series.	

1.1.144	ADP-50GRBE	OmniAccess Stellar Indoor Access Point Power Adapter. 48V AC-to-DC Power Adapter with Type A DC plug 2.1*5.5*9.5mm circular, straight. Please order PWR-CORD-XX for country specific power cord.	
1.1.145	ANT-O-6	Dual band 2.4/5GHz, 1-element, direct mount , omni-directional antenna, 6dBi 4x)	
1.1.146	ANT-O-M2-5	Dual band 2.4/5GHz, 2-element, outdoor omnidirectional antenna with N-Type Female, 5dBi @ 2.4GHz & 8dBi @ 5GHz, Azimuth Omni, Elevation 35°/25°, includes pole mount	
1.1.147	ANT-O-M4-5	Dual band 2.4/5GHz, 4-element, Ceiling-mount , Downtilt omni-directional antenna, >5dBi 1x) includes 4* 30-35in RF cable	
1.1.148	ANT-O-M4-9	Dual band 2.4/5GHz, 4-element, outdoor omnidirectional antenna with N-Type Female, 7.5dBi @ 2.4GHz & 9dBi @ 5GHz, Azimuth Omni, Elevation 22°/11°, includes pole mount	
1.1.149	ANT-O-M6-8	Outdoor Dual band 2.4/5GHz omni antenna 6-elements N-Type connector. 2.4GHz 2*2 MIMO + 5GHz 4*4 MIMO, Peak gain 8dBi on 5GHz, 6dBi on 2.4GHz. Includes pole mount kit.	
1.1.150	ANT-S-M4-120	Dual band 2.4/5GHz, 4-element, Wall-mount, sector antenna , 5dBi, H-Plane 120°, E-Plane 70°, includes 4* 30-35in RF cable (SMA-J/RPSMA-J), includes mount	
1.1.151	ANT-S-M4-30	Single band 5GHz, 4-element, Wall-mount, sector antenna , 13dBi, H-Plane 37°, E-Plane 37°, includes 4* 30-35in RF cable (SMA-J/RPSMA-J), includes mount	
1.1.152	ANT-S-M4-60	Dual band 2.4/5GHz, 4-element, Wall-mount, sector antenna , >5dBi, 60Hx60V 1x) includes 4* 30-35in RF cable	
1.1.153	ANT-S-M6-60-9	Outdoor Dual band 2.4/5GHz sector antenna 6-elements N-Type connector. 2.4GHz 2*2 MIMO + 5GHz 4*4 MIMO, Horizontal beamwidth 65° on 2.4GHz, 60° on 5GHz, Peak gain 9dBi on 2.4 and 5GHz. Includes pole mount kit.	
1.1.154	AP-MNT-OUT-H	Outdoor hanging down-tilt mount kit (Pole). Applicable for OmniAccess Stellar AP1361.	
1.1.155	AP-MNT-OUT	Outdoor mount kit (Pole/Wall). Standard configuration in the AP1251 product packaging. Applicable for OmniAccess Stellar AP1251, AP136x Outdoor series.	
1.1.156	AP-OUT-SFP-KIT	Outdoor SFP Gland weathertight kit for outdoor AP1360 series access points.	
1.1.157	AP-POE-BTSR	OmniAccess AP-POE-BTSR 1-Port Smart Rate 802.3bt 60W midspan injector	
1.1.158	PP3N-OAWAP1301	3 Yr Partner Support Plus for OAWAP1301. Includes 24x7 phone support, problem diagnosis, access to support portal, software updates and upgrades. Next business day AVR, please check availability per country.	
1.1.159	PP3N-OAWAP1311	3 Yr Partner Support Plus for OAWAP1311. Includes 24x7 phone support, problem diagnosis, access to support portal, software updates and upgrades. Next business day AVR, please check availability per country.	
1.1.160	PP3N-OAWAP1320	3 Yr Partner Support Plus for OAW-AP1320 Series. Includes 24x7 phone support, problem diagnosis, access to support portal, software updates and upgrades. Next business day AVR, please check availability per country.	

1.1.161	PP3N-OAWAP1351	3 Yr Partner Support Plus for OAWAP1351. Includes 24x7 phone support, problem diagnosis, access to support portal, software updates and upgrades. Next business day AVR, please check availability per country.	
1.1.162	PP3N-OAWAP1360	3 Yr Partner Support Plus for OAW-AP1360 series. Includes 24x7 phone support, problem diagnosis, access to support portal, software updates and upgrades. Next business day AVR, please check availability per country.	
	OAW-AP1201BG-RW	OmniAccess Stellar BLE GATEWAY AP1201BG. Dual radio 2x2:2 802.11a/b/g/n/ac WiFi client, integrated BLE GW ,integrated antenna, 1x GbE, 1x 48V DC power interface, 1x Console. Cannot be used as Access Point. Restricted Regulatory domain - Rest of the World.	
1.1.163	CT18-3-40	Card Shaped Asset tag 40 pack	
1.1.164	OAL-BT-10	OmniAccess Stellar LBS BLE Beacon - Battery powered Beacons - 10 pack	
1.1.165	OAL-BT-MNT-10	Outdoor mount kit for OmniAccess Stellar LBS BLE Beacons - 10 pack	
1.1.166	OAL-BT-USB-10	OmniAccess Stellar LBS BLE USB dongle - 10 pack	
1.1.167	S18-3-40	Sqaure Shaped Asset tag 40 pack	
1.1.168	OAL-SDK-LSGSA	OmniAccess Stellar LBS 1 yr subscription license for Bluespot, Wayfinding, Geo notification and Analytics for 100 Sq meter or 1000 sq feet	
1.1.169	OAL-SDK-LSGS	OmniAccess Stellar LBS 1 yr subscription license for Bluespot, Wayfinding and Geo notification for 100 Sq meter or 1000 sq feet.	
1.1.170	OVC-AT-SUB1	1 year subscription for asset tracking per 100 square meter	
1.1.171	OVC-AT-SUB3	3 year subscription for asset tracking per 100 square meter	
1.1.172	OVC-AT-SUB5	5 year subscription for asset tracking per 100 square meter	
1.1.173	OAW-AP318-RW	OAW-AP318-RW OmniAccess AP318 RW) Dual 2x22/4x44 Radio 6xRPSMA Connectors Indoor Hardened Unified AP. Restricted regulatory domainRest of the world	
1.1.174	OAW-AP344-RW	OAW-AP344-RW OmniAccess AP344 Dual 4x44 MU-MIMO Radio Antenna Connectors Smart Rate Unified Campus AP. Restricted regulatory domain Rest of the world	
1.1.175	OAW-AP345-RW	OAW-AP345-RW OmniAccess AP345 Dual 4x44 MU-MIMO Radio Internal Antennas Smart Rate Unified Campus AP. Restricted regulatory domainRest of the world	
1.1.176	OAW-AP365-RW	OAW-AP365-RW OmniAccess AP365 802.11n/ac Dual 2x22 Radio Integrated Omni Antenna Outdoor Unified AP. Restricted regulatory domain Rest of World	
1.1.177	OAW-AP367-RW	OAW-AP367-RW OmniAccess AP367 802.11n/ac Dual 2x22 Radio Integrated Directional Ant Outdoor Unified AP. Restricted regulatory domain Rest of World	
1.1.178	OAW-AP504-RW	OmniAccess AP504 (RW) Dual Radio 2x2:2 802.11ax External Antennas Unified Campus AP	
1.1.179	OAW-AP505-RW	OmniAccess AP505 (RW) Dual Radio 2x2:2 802.11ax Internal Antennas Unified Campus AP	

1.1.180	OAW-AP505H-RW	OmniAccess AP505H (RW) Dual-radio 802.11ax 2x2 Unified Hospitality AP with 1+4 Ethernet, PSE, USB	
1.1.181	OAW-AP514-RW	OmniAccess W-AP514 (RW) Dual Radio 4x4:4 + 2x2:2 802.11ax External Antennas Unified Campus AP	
1.1.182	AP-303-CVR-20	AP-303-CVR-20 20-pack for AP-303 with Holes for LED Indicators White Non-glossy Snap-on Covers	
1.1.183	AP-335-CVR-20	Kit of 20 snap-on covers for AP335. Plain white, non-glossy, with holes for LED indicators.	
1.1.184	AP-505-CVR-20	ALE AP-505-CVR-20 20-pk for AP-505 White Non-glossy Snap-on Covers	
1.1.185	AP-515-CVR-20	ALE AP-515-CVR-20 20-pack for AP-515 with Holes for LED Indicators White Non-glossy Snap-on Covers	
1.1.186	AP-535-CVR-20	ALE AP-535-CVR-20 20-pack for AP-535 with Holes for LED Indicators White Non-glossy Snap-on Covers	
1.1.187	AP-555-CVR-20	ALE AP-555-CVR-20 20-pack for AP-555 with Holes for LED Indicators White Non-glossy Snap-on Covers	
1.1.188	OAW-4550	OAW-4550-EU OmniAccess Wireless LAN 4550 controller/switch, 4x 10GBase-X SFP+, 1x 350W AC PS, Unrestricted Regulatory Domain. Zero AP license included, can support up to 512 APs. MUST NOT be used for deployments in the US, Israel or Japan. EU power cord.	
1.1.189	OAW-4750XM	OmniAccess W-4750XM Mobility Controller with 16GB Extended Memory, 4x 10GBase-X SFP+, 1x 350W AC PS, Zero AP license included, can support up to 2048 APs. MUST NOT be used for deployments in the US, Israel or Japan. EU power cord.	
1.1.190	PW3N-OAWMMVA10K	3YR Partner SUPPORT Software for OAW-MM-VA-10K. Includes 24x7 Remote Telephone Support, 24x7 Remote Problem Diagnosis, access to Software Updates and Upgrades, and access to support portal.	
1.1.191	PW3N-AP-ENT	3YR Partner SUPPORT Software for OAW-AP-ENT. Includes 24x7 Remote Telephone Support, 24x7 Remote Problem Diagnosis, access to Software Updates and Upgrades, and access to support portal.	
1.1.192	PP3N-OAW4450	3YR Partner SUPPORT Plus for OAW-4450 and OAW-4450-US. Includes 24x7 Remote Phone Support / Problem Diagnosis, SW Updates / Upgrades, access to support portal and next business day AVR.	
1.1.193	PW3N-OAWAP303	3 YR Partner SUPPORT Software for OAW-AP303-US used as IAP. Includes 24x7 Remote Telephone Support, 24x7 Remote Problem Diagnosis, access to Software Updates and Upgrades, and access to support portal.	
1.1.194	PW3N-OAWAP318	3 YR Partner SUPPORT Software for OAW-AP318-US used as IAP. Includes 24x7 Remote Telephone Support, 24x7 Remote Problem Diagnosis, access to Software Updates and Upgrades, and access to support portal.	
1.1.195	PW3N-OAWAP344	3 YR Partner SUPPORT Software for OAW-AP344-US used as IAP. Includes 24x7 Remote Telephone Support, 24x7 Remote Problem Diagnosis, access to Software Updates and Upgrades, and access to support portal.	
1.1.196	PW3N-OAWAP345	3 YR Partner SUPPORT Software for OAW-AP345-US used as IAP. Includes 24x7 Remote Telephone Support, 24x7 Remote Problem Diagnosis, access to Software Updates and Upgrades, and access to support portal.	

1.1.197	PW3N-OAWAP360	3 YR Partner SUPPORT Software for OAW-AP360-US used as IAP. Includes 24x7 Remote Telephone Support, 24x7 Remote Problem Diagnosis, access to Software Updates and Upgrades, and access to support portal.	
1.1.198	PW3N-OAWAP374	3 YR Partner SUPPORT Software for OAW-AP374-US used as IAP. Includes 24x7 Remote Telephone Support, 24x7 Remote Problem Diagnosis, access to Software Updates and Upgrades, and access to support portal.	
1.1.199	PW3N-OAWAP375	3 YR Partner SUPPORT Software for OAW-AP375-US used as IAP. Includes 24x7 Remote Telephone Support, 24x7 Remote Problem Diagnosis, access to Software Updates and Upgrades, and access to support portal.	
1.1.200	CPA-VA-CX000V	Aruba ClearPass Cx000V VM-Based Appliance E-LTU	
1.1.201	CPA-NL-OG-100	Aruba ClearPass New Licensing OnGuard 100 Endpoints E-LTU	
1.1.202	CPA-NL-OB-5K	Aruba ClearPass New Licensing Onboard 5K Users E-LTU	
1.1.203	CPA-NL-OB-500	Aruba ClearPass New Licensing Onboard 500 Users E-LTU	
1.1.204	CPA-NL-OB-2500	Aruba ClearPass New Licensing Onboard 2500 Users E-LTU	
1.1.205	CPA-NL-OB-1K	Aruba ClearPass New Licensing Onboard 1K Users E-LTU	
1.1.206	CPA-NL-OB-10K	Aruba ClearPass New Licensing Onboard 10K Users E-LTU	
1.1.207	CPA-NL-OB-100	Aruba ClearPass New Licensing Onboard 100 Users E-LTU	
1.1.208	CPA-NL-AC-5K	Aruba ClearPass New Licensing Access 5K Concurrent Endpoints E-LTU	
1.1.209	CPA-NL-AC-500	Aruba ClearPass New Licensing Access 500 Concurrent Endpoints E-LTU	
1.1.210	CPA-NL-AC-2500	Aruba ClearPass New Licensing Access 2500 Concurrent Endpoints E-LTU	
1.1.211	CPA-NL-AC-1K	Aruba ClearPass New Licensing Access 1K Concurrent Endpoints E-LTU	
1.1.212	CPA-NL-AC-10K	Aruba ClearPass New Licensing Access 10K Concurrent Endpoints E-LTU	
1.1.213	CPA-NL-AC-100	Aruba ClearPass New Licensing Access 100 Concurrent Endpoints E-LTU	
1.1.214	CPA-NL-OG-5K	Aruba ClearPass New Licensing OnGuard 5K Endpoints E-LTU	
1.1.215	CPA-NL-OG-500	Aruba ClearPass New Licensing OnGuard 500 Endpoints E-LTU	
1.1.216	CPA-NL-OG-2500	Aruba ClearPass New Licensing OnGuard 2500 Endpoints E-LTU	
1.1.217	CPA-NL-OG-1K	Aruba ClearPass New Licensing OnGuard 1K Endpoints E-LTU	
1.1.218	CPA-NL-OG-10K	Aruba ClearPass New Licensing OnGuard 10K Endpoints E-LTU	
1.1.219	CP3Y-VA-CX000V	3Y 24x7 SUPPORT SER-SOFT CPA-VA-CX000V	
1.1.220	CP3Y-HW-C3000	3Y 24x7 SUPPORT BASIC CPA-HW-C3000	

1.1.221	CP3Y-HW-C2000	3Y 24x7 SUPPORT BASIC CPA-HW-C2000	
1.1.222	CP3Y-HW-C1000	3Y 24x7 SUPPORT BASIC CPA-HW-C1000	
1.1.223	CP3Y-NL-OG-100	3Y 24x7 SUPPORT SER-SOFT CPA-NL-OG-100	
1.1.224	CP3Y-NL-OB-5K	3Y 24x7 SUPPORT SER-SOFT CPA-NL-OB-5K	
1.1.225	CP3Y-NL-OB-500	3Y 24x7 SUPPORT SER-SOFT CPA-NL-OB-500	
1.1.226	CP3Y-NL-OB-2500	3Y 24x7 SUPPORT SER-SOFT CPA-NL-OB-2500	
1.1.227	CP3Y-NL-OB-1K	3Y 24x7 SUPPORT SER-SOFT CPA-NL-OB-1K	
1.1.228	CP3Y-NL-OB-10K	3Y 24x7 SUPPORT SER-SOFT CPA-NL-OB-10K	
1.1.229	CP3Y-NL-OB-100	3Y 24x7 SUPPORT SER-SOFT CPA-NL-OB-100	
1.1.230	CP3Y-NL-AC-5K	3Y 24x7 SUPPORT SER-SOFT CPA-NL-AC-5K	
1.1.231	CP3Y-NL-AC-500	3Y 24x7 SUPPORT SER-SOFT CPA-NL-AC-500	
1.1.232	CP3Y-NL-AC-2500	3Y 24x7 SUPPORT SER-SOFT CPA-NL-AC-2500	
1.1.233	CP3Y-NL-AC-1K	3Y 24x7 SUPPORT SER-SOFT CPA-NL-AC-1K	
1.1.234	CP3Y-NL-AC-10K	3Y 24x7 SUPPORT SER-SOFT CPA-NL-AC-10K	
1.1.235	CP3Y-NL-AC-100	3Y 24x7 SUPPORT SER-SOFT CPA-NL-AC-100	
1.1.236	CP3Y-NL-OG-5K	3Y 24x7 SUPPORT SER-SOFT CPA-NL-OG-5K	
1.1.237	CP3Y-NL-OG-500	3Y 24x7 SUPPORT SER-SOFT CPA-NL-OG-500	
1.1.238	CP3Y-NL-OG-2500	3Y 24x7 SUPPORT SER-SOFT CPA-NL-OG-2500	
1.1.239	CP3Y-NL-OG-1K	3Y 24x7 SUPPORT SER-SOFT CPA-NL-OG-1K	
1.1.240	CP3Y-NL-OG-10K	3Y 24x7 SUPPORT SER-SOFT CPA-NL-OG-10K	
1.1.241	AP-CBL-SERU	Micro-USB TTL3.3V to USB2.0 AP Console Adapter Cable	
1.1.242	CP1Y-803894-00	1 Yr Support Software for LIC-CP-EN-100K. Includes 24x7 phone support, problem diagnosis, access to support portal, software updates and upgrades.	
1.1.243	CP1Y-803895-00	1 Yr Support Software for LIC-CP-EN-10K. Includes 24x7 phone support, problem diagnosis, access to support portal, software updates and upgrades.	
1.1.244	CP1Y-803896-00	1 Yr Support Software for LIC-CP-EN-1K. Includes 24x7 phone support, problem diagnosis, access to support portal, software updates and upgrades.	
Subtotal Ex Vat			

UCOPIA			
1.1.245	UCP-UV10000-VM	UCOPIA virtual server up to 10000 concurrent sessions. Advance License and Advance Maintenance required (except for EDGE that requires Advance Multi-Sites Maintenance).	
1.1.246	UCP-UV2000-VM	UCOPIA virtual server up to 2000 concurrent sessions. Advance License and Advance Maintenance required (except for EDGE that requires Advance Multi-Sites Maintenance).	
1.1.247	UCP-UV20000-VM	UCOPIA virtual server up to 20000 concurrent sessions. Advance License and Advance Maintenance required (except for EDGE that requires Advance Multi-Sites Maintenance).	
1.1.248	UCP-UV250-VM	UCOPIA virtual server up to 250 concurrent sessions. Advance License and Advance Maintenance required (except for EDGE that requires Advance Multi-Sites Maintenance).	
1.1.249	UCP-UV50-VM	UCOPIA virtual server up to 50 concurrent sessions, FOR EDGE ONLY	
1.1.250	UCP-UV5000-VM	UCOPIA virtual server up to 5000 concurrent sessions. Advance License and Advance Maintenance required (except for EDGE that requires Advance Multi-Sites Maintenance).	
1.1.251	UCP-UV50000-VM	UCOPIA virtual server up to 50000 concurrent sessions. Advance License and Advance Maintenance required (except for EDGE that requires Advance Multi-Sites Maintenance).	
1.1.252	UCP-ADV-10000	Advance License 10000. Virtual Machine and Advance Maintenance required.	
1.1.253	UCP-ADV-1000	Advance License 1000. Virtual Machine and Advance Maintenance required.	
1.1.254	UCP-ADV-10K-RED	Advance License Redundant 10000. Advance Maintenance Redundant required.	
1.1.255	UCP-ADV-1K-RED	Advance License Redundant 1000. Advance Maintenance Redundant required.	
1.1.256	UCP-ADV-20000	Advance License 20000. Virtual Machine and Advance Maintenance required.	
1.1.257	UCP-ADV-2000	Advance License 2000. Virtual Machine and Advance Maintenance required.	
1.1.258	UCP-ADV-20K-RED	Advance License Redundant 20000. Advance Maintenance Redundant required.	
1.1.259	UCP-ADV-250-RED	Advance License Redundant 250. Advance Maintenance Redundant required.	
1.1.260	UCP-ADV-250	Advance License 250. Virtual Machine and Advance Maintenance required.	
1.1.261	UCP-ADV-2K-RED	Advance License Redundant 2000. Advance Maintenance Redundant required.	
1.1.262	UCP-ADV-500-RED	Advance License Redundant 500. Advance Maintenance Redundant required.	
1.1.263	UCP-ADV-50000	Advance License 50000	

1.1.264	UCP-ADV-5000	Advance License 5000. Virtual Machine and Advance Maintenance required.	
1.1.265	UCP-ADV-500	Advance License 500. Virtual Machine and Advance Maintenance required.	
1.1.266	UCP-ADV-50K-RED	Advance License Redundant 50000	
1.1.267	UCP-ADV-5K-RED	Advance License Redundant 5000. Advance Maintenance Redundant required.	
1.1.268	UCP-ADV-FLX1-1W	Advance License On demand Max Server Capacity - One Week for VM2000	
1.1.269	UCP-ADV-FLX2-1W	Advance License On demand Max Server Capacity - One Week for VM5000	
1.1.270	UCP-ADV-FLX3-1W	Advance License On demand Max Server Capacity - One Week for VM10000	
1.1.271	UCP-ADV-FLX4-1W	Advance License On demand Max Server Capacity - One Week for VM20000	
1.1.272	UCP-ADV-1000-M3	3 Year Partner Support Maintenance for UCOPIA Advance 1000. Includes 24x7 phone support, problem diagnosis, access to support portal, software updates and upgrades. Virtual Machine and Advance License required.	
1.1.273	UCP-ADV-1000-M5	5 Year Partner Support Maintenance for UCOPIA Advance 1000. Includes 24x7 phone support, problem diagnosis, access to support portal, software updates and upgrades. Virtual Machine and Advance License required.	
1.1.274	UCP-ADV-10K-M3	3 Year Partner Support Maintenance for UCOPIA Advance 10000. Includes 24x7 phone support, problem diagnosis, access to support portal, software updates and upgrades. Virtual Machine and Advance License required.	
1.1.275	UCP-ADV-10K-M5	5 Year Partner Support Maintenance for UCOPIA Advance 10000. Includes 24x7 phone support, problem diagnosis, access to support portal, software updates and upgrades. Virtual Machine and Advance License required.	
1.1.276	UCP-ADV-10KEXTM	1 Yr Renewal Partner Support Maintenance for UCOPIA Advance 10000. Includes 24x7 phone support, problem diagnosis, access to support portal, software updates and upgrades.	
1.1.277	UCP-ADV-1KEXTM	1 Yr Renewal Partner Support Maintenance for UCOPIA Advance 1000. Includes 24x7 phone support, problem diagnosis, access to support portal, software updates and upgrades.	
Subtotal Ex Vat			
Network Management			
1.1.278	OV4-START-NEW	OV4-START-NEW - OV2500 NMS-Starter Pack-NEW R4. Incl 10 ALU-E device lic. (1xlic. /switch in stack/VC config); 10 3rd Party Lic. (1x lic. / mgmt IP); VMM lic. for 10vm. Use EXT. OV-NM-EX-x-N / OV-VMM-x-N for add.; DEVICE/VMM lic.	
1.1.279	OV4-NMS-HA	OV4-NMS-HA - OmniVista 2500 HA (High Availability) Software license. Apply to OV2500 Serv. Pack NEW. Provide HA services for Single Instance OV2500 NMS platform including UPAM Service.	
1.1.280	OV-NM-EX-10-N	OV-NM-EX-10-N OV2500 NM R4 Lic - Lic. 10 NM-NEW. Incl 10 ALU-E device lic. (1xlic. /switch in stack/VC config); 10 3rd Party Lic.	

		(1x lic. / mgmt IP). Apply to OV2500 Service Pack. Used w/ other NM ext.	
1.1.281	OV-NM-EX-20-N	OV-NM-EX-20-N OV2500 NM R4 Lic - Lic. 20 NM-NEW. Incl 20 ALU-E device lic. (1xlic. /switch in stack/VC config); 20 3rd Party Lic. (1x lic. / mgmt IP). Apply to OV2500 Service Pack. Used w/ other NM ext.	
1.1.282	OV-NM-EX-50-N	OV-NM-EX-50-N OV2500 NM R4 Lic - Lic. 50 NM-NEW. Incl 50 ALU-E device lic. (1xlic. /switch in stack/VC config); 50 3rd Party Lic. (1x lic. / mgmt IP). Apply to OV2500 Service Pack. Used w/ other NM ext.	
1.1.283	OV-NM-EX-100-N	OV-NM-EX-100-N OV2500 NM R4 Lic - Lic. 100 NM-NEW. Incl 100 ALU-E device lic. (1xlic. /switch in stack/VC config); 100 3rd Party Lic. (1x lic. / mgmt IP). Apply to OV2500 Service Pack. Used w/ other NM ext.	
1.1.284	OV-NM-EX-500-N	OV-NM-EX-500-N OV2500 NM R4 Lic - Lic. 500 NM-NEW. Incl 500 ALU-E device lic. (1xlic. /switch in stack/VC config); 500 3rd Party Lic. (1x lic. / mgmt IP). Apply to OV2500 Service Pack. Used w/ other NM ext.	
1.1.285	OV-NM-EX-1K-N	OV-NM-EX-1K-N OV2500 NM R4 Lic - Lic. 1000 NM-NEW. Incl 1000 ALU-E device lic. (1xlic. /switch in stack/VC config); 1000 3rd Party Lic. (1x lic. / mgmt IP). Apply to OV2500 Service Pack. Used w/ other NM ext.	
1.1.286	OV-VMM-200-N	OV-VMM-200-N - OV2500 VMM R4 app - Lic. 200 vm-NEW Deployment. Lic. for 200 VM. Suppl. lic. for VMM. Apply to OV2500 Service Pack NEW up to max. 5000 VMS per deployment. Combined w/ other VMM ext.	
1.1.287	OV-VMM-500-N	OV-VMM-500-N - OV2500 VMM R4 app - Lic. 500 vm-NEW Deployment. Lic. for 500 VM. Suppl. lic. for VMM. Apply to OV2500 Service Pack NEW up to max. 5000 VMS per deployment. Combined w/ other VMM ext.	
1.1.288	OV-VMM-1K-N	OV-VMM-1K-N - OV2500 VMM R4 app - Lic. 1000 vm-NEW Deployment. Lic. for 1000 VM. Suppl. lic. for VMM. Apply to OV2500 Service Pack NEW up to max. 5000 VMS per deployment. Combined w/ other VMM ext.	
1.1.289	OV-AP-NM-1-N	OV-AP-NM-1-N OV2500 NM R4 Lic - Lic. 1 AP-NEW for 1/Single ALU-E Stellar AP lic. (1lic. /Stellar AP)- Covers all Stellar AP models (Series 11 & 12xx). Apply to OV2500 Serv. Pack. Used w/other NM ext.	
1.1.290	OV-AP-NM-10-N	OV-AP-NM-10-N OV2500 NM R4 Lic - Lic. 10 AP-NEW for 10 ALU-E Stellar AP lic. (1lic. /Stellar AP)- Covers all Stellar AP models (Series 11 & 12xx). Apply to OV2500 Serv. Pack. Used w/other NM ext.	
1.1.291	OV-AP-NM-50-N	OV-AP-NM-50-N OV2500 NM R4 Lic - Lic. 50 AP-NEW for 10 ALU-E Stellar AP lic. (1lic. /Stellar AP)- Covers all Stellar AP models (Series 11 & 12xx). Apply to OV2500 Serv. Pack. Used w/other NM ext.	
1.1.292	OV-AP-NM-100-N	OV-AP-NM-100-N OV2500 NM R4 Lic - Lic. 100 AP-NEW for 10 ALU-E Stellar AP lic. (1lic. /Stellar AP)- Covers all Stellar AP models (Series 11 & 12xx). Apply to OV2500 Serv. Pack. Used w/other NM ext.	
1.1.293	OV-AP-NM-500-N	OV-AP-NM-500-N OV2500 NM R4 Lic - Lic. 500 AP-NEW for 10 ALU-E Stellar AP lic. (1lic. /Stellar AP)- Covers all Stellar AP models (Series 11 & 12xx). Apply to OV2500 Serv. Pack. Used w/other NM ext.	
1.1.294	OV-AP-NM-20-N	OV-AP-NM-20-N OV2500 NM R4 Lic - Lic. 20 AP-NEW for 10 ALU-E Stellar AP lic. (1lic. /Stellar AP)- Covers all Stellar AP models	

		(Series 11 & 12xx). Apply to OV2500 Serv. Pack. Used w/other NM ext.	
1.1.295	OV-AP-EX-1K-N	OV-AP-NM-1K-N OV2500 NM R4 Lic - Lic. 1000 AP-NEW for 1000 ALU-E Stellar AP lic. (1lic. /Stellar AP)- Covers all Stellar AP models (Series 11 & 12xx). Apply to OV2500 Serv. Pack. Used w/other NM ext.	
1.1.296	OV-BYOD-20-N	OV-BYOD-20-N - OV2500 BYOD R4 Lic. - Lic 20 BOYD-NEW for BYOD Access Policy Manager License to enable 20 BYOD concurrent active devices on ALU-E Network. Used w/other GA ext.	
1.1.297	OV-BYOD-50-N	OV-BYOD-50-N - OV2500 BYOD R4 Lic. - Lic 50 BOYD-NEW for BYOD Access Policy Manager License to enable 50 BYOD concurrent active devices on ALU-E Network. Used w/other GA ext.	
1.1.298	OV-BYOD-100-N	OV-BYOD-100-N - OV2500 BYOD R4 Lic. - Lic 100 BOYD-NEW for BYOD Access Policy Manager License to enable 100 BYOD concurrent active devices on ALU-E Network. Used w/other GA ext.	
1.1.299	OV-BYOD-500-N	OV-BYOD-500-N - OV2500 BYOD R4 Lic. - Lic 500 BOYD-NEW for BYOD Access Policy Manager License to enable 500 BYOD concurrent active devices on ALU-E Network. Used w/other GA ext.	
1.1.300	OV-BYOD-1K-N	OV-BYOD-1k-N - OV2500 BYOD R4 Lic. - Lic 1000 BOYD-NEW for BYOD Access Policy Manager License to enable 1000 BYOD concurrent active devices on ALU-E Network. Used w/other GA ext.	
1.1.301	OV-GA-20-N	OV-GA-20-N - OV2500 GA R4 Lic. - Lic. 20 GA-NEW for Guest Access Policy Manager enable 20 Guest Access concurrent active devices on ALU-E Network. Used w/other GA ext.	
1.1.302	OV-GA-50-N	OV-GA-50-N - OV2500 GA R4 Lic. - Lic. 50 GA-NEW for Guest Access Policy Manager enable 50 Guest Access concurrent active devices on ALU-E Network. Used w/other GA ext.	
1.1.303	OV-GA-100-N	OV-GA-100-N - OV2500 GA R4 Lic. - Lic. 100 GA-NEW for Guest Access Policy Manager enable 100 Guest Access concurrent active devices on ALU-E Network. Used w/other GA ext.	
1.1.304	OV-GA-500-N	OV-GA-500-N - OV2500 GA R4 Lic. - Lic. 500 GA-NEW for Guest Access Policy Manager enable 500 Guest Access concurrent active devices on ALU-E Network. Used w/other GA ext.	
1.1.305	OV-GA-1K-N	OV-GA-1k-N - OV2500 GA R4 Lic. - Lic. 1000 GA-NEW for Guest Access Policy Manager enable 1000 Guest Access concurrent active devices on ALU-E Network. Used w/other GA ext.	
1.1.306	PW1N-OV4START	1YR 24X7 Partner SUPPORT SOFTWARE for OV2500 NMS - RELEASE 4 OV4-START-NEW/-UPG. Includes 24x7 Remote Tel. Support, Problem Diagnosis, SW Updates, Support portal access. Must submit \$0 PO. Maintenance to be ordered on all OV Model No for each OV server.	
1.1.307	PW1R-OVNEMX	1YR Renewal 24X7 Partner SUPPORT Software for OV2500 NMS - RELEASE 4 OV-NM-EX-10-x,-EX-20-x,-EX-50-x.Includes 24x7 Remote Tel. Support, Problem Diagnosis, SW Updates, Support portal access Maintenance to be ordered on all OV Model No for each OV server.	
1.1.308	PW1R-OVNEMX100	1YR Renewal 24X7 Partner SUPPORT Software for OV2500 NMS - RELEASE 4 OV-NM-EX-100-x. Includes 24x7 Remote Tel. Support, Problem Diagnosis, SW Updates, Support portal access Maintenance to be ordered on all OV Model No for each OV server.	
1.1.309	PW1R-OVNEMX1K	1YR Renewal 24X7 Partner SUPPORT Software for OV2500 NMS - RELEASE 4 OV-NM-EX-1K-x. Includes 24x7 Remote Tel Support, Problem Diagnosis, SW Updates, Support portal access Maintenance to be ordered on all OV Model No for each OV server.	

1.1.310	PW1R-OVNMEX500	1YR Renewal 24X7 Partner SUPPORT Software for OV2500 NMS - RELEASE 4 OV-NM-EX-500-x. Includes 24x7 Remote Tel Support, Problem Diagnosis, SW Updates, Support portal access Maintenance to be ordered on all OV Model No for each OV server.	
1.1.311	PW1R-OVMMM	1YR Renewal 24X7 Partner SUPPORT Software for OV2500 NMS - RELEASE 4 OV-VMM-200-x, OV-VMM-500-x. Includes 24x7 Remote Tel Support, Problem Diagnosis, SW Updates, Support portal access Maintenance to be ordered on all OV Model No for each OV server.	
1.1.312	PW1R-OVMMM1K	1YR Renewal 24X7 Partner SUPPORT Software for OV2500 NMS - RELEASE 4 OV-VMM-1K-N and OV-VMM-1K-U. Includes 24x7 Remote Tel Support, Problem Diagnosis, SW Updates, Support portal access Maintenance to be ordered on all OV Model No for each OV server.	
1.1.313	PW1R-OVAPNM100N	1YR Renewal 24X7 Partner SUPPORT Software for OV2500 NMS - RELEASE 4 OV-AP-NM-100-N. Includes 24x7 Remote Tel Support, Problem Diagnosis, SW Updates, Support portal access Maintenance to be ordered on all OV Model No for each OV server.	
1.1.314	PW1R-OVAPNM10N	1YR Renewal 24X7 Partner SUPPORT Software for OV2500 NMS - RELEASE 4 OV-AP-NM-10-N. Includes 24x7 Remote Tel Support, Problem Diagnosis, SW Updates, Support portal access Maintenance to be ordered on all OV Model No for each OV server.	
1.1.315	PW1R-OVAPNM20N	1YR Renewal 24X7 Partner SUPPORT Software for OV2500 NMS - RELEASE 4 OV-AP-NM-20-N. Includes 24x7 Remote Tel Support, Problem Diagnosis, SW Updates, Support portal access Maintenance to be ordered on all OV Model No for each OV server.	
1.1.316	PW1R-OVAPNM500N	1YR Renewal 24X7 Partner SUPPORT Software for OV2500 NMS - RELEASE 4 OV-AP-NM-500-N. Includes 24x7 Remote Tel Support, Problem Diagnosis, SW Updates, Support portal access Maintenance to be ordered on all OV Model No for each OV server.	
1.1.317	PW1R-OVAPNM50N	1YR Renewal 24X7 Partner SUPPORT Software for OV2500 NMS - RELEASE 4 OV-AP-NM-50-N. Includes 24x7 Remote Tel Support, Problem Diagnosis, SW Updates, Support portal access Maintenance to be ordered on all OV Model No for each OV server.	
1.1.318	PW1R-OVBYOD100N	1YR Renewal 24X7 Partner SUPPORT Software for OV2500 NMS - RELEASE 4 OV-BYOD-100-N. Includes 24x7 Remote Tel Support, Problem Diagnosis, SW Updates, Support portal access Maintenance to be ordered on all OV Model No for each OV server.	
1.1.319	PW1R-OVBYOD1KN	1YR Renewal 24X7 Partner SUPPORT Software for OV2500 NMS - RELEASE 4 OV-BYOD-1K-N. Includes 24x7 Remote Tel Support, Problem Diagnosis, SW Updates, Support portal access Maintenance to be ordered on all OV Model No for each OV server.	
1.1.320	PW1R-OVBYOD20N	1YR Renewal 24X7 Partner SUPPORT Software for OV2500 NMS - RELEASE 4 OV-BYOD-20-N. Includes 24x7 Remote Tel Support, Problem Diagnosis, SW Updates, Support portal access Maintenance to be ordered on all OV Model No for each OV server.	
1.1.321	PW1R-OVBYOD500N	1YR Renewal 24X7 Partner SUPPORT Software for OV2500 NMS - RELEASE 4 OV-BYOD-500-N. Includes 24x7 Remote Tel Support, Problem Diagnosis, SW Updates, Support portal access Maintenance to be ordered on all OV Model No for each OV server.	
1.1.322	PW1R-OVBYOD50N	1YR Renewal 24X7 Partner SUPPORT Software for OV2500 NMS - RELEASE 4 OV-BYOD-50-N. Includes 24x7 Remote Tel Support, Problem Diagnosis, SW Updates, Support portal access Maintenance to be ordered on all OV Model No for each OV server.	
1.1.323	PW1R-OVGA100N	1YR Renewal 24X7 Partner SUPPORT Software for OV2500 NMS - RELEASE 4 OV-GA-100-N. Includes 24x7 Remote Tel Support,	

		Problem Diagnosis, SW Updates, Support portal access Maintenance to be ordered on all OV Model No for each OV server.	
1.1.324	PW1R-OVGA1KN	1YR Renewal 24X7 Partner SUPPORT Software for OV2500 NMS - RELEASE 4 OV-GA-1K-N. Includes 24x7 Remote Tel Support, Problem Diagnosis, SW Updates, Support portal access Maintenance to be ordered on all OV Model No for each OV server.	
1.1.325	PW1R-OVGA20N	1YR Renewal 24X7 Partner SUPPORT Software for OV2500 NMS - RELEASE 4 OV-GA-20-N. Includes 24x7 Remote Tel Support, Problem Diagnosis, SW Updates, Support portal access Maintenance to be ordered on all OV Model No for each OV server.	
1.1.326	PW1R-OVGA500N	1YR Renewal 24X7 Partner SUPPORT Software for OV2500 NMS - RELEASE 4 OV-GA-500-N. Includes 24x7 Remote Tel Support, Problem Diagnosis, SW Updates, Support portal access Maintenance to be ordered on all OV Model No for each OV server.	
1.1.327	PW1R-OVGA50N	1YR Renewal 24X7 Partner SUPPORT Software for OV2500 NMS - RELEASE 4 OV-GA-50-N. Includes 24x7 Remote Tel Support, Problem Diagnosis, SW Updates, Support portal access Maintenance to be ordered on all OV Model No for each OV server.	
1.1.328	PW3N-OVAPNM1N	3YR PARTNER SUPPORT SW OV-AP-NM-1-N	
1.1.329	PW3N-OVAPNM50N	3YR 24X7 Partner SUPPORT Software for OV2500 NMS - RELEASE 4 OV-AP-NM-50-N. Includes 24x7 Remote Tel Support, Problem Diagnosis, SW Updates, Support portal access Maintenance to be ordered on all OV Model No for each OV server.	
1.1.330	PW3N-OVAPNM100N	3YR 24X7 Partner SUPPORT Software for OV2500 NMS - RELEASE 4 OV-AP-NM-100-N. Includes 24x7 Remote Tel Support, Problem Diagnosis, SW Updates, Support portal access Maintenance to be ordered on all OV Model No for each OV server.	
1.1.331	PW3N-OVAPNM500N	3YR 24X7 Partner SUPPORT Software for OV2500 NMS - RELEASE 4 OV-AP-NM-500-N. Includes 24x7 Remote Tel Support, Problem Diagnosis, SW Updates, Support portal access Maintenance to be ordered on all OV Model No for each OV server.	
1.1.332	PW3N-OVBYOD100N	3YR 24X7 Partner SUPPORT Software for OV2500 NMS - RELEASE 4 OV-BYOD-100-N. Includes 24x7 Remote Tel Support, Problem Diagnosis, SW Updates, Support portal access Maintenance to be ordered on all OV Model No for each OV server.	
1.1.333	PW3N-OVBYOD500N	3YR 24X7 Partner SUPPORT Software for OV2500 NMS - RELEASE 4 OV-BYOD-500-N. Includes 24x7 Remote Tel Support, Problem Diagnosis, SW Updates, Support portal access Maintenance to be ordered on all OV Model No for each OV server.	
1.1.334	PW3N-OVBYOD1KN	3YR 24X7 Partner SUPPORT Software for OV2500 NMS - RELEASE 4 OV-BYOD-1K-N. Includes 24x7 Remote Tel Support, Problem Diagnosis, SW Updates, Support portal access Maintenance to be ordered on all OV Model No for each OV server.	
1.1.335	PW3N-OVGA50N	3YR 24X7 Partner SUPPORT Software for OV2500 NMS - RELEASE 4 OV-GA-50-N. Includes 24x7 Remote Tel Support, Problem Diagnosis, SW Updates, Support portal access Maintenance to be ordered on all OV Model No for each OV server.	
1.1.336	PW3N-OVGA100N	3YR 24X7 Partner SUPPORT Software for OV2500 NMS - RELEASE 4 OV-GA-100-N. Includes 24x7 Remote Tel Support, Problem Diagnosis, SW Updates, Support portal access Maintenance to be ordered on all OV Model No for each OV server.	
1.1.337	PW3N-OVGA500N	3YR 24X7 Partner SUPPORT Software for OV2500 NMS - RELEASE 4 OV-GA-500-N. Includes 24x7 Remote Tel Support, Problem	

		Diagnosis, SW Updates, Support portal access Maintenance to be ordered on all OV Model No for each OV server.	
1.1.338	PW3N-OVGA1KN	3YR 24X7 Partner SUPPORT Software for OV2500 NMS - RELEASE 4 OV-GA-1K-N. Includes 24x7 Remote Tel Support, Problem Diagnosis, SW Updates, Support portal access Maintenance to be ordered on all OV Model No for each OV server.	
1.1.339	PW3N-OVNMEEX	3YR 24X7 Partner SUPPORT Software for OV2500 NMS - RELEASE 4 OV-NM-EX-10-x,-EX-20-x,-EX-50-x.Includes 24x7 Remote Tel. Support, Problem Diagnosis, SW Updates, Support portal access Maintenance to be ordered on all OV Model No for each OV server.	
1.1.340	PW3N-OVNMEEX100	3YR 24X7 Partner SUPPORT Software for OV2500 NMS - RELEASE 4 OV-NM-EX-100-x. Includes 24x7 Remote Tel. Support, Problem Diagnosis, SW Updates, Support portal access Maintenance to be ordered on all OV Model No for each OV server.	
1.1.341	PW3N-OVNMEEX500	3YR 24X7 Partner SUPPORT Software for OV2500 NMS - RELEASE 4 OV-NM-EX-500-N and OV-NM-EX-500-U. Includes 24x7 Remote Tel Support, Problem Diagnosis, SW Updates, Support portal access Maintenance to be ordered on all OV Model No for each OV server.	
1.1.342	PW3N-OVNMEEX1K	3YR 24X7 Partner SUPPORT Software for OV2500 NMS - RELEASE 4 OV-NM-EX-1K-x. Includes 24x7 Remote Tel Support, Problem Diagnosis, SW Updates, Support portal access Maintenance to be ordered on all OV Model No for each OV server.	
1.1.343	PW3N-OVVMM1K	3YR 24X7 Partner SUPPORT Software for OV2500 NMS - RELEASE 4 OV-VMM-1K-N and OV-VMM-1K-U. Includes 24x7 Remote Tel Support, Problem Diagnosis, SW Updates, Support portal access Maintenance to be ordered on all OV Model No for each OV server.	
1.1.344	PW3N-OVVMM	3YR 24X7 Partner SUPPORT Software for OV2500 NMS - RELEASE 4 OV-VMM-200-N, OV-VMM-500-N, OV-VMM-200-U, and OV-VMM-500-U. If Maintenance is ordered on one OV Release 4 Model No it must be ordered on all OV Model No for each OV server.	
1.1.345	PS-PER20-NETOS	Proactive Engineering Resource Twenty Day Service for Network solutions. Twenty 20) days onsite to be used within a twelve 12) month period.	
1.1.346	PS-PER20-NETRMT	Proactive Engineering Resource Twenty Day Remote Service for Network solutions. Twenty 20) days remote to be used within a twelve 12) month period.	
1.1.347	PS-PER5-NETOS	Proactive Engineering Resource Five Day Service for Network solutions. Five 5) days onsite to be used within a twelve 12) month period.	
1.1.348	PS-PER5-NETRMT	Proactive Engineering Resource Five Day Remote Service for Network solutions. Five 5) days remote to be used within a twelve 12) month period.	
Subtotal Ex Vat			
MPLS			
1.1.349	3HE11175AA	7750 SR - BNDL - 7750 SR-7-B Chassis + SFM5/CPM5	
1.1.350	3HE09261AA	7750 SR - SFM - 7750 SR SFM5-7 + CPM5	
1.1.351	3HE00107TA	7750 SR - OS - 7750 SR-7/12/12e R15.0 OS LICENSE	
1.1.352	3HE08424AA	7750 SR - IMM - 7x50 40-PT 10GE SFP+ - L3HQ IMM	
1.1.353	3HE07305AA	7750 SR - IMM - 7x50 20-PT 10GE SFP+ - L3HQ	

1.1.354	3HE08020AA	7750 SR - IMM -7750 1-PT 100GE + 10-PT 10GE - L3HQ	
1.1.355	3HE09645AA	7750 SR - IMM - 7x50 4-PT 100GE CFP4 - L3HQ IMM	
1.1.356	3HE03065BA	7750 SR - REC -SR/ESS-7 AC PWR BNDL - INTL	
1.1.357	3HE09245AA	7750 SR-a - BNDL - 7750SR-a8 AC Bundle	
1.1.358	3HE09201AA	7750 SR-a - CPM - 7750 SR-a	
1.1.359	3HE09202AA	7750 SR-a - IOM - 7750 SR-a - L3HQ	
1.1.360	3HE09203AA	7750 SR-a - MDA-a XP - 7750 SR 1-PT 100G CFP	
1.1.361	3HE09204AA	7750 SR-a - MDA-a XP - 7750 SR 10-PT 10GE SFP+	
1.1.362	3HE09206AA	7750 SR-a - MDA-a - 7750 SR 20-PT 10/100/1000TX RJ45	
1.1.363	3HE09550TA	7750 SR-a - OS - 7750 SRa4/8 R15.0 OS LICENSE	
1.1.364	3HE01881CA	7750 SR-7, 7450 ESS-7 Ground and Power Lug Kit for Qty=5 shelves, spare, INCLUDES 2 AWG Ground Lugs 5), Ground Screws 10), 2 AWG DC Power Lugs 20).	
1.1.365	3HE07158BA	IMM - 7x50 12-PT 10GE MultiCore SFP+ L3BQ	
1.1.366	3HE07303AA	IMM - 7x50 2-PT 100GE CFP – L3HQ	
1.1.367	3HE10717BA	IOM - 7750 SR IOM4-e-B L3BQ	
1.1.368	3HE10429AA	MDA-e - 7750 SR 6-port 10GE SFP+ MDA-e	
1.1.369	3HE09649AA	MDA-e - 7750 SR 10-port 10GE SFP+ MDA-e	
1.1.370	3HE09881AA	MDA-e - 7750 SR 1-port 100GE CFP2 MDA-e	
1.1.371	3HE10642AA	MDA-e - 7750 SR 40cSFP/20SFP GE MDA-e	
1.1.372	3HE11030AA	MDA-e 2-PT 100GE CFP4 MDA-e	
1.1.373	3HE11031AA	MDA-e 2-PT 100GE QSFP28 MDA-e	
1.1.374	3HE00190AA	FLT - 7x50 SR/ESS-7 AIR FILTER	
1.1.375	3HE06791AA	7705 SAR - SAR-8 SHELF V2	
1.1.376	3HE06792EA	7705 SAR - Fan Module (SAR-8 Shelf V2) Ext Temp	
1.1.377	3HE02774AB	7705 SAR - CONTROL SWITCH MODULE V2 (CSMV2)	
1.1.378	3HE05838AA	7705 SAR - 250W 120/240V AC power converter	
1.1.379	3HE05837BA	7705 SAR - 7705 AC power converter pigtail - O-ring	
1.1.380	3HE02785KA	7705 SAR - SAR RELEASE 8.0 BASIC OS UPGRADE	
1.1.381	3HE09259EA	7705 SAR - RTU - 7705 SAR-8 NGE LICENSE	
1.1.382	3HE06151AC	7705 SAR - 8 PORT GE SFP CARD V3 (-48/+24 VDC)	
1.1.383	3HE07943AA	7705 SAR - 2P 10GE+4P GE 10G ETH CARD (-48/+24VDC)	
1.1.384	3HE02775AB	7705 SAR - 16 PORT T1/E1 ASAP CARD V2 (-48/+24 VDC)	

1.1.385	3HE03391AA	7705 SAR - 12 PORT SERIAL DATA CARD	
1.1.386	3HE04508AB	7705 SAR - X.21 Cable - 2M	
1.1.387	3HE04512AA	7705 SAR - 6 PORT X.21 DISTRIBUTION PANEL	
1.1.388	3HE10413AD	7210 SAS - SYS - 7210 SAS-Mxp 22F 2C 4SFP+ AC	
1.1.389	3HE10417BA	7210 SAS - OS-7210 SAS-Mxp Rel-9 or upg to rel-9	
1.1.390	3HE08364AF	7210 SAS - SYS - 7210 SAS-T 12F 10T 4XFP AC w Power Cord	
1.1.391	3HE09507CA	7210 SAS - OS -7210 SAS-T Rel 9.x or upg to rel 9.x	
1.1.392	3HE10493AA	7210 SAS - SYS - 7210 SAS-Sx 22F2C4SFP+	
1.1.393	3HE10866BA	7210 SAS - OS-7210 SAS-S/Sx 1/10 Rel-9 Base Lic S-A	
1.1.394	3HE11470AA	7210 SAS - RTU-7210 SAS-Sx 10/100 IP svc Lic S-A	
1.1.395	3HE04414AB	7210 SAS - PS-7210 SAS E/M AC PS (NON-ETR) 200 Watt	
1.1.396	3HE05580AB	7210 SAS - PS - 7210 SAS-M/T/Mxp ETR (200W) AC Power Supply	
1.1.397	3HE04416AA	7210 SAS - FAN - 7210 SAS E/M/T Fan Tray (Spare)	
1.1.398	3HE10498AA	7210 SAS - PS – 7210 SAS-Sx Power Supply AC (F)	
1.1.399	3HE02946AA	SR/ESS AC Power Cable 220V for SR/ESS 2500 Watt AC Power Supply for the SR/ESS AC Split Power Shelf, Blunt Cut – International	
1.1.400	3HE03397AA	T1/E1 cable for distribution panel 1m	
1.1.401	3HE11800CA	NSP 17: NFM-P Premium base	
1.1.402	3HE11802CA	NSP 17: NFM-P Premium LP	
1.1.403	3HE11803CA	NSP 17: NFM-P High Availability LP	
1.1.404	3HE11810CA	NSP 17: NFM-P AA Analytics Base	
1.1.405	3HE10824QA	5620 SAM R14 PREMIUM SUITE LICENSE POINT	
1.1.406	301 013 231	IP routing TS	
1.1.407	301 048 468	IP routing RES	
1.1.408	3HE05610AC	IP Routing SSP	
Subtotal Ex Vat			
FIREWALLS			
1.1.409	FG-100F	22x GE RJ45 ports (including 2x WAN ports, 1x DMZ port, 1x Mgmt port, 2x HA ports, 16x switch ports with 4 SFP port shared media), 4 SFP ports, 2x 10 GE SFP+ FortiLinks, dual power supplies redundancy). Firewall 7.4 Gbps, IPS 500Mbps, NGFW 360Mbps, Threat Protection 250 Mbps.	
1.1.410		FG-100F - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 12 Months	

1.1.411		FG-100F - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 24 Months	
1.1.412		FG-100F - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 36 Months	
1.1.413		FG-100F - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 12 Months	
1.1.414		FG-100F - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 24 Months	
1.1.415		FG-100F - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 36 Months	
1.1.416		FG-100F - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 12 Months	
1.1.417		FG-100F - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 24 Months	
1.1.418		FG-100F - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 36 Months	
1.1.419		FG-100F - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 12 Months	
1.1.420		FG-100F - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 24 Months	
1.1.421		FG-100F - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 36 Months	
1.1.422		FG-100F - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 12 Months	
1.1.423		FG-100F - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 24 Months	
1.1.424		FG-100F - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 36 Months	
1.1.425	FG-101F	22x GE RJ45 ports (including 2x WAN ports, 1x DMZ port, 1x Mgmt port, 2x HA ports, 16x switch ports with 4 SFP port shared media), 4 SFP ports, 2x 10 GE SFP+ FortiLinks, 480GB onboard storage, dual power supplies redundancy). Firewall 7.4 Gbps, IPS 500Mbps, NGFW 360Mbps, Threat Protection 250 Mbps.	
1.1.426		FG-101F - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 12 Months	
1.1.427		FG-101F - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 24 Months	

1.1.428		FG-101F - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 36 Months	
1.1.429		FG-101F - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 12 Months	
1.1.430		FG-101F - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 24 Months	
1.1.431		FG-101F - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 36 Months	
1.1.432		FG-101F - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 12 Months	
1.1.433		FG-101F - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 24 Months	
1.1.434		FG-101F - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 36 Months	
1.1.435		FG-101F - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 12 Months	
1.1.436		FG-101F - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 24 Months	
1.1.437		FG-101F - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 36 Months	
1.1.438		FG-101F - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 12 Months	
1.1.439		FG-101F - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 24 Months	
1.1.440		FG-101F - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 36 Months	
1.1.441	FG-200E	18 x GE RJ45 (including 2 x WAN ports, 1 x MGMT port, 1 X HA port, 14 x switch ports), 4 x GE SFP slots. SPU NP6Lite and CP9 hardware accelerated). Firewall 20 Gbps, IPS 2.2 Gbps, NGFW 1.8 Gbps, Threat Protection 1.2 Gbps.	
1.1.442		FG-200E - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 12 Months	
1.1.443		FG-200E - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 24 Months	
1.1.444		FG-200E - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 36 Months	
1.1.445		FG-200E - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 12 Months	

1.1.446		FG-200E - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 24 Months	
1.1.447		FG-200E - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 36 Months	
1.1.448		FG-200E - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 12 Months	
1.1.449		FG-200E - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 24 Months	
1.1.450		FG-200E - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 36 Months	
1.1.451		FG-200E - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 12 Months	
1.1.452		FG-200E - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 24 Months	
1.1.453		FG-200E - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 36 Months	
1.1.454		FG-200E - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 12 Months	
1.1.455		FG-200E - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 24 Months	
1.1.456		FG-200E - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 36 Months	
1.1.457	FG-201E	18 x GE RJ45 (including 2 x WAN ports, 1 x MGMT port, 1 X HA port, 14 x switch ports), 4 x GE SFP slots, SPU NP6Lite and CP9 hardware accelerated, 480GB onboard SSD storage). Firewall 20 Gbps, IPS 2.2 Gbps, NGFW 1.8 Gbps, Threat Protection 1.2 Gbps.	
1.1.458		FG-201E - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 12 Months	
1.1.459		FG-201E - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 24 Months	
1.1.460		FG-201E - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 36 Months	
1.1.461		FG-201E - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 12 Months	
1.1.462		FG-201E - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 24 Months	
1.1.463		FG-201E - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 36 Months	

1.1.464		FG-201E - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 12 Months	
1.1.465		FG-201E - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 24 Months	
1.1.466		FG-201E - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 36 Months	
1.1.467		FG-201E - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 12 Months	
1.1.468		FG-201E - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 24 Months	
1.1.469		FG-201E - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 36 Months	
1.1.470		FG-201E - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 12 Months	
1.1.471		FG-201E - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 24 Months	
1.1.472		FG-201E - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 36 Months	
1.1.473	FG-200F	18 x GE RJ45 (including 1 x MGMT port, 1 X HA port, 16 x switch ports), 8 x GE SFP slots, 4 x 10GE SFP+ slots, NP6XLite and CP9 hardware accelerated). Firewall 27 Gbps, IPS 5 Gbps, NGFW 3.5 Gbps, Threat Protection 3 Gbps.	
1.1.474	FN-TRAN-GC	1 GE SFP RJ45 transceiver module.	
1.1.475	FN-TRAN-SX	1 GE SFP SX transceiver module.	
1.1.476	FN-TRAN-LX	1 GE SFP LX transceiver module.	
1.1.477	FN-TRAN-SFP+GC	10 GE SFP+ RJ45 transceiver module.	
1.1.478	FN-TRAN-SFP+SR	10 GE SFP+ transceiver module, short range.	
1.1.479	FN-TRAN-SFP+LR	10 GE SFP+ transceiver module, long range.	
1.1.480	FN-TRAN-SFP+ER	10 GE SFP+ transceivers, extended range.	
1.1.481		FG-200F - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 12 Months	
1.1.482		FG-200F - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 24 Months	

1.1.483		FG-200F - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 36 Months	
1.1.484		FG-200F - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 12 Months	
1.1.485		FG-200F - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 24 Months	
1.1.486		FG-200F - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 36 Months	
1.1.487		FG-200F - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 12 Months	
1.1.488		FG-200F - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 24 Months	
1.1.489		FG-200F - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 36 Months	
1.1.490		FG-200F - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 12 Months	
1.1.491		FG-200F - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 24 Months	
1.1.492		FG-200F - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 36 Months	
1.1.493		FG-200F - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 12 Months	
1.1.494		FG-200F - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 24 Months	
1.1.495		FG-200F - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 36 Months	
1.1.496	FG-201F	18 x GE RJ45 (including 1 x MGMT port, 1 X HA port, 16 x switch ports), 8 x GE SFP slots, 4 x 10GE SFP+ slots, NP6XLite and CP9 hardware accelerated, 480GB onboard SSD storage). Firewall 27 Gbps, IPS 5 Gbps, NGFW 3.5 Gbps, Threat Protection 3 Gbps.	
1.1.497		FG-201F - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 12 Months	
1.1.498		FG-201F - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 24 Months	
1.1.499		FG-201F - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 36 Months	
1.1.500		FG-201F - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 12 Months	

1.1.501		FG-201F - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 24 Months	
1.1.502		FG-201F - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 36 Months	
1.1.503		FG-201F - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 12 Months	
1.1.504		FG-201F - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 24 Months	
1.1.505		FG-201F - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 36 Months	
1.1.506		FG-201F - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 12 Months	
1.1.507		FG-201F - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 24 Months	
1.1.508		FG-201F - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 36 Months	
1.1.509		FG-201F - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 12 Months	
1.1.510		FG-201F - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 24 Months	
1.1.511		FG-201F - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 36 Months	
1.1.512	FG-600E	2x 10 GE SFP+ slots, 10x GE RJ45 ports (including 1x MGMT port, 1x HA port, 8x switch ports), 8x GE SFP slots, SPU NP6 and CP9 hardware accelerated). Firewall 36 Gbps, IPS 10 Gbps, NGFW 9.5 Gbps, Threat Protection 7 Gbps.	
1.1.513	SP-CABLE-ADASFP+	10 GE SFP+ Active Direct Attach Cable, 10m / 32.8 ft	
1.1.514	SP-FG300E-PS	Optional Power Supply - AC power supply for FG-300/301E, FG-400/401E, FG-500/501E, FG-600/601E, FAZ-200F/300F/800F and FMG-200F/300F.	
1.1.515		FG-600E - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 12 Months	
1.1.516		FG-600E - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 24 Months	
1.1.517		FG-600E - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 36 Months	

1.1.518		FG-600E - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 12 Months	
1.1.519		FG-600E - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 24 Months	
1.1.520		FG-600E - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 36 Months	
1.1.521		FG-600E - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 12 Months	
1.1.522		FG-600E - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 24 Months	
1.1.523		FG-600E - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 36 Months	
1.1.524		FG-600E - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 12 Months	
1.1.525		FG-600E - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 24 Months	
1.1.526		FG-600E - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 36 Months	
1.1.527		FG-600E - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 12 Months	
1.1.528		FG-600E - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 24 Months	
1.1.529		FG-600E - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 36 Months	
1.1.530	FG-601E	2 x 10GE SFP+ slots, 10 x GE RJ45 ports (including 1 x MGMT port, 1 X HA port, 8 x switch ports), 8 x GE SFP slots, SPU NP6 and CP9 hardware accelerated, 2x 240GB onboard SSD storage). Firewall 36 Gbps, IPS 10 Gbps, NGFW 9.5 Gbps, Threat Protection 7 Gbps.	
1.1.531		FG-601E - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 12 Months	
1.1.532		FG-601E - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 24 Months	
1.1.533		FG-601E - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 36 Months	
1.1.534		FG-601E - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 12 Months	
1.1.535		FG-601E - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 24 Months	

1.1.536		FG-601E - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 36 Months	
1.1.537		FG-601E - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 12 Months	
1.1.538		FG-601E - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 24 Months	
1.1.539		FG-601E - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 36 Months	
1.1.540		FG-601E - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 12 Months	
1.1.541		FG-601E - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 24 Months	
1.1.542		FG-601E - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 36 Months	
1.1.543		FG-601E - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 12 Months	
1.1.544		FG-601E - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 24 Months	
1.1.545		FG-601E - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 36 Months	
1.1.546	FG-1800F	4 x 40GE QSFP+ slots, 12 x 25GE SFP28 /10GE SFP+ slots, 2x10GE SFP+ HA slots, 8 x GE SFP slots, 18 x GE RJ45 ports. SPU NP7 and CP9 accelerated, dual AC power supplies). Firewall 198 Gbps, IPS 13 Gbps, NGFW 11 Gbps, Threat Protection 9.1 Gbps.	
1.1.547	LIC-FGT-HYPSC-1K2K	Hyperscale Firewall License FG1KF2KF - Hyperscale Firewall License for FortiGate FG1800F/FG1801F/ FG2600F/ FG2601F Series for hardware acceleration.	
1.1.548	SP-CABLE-ADASFP+	10 GE SFP+ Active Direct Attach Cable, 10m/32.8ft	
1.1.549	FN-TRAN-SFP+GC	10 GE Copper SFP+ RJ45 Transceiver (30m Range)	
1.1.550	FN-TRAN-SFP+ER	10 Gbase-ER SFP+ Transceivers	
1.1.551	FN-TRAN-SFP28-LR	25 GE SFP28 Transceiver Module, Long Range	
1.1.552	FN-TRAN-SFP28-SR	25 GE/10 GE Dual Rate SFP28 Transceiver Module, Short Range	
1.1.553	FN-TRAN-QSFP+SR	40 GE QSFP+ Transceivers, Short Range	

1.1.554	FG-TRAN-QSFP+SR-BIDI	40 GE QSFP+ Transceivers, Short Range, BiDi	
1.1.555	FN-TRAN-QSFP+LR	40 GE QSFP+ Transceivers, Long Range	
1.1.556	FG-TRAN-QSFP-4XSFP	40 GE QSFP+ to 4x 10 GE SFP+ optical breakout, 1 meter	
1.1.557	Rack Mount Sliding Rails	SP-FG3040B-RAIL - Rack mount sliding rails for FG-1000C/-DC, FG-1100/1101E, FG-1200D, FG-1500D/-DC, FG-1800F, FG-2000E, FG-2500E, FG-3040B/-DC, FG-3140B/-DC, FG-3240C/-DC, FG-3000D/-DC, FG-3100D/-DC, FG-3200D/-DC, FG-3400/3401E, FG-3600/3601E, FG-3700D/-DC, FG-3700DX, FG-3810D/-DC and FG-3950B/-DC.	
1.1.558	SP-FG1800F-PS	AC Power Supply - AC power supply for FG-1800/1801F.	
1.1.559		FG-1800F - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 12 Months	
1.1.560		FG-1800F - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 24 Months	
1.1.561		FG-1800F - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 36 Months	
1.1.562		FG-1800F - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 12 Months	
1.1.563		FG-1800F - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 24 Months	
1.1.564		FG-1800F - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 36 Months	
1.1.565		FG-1800F - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 12 Months	
1.1.566		FG-1800F - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 24 Months	
1.1.567		FG-1800F - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 36 Months	
1.1.568		FG-1800F - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 12 Months	
1.1.569		FG-1800F - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 24 Months	
1.1.570		FG-1800F - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 36 Months	
1.1.571		FG-1800F - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 12 Months	

1.1.572		FG-1800F - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 24 Months	
1.1.573		FG-1800F - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 36 Months	
1.1.574	FG-1801F	4 x 40GE QSFP+ slots, 12 x 25GE SFP28/10GE SFP+ slots, 2x10GE SFP+ HA slots, 8 x GE SFP slots, 18 x GE RJ45 ports, 2x1TB on board SSD storage. SPU NP7 and CP9 accelerated, dual AC power supplies). Firewall 198 Gbps, IPS 13 Gbps, NGFW 11 Gbps, Threat Protection 9.1 Gbps.	
1.1.575		FG-1801F - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 12 Months	
1.1.576		FG-1801F - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 24 Months	
1.1.577		FG-1801F - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 36 Months	
1.1.578		FG-1801F - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 12 Months	
1.1.579		FG-1801F - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 24 Months	
1.1.580		FG-1801F - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 36 Months	
1.1.581		FG-1801F - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 12 Months	
1.1.582		FG-1801F - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 24 Months	
1.1.583		FG-1801F - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 36 Months	
1.1.584		FG-1801F - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 12 Months	
1.1.585		FG-1801F - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 24 Months	
1.1.586		FG-1801F - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 36 Months	
1.1.587		FG-1801F - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 12 Months	
1.1.588		FG-1801F - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 24 Months	

1.1.589		FG-1801F - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 36 Months	
1.1.590	FG-2600F	4 x 100GE/40GE QSFP28 slots, 16 x 25GE/10GE SFP28 slots, 16 x 10GE RJ45 ports, 2x 10G SFP+ HA slots, 2x 1G MGMT ports, SPU NP7 and CP9 hardware accelerated, and dual AC power supplies). Firewall 198 Gbps, IPS 24 Gbps, NGFW 19 Gbps, Threat Protection 17 Gbps.	
1.1.591	LIC-FGT-HYPSC-1K2K	Hyperscale Firewall License FG1KF2KF - Hyperscale Firewall License for FortiGate FG1800F/FG1801F/ FG2600F/ FG2601F Series for hardware acceleration.	
1.1.592	FN-TRAN-LX	1 GE SFP LX Transceiver Module	
1.1.593	FN-TRAN-GC	1 GE SFP RJ45 Transceiver Module	
1.1.594	FN-TRAN-SX	1 GE SFP SX Transceiver Module	
1.1.595	FN-TRAN-SFP+GC	10 GE SFP+ RJ45 Transceiver Module	
1.1.596	FN-TRAN-SFP+SR	10 GE SFP+ Transceiver Module, Short Range	
1.1.597	FN-TRAN-SFP+LR	10 GE SFP+ Transceiver Module, Long Range	
1.1.598	FN-TRAN-SFP+ER	10 GE SFP+ Transceiver Module, Extended Range	
1.1.599	SP-CABLE-ADASFP+	10 GE SFP+ Active Direct Attach Cable, 10m / 32.8 ft	
1.1.600	FN-TRAN-SFP28-SR	25 GE SFP28 Transceiver Module, Short Range	
1.1.601	FN-TRAN-SFP28-LR	25 GE SFP28 Transceiver Module, Long Range	
1.1.602	FN-TRAN-QSFP+SR	40 GE QSFP+ Transceiver Module, Short Range	
1.1.603	FN-TRAN-QSFP+SR-BIDI	40 GE QSFP+ Transceiver Module, Short Range, BiDi	
1.1.604	FN-TRAN-QSFP+LR	40 GE QSFP+ Transceiver Module, Long Range	
1.1.605	FG-TRAN-QSFP-4XSFP	40 GE QSFP+ to 4x 10 GE SFP+ optical breakout, 1 meter	
1.1.606	FN-TRAN-QSFP28-SR	100 GE QSFP28 Transceivers, Short Range	
1.1.607	FN-TRAN-QSFP28-LR	100 GE QSFP28 Transceivers, Long Range	
1.1.608	FN-TRAN-QSFP28-CWDM4	100 GE QSFP28 Transceivers, CWDM4	

1.1.609	SP-FG3040B-RAIL	Rack mount sliding rails for FG-1000C/-DC, FG-1100/1101E, FG-1200D, FG-1500D/-DC, FG-1800F, FG-2000E, FG-2500E, FG-3040B/-DC, FG-3140B/-DC, FG-3240C/-DC, FG-3000D/-DC, FG-3100D/-DC, FG-3200D/-DC, FG-3400/3401E, FG-3600/3601E, FG-3700D/-DC, FG-3700DX, FG-3810D/-DC and FG-3950B/-DC.	
1.1.610	SP-FG1800F-PS	AC power supply for FG-1800/1801F and FG-2600/2601F.	
1.1.611		FG-2600F - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 12 Months	
1.1.612		FG-2600F - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 24 Months	
1.1.613		FG-2600F - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 36 Months	
1.1.614		FG-2600F - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 12 Months	
1.1.615		FG-2600F - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 24 Months	
1.1.616		FG-2600F - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 36 Months	
1.1.617		FG-2600F - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 12 Months	
1.1.618		FG-2600F - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 24 Months	
1.1.619		FG-2600F - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 36 Months	
1.1.620		FG-2600F - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 12 Months	
1.1.621		FG-2600F - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 24 Months	
1.1.622		FG-2600F - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 36 Months	
1.1.623		FG-2600F - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 12 Months	
1.1.624		FG-2600F - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 24 Months	
1.1.625		FG-2600F - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 36 Months	
1.1.626	FG-2601F	4 x 100GE/40GE QSFP28 slots, 16 x 25GE/10GE SFP28 slots, 16 x 10GE RJ45 ports, 2x 10G SFP+ HA slots, 2x 1G MGMT ports, SPU NP7 and CP9 hardware accelerated, and dual AC power supplies	

		with 2TB onboard storage). Firewall 198 Gbps, IPS 24 Gbps, NGFW 19 Gbps, Threat Protection 17 Gbps.	
1.1.627		FG-2601F - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 12 Months	
1.1.628		FG-2601F - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 24 Months	
1.1.629		FG-2601F - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 36 Months	
1.1.630		FG-2601F - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 12 Months	
1.1.631		FG-2601F - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 24 Months	
1.1.632		FG-2601F - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 36 Months	
1.1.633		FG-2601F - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 12 Months	
1.1.634		FG-2601F - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 24 Months	
1.1.635		FG-2601F - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 36 Months	
1.1.636		FG-2601F - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 12 Months	
1.1.637		FG-2601F - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 24 Months	
1.1.638		FG-2601F - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 36 Months	
1.1.639		FG-2601F - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 12 Months	
1.1.640		FG-2601F - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 24 Months	
1.1.641		FG-2601F - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 36 Months	
1.1.642	FG-3000D	16 x 10GE SFP+ slots, 2 x GE RJ45 Management, SPU NP6 and CP8 hardware accelerated, 480GB SSD onboard storage, and dual AC power supplies). Firewall 80 Gbps, IPS 23 Gbps, NGFW 22 Gbps, Threat Protection 13 Gbps.	
1.1.643	SP-FG3040B-RAIL	Rack mount sliding rails for FG-1000C/-DC, FG-1200D, FG-1500D, FG-3040B/-DC, FG-3140B/-DC, FG-3240C/-DC, FG-3000D, FG-	

		3100D, FG-3200D, FG-3700D/-DC, FG-3700DX, FG-3810D and FG-3950B/-DC.	
1.1.644	SP-FG3600C-PS	AC power supply for FG-3000D, FG-3100D, FG-3200D, FG-3600C and FG-3240C.	
1.1.645		FG-3000D - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 12 Months	
1.1.646		FG-3000D - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 24 Months	
1.1.647		FG-3000D - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 36 Months	
1.1.648		FG-3000D - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 12 Months	
1.1.649		FG-3000D - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 24 Months	
1.1.650		FG-3000D - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 36 Months	
1.1.651		FG-3000D - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 12 Months	
1.1.652		FG-3000D - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 24 Months	
1.1.653		FG-3000D - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 36 Months	
1.1.654		FG-3000D - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 12 Months	
1.1.655		FG-3000D - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 24 Months	
1.1.656		FG-3000D - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 36 Months	
1.1.657		FG-3000D - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 12 Months	
1.1.658		FG-3000D - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 24 Months	
1.1.659		FG-3000D - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 36 Months	
1.1.660	FG-3300E	4 x 40GE QSFP+ slots, 16 x 10GE SFP+ slots (including 14x ports, 2x HA ports), 14 x GE RJ45 ports (including 12 x ports, 2 x management ports), 4 x 10GBase-T ports, SPU NP6 and CP9 hardware accelerated, and dual AC power supplies). Firewall 160 Gbps, IPS 27 Gbps, NGFW 23 Gbps, Threat Protection 17 Gbps.	

1.1.661	SP-FG3040B-RAIL	Rack mount sliding rails for FG-1000C/-DC, FG-1200D, FG-1500D/DC, FG-3040B/-DC, FG-3140B/-DC, FG-3240C/-DC, FG-3000D/-DC, FG-3100D/-DC, FG-3200D/-DC, FG-3400/3401E, FG-3600/3601E, FG-3700D/-DC, FG-3700DX, FG-3810D/-DC and FG-3950B/-DC.	
1.1.662	SP-FG3800D-PS	AC power supply for FG-2200/2201E, FG-3300/3301E, FG-3400/3401E, FG-3600/3601E, FG-3700D, FG-3700D-NEBS, FG-3700DX, FG-3810D and FG-3815D.	
1.1.663	FN-TRAN-SFP+GC	10 GE SFP+ RJ45 Transceiver Module	
1.1.664	FN-TRAN-SFP+SR	10 GE SFP+ Transceiver Module, Short Range	
1.1.665	FN-TRAN-SFP+LR	10 GE SFP+ Transceiver Module, Long Range	
1.1.666	FN-TRAN-SFP+ER	10 GE SFP+ Transceiver Module, Extended Range	
1.1.667	SP-CABLE-ADASFP+	10 GE SFP+ Active Direct Attach Cable, 10m / 32.8 ft	
1.1.668	FN-TRAN-SFP28-SR	25 GE SFP28 Transceiver Module, Short Range	
1.1.669	FG-TRAN-SFP28-LR	25 GE SFP28 Transceiver Module, Long Range	
1.1.670	FN-TRAN-QSFP+SR	40 GE QSFP+ Transceiver Module, Short Range	
1.1.671	FG-TRAN-QSFP+SR-BIDI	40 GE QSFP+ Transceiver Module, Short Range BiDi	
1.1.672	FN-TRAN-QSFP+LR	40 GE QSFP+ Transceiver Module, Long Range	
1.1.673	FG-TRAN-QSFP+4XSFP	40 GE QSFP+ to 4x 10GE SFP+ Optical Breakout	
1.1.674	FG-TRAN-QSFP+4SFP-5	QSFP+ to 4xSFP+ Optical breakout 5m	
1.1.675		FG-3300E - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 12 Months	
1.1.676		FG-3300E - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 24 Months	
1.1.677		FG-3300E - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 36 Months	
1.1.678		FG-3300E - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 12 Months	
1.1.679		FG-3300E - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 24 Months	
1.1.680		FG-3300E - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 36 Months	

1.1.681		FG-3300E - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 12 Months	
1.1.682		FG-3300E - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 24 Months	
1.1.683		FG-3300E - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 36 Months	
1.1.684		FG-3300E - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 12 Months	
1.1.685		FG-3300E - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 24 Months	
1.1.686		FG-3300E - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 36 Months	
1.1.687		FG-3300E - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 12 Months	
1.1.688		FG-3300E - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 24 Months	
1.1.689		FG-3300E - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 36 Months	
1.1.690	FG-3301E	4 x 40GE QSFP+ slots, 16 x 10GE SFP+ slots (including 14x ports, 2x HA ports), 14 x GE RJ45 ports (including 12 x ports, 2 x management ports), 4 x 10GBase-T ports, SPU NP6 and CP9 hardware accelerated, and dual AC power supplies, with 2x 1TB SSD onboard storage). Firewall 160 Gbps, IPS 27 Gbps, NGFW 23 Gbps, Threat Protection 17 Gbps.	
1.1.691		FG-3301E - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 12 Months	
1.1.692		FG-3301E - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 24 Months	
1.1.693		FG-3301E - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 36 Months	
1.1.694		FG-3301E - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 12 Months	
1.1.695		FG-3301E - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 24 Months	
1.1.696		FG-3301E - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 36 Months	
1.1.697		FG-3301E - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 12 Months	

1.1.698		FG-3301E - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 24 Months	
1.1.699		FG-3301E - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 36 Months	
1.1.700		FG-3301E - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 12 Months	
1.1.701		FG-3301E - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 24 Months	
1.1.702		FG-3301E - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 36 Months	
1.1.703		FG-3301E - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 12 Months	
1.1.704		FG-3301E - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 24 Months	
1.1.705		FG-3301E - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 36 Months	
1.1.706	FG-3400E	4x 100 GE QSFP28 slots and 24x 25 GE SFP28 slots (including 22x ports, 2x HA ports), 2x GE RJ45 Management ports, SPU NP6 and CP9 hardware accelerated, and 2 AC power supplies). Firewall 240 Gbps, IPS 44 Gbps, NGFW 34 Gbps, Threat Protection 25 Gbps.	
1.1.707	SP-FG3040B-RAIL	Rack mount sliding rails for FG-1000C/-DC, FG-1200D, FG-1500D/DC, FG-3040B/-DC, FG-3140B/-DC, FG-3240C/-DC, FG-3000D/-DC, FG-3100D/-DC, FG-3200D/-DC, FG-3400/3401E, FG-3600/3601E, FG-3700D/-DC, FG-3700DX, FG-3810D/-DC and FG-3950B/-DC.	
1.1.708	SP-FG3800D-PS	AC power supply for FG-3400/3401E, FG-3600/3601E, FG-3700D, FG-3700D-NEBS, FG-3700DX, FG-3810D and FG-3815D.	
1.1.709	FN-TRAN-LX	1 GE SFP LX Transceiver Module	
1.1.710	FN-TRAN-GC	1 GE SFP RJ45 Transceiver Module	
1.1.711	FN-TRAN-SX	1 GE SFP SX Transceiver Module	
1.1.712	FN-TRAN-SFP+GC	10 GE SFP+ RJ45 Transceiver Module	
1.1.713	FN-TRAN-SFP+SR	10 GE SFP+ Transceiver Module, Short Range	

1.1.714	FN-TRAN-SFP+LR	10 GE SFP+ Transceiver Module, Long Range	
1.1.715	FN-TRAN-SFP+ER	10 GE SFP+ Transceiver Module, Extended Range	
1.1.716	SP-CABLE-ADASFP+	10 GE SFP+ Active Direct Attach Cable, 10m / 32.8 ft	
1.1.717	FN-TRAN-SFP28-SR	25 GE SFP28 Transceiver Module, Short Range	
1.1.718	FG-TRAN-SFP28-LR	25 GE SFP28 Transceiver Module, Long Range	
1.1.719	FN-TRAN-QSFP+SR	40 GE QSFP+ Transceiver Module, Short Range	
1.1.720	FG-TRAN-QSFP+SR-BIDI	40 GE QSFP+ Transceiver Module, Short Range BiDi	
1.1.721	FN-TRAN-QSFP+LR	40 GE QSFP+ Transceiver Module, Long Range	
1.1.722	FN-TRAN-QSFP28-SR	100 GE QSFP28 Transceivers, Short Range	
1.1.723	FN-TRAN-QSFP28-LR	100 GE QSFP28 Transceivers, Long Range	
1.1.724	FN-TRAN-QSFP28-CWDM4	100 GE QSFP28 Transceivers, CWDM4	
1.1.725		FG-3400E - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 12 Months	
1.1.726		FG-3400E - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 24 Months	
1.1.727		FG-3400E - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 36 Months	
1.1.728		FG-3400E - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 12 Months	
1.1.729		FG-3400E - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 24 Months	
1.1.730		FG-3400E - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 36 Months	
1.1.731		FG-3400E - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 12 Months	
1.1.732		FG-3400E - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 24 Months	
1.1.733		FG-3400E - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 36 Months	

1.1.734		FG-3400E - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 12 Months	
1.1.735		FG-3400E - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 24 Months	
1.1.736		FG-3400E - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 36 Months	
1.1.737		FG-3400E - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 12 Months	
1.1.738		FG-3400E - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 24 Months	
1.1.739		FG-3400E - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 36 Months	
1.1.740	FG-3401E	4x 100 GE QSFP28 slots and 24x 25 GE SFP28 slots (including 22x ports, 2x HA ports), 2x GE RJ45 Management ports, SPU NP6 and CP9 hardware accelerated, 4 TB SSD onboard storage, and 2 AC power supplies). Firewall 240 Gbps, IPS 44 Gbps, NGFW 34 Gbps, Threat Protection 25 Gbps.	
1.1.741		FG-3401E - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 12 Months	
1.1.742		FG-3401E - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 24 Months	
1.1.743		FG-3401E - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 36 Months	
1.1.744		FG-3401E - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 12 Months	
1.1.745		FG-3401E - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 24 Months	
1.1.746		FG-3401E - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 36 Months	
1.1.747		FG-3401E - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 12 Months	
1.1.748		FG-3401E - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 24 Months	
1.1.749		FG-3401E - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 36 Months	
1.1.750		FG-3401E - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 12 Months	

1.1.751		FG-3401E - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 24 Months	
1.1.752		FG-3401E - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 36 Months	
1.1.753		FG-3401E - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 12 Months	
1.1.754		FG-3401E - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 24 Months	
1.1.755		FG-3401E - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 36 Months	
1.1.756	FGR-30D	FortiGate Rugged 30D - Ruggedized, 4x GE RJ45 ports, 2x GE SFP slots, 2x DB9 Serial. Maximum managed FortiAPs (Total / Tunnel) 2 / 2.	
1.1.757	FR-TRAN-LX	1 GE SFP LX transceivers, SMF, -40–85°C operation	
1.1.758	FR-TRAN-SX	1 GE SFP SX transceivers, MMF, -40–85°C operation	
1.1.759	FR-TRAN-ZX	1 GE SFP transceivers, 90km range, -40–85°C operation	
1.1.760		FGR-30D - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 12 Months	
1.1.761		FGR-30D - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 24 Months	
1.1.762		FGR-30D - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 36 Months	
1.1.763		FGR-30D - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 12 Months	
1.1.764		FGR-30D - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 24 Months	
1.1.765		FGR-30D - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 36 Months	
1.1.766		FGR-30D - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 12 Months	
1.1.767		FGR-30D - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 24 Months	
1.1.768		FGR-30D - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 36 Months	
1.1.769		FGR-30D - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 12 Months	

1.1.770		FGR-30D - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 24 Months	
1.1.771		FGR-30D - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 36 Months	
1.1.772		FGR-30D - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 12 Months	
1.1.773		FGR-30D - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 24 Months	
1.1.774		FGR-30D - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 36 Months	
1.1.775	FGR-35D	FortiGate Rugged 35D - Ruggedized, IP67 rating for outdoor environment, 3x GE RJ45 Switch ports. Maximum managed FortiAPs (Total / Tunnel) 2 / 2.	
1.1.776		FGR-35D - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 12 Months	
1.1.777		FGR-35D - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 24 Months	
1.1.778		FGR-35D - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 36 Months	
1.1.779		FGR-35D - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 12 Months	
1.1.780		FGR-35D - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 24 Months	
1.1.781		FGR-35D - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 36 Months	
1.1.782		FGR-35D - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 12 Months	
1.1.783		FGR-35D - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 24 Months	
1.1.784		FGR-35D - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 36 Months	
1.1.785		FGR-35D - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 12 Months	
1.1.786		FGR-35D - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 24 Months	

1.1.787		FGR-35D - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 36 Months	
1.1.788		FGR-35D - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 12 Months	
1.1.789		FGR-35D - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 24 Months	
1.1.790		FGR-35D - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 36 Months	
1.1.791	FGR-60F	FortiGate Rugged 60F - Ruggedized, 4 x GE RJ45 Switch ports, 2 x Shared Media pairs (Including 2 x GE RJ45 ports, 2 x SFP slots). 1x RJ45 by-pass can be set up between WAN1 and PORT4. DB9 Serial.	
1.1.792		FGR-60F - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 12 Months	
1.1.793		FGR-60F - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 24 Months	
1.1.794		FGR-60F - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 36 Months	
1.1.795		FGR-60F - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 12 Months	
1.1.796		FGR-60F - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 24 Months	
1.1.797		FGR-60F - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 36 Months	
1.1.798		FGR-60F - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 12 Months	
1.1.799		FGR-60F - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 24 Months	
1.1.800		FGR-60F - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 36 Months	
1.1.801		FGR-60F - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 12 Months	
1.1.802		FGR-60F - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 24 Months	
1.1.803		FGR-60F - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 36 Months	
1.1.804		FGR-60F - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 12 Months	

1.1.805		FGR-60F - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 24 Months	
1.1.806		FGR-60F - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 36 Months	
1.1.807	FGR-60F-3G4G	FortiGate Rugged 60F-3G4G - Ruggedized, 4 x GE RJ45 Switch ports, 2 x Shared Media pairs (Including 2 x GE RJ45 ports, 2 x SFP slots). 1x RJ45 by-pass can be set up between WAN1 and PORT4. DB9 Serial, embedded 3G/4G/LTE wireless wan module.	
1.1.808		FGR-60F-3G4G - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 12 Months	
1.1.809		FGR-60F-3G4G - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 24 Months	
1.1.810		FGR-60F-3G4G - Hardware plus 24x7 FortiCare and FortiGuard Enterprise Protection – 36 Months	
1.1.811		FGR-60F-3G4G - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 12 Months	
1.1.812		FGR-60F-3G4G - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 24 Months	
1.1.813		FGR-60F-3G4G - Hardware plus 24x7 FortiCare and FortiGuard Unified Threat Protection (UTP) – 36 Months	
1.1.814		FGR-60F-3G4G - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 12 Months	
1.1.815		FGR-60F-3G4G - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 24 Months	
1.1.816		FGR-60F-3G4G - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 36 Months	
1.1.817		FGR-60F-3G4G - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 12 Months	
1.1.818		FGR-60F-3G4G - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 24 Months	
1.1.819		FGR-60F-3G4G - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 36 Months	
1.1.820		FGR-60F-3G4G - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 12 Months	
1.1.821		FGR-60F-3G4G - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 24 Months	

1.1.822		FGR-60F-3G4G - Advanced Threat Protection (IPS, Advanced Malware Protection Service, Application Control, and 24x7 FortiCare) – 36 Months	
1.1.823	Subscription License with Bundle for FortiGate-VM (2 CPU)	Subscriptions license for FortiGate-VM (2 CPU) with Enterprise Bundle included. – 12 Months	
1.1.824	Subscription License with Bundle for FortiGate-VM (2 CPU)	Subscriptions license for FortiGate-VM (2 CPU) with Enterprise Bundle included. – 24 Months	
1.1.825	Subscription License with Bundle for FortiGate-VM (2 CPU)	Subscriptions license for FortiGate-VM (2 CPU) with Enterprise Bundle included. – 36 Months	
1.1.826	Subscription License with Bundle for FortiGate-VM (2 CPU)	Subscriptions license for FortiGate-VM (2 CPU) with UTP Bundle included. – 12 Months	
1.1.827	Subscription License with Bundle for FortiGate-VM (2 CPU)	Subscriptions license for FortiGate-VM (2 CPU) with UTP Bundle included. – 24 Months	
1.1.828	Subscription License with Bundle for FortiGate-VM (2 CPU)	Subscriptions license for FortiGate-VM (2 CPU) with UTP Bundle included. – 36 Months	
1.1.829	Subscription License with Bundle for FortiGate-VM (4 CPU)	Subscriptions license for FortiGate-VM (4 CPU) with Enterprise Bundle included. – 12 Months	
1.1.830	Subscription License with Bundle for FortiGate-VM (4 CPU)	Subscriptions license for FortiGate-VM (4 CPU) with Enterprise Bundle included. – 24 Months	
1.1.831	Subscription License with Bundle for FortiGate-VM (4 CPU)	Subscriptions license for FortiGate-VM (4 CPU) with Enterprise Bundle included. – 36 Months	
1.1.832	Subscription License with Bundle for FortiGate-VM (4 CPU)	Subscriptions license for FortiGate-VM (4 CPU) with UTP Bundle included. – 12 Months	
1.1.833	Subscription License with Bundle for FortiGate-VM (4 CPU)	Subscriptions license for FortiGate-VM (4 CPU) with UTP Bundle included. – 24 Months	

1.1.834	Subscription License with Bundle for FortiGate-VM (4 CPU)	Subscriptions license for FortiGate-VM (4 CPU) with UTP Bundle included. – 36 Months	
1.1.835	Subscription License with Bundle for FortiGate-VM (8 CPU)	Subscriptions license for FortiGate-VM (8 CPU) with Enterprise Bundle included. – 12 Months	
1.1.836	Subscription License with Bundle for FortiGate-VM (8 CPU)	Subscriptions license for FortiGate-VM (8 CPU) with Enterprise Bundle included. – 24 Months	
1.1.837	Subscription License with Bundle for FortiGate-VM (8 CPU)	Subscriptions license for FortiGate-VM (8 CPU) with Enterprise Bundle included. – 36 Months	
1.1.838	Subscription License with Bundle for FortiGate-VM (8 CPU)	Subscriptions license for FortiGate-VM (8 CPU) with UTP Bundle included. – 12 Months	
1.1.839	Subscription License with Bundle for FortiGate-VM (8 CPU)	Subscriptions license for FortiGate-VM (8 CPU) with UTP Bundle included. – 24 Months	
1.1.840	Subscription License with Bundle for FortiGate-VM (8 CPU)	Subscriptions license for FortiGate-VM (8 CPU) with UTP Bundle included. – 36 Months	
1.1.841	Subscription License with Bundle for FortiGate-VM (16 CPU)	Subscriptions license for FortiGate-VM (16 CPU) with Enterprise Bundle included. – 12 Months	
1.1.842	Subscription License with Bundle for FortiGate-VM (16 CPU)	Subscriptions license for FortiGate-VM (16 CPU) with Enterprise Bundle included. – 24 Months	
1.1.843	Subscription License with Bundle for FortiGate-VM (16 CPU)	Subscriptions license for FortiGate-VM (16 CPU) with Enterprise Bundle included. – 36 Months	
1.1.844	Subscription License with Bundle for FortiGate-VM (16 CPU)	Subscriptions license for FortiGate-VM (16 CPU) with UTP Bundle included. – 12 Months	
1.1.845	Subscription License with Bundle for	Subscriptions license for FortiGate-VM (16 CPU) with UTP Bundle included. – 24 Months	

	FortiGate-VM (16 CPU)		
1.1.846	Subscription License with Bundle for FortiGate-VM (16 CPU)	Subscriptions license for FortiGate-VM (16 CPU) with UTP Bundle included. – 36 Months	
1.1.847	Subscription License with Bundle for FortiGate-VM (32 CPU)	Subscriptions license for FortiGate-VM (32 CPU) with Enterprise Bundle included. – 12 Months	
1.1.848	Subscription License with Bundle for FortiGate-VM (32 CPU)	Subscriptions license for FortiGate-VM (32 CPU) with Enterprise Bundle included. – 24 Months	
1.1.849	Subscription License with Bundle for FortiGate-VM (32 CPU)	Subscriptions license for FortiGate-VM (32 CPU) with Enterprise Bundle included. – 36 Months	
1.1.850	Subscription License with Bundle for FortiGate-VM (32 CPU)	Subscriptions license for FortiGate-VM (32 CPU) with UTP Bundle included. – 12 months	
1.1.851	Subscription License with Bundle for FortiGate-VM (32 CPU)	Subscriptions license for FortiGate-VM (32 CPU) with UTP Bundle included. – 24 months	
1.1.852	Subscription License with Bundle for FortiGate-VM (32 CPU)	Subscriptions license for FortiGate-VM (32 CPU) with UTP Bundle included. – 36 months	
1.1.853	FG-VM02	FortiGate-VM virtual appliance designed for all supported platforms. 2 x vCPU cores and unlimited RAM	
1.1.854		FG-VM02 - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 12 Months	
1.1.855		FG-VM02 - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 24 Months	
1.1.856		FG-VM02 - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 36 Months	
1.1.857		FG-VM02 - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 12 Months	

1.1.858		FG-VM02 - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 24 Months	
1.1.859		FG-VM02 - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 36 Months	
1.1.860	FG-VM04	FortiGate-VM virtual appliance designed for all supported platforms. 4 x vCPU cores and unlimited RAM	
1.1.861		FG-VM04 - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 12 Months	
1.1.862		FG-VM04 - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 24 Months	
1.1.863		FG-VM04 - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 36 Months	
1.1.864		FG-VM04 - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 12 Months	
1.1.865		FG-VM04 - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 24 Months	
1.1.866		FG-VM04 - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 36 Months	
1.1.867	FG-VM08	FortiGate-VM virtual appliance designed for all supported platforms. 8 x vCPU cores and unlimited RAM	
1.1.868		FG-VM08 - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 12 Months	
1.1.869		FG-VM08 - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 24 Months	
1.1.870		FG-VM08 - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 36 Months	
1.1.871		FG-VM08 - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 12 Months	
1.1.872		FG-VM08 - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 24 Months	
1.1.873		FG-VM08 - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 36 Months	

1.1.874	FG-VM16	FortiGate-VM virtual appliance designed for all supported platforms. 16 x vCPU cores and unlimited RAM	
1.1.875		FG-VM16 - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 12 Months	
1.1.876		FG-VM16 - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 24 Months	
1.1.877		FG-VM16 - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 36 Months	
1.1.878		FG-VM16 - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 12 Months	
1.1.879		FG-VM16 - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 24 Months	
1.1.880		FG-VM16 - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 36 Months	
1.1.881	FG-VM32	FortiGate-VM virtual appliance designed for all supported platforms. 32 x vCPU cores and unlimited RAM	
1.1.882		FG-VM32 - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 12 Months	
1.1.883		FG-VM32 - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 24 Months	
1.1.884		FG-VM32 - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 36 Months	
1.1.885		FG-VM32 - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 12 Months	
1.1.886		FG-VM32 - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 24 Months	
1.1.887		FG-VM32 - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 36 Months	
1.1.888	FG-VM02V	FortiGate-VM virtual appliance designed for all supported platforms - 2 x vCPU cores and unlimited RAM. No VDOM by default.	
1.1.889		FG-VM02V - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 12 Months	

1.1.890		FG-VM02V - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 24 Months	
1.1.891		FG-VM02V - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 36 Months	
1.1.892		FG-VM02V - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 12 Months	
1.1.893		FG-VM02V - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 24 Months	
1.1.894		FG-VM02V - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 36 Months	
1.1.895	FG-VM04V	FortiGate-VM virtual appliance designed for all supported platforms - 4 x vCPU cores and unlimited RAM. No VDOM by default.	
1.1.896		FG-VM04V - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 12 Months	
1.1.897		FG-VM04V - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 24 Months	
1.1.898		FG-VM04V - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 36 Months	
1.1.899		FG-VM04V - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 12 Months	
1.1.900		FG-VM04V - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 24 Months	
1.1.901		FG-VM04V - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 36 Months	
1.1.902	FG-VM08V	FortiGate-VM virtual appliance designed for all supported platforms - 8 x vCPU cores and unlimited RAM. No VDOM by default.	
1.1.903		FG-VM08V - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 12 Months	
1.1.904		FG-VM08V - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 24 Months	
1.1.905		FG-VM08V - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 36 Months	

1.1.906		FG-VM08V - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 12 Months	
1.1.907		FG-VM08V - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 24 Months	
1.1.908		FG-VM08V - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 36 Months	
1.1.909	FG-VM16V	FortiGate-VM virtual appliance designed for all supported platforms - 16 x vCPU cores and unlimited RAM. No VDOM by default.	
1.1.910		FG-VM16V - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 12 Months	
1.1.911		FG-VM16V - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 24 Months	
1.1.912		FG-VM16V - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 36 Months	
1.1.913		FG-VM16V - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 12 Months	
1.1.914		FG-VM16V - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 24 Months	
1.1.915		FG-VM16V - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 36 Months	
1.1.916	FG-VM32V	FortiGate-VM virtual appliance designed for all supported platforms - 32 x vCPU cores and unlimited RAM. No VDOM by default.	
1.1.917		FG-VM32V - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 12 Months	
1.1.918		FG-VM32V - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 24 Months	
1.1.919		FG-VM32V - Enterprise Protection (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam, Security Rating, IoT Detection, Industrial Security, FortiConverter Svc, and 24x7 FortiCare) – 36 Months	
1.1.920		FG-VM32V - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 12 Months	
1.1.921		FG-VM32V - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 24 Months	

1.1.922		FG-VM32V - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 36 Months	
1.1.923	FG-VDOM-5-UG	Upgrade license for adding 5 VDOMs to FortiOS 5.4 and later, limited by platform maximum VDOM capacity.	
1.1.924	FG-VDOM-15-UG	Upgrade license for adding 15 VDOMs to FortiOS 5.4 and later, limited by platform maximum VDOM capacity.	
1.1.925	FortiGate-VM02-S	FortiGate-VM02-S - Subscriptions license for FortiGate-VM (2 vCPU cores) - FortiCare services (only) included – 12 Months	
1.1.926	FortiGate-VM02-S	FortiGate-VM02-S - Subscriptions license for FortiGate-VM (2 vCPU cores) - FortiCare services (only) included – 24 Months	
1.1.927	FortiGate-VM02-S	FortiGate-VM02-S - Subscriptions license for FortiGate-VM (2 vCPU cores) - FortiCare services (only) included – 36 Months	
1.1.928	FortiGate-VM02-S	FortiGate-VM02-S - Subscriptions license for FortiGate-VM (2 vCPU cores) - Enterprise Bundle included – 12 Months	
1.1.929	FortiGate-VM02-S	FortiGate-VM02-S - Subscriptions license for FortiGate-VM (2 vCPU cores) - Enterprise Bundle included – 24 Months	
1.1.930	FortiGate-VM02-S	FortiGate-VM02-S - Subscriptions license for FortiGate-VM (2 vCPU cores) - Enterprise Bundle included – 36 Months	
1.1.931	FortiGate-VM02-S	FortiGate-VM02-S - Subscriptions license for FortiGate-VM (2 vCPU cores) - UTP Bundle included– 12 Months	
1.1.932	FortiGate-VM02-S	FortiGate-VM02-S - Subscriptions license for FortiGate-VM (2 vCPU cores) - UTP Bundle included– 24 Months	
1.1.933	FortiGate-VM02-S	FortiGate-VM02-S - Subscriptions license for FortiGate-VM (2 vCPU cores) - UTP Bundle included– 36 Months	
1.1.934	FortiGate-VM04-S	FortiGate-VM04-S - Subscriptions license for FortiGate-VM (4 vCPU cores) - FortiCare services (only) included – 12 Months	
1.1.935	FortiGate-VM04-S	FortiGate-VM04-S - Subscriptions license for FortiGate-VM (4 vCPU cores) - FortiCare services (only) included – 24 Months	
1.1.936	FortiGate-VM04-S	FortiGate-VM04-S - Subscriptions license for FortiGate-VM (4 vCPU cores) - FortiCare services (only) included – 36 Months	
1.1.937	FortiGate-VM04-S	FortiGate-VM04-S - Subscriptions license for FortiGate-VM (4 vCPU cores) - Enterprise Bundle included – 12 Months	
1.1.938	FortiGate-VM04-S	FortiGate-VM04-S - Subscriptions license for FortiGate-VM (4 vCPU cores) - Enterprise Bundle included – 24 Months	
1.1.939	FortiGate-VM04-S	FortiGate-VM04-S - Subscriptions license for FortiGate-VM (4 vCPU cores) - Enterprise Bundle included – 36 Months	
1.1.940	FortiGate-VM04-S	FortiGate-VM04-S - Subscriptions license for FortiGate-VM (4 vCPU cores) - UTP Bundle included– 12 Months	
1.1.941	FortiGate-VM04-S	FortiGate-VM04-S - Subscriptions license for FortiGate-VM (4 vCPU cores) - UTP Bundle included– 24 Months	
1.1.942	FortiGate-VM04-S	FortiGate-VM04-S - Subscriptions license for FortiGate-VM (4 vCPU cores) - UTP Bundle included– 36 Months	
1.1.943	FortiGate-VM08-S	FortiGate-VM08-S - Subscriptions license for FortiGate-VM (8 vCPU cores) - FortiCare services (only) included – 12 Months	

1.1.944	FortiGate-VM08-S	FortiGate-VM08-S - Subscriptions license for FortiGate-VM (8 vCPU cores) - FortiCare services (only) included – 24 Months	
1.1.945	FortiGate-VM08-S	FortiGate-VM08-S - Subscriptions license for FortiGate-VM (8 vCPU cores) - FortiCare services (only) included – 36 Months	
1.1.946	FortiGate-VM08-S	FortiGate-VM08-S - Subscriptions license for FortiGate-VM (8 vCPU cores) - Enterprise Bundle included – 12 Months	
1.1.947	FortiGate-VM08-S	FortiGate-VM08-S - Subscriptions license for FortiGate-VM (8 vCPU cores) - Enterprise Bundle included – 24 Months	
1.1.948	FortiGate-VM08-S	FortiGate-VM08-S - Subscriptions license for FortiGate-VM (8 vCPU cores) - Enterprise Bundle included – 36 Months	
1.1.949	FortiGate-VM08-S	FortiGate-VM08-S - Subscriptions license for FortiGate-VM (8 vCPU cores) - UTP Bundle included– 12 Months	
1.1.950	FortiGate-VM08-S	FortiGate-VM08-S - Subscriptions license for FortiGate-VM (8 vCPU cores) - UTP Bundle included– 24 Months	
1.1.951	FortiGate-VM08-S	FortiGate-VM08-S - Subscriptions license for FortiGate-VM (8 vCPU cores) - UTP Bundle included– 36 Months	
1.1.952	FortiGate-VM16-S	FortiGate-VM016-S - Subscriptions license for FortiGate-VM (16 vCPU cores) - FortiCare services (only) included – 12 Months	
1.1.953	FortiGate-VM16-S	FortiGate-VM016-S - Subscriptions license for FortiGate-VM (16 vCPU cores) - FortiCare services (only) included – 24 Months	
1.1.954	FortiGate-VM16-S	FortiGate-VM016-S - Subscriptions license for FortiGate-VM (16 vCPU cores) - FortiCare services (only) included – 36 Months	
1.1.955	FortiGate-VM16-S	FortiGate-VM016-S - Subscriptions license for FortiGate-VM (16 vCPU cores) - Enterprise Bundle included – 12 Months	
1.1.956	FortiGate-VM16-S	FortiGate-VM016-S - Subscriptions license for FortiGate-VM (16 vCPU cores) - Enterprise Bundle included – 24 Months	
1.1.957	FortiGate-VM16-S	FortiGate-VM016-S - Subscriptions license for FortiGate-VM (16 vCPU cores) - Enterprise Bundle included – 36 Months	
1.1.958	FortiGate-VM16-S	FortiGate-VM016-S - Subscriptions license for FortiGate-VM (16 vCPU cores) - UTP Bundle included– 12 Months	
1.1.959	FortiGate-VM16-S	FortiGate-VM016-S - Subscriptions license for FortiGate-VM (16 vCPU cores) - UTP Bundle included– 24 Months	
1.1.960	FortiGate-VM16-S	FortiGate-VM016-S - Subscriptions license for FortiGate-VM (16 vCPU cores) - UTP Bundle included– 36 Months	
1.1.961	FortiGate-VM32-S	FortiGate-VM032-S - Subscriptions license for FortiGate-VM (32 vCPU cores) - FortiCare services (only) included – 12 Months	
1.1.962	FortiGate-VM32-S	FortiGate-VM032-S - Subscriptions license for FortiGate-VM (32 vCPU cores) - FortiCare services (only) included – 24 Months	
1.1.963	FortiGate-VM32-S	FortiGate-VM032-S - Subscriptions license for FortiGate-VM (32 vCPU cores) - FortiCare services (only) included – 36 Months	
1.1.964	FortiGate-VM32-S	FortiGate-VM032-S - Subscriptions license for FortiGate-VM (32 vCPU cores) - Enterprise Bundle included – 12 Months	
1.1.965	FortiGate-VM32-S	FortiGate-VM032-S - Subscriptions license for FortiGate-VM (32 vCPU cores) - Enterprise Bundle included – 24 Months	

1.1.966	FortiGate-VM32-S	FortiGate-VM032-S - Subscriptions license for FortiGate-VM (32 vCPU cores) - Enterprise Bundle included – 36 Months	
1.1.967	FortiGate-VM32-S	FortiGate-VM032-S - Subscriptions license for FortiGate-VM (32 vCPU cores) - UTP Bundle included– 12 Months	
1.1.968	FortiGate-VM32-S	FortiGate-VM032-S - Subscriptions license for FortiGate-VM (32 vCPU cores) - UTP Bundle included– 24 Months	
1.1.969	FortiGate-VM32-S	FortiGate-VM032-S - Subscriptions license for FortiGate-VM (32 vCPU cores) - UTP Bundle included– 36 Months	
Subtotal Ex Vat			
Firewall Tools			
1.1.970	FAZ-300G	FortiAnalyzer - FAZ-300G - Centralized log and analysis appliance — 4 x RJ45 GE, 8 TB storage, up to 100 GB/day of logs.	
1.1.971		FAZ-300G - Hardware plus 24x7 FortiCare and FortiAnalyzer Enterprise Protection – 12 Months	
1.1.972		FAZ-300G - Hardware plus 24x7 FortiCare and FortiAnalyzer Enterprise Protection – 24 Months	
1.1.973		FAZ-300G - Hardware plus 24x7 FortiCare and FortiAnalyzer Enterprise Protection – 36 Months	
1.1.974		FAZ-300G - Enterprise Protection (24x7 FortiCare plus Indicators of Compromise Service, SOC Subscription license, and FortiGuard Outbreak Alert service) – 12 Months	
1.1.975		FAZ-300G - Enterprise Protection (24x7 FortiCare plus Indicators of Compromise Service, SOC Subscription license, and FortiGuard Outbreak Alert service) – 24 Months	
1.1.976		FAZ-300G - Enterprise Protection (24x7 FortiCare plus Indicators of Compromise Service, SOC Subscription license, and FortiGuard Outbreak Alert service) – 36 Months	
1.1.977		FAZ-300G - Subscription license for the FortiGuard Indicator of Compromise (IOC). - 12 Months	
1.1.978		FAZ-300G - Subscription license for the FortiGuard Indicator of Compromise (IOC). - 24 Months	
1.1.979		FAZ-300G - Subscription license for the FortiGuard Indicator of Compromise (IOC). - 36 Months	
1.1.980		FAZ-300G - 24x7 FortiCare Contract – 12 Months	
1.1.981		FAZ-300G - 24x7 FortiCare Contract – 24 Months	
1.1.982		FAZ-300G - 24x7 FortiCare Contract – 36 Months	
1.1.983	FAZ-800G	FortiAnalyzer - FAZ-800G - Centralized log and analysis appliance — 4 x GE, 2 x SFP, 16 TB storage, up to 200 GB/day of logs.	
1.1.984		FAZ-800G - Hardware plus 24x7 FortiCare and FortiAnalyzer Enterprise Protection – 12 Months	
1.1.985		FAZ-800G - Hardware plus 24x7 FortiCare and FortiAnalyzer Enterprise Protection – 24 Months	
1.1.986		FAZ-800G - Hardware plus 24x7 FortiCare and FortiAnalyzer Enterprise Protection – 36 Months	

1.1.987		FAZ-800G - Enterprise Protection (24x7 FortiCare plus Indicators of Compromise Service, SOC Subscription license, and FortiGuard Outbreak Alert service) – 12 Months	
1.1.988		FAZ-800G - Enterprise Protection (24x7 FortiCare plus Indicators of Compromise Service, SOC Subscription license, and FortiGuard Outbreak Alert service) – 24 Months	
1.1.989		FAZ-800G - Enterprise Protection (24x7 FortiCare plus Indicators of Compromise Service, SOC Subscription license, and FortiGuard Outbreak Alert service) – 36 Months	
1.1.990		FAZ-800G - Subscription license for the FortiGuard Indicator of Compromise (IOC). - 12 Months	
1.1.991		FAZ-800G - Subscription license for the FortiGuard Indicator of Compromise (IOC). - 24 Months	
1.1.992		FAZ-800G - Subscription license for the FortiGuard Indicator of Compromise (IOC). - 36 Months	
1.1.993		FAZ-800G - 24x7 FortiCare Contract – 12 Months	
1.1.994		FAZ-800G - 24x7 FortiCare Contract – 24 Months	
1.1.995		FAZ-800G - 24x7 FortiCare Contract – 36 Months	
1.1.996	FAZ-1000F	FortiAnalyzer - Centralized log and analysis appliance — 2 x 10GE RJ45, 2 x 10GbE SFP+, 32 TB storage, dual power supplies, up to 660 GB/day of logs.	
1.1.997		FAZ-1000F - Hardware plus 24x7 FortiCare and FortiAnalyzer Enterprise Protection – 12 Months	
1.1.998		FAZ-1000F - Hardware plus 24x7 FortiCare and FortiAnalyzer Enterprise Protection – 24 Months	
1.1.999		FAZ-1000F - Hardware plus 24x7 FortiCare and FortiAnalyzer Enterprise Protection – 36 Months	
1.1.1000		FAZ-1000F - Enterprise Protection (24x7 FortiCare plus Indicators of Compromise Service, SOC Subscription license, and FortiGuard Outbreak Alert service) – 12 Months	
1.1.1001		FAZ-1000F - Enterprise Protection (24x7 FortiCare plus Indicators of Compromise Service, SOC Subscription license, and FortiGuard Outbreak Alert service) – 24 Months	
1.1.1002		FAZ-1000F - Enterprise Protection (24x7 FortiCare plus Indicators of Compromise Service, SOC Subscription license, and FortiGuard Outbreak Alert service) – 36 Months	
1.1.1003		FAZ-1000F - Subscription license for the FortiGuard Indicator of Compromise (IOC). - 12 Months	
1.1.1004		FAZ-1000F - Subscription license for the FortiGuard Indicator of Compromise (IOC). - 24 Months	
1.1.1005		FAZ-1000F - Subscription license for the FortiGuard Indicator of Compromise (IOC). - 36 Months	
1.1.1006		FAZ-1000F - 24x7 FortiCare Contract – 12 Months	
1.1.1007		FAZ-1000F - 24x7 FortiCare Contract – 24 Months	
1.1.1008		FAZ-1000F - 24x7 FortiCare Contract – 36 Months	

1.1.1009	FAZ-3000G	FortiAnalyzer - FAZ-3000G - Centralized log and analysis appliance — 2 x GE RJ45, 2x 25GE SFP28, 64 TB storage, dual power supplies, up to 3,000 GB/day of logs.	
1.1.1010		FAZ-3000G - Hardware plus 24x7 FortiCare and FortiAnalyzer Enterprise Protection – 12 Months	
1.1.1011		FAZ-3000G - Hardware plus 24x7 FortiCare and FortiAnalyzer Enterprise Protection – 24 Months	
1.1.1012		FAZ-3000G - Hardware plus 24x7 FortiCare and FortiAnalyzer Enterprise Protection – 36 Months	
1.1.1013		FAZ-3000G - Enterprise Protection (24x7 FortiCare plus Indicators of Compromise Service, SOC Subscription license, and FortiGuard Outbreak Alert service) – 12 Months	
1.1.1014		FAZ-3000G - Enterprise Protection (24x7 FortiCare plus Indicators of Compromise Service, SOC Subscription license, and FortiGuard Outbreak Alert service) – 24 Months	
1.1.1015		FAZ-3000G - Enterprise Protection (24x7 FortiCare plus Indicators of Compromise Service, SOC Subscription license, and FortiGuard Outbreak Alert service) – 36 Months	
1.1.1016		FAZ-3000G - Subscription license for the FortiGuard Indicator of Compromise (IOC). - 12 Months	
1.1.1017		FAZ-3000G - Subscription license for the FortiGuard Indicator of Compromise (IOC). - 24 Months	
1.1.1018		FAZ-3000G - Subscription license for the FortiGuard Indicator of Compromise (IOC). - 36 Months	
1.1.1019		FAZ-3000G - 24x7 FortiCare Contract – 12 Months	
1.1.1020		FAZ-3000G - 24x7 FortiCare Contract – 24 Months	
1.1.1021		FAZ-3000G - 24x7 FortiCare Contract – 36 Months	
1.1.1022	FMG-200G	FortiManager - Centralized management appliance — 4xRJ45 GE, 8 TB storage, up to 30x Fortinet devices/virtual domains.	
1.1.1023		FMG-200G - Hardware plus 24x7 FortiCare and FortiCare BPS - 12 Months	
1.1.1024		FMG-200G - Hardware plus 24x7 FortiCare and FortiCare BPS - 24 Months	
1.1.1025		FMG-200G - Hardware plus 24x7 FortiCare and FortiCare BPS - 36 Months	
1.1.1026		FMG-200G - 24x7 FortiCare Contract – 12 Months	
1.1.1027		FMG-200G - 24x7 FortiCare Contract – 24 Months	
1.1.1028		FMG-200G - 24x7 FortiCare Contract – 36 Months	
1.1.1029	FMG-300F	FortiManager - Centralized management appliance — 4x GE RJ45, 2xSFP, 16 TB storage, up to 100x Fortinet devices/virtual domains.	
1.1.1030		FMG-300F - Hardware plus 24x7 FortiCare and FortiCare BPS - 12 Months	

1.1.1031		FMG-300F - Hardware plus 24x7 FortiCare and FortiCare BPS - 24 Months	
1.1.1032		FMG-300F - Hardware plus 24x7 FortiCare and FortiCare BPS - 36 Months	
1.1.1033		FMG-300F - 24x7 FortiCare Contract – 12 Months	
1.1.1034		FMG-300F - 24x7 FortiCare Contract – 24 Months	
1.1.1035		FMG-300F - 24x7 FortiCare Contract – 36 Months	
1.1.1036	FWB-1000E	Web Application Firewall - 2 x 10GE SFP+ ports, 2 x GE RJ45 ports, 4 x GE RJ45 bypass ports, 4 x GE SFP ports, 2 x GE management ports dual AC power supplies, 2 TB storage	
1.1.1037		FWB-1000E - Hardware plus 24x7 FortiCare and FortiWeb Standard Bundle – 12 Months	
1.1.1038		FWB-1000E - Hardware plus 24x7 FortiCare and FortiWeb Standard Bundle – 24 Months	
1.1.1039		FWB-1000E - Hardware plus 24x7 FortiCare and FortiWeb Standard Bundle – 36 Months	
1.1.1040		FWB-1000E - Hardware plus 24x7 FortiCare and FortiWeb Advanced Bundle – 12 Months	
1.1.1041		FWB-1000E - Hardware plus 24x7 FortiCare and FortiWeb Advanced Bundle – 24 Months	
1.1.1042		FWB-1000E - Hardware plus 24x7 FortiCare and FortiWeb Advanced Bundle – 36 Months	
1.1.1043		FWB-1000E - Standard Bundle (24x7 FortiCare plus AV, FortiWeb Security Service, and IP Reputation) – 12 Months	
1.1.1044		FWB-1000E - Standard Bundle (24x7 FortiCare plus AV, FortiWeb Security Service, and IP Reputation) – 24 Months	
1.1.1045		FWB-1000E - Standard Bundle (24x7 FortiCare plus AV, FortiWeb Security Service, and IP Reputation) – 36 Months	
1.1.1046		FWB-1000E - Advanced Bundle (24x7 FortiCare plus AV, FortiWeb Security Service, IP Reputation, FortiWeb Cloud Sandbox, and Credential Stuffing Defense Service) – 12 Months	
1.1.1047		FWB-1000E - Advanced Bundle (24x7 FortiCare plus AV, FortiWeb Security Service, IP Reputation, FortiWeb Cloud Sandbox, and Credential Stuffing Defense Service) – 24 Months	
1.1.1048		FWB-1000E - Advanced Bundle (24x7 FortiCare plus AV, FortiWeb Security Service, IP Reputation, FortiWeb Cloud Sandbox, and Credential Stuffing Defense Service) – 36 Months	
1.1.1049	FWB-2000F	Web Application Firewall - 4 x 10GE SFP+ ports, 4 x GE RJ45 bypass ports, 4 x GE SFP ports, 2 x GE management ports, dual AC power supplies, 2x480GB SSD storage	
1.1.1050		FWB-2000F - Hardware plus 24x7 FortiCare and FortiWeb Standard Bundle – 12 Months	
1.1.1051		FWB-2000F - Hardware plus 24x7 FortiCare and FortiWeb Standard Bundle – 24 Months	

1.1.1052		FWB-2000F - Hardware plus 24x7 FortiCare and FortiWeb Standard Bundle – 36 Months	
1.1.1053		FWB-2000F - Hardware plus 24x7 FortiCare and FortiWeb Advanced Bundle – 12 Months	
1.1.1054		FWB-2000F - Hardware plus 24x7 FortiCare and FortiWeb Advanced Bundle – 24 Months	
1.1.1055		FWB-2000F - Hardware plus 24x7 FortiCare and FortiWeb Advanced Bundle – 36 Months	
1.1.1056		FWB-2000F - Standard Bundle (24x7 FortiCare plus AV, FortiWeb Security Service, and IP Reputation) – 12 Months	
1.1.1057		FWB-2000F - Standard Bundle (24x7 FortiCare plus AV, FortiWeb Security Service, and IP Reputation) – 24 Months	
1.1.1058		FWB-2000F - Standard Bundle (24x7 FortiCare plus AV, FortiWeb Security Service, and IP Reputation) – 36 Months	
1.1.1059		FWB-2000F - Advanced Bundle (24x7 FortiCare plus AV, FortiWeb Security Service, IP Reputation, FortiWeb Cloud Sandbox, and Credential Stuffing Defense Service) – 12 Months	
1.1.1060		FWB-2000F - Advanced Bundle (24x7 FortiCare plus AV, FortiWeb Security Service, IP Reputation, FortiWeb Cloud Sandbox, and Credential Stuffing Defense Service) – 24 Months	
1.1.1061		FWB-2000F - Advanced Bundle (24x7 FortiCare plus AV, FortiWeb Security Service, IP Reputation, FortiWeb Cloud Sandbox, and Credential Stuffing Defense Service) – 36 Months	
1.1.1062	Subscription license with Bundle for FortiWeb-VM (2 CPU)	Subscription license for FortiWeb-VM (2 CPU) with Standard bundle included – 12 Months	
1.1.1063		Subscription license for FortiWeb-VM (2 CPU) with Standard bundle included – 24 Months	
1.1.1064		Subscription license for FortiWeb-VM (2 CPU) with Standard bundle included – 36 Months	
1.1.1065		Subscription license for FortiWeb-VM (2 CPU) with Advanced bundle included -12 Months	
1.1.1066		Subscription license for FortiWeb-VM (2 CPU) with Advanced bundle included -24 Months	
1.1.1067		Subscription license for FortiWeb-VM (2 CPU) with Advanced bundle included -36 Months	
1.1.1068	Subscription license with Bundle for FortiWeb-VM (4 CPU)	Subscription license for FortiWeb-VM (4 CPU) with Standard bundle included – 12 Months	
1.1.1069		Subscription license for FortiWeb-VM (4 CPU) with Standard bundle included – 24 Months	
1.1.1070		Subscription license for FortiWeb-VM (4 CPU) with Standard bundle included – 36 Months	

1.1.1071		Subscription license for FortiWeb-VM (4 CPU) with Advanced bundle included -12 Months	
1.1.1072		Subscription license for FortiWeb-VM (4 CPU) with Advanced bundle included -24 Months	
1.1.1073		Subscription license for FortiWeb-VM (4 CPU) with Advanced bundle included -36 Months	
1.1.1074	Subscription license with Bundle for FortiWeb-VM (8 CPU)	Subscription license for FortiWeb-VM (8 CPU) with Standard bundle included – 12 Months	
1.1.1075		Subscription license for FortiWeb-VM (8 CPU) with Standard bundle included – 24 Months	
1.1.1076		Subscription license for FortiWeb-VM (8 CPU) with Standard bundle included – 36 Months	
1.1.1077		Subscription license for FortiWeb-VM (8 CPU) with Advanced bundle included -12 Months	
1.1.1078		Subscription license for FortiWeb-VM (8 CPU) with Advanced bundle included -24 Months	
1.1.1079		Subscription license for FortiWeb-VM (8 CPU) with Advanced bundle included -36 Months	
1.1.1080	FWB-VM02	Web Application Firewall - virtual appliance for all supported platforms. Supports up to 2 x vCPU core	
1.1.1081		FWB-VM02 - Standard Bundle (24x7 FortiCare plus AV, FortiWeb Security Service, and IP Reputation) – 12 Months	
1.1.1082		FWB-VM02 - Standard Bundle (24x7 FortiCare plus AV, FortiWeb Security Service, and IP Reputation) – 24 Months	
1.1.1083		FWB-VM02 - Standard Bundle (24x7 FortiCare plus AV, FortiWeb Security Service, and IP Reputation) – 36 Months	
1.1.1084		FWB-VM02 - Advanced Bundle (24x7 FortiCare plus AV, FortiWeb Security Service, IP Reputation, FortiWeb Cloud Sandbox, and Credential Stuffing Defense Service) – 12 Months	
1.1.1085		FWB-VM02 - Advanced Bundle (24x7 FortiCare plus AV, FortiWeb Security Service, IP Reputation, FortiWeb Cloud Sandbox, and Credential Stuffing Defense Service) – 24 Months	
1.1.1086		FWB-VM02 - Advanced Bundle (24x7 FortiCare plus AV, FortiWeb Security Service, IP Reputation, FortiWeb Cloud Sandbox, and Credential Stuffing Defense Service) – 36 Months	
1.1.1087	FWB-VM04	Web Application Firewall - virtual appliance for all supported platforms. Supports up to 4 x vCPU core	
1.1.1088		FWB-VM04 - Standard Bundle (24x7 FortiCare plus AV, FortiWeb Security Service, and IP Reputation) – 12 Months	
1.1.1089		FWB-VM04 - Standard Bundle (24x7 FortiCare plus AV, FortiWeb Security Service, and IP Reputation) – 24 Months	
1.1.1090		FWB-VM04 - Standard Bundle (24x7 FortiCare plus AV, FortiWeb Security Service, and IP Reputation) – 36 Months	

1.1.1091		FWB-VM04 - Advanced Bundle (24x7 FortiCare plus AV, FortiWeb Security Service, IP Reputation, FortiWeb Cloud Sandbox, and Credential Stuffing Defense Service) – 12 Months	
1.1.1092		FWB-VM04 - Advanced Bundle (24x7 FortiCare plus AV, FortiWeb Security Service, IP Reputation, FortiWeb Cloud Sandbox, and Credential Stuffing Defense Service) – 24 Months	
1.1.1093		FWB-VM04 - Advanced Bundle (24x7 FortiCare plus AV, FortiWeb Security Service, IP Reputation, FortiWeb Cloud Sandbox, and Credential Stuffing Defense Service) – 36 Months	
1.1.1094	FWB-VM08	Web Application Firewall - virtual appliance for all supported platforms. Supports up to 8 x vCPU core	
1.1.1095		FWB-VM08 - Standard Bundle (24x7 FortiCare plus AV, FortiWeb Security Service, and IP Reputation) – 12 Months	
1.1.1096		FWB-VM08 - Standard Bundle (24x7 FortiCare plus AV, FortiWeb Security Service, and IP Reputation) – 24 Months	
1.1.1097		FWB-VM08 - Standard Bundle (24x7 FortiCare plus AV, FortiWeb Security Service, and IP Reputation) – 36 Months	
1.1.1098		FWB-VM08 - Advanced Bundle (24x7 FortiCare plus AV, FortiWeb Security Service, IP Reputation, FortiWeb Cloud Sandbox, and Credential Stuffing Defense Service) – 12 Months	
1.1.1099		FWB-VM08 - Advanced Bundle (24x7 FortiCare plus AV, FortiWeb Security Service, IP Reputation, FortiWeb Cloud Sandbox, and Credential Stuffing Defense Service) – 24 Months	
1.1.1100		FWB-VM08 - Advanced Bundle (24x7 FortiCare plus AV, FortiWeb Security Service, IP Reputation, FortiWeb Cloud Sandbox, and Credential Stuffing Defense Service) – 36 Months	
1.1.1101	FPX-2000E	FortiProxy2000E, 2x GbE RJ45, 2 x GbE RJ45 Bypass, 2 x GbE SFP, 2 x 10GbE SFP+, CP9 Hardware Accelerated (2 x CP9 Chips), 8TB (2TB x 4) Storage, Dual AC Power Supplies	
1.1.1102		FPX-2000E - SWG Protection - Web & Video Filtering, DNS Filtering, Application Control, DLP, AV, Botnet (IP/Domain), Sandbox Cloud. 500 User license with SWG Protection (Minimum order 5 and up to 30) - 12 Months	
1.1.1103		FPX-2000E - SWG Protection - Web & Video Filtering, DNS Filtering, Application Control, DLP, AV, Botnet (IP/Domain), Sandbox Cloud. 500 User license with SWG Protection (Minimum order 5 and up to 30) - 24 Months	
1.1.1104		FPX-2000E - Content Analysis Service. 500 User license (Minimum order 5 and up to 30) – 12 Months	
1.1.1105		FPX-2000E - Content Analysis Service. 500 User license (Minimum order 5 and up to 30) – 24 Months	
1.1.1106		FPX-2000E - 24x7 FortiCare Contract – 12 Months	
1.1.1107		FPX-2000E - 24x7 FortiCare Contract – 24 Months	
1.1.1108		FPX-2000E - 24x7 FortiCare Contract – 36 Months	
1.1.1109	FPX-4000E	FortiProxy-4000E, 4 x GbE RJ45, 2 x GbE SFP Ports, 4 x 10GbE SFP+ Ports, 2 x GbE RJ45 Bypass Ports, CP9 Hardware Accelerated (2 x CP9 Chips), 8TB (2TB x 4) Storage, Dual AC Power Supplies	
1.1.1110		FPX-4000E - SWG Protection - Web & Video Filtering, DNS Filtering, Application Control, DLP, AV, Botnet (IP/Domain), Sandbox Cloud.	

		500 User license with SWG Protection (Minimum order 20 and up to 100) – 12 Months	
1.1.1111		FPX-4000E - SWG Protection - Web & Video Filtering, DNS Filtering, Application Control, DLP, AV, Botnet (IP/Domain), Sandbox Cloud. 500 User license with SWG Protection (Minimum order 20 and up to 100) – 24 Months	
1.1.1112		FPX-4000E - Content Analysis Service. 500 User license (Minimum order 20 and up to 100) – 12 Months	
1.1.1113		FPX-4000E - Content Analysis Service. 500 User license (Minimum order 20 and up to 100) – 24 Months	
1.1.1114		FPX-4000E - 24x7 FortiCare Contract – 12 Months	
1.1.1115		FPX-4000E - 24x7 FortiCare Contract – 24 Months	
1.1.1116		FPX-4000E - 24x7 FortiCare Contract – 36 Months	
1.1.1117	LIC-FPRXY-VM08	FortiProxy-VM08 - FortiProxy-VM virtual appliance designed for all supported platforms. 16 x vCPU core, Unlimited RAM and 8TB Disk.	
1.1.1118		FortiProxy-VM08 - SWG Protection 24x7 - Web & Video Filtering, DNS Filtering, Application Control, DLP, AV, Botnet (IP/Domain), Sandbox Cloud. 100 User license with SWG Protection (Minimum order 1 and up to 100) – 12 Months	
1.1.1119		FortiProxy-VM08 - SWG Protection 24x7 - Web & Video Filtering, DNS Filtering, Application Control, DLP, AV, Botnet (IP/Domain), Sandbox Cloud. 100 User license with SWG Protection (Minimum order 1 and up to 100) – 24 Months	
1.1.1120		FortiProxy-VM08 - Content Analysis Service. 100 User license (Minimum order 1 and up to 100) – 12 Months	
1.1.1121		FortiProxy-VM08 - Content Analysis Service. 100 User license (Minimum order 1 and up to 100) – 24 Months	
1.1.1122	LIC-FPRXY-VM16	FortiProxy-VM16 - FortiProxy-VM virtual appliance designed for all supported platforms. 32 x vCPU core, Unlimited RAM and 8TB Disk.	
1.1.1123		FortiProxy-VM16 - SWG Protection 24x7 - Web & Video Filtering, DNS Filtering, Application Control, DLP, AV, Botnet (IP/Domain), Sandbox Cloud. 100 User license with SWG Protection (Minimum order 1 and up to 250) – 12 Months	
1.1.1124		FortiProxy-VM16 - SWG Protection 24x7 - Web & Video Filtering, DNS Filtering, Application Control, DLP, AV, Botnet (IP/Domain), Sandbox Cloud. 100 User license with SWG Protection (Minimum order 1 and up to 250) – 24 Months	
1.1.1125		FortiProxy-VM16 - Content Analysis Service. 100 User license (Minimum order 1 and up to 250) – 12 Months	
1.1.1126		FortiProxy-VM16 - Content Analysis Service. 100 User license (Minimum order 1 and up to 250) – 24 Months	
1.1.1127	FCH-1000D	FCH-1000D - Web Cache appliance — 2x GE RJ45 ports, 4x GE RJ45 bypass ports, 2x GE SFP ports, 8 TB storage.	
1.1.1128		FCH-1000D - FortiGuard AV Services – 12 Months	
1.1.1129		FCH-1000D - FortiGuard AV Services – 24 Months	
1.1.1130		FCH-1000D - Web Filtering Service – 12 Months	

1.1.1131		FCH-1000D - Web Filtering Service – 24 Months	
1.1.1132		FCH-1000D - Content Analysis Service -12 Months	
1.1.1133		FCH-1000D - Content Analysis Service -24 Months	
1.1.1134		FCH-1000D - 24x7 FortiCare Contract – 12 Months	
1.1.1135		FCH-1000D - 24x7 FortiCare Contract – 24 Months	
1.1.1136		FCH-1000D - 24x7 FortiCare Contract – 36 Months	
1.1.1137	FCH-3000E	FCH-3000E - Web Cache appliance — 4x GE RJ45 ports, 2x GE RJ45 bypass ports, 2x GE SFP ports, 2x 10 GE SFP+ ports, 4x 2 TB SAS (RAID) HDD storage.	
1.1.1138		FCH-3000E - FortiGuard AV Services – 12 Months	
1.1.1139		FCH-3000E - FortiGuard AV Services – 24 Months	
1.1.1140		FCH-3000E - Web Filtering Service – 12 Months	
1.1.1141		FCH-3000E - Web Filtering Service – 24 Months	
1.1.1142		FCH-3000E - Content Analysis Service -12 Months	
1.1.1143		FCH-3000E - Content Analysis Service -24 Months	
1.1.1144		FCH-3000E - 24x7 FortiCare Contract – 12 Months	
1.1.1145		FCH-3000E - 24x7 FortiCare Contract – 24 Months	
1.1.1146		FCH-3000E - 24x7 FortiCare Contract – 36 Months	
1.1.1147	FCH-VM02	FCH-VM02 - FortiCache-VM software virtual appliance designed for VMware ESX, ESXi and KVM platforms. 2x vCPU core, 8 GB RAM and 4 TB disk.	
1.1.1148		FCH-VM02 - FortiGuard AV Services – 12 Months	
1.1.1149		FCH-VM02 - FortiGuard AV Services – 24 Months	
1.1.1150		FCH-VM02 - Web Filtering Service – 12 Months	
1.1.1151		FCH-VM02 - Web Filtering Service – 24 Months	
1.1.1152		FCH-VM02 - Content Analysis Service -12 Months	
1.1.1153		FCH-VM02 - Content Analysis Service -24 Months	
1.1.1154		FCH-VM02 - 24x7 Comprehensive FortiCare – 12 Months	
1.1.1155		FCH-VM02 - 24x7 Comprehensive FortiCare – 24 Months	
1.1.1156		FCH-VM02 - 24x7 Comprehensive FortiCare – 36 Months	
1.1.1157	FCH-VM04	FCH-VM04 - FortiCache-VM software virtual appliance designed for VMware ESX, ESXi and KVM platforms. 4x vCPU core, 12 GB RAM and 6 TB disk.	
1.1.1158		FCH-VM04 - FortiGuard AV Services – 12 Months	
1.1.1159		FCH-VM04 - FortiGuard AV Services – 24 Months	

1.1.1160		FCH-VM04 - Web Filtering Service – 12 Months	
1.1.1161		FCH-VM04 - Web Filtering Service – 24 Months	
1.1.1162		FCH-VM04 - Content Analysis Service -12 Months	
1.1.1163		FCH-VM04 - Content Analysis Service -24 Months	
1.1.1164		FCH-VM04 - 24x7 Comprehensive FortiCare – 12 Months	
1.1.1165		FCH-VM04 - 24x7 Comprehensive FortiCare – 24 Months	
1.1.1166		FCH-VM04 - 24x7 Comprehensive FortiCare – 36 Months	
1.1.1167	FCH-VM08	FCH-VM08 - FortiCache-VM software virtual appliance designed for VMware ESX, ESXi and KVM platforms. 8x vCPU core, 16 GB RAM and 8 TB disk.	
1.1.1168		FCH-VM08 - FortiGuard AV Services – 12 Months	
1.1.1169		FCH-VM08 - FortiGuard AV Services – 24 Months	
1.1.1170		FCH-VM08 - Web Filtering Service – 12 Months	
1.1.1171		FCH-VM08 - Web Filtering Service – 24 Months	
1.1.1172		FCH-VM08 - Content Analysis Service -12 Months	
1.1.1173		FCH-VM08 - Content Analysis Service -24 Months	
1.1.1174		FCH-VM08 - 24x7 Comprehensive FortiCare – 12 Months	
1.1.1175		FCH-VM08 - 24x7 Comprehensive FortiCare – 24 Months	
1.1.1176		FCH-VM08 - 24x7 Comprehensive FortiCare – 36 Months	
1.1.1177	FAC-300F	FortiAuthenticator 300F - Identity Management and FSSO appliance - 4 x GE RJ45 ports, 2 TB storage. Supports up to 1,500 Users	
1.1.1178	SP-FML900F-PS	Power Supplies - AC power supply for FAC-300F.	
1.1.1179		FAC-300F - 24x7 FortiCare Contract – 12 Months	
1.1.1180		FAC-300F - 24x7 FortiCare Contract – 24 Months	
1.1.1181		FAC-300F - 24x7 FortiCare Contract – 36 Months	
1.1.1182	FAC-800F	FortiAuthenticator 800F - Identity Management and FSSO appliance - 4 x GE RJ45 ports, 2 x GE SFP, 4 TB storage. Supports up to 8,000 Users	
1.1.1183	SP-FML900F-PS	Power Supplies - AC power supply for FAC-800F.	
1.1.1184		FAC-800F - 24x7 FortiCare Contract – 12 Months	
1.1.1185		FAC-800F - 24x7 FortiCare Contract – 24 Months	
1.1.1186		FAC-800F - 24x7 FortiCare Contract – 36 Months	
1.1.1187	FAC-HW-100UG	Hardware Upgrade Licenses for FAC-300F and FAC-800F - FortiAuthenticator 300F or 800F, 100 user upgrade	
1.1.1188	FAC-HW-1000UG	Hardware Upgrade Licenses for FAC-300F and FAC-800F - FortiAuthenticator 300F or 800F, 1000 user upgrade	

1.1.1189	FAC-HW-10KUG	Hardware Upgrade Licenses for FAC-300F and FAC-800F - FortiAuthenticator 800F, 10,000 user upgrade	
1.1.1190	FAC-VM-Base	FortiAuthenticator-VM License - Base FortiAuthenticator-VM with 100 user license. Unlimited vCPU. Supporting VMware ESXi / ESX, Microsoft Hyper-V, Linux Kernel-based Virtual Machine (KVM) on Virtual Machine Manager and QEMU 2.5.0, and Xen Virtual Machine platforms.	
1.1.1191	FAC-VM-100-UG	FortiAuthenticator-VM License - FortiAuthenticator-VM 100 user license upgrade.	
1.1.1192	FAC-VM-1000-UG	FortiAuthenticator-VM License - FortiAuthenticator-VM 1,000 user license upgrade.	
1.1.1193	FAC-VM-10000-UG	FortiAuthenticator-VM License - FortiAuthenticator-VM 10,000 user license upgrade.	
1.1.1194	FC1-10-0ACVM-248-02-12	FortiAuthenticator-VM License - 1 Year 24x7 FortiCare Contract (1-500 users).	
1.1.1195	FC2-10-0ACVM-248-02-12	FortiAuthenticator-VM License - 1 Year 24x7 FortiCare Contract (1-1100 users).	
1.1.1196	FC3-10-0ACVM-248-02-12	FortiAuthenticator-VM License - 1 Year 24x7 FortiCare Contract (1-5100 users).	
1.1.1197	FC4-10-0ACVM-248-02-12	FortiAuthenticator-VM License - 1 Year 24x7 FortiCare Contract (1-10100 users).	
1.1.1198	FC8-10-0ACVM-248-02-12	FortiAuthenticator-VM License - 1 Year 24x7 FortiCare Contract (1-25100 users).	
1.1.1199	FCC-FAC2K-LIC	FortiClient SSO License for FortiAuthenticator - FortiAuthenticator FortiClient SSO Mobility Agent License for 2,000 FortiClient connections (does not include FortiClient Endpoint Control License for FortiGate)	
1.1.1200	FCC-FAC10K-LIC	FortiClient SSO License for FortiAuthenticator - FortiAuthenticator FortiClient SSO Mobility Agent License for 10,000 FortiClient connections (does not include FortiClient Endpoint Control License for FortiGate)	
1.1.1201		FortiClient - On Premise - ZTNA - 25-pack – 12 Months	
1.1.1202		FortiClient - On Premise - ZTNA - 25-pack – 24 Months	
1.1.1203		FortiClient - On Premise - ZTNA - 25-pack – 36 Months	
1.1.1204		FortiClient - On Premise - ZTNA - 500-pack – 12 Months	
1.1.1205		FortiClient - On Premise - ZTNA - 500-pack – 24 Months	
1.1.1206		FortiClient - On Premise - ZTNA - 500-pack – 36 Months	
1.1.1207		FortiClient - On Premise - ZTNA - 2,000-pack – 12 Months	
1.1.1208		FortiClient - On Premise - ZTNA - 2,000-pack – 24 Months	
1.1.1209		FortiClient - On Premise - ZTNA - 2,000-pack – 36 Months	
1.1.1210		FortiClient - On Premise - ZTNA - 10,000 pack – 12 Months	
1.1.1211		FortiClient - On Premise - ZTNA - 10,000 pack – 24 Months	
1.1.1212		FortiClient - On Premise - ZTNA - 10,000 pack – 36 Months	

1.1.1213		FortiClient - On Premise - EPP/APT - 25-pack - 12 Months	
1.1.1214		FortiClient - On Premise - EPP/APT - 25-pack - 24 Months	
1.1.1215		FortiClient - On Premise - EPP/APT - 25-pack - 36 Months	
1.1.1216		FortiClient - On Premise - EPP/APT - 500-pack – 12 Months	
1.1.1217		FortiClient - On Premise - EPP/APT - 500-pack – 24 Months	
1.1.1218		FortiClient - On Premise - EPP/APT - 500-pack – 36 Months	
1.1.1219		FortiClient - On Premise - EPP/APT - 2,000-pack – 12 Months	
1.1.1220		FortiClient - On Premise - EPP/APT - 2,000-pack – 24 Months	
1.1.1221		FortiClient - On Premise - EPP/APT - 2,000-pack – 36 Months	
1.1.1222		FortiClient - On Premise - EPP/APT - 10,000 pack – 12 Months	
1.1.1223		FortiClient - On Premise - EPP/APT - 10,000 pack – 24 Months	
1.1.1224		FortiClient - On Premise - EPP/APT - 10,000 pack – 36 Months	
1.1.1225		FortiClient - On Premise – CHROMEBOOK - 25-pack – 12 Months	
1.1.1226		FortiClient - On Premise – CHROMEBOOK - 25-pack – 24 Months	
1.1.1227		FortiClient - On Premise – CHROMEBOOK - 25-pack – 36 Months	
1.1.1228		FortiClient - FortiCare Best Practices Consultation Service - 25-999 endpoints. – 12 Months	
1.1.1229	FT-FCT	FortiClient - Training Services - Classroom - virtual ILT	
1.1.1230	FT-FCT-LAB	FortiClient - Training Services - Lab access - standard NSE training lab environment.	
1.1.1231	NSE-EX-SPL5	FortiClient - Training Services - NSE5 exam voucher	
Subtotal Ex Vat			
Firewall Additional			
1.1.1232		CoT currently deployed firewall FG-200E license renewal - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 12 Months	
1.1.1233		CoT currently deployed firewall FG-200E license renewal - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 24 Months	
1.1.1234		CoT currently deployed firewall FG-200E license renewal - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 36 Months	
1.1.1235		CoT currently deployed firewall FG-3000D license renewal - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 12 Months	

1.1.1236		CoT currently deployed firewall FG-3000D license renewal - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 24 Months	
1.1.1237		CoT currently deployed firewall FG-3000D license renewal - Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, Web & Video Filtering, Antispam Service, and 24x7 FortiCare) – 36 Months	
1.1.1238		CoT currently deployed FortiAnalyzer-1000E license renewal - Subscription license for the FortiGuard Indicator of Compromise (IOC). – 12 Months	
1.1.1239		CoT currently deployed FortiAnalyzer-1000E license renewal - Subscription license for the FortiGuard Indicator of Compromise (IOC). – 24 Months	
1.1.1240		CoT currently deployed FortiAnalyzer-1000E license renewal - 24x7 FortiCare Contract. – 12 Months	
1.1.1241		CoT currently deployed FortiAnalyzer-1000E license renewal - 24x7 FortiCare Contract. – 24 Months	
1.1.1242		Fortinet NSE 1 Technical Training per firewall administrator	
1.1.1243		Fortinet NSE 2 Technical Training per firewall administrator	
1.1.1244		Fortinet NSE 3 Technical Training per firewall administrator	
1.1.1245		Fortinet NSE 4 Technical Training per firewall administrator	
Subtotal Ex Vat			
ForcePoint Web Security (Or Equivalent Solution)			
		<p>CoT currently have ForcePoint Web Security 8.4 together with two ForcePoint V10000 Proxy appliances (Model: V10000 G4, System Revision: I) for its Internet proxy solution. CoT again needs a solution that best suits its needs to implement its Internet Use Policy, both from a URL / Protocol filter as well as for security enforcement and bandwidth protection. It must be a dedicated, best of breed and market leading solution. The tenderer is required to provide information specific to the following:</p> <ul style="list-style-type: none"> • Web Security, URL/Protocol, Web Filter. • URL / Protocol filtering with extensive security capabilities. • Customizable Web categories and self-update security categories and URL filtering DB. • Advanced control of network protocols and applications. • Simple, scalable management. • Microsoft Active Directory integration. • Management and reporting. • Design and Architecture. • Installation and support. • High Availability (HA). • COT technical staff to be able to manage and enforce its Internet use Policy. 	
1.1.1246		Total Subscribed Network Users License: (8500 Users per month)	
1.1.1247		Additional Subscribed network users licenses: 5001 up to 10000 users (per Subscribed network user per month)	
1.1.1248		Additional Subscribed network users licenses: 10001 and more users (per Subscribed network user per month)	
1.1.1249		New ForcePoint V10000 Proxy Sever/Appliance (Or Equivalent Solution)	

1.1.1250		ForcePoint Web Security as a Service. (This option must include the monthly rental of the full solution. This includes both new Proxy appliances as well as 8500 Subscribed network user licenses and Installation and Support) (This must be a per monthly payment provided for here)	
Subtotal Ex Vat			
Radios			
1.1.1251	QB-825-LNK-50+-WD	PROXIM 100 Meg radio link (50 Meg up and 50 Meg down) - Tsunami QB-825 link (50 Meg)	
1.1.1252	QB-825-50-100-UPG	PROXIM 100 Meg radio link (50 Meg up and 50 Meg down) - Tsunami QB-825Link 50 to 100 Mbps license upgrade	
1.1.1253	ETH-SURGE-1G	Surge, Gigabit Surge Protector with shield RJ45 – 100M Radio	
1.1.1254	QB-10150-LNK-WD	PROXIM 400 Meg radio link integrated - Tsunami QB10150 link lite, 400 Mbps, MIMO 2x2, 22dBi panel antenna	
1.1.1255	QB-10100-LNK-866-UPG	PROXIM 400 Meg radio link integrated - Tsunami QB10100 Link Lite, 400 Mbps to 866 Mbps license upgrade	
1.1.1256	ETH-SURGE-1G	Surge, Gigabit Surge Protector with shield RJ45 – 400M Radio	
1.1.1257	QB-10100L-LNK-WD	Proxim 400 Meg Radio Link Connectorised - Tsunami QB 10100 Link Lite, 400 Mbps, MIMO 2x2, Type - N Connector	
1.1.1258	QB-10100-LNK-866-UPG	Tsunami QB10100 Link Lite, 400 Mbps to 866 Mbps license upgrade	
1.1.1259	ETH-SURGE-1G	Surge, Gigabit Surge Protector with shield RJ45 – 400M Radio	
1.1.1260	LMR400-M2m	Proxim 400 Meg Radio Link Connectorised - LMR400 N-Male to N-Male - 2m	
1.1.1261	YLD0550-28D	Antenna - 2ft Parabolic reflector - Dual Polarization	
1.1.1262	YLD0550-31D	Antenna – 3ft Parabolic reflector - Dual Polarization	
1.1.1263	GARPD4-56A-N	Antenna - 4ft Solid Parabolic Antenna Dual Pol 5.25 - 5.85 GHz - 34.3dBi	
1.1.1264	ETH-POEINJ60-1G-V1	Gigabit, 60W, POE injector with RJ45, level V1 Compliance	
1.1.1265	BS-001	Brackets and steel work (Per Link)	
1.1.1266	Brackets/Steelwork S	Brackets and Steelwork - Radio Special - each (clamp bracket for metal structures)	
1.1.1267	CAB20U	20 U IP65 Outdoor Server Cabinet 600cm Deep Enclosure	
1.1.1268	5M MAST	5m Mast	
1.1.1269	PTP 670	Cambiam PTP 670 High capacity Multipoint Radio 450 Mbs (5 Ghz)	
1.1.1270	PMP 450i	Cambiam PTP 450i broadband radio 300 Mbs (5Ghz)	
1.1.1271	ePMP Force 200	Cambiam Force 200 200Mbs (5Ghz)	
1.1.1272	Dish	5 Ghz 2ft dish with mounting brackets	
1.1.1273	Dish	5 Ghz 3ft dish with mounting brackets	

Subtotal Ex Vat			
UPS			
1.1.1274	UPS001	2000VA 2U on-line Rackmount UPS, battery inside (cost to include installation and electrical work, electrical cabling for full load and all other costs required for a working solution). Include Rack mount kit for UPS.	
1.1.1275	UPS002	3000VA 2U on-line Rackmount UPS, battery inside (cost to include installation and electrical work, electrical cabling for full load and all other costs required for a working solution). Include Rack mount kit for UPS.	
1.1.1276	UPS003	6000VA 2U-5U on-line Rackmount UPS, batteries (cost to include installation and electrical work, electrical cabling for full load and all other costs required for a working solution). Include Rack mount kit for UPS.	
1.1.1277	UPS004	10kVA 2U-5U on-line Rack mount UPS, batteries (cost to include installation and electrical work, electrical cabling for full load and all other costs required for a working solution). Include Rack mount kit for UPS.	
1.1.1278	UPS005	6/10kVA on-line tower extended Battery Bank (cost to include installation and electrical work, electrical cabling for full load and all other costs required for a working solution)	
1.1.1279	UPS006	SNMP network card for UPS: 1-3 kVA UPS	
1.1.1280	UPS007	SNMP network card for UPS: 5-10 kVA UPS	
1.1.1281	UPS008	10 kVA 3 Phase UPS	
1.1.1282	UPS009	2000 VA UPS - Comprehensive maintenance contract to maintain/service UPS (inclusive of all spare parts and batteries). Unit price to include for one year's maintenance (with the provision to maintain for an additional two years). Note that maintenance will be paid monthly if an order is issued for this service.	
1.1.1283	UPS010	3000 VA UPS - Comprehensive maintenance contract to maintain/service UPS (inclusive of all spare parts and batteries). Unit price to include for one year's maintenance (with the provision to maintain for an additional two years). Note that maintenance will be paid monthly if an order is issued for this service.	
1.1.1284	UPS011	6000 VA UPS - Comprehensive maintenance contract to maintain/service UPS (inclusive of all spare parts and batteries). Unit price to include for one year's maintenance (with the provision to maintain for an additional two years). Note that maintenance will be paid monthly if an order is issued for this service.	
1.1.1285	UPS012	10 kVA UPS - Comprehensive maintenance contract to maintain/service UPS (inclusive of all spare parts and batteries). Unit price to include for one year's maintenance (with the provision to maintain for an additional two years). Note that maintenance will be paid monthly if an order is issued for this service.	
Subtotal Ex Vat			
Generators			
1.1.1286	GEN001	5 kVA Single Phase Generator with outdoor container (include electrical cables for full load 30m, contactors, circuit breakers, electrical work, exhaust mounting, concrete slab and all other requirement for a working solution)	

1.1.1287	GEN002	10 kVA Three Phase Generator with outdoor container (include electrical cables for full load 30m, contactors, circuit breakers, electrical work, exhaust mounting, concrete slab and all other requirement for a working solution) (fully fueled at time of installation)	
1.1.1288	GEN003	20 kVA Three Phase Generator with outdoor container (include electrical cables for full load 30m, contactors, circuit breakers, electrical work, exhaust mounting, concrete slab and all other requirement for a working solution) (fully fueled at time of installation)	
1.1.1289	GEN004	30 kVA Three Phase Generator with outdoor container (include electrical cables for full load 30m, contactors, circuit breakers, electrical work, exhaust mounting, concrete slab and all other requirement for a working solution) (fully fueled at time of installation)	
1.1.1290	GEN005	P.K. amount per generator installation to allow for longer Electrical Cables, extended exhaust or any other item.	R 100 000.00
1.1.1291	GEN006	Services of Electrical Engineer (Load Calculations, consultancy etc)	
1.1.1292	GEN007	5 kVA Single Phase Generator - Comprehensive maintenance contract to maintain/service generator (inclusive of all spare parts). Unit price to include for one year's maintenance (with the provision to maintain for an additional two years). Note that maintenance will be paid monthly if an order is issued for this service.	
1.1.1293	GEN008	10 kVA Three Phase Generator - Comprehensive maintenance contract to maintain/service generator (inclusive of all spare parts). Unit price to include for one year's maintenance (with the provision to maintain for an additional two years). Note that maintenance will be paid monthly if an order is issued for this service.	
1.1.1294	GEN009	20 kVA Three Phase Generator - Comprehensive maintenance contract to maintain/service generator (inclusive of all spare parts). Unit price to include for one year's maintenance (with the provision to maintain for an additional two years). Note that maintenance will be paid monthly if an order is issued for this service.	
1.1.1295	GEN010	30 kVA Three Phase Generator - Comprehensive maintenance contract to maintain/service generator (inclusive of all spare parts). Unit price to include for one year's maintenance (with the provision to maintain for an additional two years). Note that maintenance will be paid monthly if an order is issued for this service.	
Subtotal Ex Vat			
SOLAR			
1.1.1296	SOL001	Lithium Battery 100 AH 48V	
1.1.1297	SOL002	Cabinet with Power Module and Battery Enclosure – ICC30	
1.1.1298	SOL003	Rectifier Module, 1U, 3000W, High Efficiency	
1.1.1299	SOL004	Solar Module, 1U, 4000W, High Efficiency	
1.1.1300	SOL005	Inverter Module,, 1U, 2000VA/1600W, High Efficiency	
1.1.1301	SOL006	445W 41.2V 10.8A Solar Panel	
1.1.1302	SOL007	7.5m pole mounting option (diameter>200mm @ 3.7m, diameter>160mm @ 4.7m)	
1.1.1303	SOL008	Solar Panel installation: Installation cost to include for all transport, delivery, off-loading, installation, electrical and other cabling, excavations, sundries, Certificate of Compliance and any other cost	

		that might be associated with the installation of the complete solar solution.	
Subtotal Ex Vat			

MISC			
1.1.1304	Network Performance Analysis Tools 10G (for example nChronos Appliance NS9022X or similar)	<p>Network Performance Analysis Tools capable of:</p> <ul style="list-style-type: none"> • Capturing and recording, retrospective analysis, real-time monitor & analysis, drill down analysis, reporting (user defined), packet capturing (24/7) and decoding, alerts and ample alarm parameters. Need to provide the proof whether the faults are caused by networks, end-user elements, servers or applications. • Possible to troubleshoot historical network issues. • Capable to sniff 10G interfaces • Throughput Capacity 20G • Fully licensed for two years 	
1.1.1305	Network Performance Analysis Tools 10G (for example nChronos Appliance NS9022X or similar) licensing	Additional license for 1 year period (if applicable)	
1.1.1306	Network Performance Analysis Tools 1G (for example nChronos Appliance NS4526SX or similar)	<p>Network Performance Analysis Tools capable of:</p> <ul style="list-style-type: none"> • Capturing and recording, retrospective analysis, real-time monitor & analysis, drill down analysis, reporting (user defined), packet capturing (24/7) and decoding, alerts and ample alarm parameters. • Need to provide the proof whether the faults are caused by networks, end-user elements, servers or applications. • Possible to troubleshoot historical network issues. • Capable to sniff 1G interfaces • Throughput Capacity 10G • Fully licensed for two years 	
1.1.1307	Network Performance Analysis Tools 1G (for example nChronos Appliance NS4526SX or similar)	Additional license for 1 year period (if applicable)	
1.1.1308	Portable Network Analyzer Tool/Software (for example Colasoft Capsa or similar)	<p>Features to include:</p> <ul style="list-style-type: none"> • Troubleshooting • Performance Monitoring • Traffic Alarms and Statistics • Network and application monitoring • Capable of identifying protocols • TCP transaction analysis • Local process analysis 	

		<ul style="list-style-type: none"> - VoIP analysis - Automatic and expert network diagnostics - Indepht packet decoding - Wireless 802.11 standards - Licensing to be included for two years (if applicable) 	
1.1.1309	Portable Network Analyzer Tool/Software (for example Colasoft Capsa or similar)	Additional license for 1 year period (if applicable)	
Subtotal Ex Vat			

2.2 ITEMIZED BILL OF QUANTITIES: VOICE EQUIPMENT

<u>GROUP</u>	<u>ITEM CODE</u>	<u>ITEM DESCRIPTION</u>	Unit Price (Excl. vat)
OpenTouch Business Edition / Multimedia Services Platforms: Infrastructure Server & Software			
1.2.001	3BA03247AL	Multimedia application 2.6 software that provides advanced business communication services as an applicative add-on to OmniPCX Enterprise	
1.2.002	3BA03252AL	Multimedia application 2.6 virtualized software that provides advanced business communication services as an applicative add-on to OmniPCX Enterprise	
1.2.003	3BA03258AL	OpenTouch Message Center 2.6 Software providing advanced voice messaging services	
1.2.004	3BA03259AL	OpenTouch Message Center 2.6 Virtualized software providing advanced voice messaging services	
Subtotal Ex Vat			
OpenTouch Business Edition / Multimedia Services Software: Infrastructure Options			
1.2.005	3BA09403JA	8770 PKI service for enhanced centralised certificate management and other security services such as IP Sec client 8770, SSH and SFTP OXE license	
1.2.006	3BA09404JA	8770 System Topology option license	
1.2.007	3BA09405JA	8770 1 Additional administrator session option license	
1.2.008	3BA09437JA	OpenTouch SIP trunk license	
1.2.009	3BA09542JA	8770 System Active directory option license	
1.2.010	3BA09611JO	1 port access for OmniPCX Enterprise Media Services (conferencing, voice guide, transcoding)	
1.2.011	3BA09812JO	OmniPCX Enterprise Media Services Software license Base - Suse operating system	
Subtotal Ex Vat			
OpenTouch Business Edition / Multimedia Services Software: Users Common Options			
1.2.012	3BA09426JA	8770 Alarm User option license	
1.2.013	3BA09427JA	8770 Performance User option license	95
1.2.014	3BA09428JA	8770 Metering User option license	

1.2.015	3BA09429JA	8770 Ticket Collector User option license	
1.2.016	3BA09430JA	8770 Web Directory User option license	
1.2.017	3BA09431JA	8770 Network Unified User Management User option license	
1.2.018	3BA09436JA	ABC/QSIG networking option software license	
1.2.019	3BA09459JA	8770 Unified Management User option license	
1.2.020	3BA09543JA	8770 SNMP proxy User option license	
1.2.021	3BA09736JA	OpenTouch Provisioning API through 8770 User option license	
1.2.022	3BA09791JA	OpenTouch multimedia conferencing user option	
1.2.023	3BA09792JA	OpenTouch conversation REST web services user option license for Conversation and Connection users	
1.2.024	3BA09863JA	Conferencing management REST Web Services, user software license	
Subtotal Ex Vat			
OpenTouch Business Edition / Multimedia Services Software: System Releases and DVDs			
1.2.025	3BA09518JA	OpenTouch Multimedia Services Major upgrade - 1 user license	
1.2.026	3BA09519JA	OpenTouch Multimedia Services Free of charge upgrade	
1.2.027	3BA09705JA	OpenTouch Message Center Virtualization for tracking	
1.2.028	3BA09767JA	OpenTouch Message Center Minor upgrade - 1 user license	
1.2.029	3BA09768JA	OpenTouch Message Center Major upgrade - 1 user license	
1.2.030	3BA09769JA	OpenTouch Message Center Free of charge upgrade	
1.2.031	3BA09905JA	OpenTouch Multimedia Services virtualization	
1.2.032	3BA09056KA	OpenTouch Multimedia Services 2.6 software release license	
1.2.033	3BA09056KU	OpenTouch Multimedia Services upgrade to 2.6 software release license	
1.2.034	3BA09057KA	OpenTouch Message Center 2.6 software release license	
1.2.035	3BA09057KU	OpenTouch Message Center upgrade to 2.6 software release license	
Subtotal Ex Vat			
OpenTouch Business Edition / Multimedia Services Software: Miscellaneous			
1.2.036	3BA09760FE	IP/SIP for free program - 1 digital software license removal	
1.2.037	3BA09760FF	IP/SIP for free program - 1 analog software license removal	
1.2.038	3BA09760FG	IP/SIP for free program - 1 OpenTouch Conversation user software license removal	
1.2.039	3BA09760FH	IP/SIP for free program - 1 OpenTouch Conversation universal client user option software license removal	
1.2.040	3BA09760FO	IP/SIP for free program - 1 SIP user software license removal	
1.2.041	3BA09760FR	IP/SIP for free - IP user removed	
Subtotal Ex Vat			
System cabinets: Enterprise Base System - Appliance Server			

1.2.042	3BA00814AA	OmniPCX Enterprise basic package crystal hardware without Appliance Server, INT-IP3 board, ACT 14	
1.2.043	3BA00814UA	OmniPCX Enterprise basic package crystal hardware without Appliance Server, INT-IP3 board, ACT 14 US	
1.2.044	3BA00815AA	OmniPCX Enterprise basic package crystal hardware without Appliance Server, INT-IP3 board, ACT 28	
1.2.045	3BA00815UA	OmniPCX Enterprise basic package crystal hardware without Appliance Server, INT-IP3 board, ACT 28 US	
Subtotal Ex Vat			
System cabinets: Enterprise Base System - IP Communication Server			
1.2.046	3BA00864AA	OmniPCX Enterprise basic package without Call Server software installation, no hardware delivered by ALE	
OmniPCX Common hardware: Power Supply back-up			
1.2.047	3EH76090AE	UPS range : Power back-up 55W/1H	
1.2.048	3EH76090AG	UPS range : Power back-up 185W/1H	
1.2.049	3EH76090AH	UPS range : Power back-up 105W/1H	
1.2.050	3EH76155AA	Rack box for external batteries 12V	
1.2.051	3EH76155AB	Rack box for external batteries 36V	
1.2.052	3EH76177AB	External stack battery box 12V for OmniPCX Office Rack 1, 2	
1.2.053	3EH76177AC	External stack battery box 36V for OmniPCX Office Rack 3	
1.2.054	3EH76181AA	Rack charger 48V/14AH without rectifier	
1.2.055	3EH76185AA	Rectifier 500W for rack charger	
1.2.056	3EH76210AA	Enhanced power back-up kit: power backup & external battery for Uninterrupted Power Supply powers 100 watts during 1H30 hours.	
1.2.057	3EH76211AA	Additional external battery for Uninterrupted Power Supply, with an additional 100 watts lasting 4 hours	
1.2.058	3EH76190AA	Rack charger with 2 slots for redundancy	
Subtotal Ex Vat			
OmniPCX Crystal hardware: Infrastructure			
1.2.059	3BA00759AA	VoIP access board INT-IP3 board including one 10/100/1000 Base-T connecting card	
1.2.060	3BA00760AA	Pack with one VoIP access board INT-IP3 board + one 10/100/1000 Base-T connecting card+ one ARMADA daughter board for 30 additional compression pathes	
1.2.061	3BA00760AB	Pack with one VoIP access board INT-IP3 board + one 10/100/1000 Base-T connecting card+ two ARMADA daughter boards for 60 additional compression pathes	
1.2.062	3BA00760AC	Pack with one VoIP access board INT-IP3 board + one 10/100/1000 Base-T connecting card+ three ARMADA daughter boards for 90 additional compression pathes	
1.2.063	3BA23274AB	VoIP access board INT-IP3 board	
1.2.064	3BA23278AA	10/100/1000 Base-T connecting card	
Subtotal Ex Vat			
OmniPCX Crystal hardware: Power Supply			

1.2.065	3BA27304AA	Optional battery shelf for battery inside power supply cabinet	
1.2.066	3BA57075AA	48V/18 AH battery elements	
1.2.067	3BA57076AA	48V/38 AH battery elements	
1.2.068	3BA57185AA	48V/65 AH battery elements	
1.2.069	3BA57186AA	48V/65 AH battery box + connection kit	
1.2.070	3BA57206AA	Wall-mounted 48 V/40 A 230 V rectifier	
1.2.071	3BA57218AA	48/24V, 38 AH battery box + connection kit	
1.2.072	3BA26274AB	Power supply 110V/500W - 230V/1000W	
1.2.073	3BA27302AB	PSC power rack 4 slots	
1.2.074	3BA27305AB	PSC rectifier cabinet	
1.2.075	3BA57076UA	48V/38 AH battery elements (US)	
1.2.076	3BA57185UA	48V/65 AH battery elements	
Subtotal Ex Vat			
OmniPCX Software: Communication software options			
1.2.077	3BA09046JA	Software License for "Passive Communication Server" (PCS) - from 1 to 15 licenses, price per license	
1.2.078	3BA09046JO	Passive Communication Server (PCS) embedded in OpenTouch Business Edition software license	
1.2.079	3BA09611JA	1 port access for OmniPCX Enterprise Media Services (conferencing, voice guide, transcoding)	
1.2.080	3BA09709JA	Telephony redundancy with OTMC-V	
1.2.081	3BA09737JA	IPv6 support	
1.2.082	3BA09812JA	OmniPCX Enterprise Media Services Software license Base - Suse operating system	
1.2.083	3BA09830JA	OmniPCX Enterprise Generic Appliance Server - System virtualization server license	
1.2.084	3BA09831JA	OmniPCX Enterprise Generic Appliance Server - System virtualization server license for redundancy	
1.2.085	3BA09911JA	OmniPCX Enterprise High Availability service - Base license	
1.2.086	3BA09911JO	OmniPCX Enterprise High Availability service on OpenTouch deployment – Base license	
1.2.087	3BA09912JA	OmniPCX Enterprise High Availability – 1 Business Telephony user license	
1.2.088	3BA09912JO	OmniPCX Enterprise High Availability service on OpenTouch deployment - 1 Business Telephony user license	
1.2.089	3BA09911JC	OmniPCX Enterprise High Availability service - Base license	
1.2.090	3BA09911JD	OmniPCX Enterprise High Availability service - Base license	
1.2.091	3BA09956JA	OmniPCX Enterprise virtualization software license	
1.2.092	3BA09986JA	Alcatel-Lucent OmniPCX Enterprise virtualization software license for migration to OXE release greater or equal to R12.0	
1.2.093	3BA09046JB	Software License for "Passive Communication Server" (PCS) - from 16 to 39 licenses, price per license	
1.2.094	3BA09046JC	Software License for "Passive Communication Server" (PCS) - from 40 to 74 licenses, price per license	98

1.2.095	3BA09046JD	Software License for "Passive Communication Server" (PCS) - from 75 licenses, price per license	
Subtotal Ex Vat			
OmniPCX Software: Desktop communication services			
1.2.096	3BA09077JA	License for usage of the IME (INPUT METHOD ENGINE) -1 USER	
1.2.097	3BA09091JA	Call by Name License - 1 user	
1.2.098	3BA09845JA	Analog Premium license - 1 user	
1.2.099	3BA09847JA	Digital Premium license - 1 user	
1.2.100	3BA09847JB	Digital Premium 1 User license for Common Hardware Base system	
Subtotal Ex Vat			
OmniPCX Software: Mobility services			
1.2.101	3BA09095JA	Roaming License for Mobile DECT or PWT	
1.2.102	3BA09096JA	License Ubiquity pour Mobile DECT 1 user	
1.2.103	3BA09097JA	Encryption & Authentification License for Mobile DECT/PWT 1 user	
1.2.104	3BA09110JA	License for Mobile IPTouch terminal 1 user	
1.2.105	3BA09593AA	Notification server up to 50 alarms software license	
1.2.106	3BA09667AA	DECT over campus, software license	
1.2.107	3BA09492JA	Mobile IP DECT license -1 user	
1.2.108	3BA09852JA	Remote Extension Premium license - 1 user	
1.2.109	3BA09848JA	Mobile DECT Premium license - 1 user	
1.2.110	3BA09849JA	Mobile WLAN IP Touch Premium license - 1 user	
1.2.111	3BA09848JB	Migration software license for DECT - 1 user	
Subtotal Ex Vat			
OmniPCX Software: Voice & Media services			
1.2.112	3BA09511AA	Software license for the meet-me conference	
1.2.113	3BA09512AA	Voice guides recording from Reflexes sets software license	
1.2.114	3BA09563AA	Additional S0 services software license	
1.2.115	3BA09663AA	Voice detection channels software license	
1.2.116	3BA09668AA	Compressed calls, software license	
1.2.117	3BA09725AA	Radio link, software license	
1.2.118	3BA09726AA	Intercom services, software license	
1.2.119	3BA09836JA	Master Conference Service software license - 1 user	
1.2.120	3BA09837JA	Call Restriction service software license - 1 user	
1.2.121	3BA09838JA	Multi Tenant service software license - 1 user	
1.2.122	3BA09839JA	Priority Call service software license - 1 user	
Subtotal Ex Vat			
OmniPCX Software: Call handling services			
1.2.123	3BA09503AA	DISA service software license	
1.2.124	3BA09505AA	Automated attendant up to 6 voice guides software license	99

1.2.125	3BA09506AA	Automated attendant over 6 voice guides software license	
1.2.126	3BA09507AA	Automated attendant software license upgrade above 6 voice guides	
1.2.127	3BA09506AO	Automated attendant over 6 voice guides embedded in OpenTouch Business Edition software license	
Subtotal Ex Vat			
OmniPCX Software: VoIP services			
1.2.128	3BA09031JO	IP Desktop Softphone embedded in OpenTouch Business Edition software license	
1.2.129	3BA09851JA	IP Desktop Softphone Premium license - 1 user	
1.2.130	3BA09846JA	IP Premium license - 1 user	
1.2.131	3BA09846JD	Migration software license for IP Premium - 1 user	
1.2.132	3BA09846JB	Migration software license for IP Premium - 1 user	
1.2.133	3BA09846JE	Migration software license for IP Premium (from OTCV) - 1 user	
Subtotal Ex Vat			
OmniPCX Software: SIP services			
1.2.134	3BA09559AA	SIP network link software license	
1.2.135	3BA09559AB	Software license for Bypass SIP Network Link	
1.2.136	3BA09850JA	SIP Premium license - 1 user	
1.2.137	3BA09850JC	Migration software license for SIP Premium - 1 user with set	
1.2.138	3BA09850JD	Migration software license for SIP Premium - 1 user	
1.2.139	3BA09850JB	Migration software license for SIP Premium - 1 user	
1.2.140	3BA09850JE	Migration software license for SIP Premium (From OTCV) - 1 user	
Subtotal Ex Vat			
OmniPCX Software: Security services			
1.2.141	3BA09087JA	Migration license for Encryption Server, 500 IP users	
1.2.142	3BA09249JA	Media Security Module software license for 3 IP MediaGateways	
1.2.143	3BA09250JA	Media Security Module software license from 4 to 10 IP MediaGateways	
1.2.144	3BA09251JA	Media Security Module software license from 11 to 20 IP MediaGateways	
1.2.145	3BA09252JA	Media Security Module software license for over 20 IP MediaGateways	
1.2.146	3BA09253JA	Media Security Module software license for OpenTouch	
1.2.147	3BA09285JA	SIP encrypted trunk	
1.2.148	3BA09973AA	Encryption Media Gateway	
1.2.149	3BA09827JA	OmniPCX Enterprise VoIP encryption server - First 200 IP users	
1.2.150	3BA09828JA	OmniPCX Enterprise VoIP encryption server from 201 to 1000 IP users - Each pack of 100 IP users	
1.2.151	3BA09829JA	OmniPCX Enterprise VoIP encryption server above 1000 IP users - Each pack of 500 users	10C

1.2.152	3BA27698AB	IP Premium Server Security Module (SSM) for VoIP encryption on IP network	
1.2.153	3BA27699AB	IP Premium Media Security Module (MSM) for VoIP encryption on IP network	
1.2.154	3BA09970JA	Software license for encryption of 1 IP device for the part up to 1500 encrypted IP devices	
1.2.155	3BA09971JA	Native encryption License - 1 Media Gateway	
1.2.156	3BA09023KA	Software license for encryption of 1 SIP trunk with Native Encryption.	
1.2.157	3BA09020KA	Software license for encryption of 1 IP device for the part above 1500 encrypted IP devices	
Subtotal Ex Vat			
OmniPCX Software: SBC services			
1.2.158	3BA09503JA	OpenTouch SBC software - Engine	
1.2.159	3BA09504JA	OpenTouch SBC software - 1 SIP call	
1.2.160	3BA09505JA	OpenTouch SBC software - 1 remote user	
1.2.161	3BA09506JA	OpenTouch SBC software - 1 SRTP-RTP session	
1.2.162	3BA09507JA	OpenTouch SBC software redundancy - Engine	
1.2.163	3BA09508JA	OpenTouch SBC software redundancy - 1 SIP call	
1.2.164	3BA09509JA	OpenTouch SBC software redundancy - 1 remote user	
1.2.165	3BA09510JA	OpenTouch SBC software redundancy - 1 SRTP-RTP session	
1.2.166	3BA00797AA	OpenTouch SBC -1 SIP Call / SIP Network link pack	
1.2.167	3BA00797AB	OT-SBC pack containing one SBC SIP call and one SIP network link (for OpenTouch)	
1.2.168	3BA09680JA	OpenTouch SBC software - Additionnal 500 SIP Calls above 1000 SIP calls	
1.2.169	3BA09681JA	OpenTouch SBC software redundancy- Additionnal 500 SIP Calls above 1000 SIP calls	
1.2.170	3BA09771JA	OpenTouch SBC software - WebRTC session	
1.2.171	3BA09773JA	OpenTouch SBC software redundancy - WebRTC session	
1.2.172	3BA09772JA	OpenTouch SBC software - Transcoding session	
1.2.173	3BA09774JA	OpenTouch SBC software redundancy - Transcoding session	
1.2.174	3BA09915JA	OpenTouch SBC software license R2.3	
1.2.175	3BA09915JU	OpenTouch SBC R2.3 upgrade software license	
1.2.176	3BA09973JA	OpenTouch SBC upgrade software license without valid SPS contract - 1 SIP session	
1.2.177	3BA09987JA	OpenTouch SBC upgrade software license with valid SPS contract	
1.2.178	3BA09988JA	OTSBC Reverse Proxy Light	
1.2.179	3BA09989JA	Redundant OTSBC Reverse Proxy Light	
1.2.180	3BA09990JA	Low capacity OTSBC license for OVOC	
1.2.181	3BA09991JA	High capacity OTSBC license for OVOC	
1.2.182	3BA09992JA	Redundant Low capacity OTSBC license for OVOC	101

1.2.183	3BA09993JA	Redundant High capacity OTSBC license for OVOC	
1.2.184	3BA09053KA	OpenTouch SBC software - 1 SIPREC session	
1.2.185	3BA09054KA	OpenTouch SBC software redundancy - 1 SIPREC session	
Subtotal Ex Vat			
OmniPCX Software: Networking services			
1.2.186	3BA09183JA	ABC-F on IP trunk group license	
1.2.187	3BA09840JA	ABC Network service software license (including ARS, H323, ABC CDR) - 1 user	
1.2.188	3BA09183JB	ABC-F on IP trunk group by-pass license	
Subtotal Ex Vat			
15% Vat			
Subtotal Incl Vat			
OmniPCX Software: Accounting management services			
1.2.189	3BA09841JA	Local Ticket Accounting service software license - 1 user	
OmniPCX Software: System release & Upgrade			
1.2.190	3BA09498JA	Alcatel-Lucent OmniPCX Enterprise virtualization software license up to R11.2 and OT up to 2.2	
1.2.191	3BA09511JA	Alcatel-Lucent OmniPCX Enterprise virtualization software license for redundancy	
1.2.192	3BA09550JA	Alcatel-Lucent OmniPCX Enterprise virtualization software license for migration to OXE release less or equal to R11.2	
1.2.193	3BA09558JA	OmniPCX Enterprise Virtualization for tracking	
1.2.194	3BA09834JA	OmniPCX Enterprise minor software upgrade - 1 user	
1.2.195	3BA09835JA	OmniPCX Enterprise major software upgrade - 1 user	
1.2.196	3BA09843JA	External Voice Mail via VPS link software license - 1 user	
1.2.197	3BA09018JA	Free of charge upgrade Stand-Alone	
1.2.198	3BA09005KA	Alcatel-Lucent OmniPCX Enterprise R12.3 software license	
1.2.199	3BA50280AE	OmniPCX Enterprise Release R12.3 software installation	
1.2.200	3BA09080KA	Alcatel-Lucent OmniPCX Enterprise R12.4 software license	
1.2.201	3BA50280AF	OmniPCX Enterprise Release R12.4 software installation	
Subtotal Ex Vat			
OmniPCX Software: System IP Centralization program			
1.2.202	3BA04234FA	IP Centralization or Migration: OXE Service Contract	
1.2.203	3BA04237FA	IP Centralization or Migration: CCIVR Service Contract	
1.2.204	3BA09158FA	OXE IP Centralization/Migration software license for e-CS 50 without OXE release upgrade	
1.2.205	3BA09159FA	OXE IP Centralization/Migration software license for e-CS 80 without OXE release upgrade	
1.2.206	3BA09160FA	OXE IP Centralization/Migration software license for e-CS 150 without OXE release upgrade	102

1.2.207	3BA09161FA	OXE IP Centralization/Migration software license for e-CS 350 without OXE release upgrade	
1.2.208	3BA09162FA	OXE IP Centralization/Migration software license for e-CS 500 without OXE release upgrade	
1.2.209	3BA09163FA	OXE IP Centralization/Migration software license for e-CS 500+	
1.2.210	3BA09164FA	OXE IP Centralization/Migration software license for 500 additional users without OXE release upgrade	
1.2.211	3BA09200JB	IP Centralization	
1.2.212	3BA09265JA	IP Centralization or Migration: OmniPCX Office user upgrade to OmniPCX Enterprise	
1.2.213	3BA04301FA	IP Centralization or Migration: OmniVista Service Contract	
1.2.214	3BA04302FA	IP Centralization or Migration: OpenTouch Service Contract	
1.2.215	3BA04373FA	IP Centralization or Migration: Visual Automated Attendant Service Contract	
1.2.216	3BA04374FA	IP Centralization or Migration: Visual Notification Assistant Service Contract	
Subtotal Ex Vat			
Operator Attendant Consoles			
1.2.217	3BA00637RB	4059/4059EE IP Attendant keyboard with USB connector English	
1.2.218	3BA00637UB	4059/4059EE IP Attendant keyboard with USB connector US English	
1.2.219	3BA09069JA	Software license opening the Phone based Greeting Assistant position to perform the attendant function. This position can either be an IP Touch 4068, 4038 or 4039	
1.2.220	3BA09329JA	4059EE license	
1.2.221	3BA09508AA	4059 multimedia attendant console software license	
1.2.222	3BA09509AA	4059/4059EE Busy Lamp Field software license	
1.2.223	3BA09510AA	4059 Automatic pop-up software license for directory information pop-up option	
1.2.224	3BH11404AB	4059 R5 attendant software includes 4059 BLF software	
1.2.225	3BA09329JO	4059EE embedded in OpenTouch Business Edition software license	
1.2.226	3BA09509AO	4059/4059EE Busy Lamp Field embedded in OpenTouch Business Edition software license	
Subtotal Ex Vat			
OmniMessage: 4645 Voice mail			
1.2.227	3BA09103JA	Alcatel-Lucent 4645 EMAIL Value Pack -1 user	
1.2.228	3BA09477AA	Alcatel-Lucent 4645 voice mail - Base engine software license	
1.2.229	3BA09478AA	Alcatel-Lucent 4645 networked voice mail Software license. Value pack	
1.2.230	3BA09479AA	Alcatel-Lucent 4645 voice mail - 1 additional language software license	
1.2.231	3BA09832JA	Alcatel-Lucent A4645 Voice Messaging software license - 1 user	
Subtotal Ex Vat			10€

OmniVista 8770: Network Management application			
1.2.232	3BA09775JA	OmniVista 8770 Start Pack - One free extension for OpenTouch Connection user	
1.2.233	3BA09777JA	OmniVista 8770 Full Pack - One free extension for OpenTouch Connection user	
1.2.234	3BA09779JA	OmniVista 8770 Unified Management - One free extension for OpenTouch Connection user	
1.2.235	3BA09782JA	OmniVista 8770 Alarms - One free extension for OpenTouch Connection user	
1.2.236	3BA09784JA	OmniVista 8770 Metering & Tracking - One free extension for OpenTouch Connection user	
1.2.237	3BA09786JA	OmniVista 8770 Past-Time-Performance and OmniPCX Enterprise/OpenTouch Voice over IP Performance - One free extension for OpenTouch Connection user	
1.2.238	3BA09789JA	OmniVista 8770 Web Directory - One free extension for OpenTouch Connection user	
1.2.239	3BA09790JA	OmniVista 8770 Ticket Collector - One free extension for OpenTouch Connection user	
1.2.240	3BA09916JA	OmniVista 8770 Start Pack - Base license	
1.2.241	3BA09917JA	OmniVista 8770 Start Pack - User license	
1.2.242	3BA09918JA	OmniVista 8770 Full Pack - Base license	
1.2.243	3BA09919JA	OmniVista 8770 Full Pack - User license	
1.2.244	3BA09920JA	OmniVista 8770 Metering and Tracking - Base license	
1.2.245	3BA09921JA	OmniVista 8770 Metering and Tracking - User license	
1.2.246	3BA09922JA	OmniVista 8770 Unified Management - Base license	
1.2.247	3BA09951JA	OmniVista 8770 Unified Management for free - Base license	
1.2.248	3BA09923JA	OmniVista 8770 Unified Management - User license	
1.2.249	3BA09952JA	OmniVista 8770 Unified Management for free - User license	
1.2.250	3BA09924JA	OmniVista 8770 Alarms - Base license	
1.2.251	3BA09925JA	OmniVista 8770 Alarms - User license	
1.2.252	3BA09926JA	OmniVista 8770 Past-Time Performance and OXE/OT VoIP Performance - Base license	
1.2.253	3BA09927JA	OmniVista 8770 Past-Time Performance and OXE/OT VoIP Performance - User license	
1.2.254	3BA09928JA	OmniVista 8770 Web Directory - Base license	
1.2.255	3BA09929JA	OmniVista 8770 Web Directory - User license	
1.2.256	3BA09930JA	OmniVista 8770 Ticket Collector - Base license	
1.2.257	3BA09931JA	OmniVista 8770 Ticket Collector - User license	
1.2.258	3BA09954JA	OmniVista 8770 SNMP option license	
1.2.259	3BA09955JA	OmniVista 8770 SNMP proxy users alignment	104

1.2.260	3BA09948JD	OmniVista 8770 Unified User management - 1 User alignment	
1.2.261	3BA09950JD	OmniVista 8770 OXE/OT VoIP Performance - 1 User alignment	
1.2.262	3BA09015KA	OmniVista 8770 My Phone Management - Base license	
1.2.263	3BA09016KA	OmniVista 8770 My Phone Management - User license	
1.2.264	3BA09101KA	OmniVista 8770 My Phone Management for free - User license	
Subtotal Ex Vat			
OmniVista 8770: Options & Upgrade			
1.2.265	3BA09362JA	OmniVista 8770 Topology Option	
1.2.266	3BA09363JA	OmniVista 8770 Security Option	
1.2.267	3BA09364JA	OmniVista 8770 Add Client License for simultaneous administration (x1)	
1.2.268	3BA09365JA	OmniVista 8770 Redundancy - 50 per cent per system value	
1.2.269	3BA09512JA	OmniVista 8770 Active directory option	
1.2.270	3BA09675JA	OmniVista 8770 users provisioning Application Programing Interface (API) option	
1.2.271	3BA09391JB	OmniVista 8770 redundancy license from 3.2	
1.2.272	3BA09932JA	OmniVista 8770 upgrade - User license	
1.2.273	3BA09933JA	OmniVista 8770 upgrade free of charge - User license	
1.2.274	3BA09731JB	OmniVista 8770 redundancy license from 3.2 for OTBE HA	
1.2.275	3BA09972JA	8770 purchased in Price Per User mode, for tracking	
1.2.276	3BA09985JA	OmniVista 8770 upgrade software license for systems <= R2.6	
1.2.277	3BA09632JD	OmniVista 8770 tracking option alignment	
1.2.278	3BA09641JD	OmniVista 8770 Operations audit option alignment	
1.2.279	3BA09650JD	OmniVista 8770 OXO VoIP performance option alignment	
1.2.280	3BA09013KU	OmniVista 8770 release 4.1 upgrade software license	
1.2.281	3BA09014KA	OmniVista 8770 Multi Domain option	
1.2.282	3BA09014KD	OmniVista 8770 Multi Domain option alignment	
1.2.283	3BA09038KA	OmniVista 8770 application disabled	
1.2.284	3BA09052KA	OmniVista 8770 release 4.2 software license	
1.2.285	3BA09052KU	OmniVista 8770 release 4.2 upgrade software license	
Subtotal Ex Vat			
OmniVista 8770: MCS Edition			
1.2.286	3BA09390JA	OmniVista 8770 multi-customer option	
1.2.287	3BA00824AA	OmniVista 8770 Managed Communication Services - Base license	
1.2.288	3BA00825AA	OmniVista 8770 Managed Communication Services - User license	
1.2.289	3BA00858AA	OmniVista 8770 Managed Communication Services including multi domain - Base license	

1.2.290	3BA00859AA	OmniVista 8770 Managed Communication Services including multi domain - User license	
Subtotal Ex Vat			
OmniTouch CC Standard Edition: CCdistribution & ACR			
1.2.291	3BA09529AA	CCdistribution Contact Center Distribution Starter Pack including 5 agents + 1 mono site supervisor software license	
1.2.292	3BA09530AA	CCdistribution Contact Center Distribution server including 5 agents software license	
1.2.293	3BA09531AA	CCdistribution Contact Center Distribution additional 5 agents pack (up to 50) - software license	
1.2.294	3BA09532AA	CCdistribution Contact Center Distribution upgrade from starter to server software license	
1.2.295	3BA09538AA	ACR Advanced Call Routing database read software license	
1.2.296	3BA09654AA	CCdistribution Contact Center Distribution additional 5 agents pack over 50 agents software license	
1.2.297	3BA09743AA	ACR networking, software license	
1.2.298	3BA09781AA	CCD EasyContact Pack for 5 agents (Without CCsupervision)	
1.2.299	3BA09782AA	Upgrade from CCD EasyContact toward Starter pack	
1.2.300	3BA09738JA	OTCC-SE Virtualization for tracking	
1.2.301	3BA09913JA	OmniPCX Enterprise High Availability – 1 Contact Center user license	
1.2.302	3BA09913JO	OmniPCX Enterprise High Availability on OpenTouch deployment – 1 Contact Center user license	
Subtotal Ex Vat			
OmniTouch CC Standard Edition: CCsupervision			
1.2.303	3BA09533AA	CCsupervision Contact Center Supervision mono-site connection software License	
1.2.304	3BA09534AA	CCsupervision Contact Center Supervision multi-site connection software License	
1.2.305	3BA09847AA	CCsupervision CCS Light mono-site connection software license	
1.2.306	3BA09848AA	CCsupervision Contact Center Supervision software license upgrade form CCsupervision Light to CCsupervision	
1.2.307	3BH11646AC	CCSupervision CD-ROM	
1.2.308	3BA09533AO	Mono-Site Supervision Contact Center embedded in OpenTouch Business Edition - CCS Supervision mono-site connection software License	
1.2.309	3BA09534AO	Multi-Sites Supervision Contact Center embedded in OpenTouch Business Edition - CCS Supervision multi-site connection software License	
1.2.310	3BA09847AO	Light Mono-Site Supervision Contact Center embedded in OpenTouch Business Edition - CCS Supervision light mono-site connection software License	
Subtotal Ex Vat			10€

OmniTouch CC Standard Edition: CCInterfaces			
1.2.311	3BA09535AA	CRI Call Record Interface software license - access to CCD detailed call records	
1.2.312	3BA09536AA	WMI Workforce Management Interface software license	
1.2.313	3BA09537AA	RTI Real Time Interface software license	
1.2.314	3BA09541AA	CCTI Contact Center Telephony Interface Server including 5 agents software license	
1.2.315	3BA09542AA	CCTI Contact Center Telephony Interface 5 additional agents pack software license	
1.2.316	3BA09535AO	CRI Call Record Interface software license - access to Contact Center Distribution embedded in OpenTouch Business Edition detailed call records	
1.2.317	3BA09536AO	WMI Workforce Management Interface software license - access to Contact Center Distribution embedded in OpenTouch Business Edition detailed agent metrics for workforce management	
1.2.318	3BA09537AO	RTI Real Time Interface software license - access to Contact Center Distribution embedded in OpenTouch Business Edition detailed monitoring	
1.2.319	3BA09541AO	CCTI Contact Center Telephony Interface Server including 5 agents software license - access to Contact Center Distribution embedded in OpenTouch Business Edition Agent SDK	
1.2.320	3BA09542AO	CCTI Contact Center Telephony Interface 5 additional agents pack software license - access to Contact Center Distribution embedded in OpenTouch Business Edition Agent SDK	
Subtotal Ex Vat			
OmniTouch CC Standard Edition: CCagent			
1.2.321	3BA09539AA	CCagent Softphone Contact Center Agent server including 5 agents software license	
1.2.322	3BA09540AA	CCagent Softphone Contact Center Agent 5 additional agents pack software license	
1.2.323	3BA09670AA	CCagent Nomadic software license	
1.2.324	3BH11591AB	CCagent/CCagent Softphone & CCTI CD-ROM including software & documentation	
1.2.325	3BA09539AO	CCagent Softphone embedded in OpenTouch Business Edition - Contact Center Agent server including 5 agents software license	
1.2.326	3BA09540AO	CCagent Softphone embedded in OpenTouch Business Edition - Contact Center Agent 5 additional agents software license	
Subtotal Ex Vat			
OmniTouch CC Premium Edition: Interaction CC			
1.2.327	3BA09975AA	IP Softphone 1 Agent software license	
OmniTouch CC Common Option: Self service - CCivr			
1.2.328	3BA09280JA	CCIVR Free of charge upgrade	
1.2.329	3BA09368JA	CCivr master server	
1.2.330	3BA09369JA	CCivr easy server	107
1.2.331	3BA09370JA	CCivr Analog Software License 4 ports	

1.2.332	3BA09371JA	CCivr Digital Software License 10 ports	
1.2.333	3BA09374JA	CCivr Contact Center Integration and Queuing	
1.2.334	3BA09375JA	CCivr Database Read	
1.2.335	3BA09997JA	CCivr Software license R12.x	
1.2.336	3BA09997JU	CCivr Software license for upgrade R12.x	
1.2.337	3BA09998JA	CCivr SAPI5 TTS Connector 2 sessions	
Subtotal Ex Vat			
Genesys Compact Edition: Interaction CC			
1.2.338	3BA09209JA	Software license 1 user Routing Service Interface	
1.2.339	3BA09975AO	IP Softphone 1 Agent software license embedded in OpenTouch Business Edition	
Subtotal Ex Vat			
OpenTouch Customer Service : Media Packs - Base Media			
1.2.340	3BA09575JA	OTCS Media Packs - Predictive Dialer with call classification Software license	
1.2.341	3BA09576JA	OTCS Media Packs - Blended Power + Preview	
1.2.342	3BA09577JA	OTCS Media Packs - Blended Power+Preview+Predictive Software license	
1.2.343	3BA09578JA	OTCS Media Packs - Multi-media (email + chat + open media + social media)	
1.2.344	3BA09579JA	OTCS Media Packs - Full inbound (voice inbound+ chat + email + open media + social media) Software license	
1.2.345	3BA09580JA	OTCS Media Packs - Full Software license	
1.2.346	3BA09581JA	OTCS Base Media - Inbound Software license	
1.2.347	3BA09582JA	OTCS Base Media - Outbound Preview + Power Software license	
1.2.348	3BA09583JA	OTCS Base Media - Outbound Power + Preview + Predictive Software license	
1.2.349	3BA09584JA	OTCS Base Media - Call Classifier Software license	
1.2.350	3BA09585JA	OTCS Base Media - Email Software license	
1.2.351	3BA09586JA	OTCS Base Media - Social Media Software license	
1.2.352	3BA09587JA	OTCS Base Media - Open Media Software license	
1.2.353	3BA09588JA	OTCS Base Media - Chat Software license	
1.2.354	3BA09657JA	OTCS Base Media - PLUG-IN inbound Software license	
1.2.355	3BA09658JA	OTCS Base Media - Outbound Preview Software license	
Subtotal Ex Vat			
OpenTouch Customer Service : Management			
1.2.356	3BA09593JA	OTCS Management - Business Indicators Software license	
1.2.357	3BA09594JA	OTCS Management - Workforce management connectors Software license	
1.2.358	3BA09595JA	OTCS Management - Strategy Manager Software license	
1.2.359	3BA09596JA	OTCS Management - Management (Supervisor + Script + CRM + Custom) Software license	10€
1.2.360	3BA09706JA	OTCS Management - Agent Motivator Software license	

Subtotal Ex Vat			
OpenTouch Customer Service : Agents			
1.2.361	3BA09589JA	OTCS Agent - Default Software license	
1.2.362	3BA09590JA	OTCS Agent - CRM & Custom Software license	
1.2.363	3BA09591JA	OTCS Agent - Smart (Script + CRM + Custom) Software license	
1.2.364	3BA09592JA	OTCS Agent - Agent SIP phone	
Subtotal Ex Vat			
OpenTouch Customer Service : Routing			
1.2.365	3BA09597JA	OTCS Routing - Default Software license	
1.2.366	3BA09598JA	OTCS Routing - Intelligent + GUI based Software license	
Subtotal Ex Vat			
OpenTouch Customer Service : Voice Portal			
1.2.367	3BA04323AA	DIALOGIC Voice licenses (1 Port)	
1.2.368	3BA04324AA	DIALOGIC RTP G.711 licenses (1 Port)	
1.2.369	3BA04325AA	DIALOGIC HMP HA Cold Backup Software license	
1.2.370	3BA09599JA	OTCS Voice Portal - Queue Software license	
1.2.371	3BA09600JA	OTCS Voice Portal - Voice Prompting Software license	
1.2.372	3BA09601JA	OTCS Voice Portal - Voice Portal (VXML + ASR/TTS) Software license	
1.2.373	3BA09602JA	OTCS Voice Portal - Proactive Voice Portal (outbound IVR) Software license	
1.2.374	3BA09603JA	OTCS Voice Portal - IVR IP port Software license	
Subtotal Ex Vat			
OpenTouch Customer Service : Resources			
1.2.375	3BA09604JA	OTCS Workflow Software license	
1.2.376	3BA09605JA	OTCS Quality Management - Recording Connector Software license	
1.2.377	3BA09606JA	OTCS Resource Kit - Operational/Monitoring Level (Integration Server) Software license	
1.2.378	3BA09608JA	OTCS Resource Kit - Management + Operational/Monitoring Level (Integration Server) Software license	
1.2.379	3BA09685JA	OTCS High Availability Software license	
1.2.380	3BA09723JA	OTCS High Availability - Clustering Software license	
Subtotal Ex Vat			
OpenTouch Customer Service: DVD & Releases			
1.2.381	3BA09574JA	OTCS SOFTWARE LICENSE R8	
1.2.382	3BH03021AA	USB Dongle for OTCS	
1.2.383	3BA09041KA	OTCS Plugin remote node software	
Subtotal Ex Vat			
User applications: OmniTouch Unified Communication			
1.2.384	3BA09112JA	Software license My IP Touch Communicator 1 user (telephony presence, advanced directory lookup and call logging on IP Touch phone set 4038/4068)	
1.2.385	3BA09233JA	Stand alone application	10€
Subtotal Ex Vat			

OpenTouch Message Center			
1.2.386	3BA09690JA	OpenTouch Message Center - 1 user license	
1.2.387	3BA09691JA	OpenTouch Message Center High Availability option - 1 user license	
1.2.388	3BA09692JA	OpenTouch Message Center - audio prompts - 1 additional language license	
1.2.389	3BA09693JA	OpenTouch Message Center Automated Attendant Services option - 1 audio port license	
1.2.390	3BA09696JA	OpenTouch Message Center - 1 messaging audio port free license	
Subtotal Ex Vat			
User applications: CSTA interfaces			
1.2.391	3BA09005AA	CSTA Monitoring beyond 9999 instances	
1.2.392	3BA09081JA	IP DR-link Recording software license including the first 5 ports (Dedicated Recording Link)	
1.2.393	3BA09082JA	IP DR-link record 5 additional ports software license	
1.2.394	3BA09515AA	CSTA Contact Center server 5 monitors includes the first 5 monitorings - software license	
1.2.395	3BA09516AA	CSTA server 5 additional monitorings pack software license	
1.2.396	3BA09517AA	CSTA pilots monitoring allows CCdistribution queues monitoring - software license	
1.2.397	3BA09518AA	CSTA IVR server including the first 5 IVR ports software license	
1.2.398	3BA09519AA	CSTA IVR 5 additional IVR ports pack software license	
1.2.399	3BA09520AA	DR-link Recording Base Application software license including the first 5 ports (Dedicated Recording Link)	
1.2.400	3BA09521AA	CSTA record 5 additional ports pack software license	
1.2.401	3BA09522AA	CSTA record networked server including the first 5 ports software license	
1.2.402	3BA09523AA	RSI Routing Services Interface Server - 5 agents for Genesys Integration software license	
1.2.403	3BA09524AA	RSI CC Routing Services Interface - additional 5 agents pack for Genesys Integration software license	
1.2.404	3BA09602AA	CSTA NICE recording software license	
1.2.405	3BA09656AA	CSTA call recording (Voice Logger) software license	
1.2.406	3BA09665AA	CSTA 500 bypass software license	
1.2.407	3BA09671AA	CSTA recording networked 5 additional ports pack software license	
1.2.408	3BA09715AA	RSI business 5 agents pack software license	
1.2.409	3BA09528JA	CSTA call recording (OmniPCX Record Suite) software license	
1.2.410	3BA09081JO	IP DR-link embedded in OpenTouch Business Edition - Recording Server software license including the first 5 ports (Dedicated Recording Link)	
1.2.411	3BA09082JO	IP DR-link embedded in OpenTouch Business Edition - 5 additional ports software license (Dedicated Recording Link)	11C

1.2.412	3BA09515AO	Contact Center CSTA embedded in OpenTouch Business Edition - Server including the first 5 monitorings software license	
1.2.413	3BA09516AO	Contact Center CSTA embedded in OpenTouch Business Edition - 5 additional monitorings pack software license	
1.2.414	3BA09517AO	Contact Center CSTA embedded in OpenTouch Business Edition - Pilots monitoring allows Contact Center Distribution queues monitoring software license	
1.2.415	3BA09518AO	CSTA IVR Server embedded in OpenTouch Business Edition - including the first 5 IVR ports software license	
1.2.416	3BA09519AO	CSTA IVR embedded in OpenTouch Business Edition - 5 additional IVR ports pack software license	
1.2.417	3BA09520AO	DR-link CSTA embedded in OpenTouch Business Edition - Recording Server software license including the first 5 ports (Dedicated Recording Link)	
1.2.418	3BA09521AO	DR-Link CSTA embedded in OpenTouch Business Edition - 5 additional ports pack software license (Dedicated Recording Link)	
1.2.419	3BA09522AO	DR-Link CSTA embedded in OpenTouch Business Edition - Record networked Server software license including the first 5 ports (Dedicated Recording link)	
1.2.420	3BA09523AO	RSI Routing Services Intelligence embedded in OpenTouch Business Edition - Server including 5 agents software license	
1.2.421	3BA09524AO	RSI Routing Services Intelligence embedded in OpenTouch Business Edition - additional 5 agents pack software license	
1.2.422	3BA09715AO	RSI Routing Services Intelligence embedded in OpenTouch Business Edition - additional 5 business agents pack software license	
1.2.423	3BA09517AB	CSTA pilots monitoring bypass software license	
1.2.424	3BA09524AB	RSI CC 5 agents pack bypass software license	
1.2.425	3BA09960JA	CSTA call recording for multiple OmniPCX Record software license	
1.2.426	3BA09961JA	CSTA call recording for multiple NICE recorders software license	
1.2.427	3BA09962JA	CSTA call recording for multiple Voice Loggers software license	
1.2.428	3BA09024KA	CSTA SIP trunk Recording software server license including the first 5 ports	
1.2.429	3BA09025KA	5 additional ports software license for CSTA SIP trunk record	
Subtotal Ex Vat			
User applications: TAPI/TSAPI interfaces			
1.2.430	3BA09525AA	TAPI Premium server including 5 clients software license	
1.2.431	3BA09526AA	TAPI Premium server 5 additional clients pack software license	111

1.2.432	3BA09527AA	TSAPI server including the first 5 monitorings software license	
1.2.433	3BA09528AA	TSAPI server 5 additional monitorings pack software license	
1.2.434	3BH11413AA	TSAPI CD-ROM including software & documentation	
1.2.435	3BH11505AA	TAPI Premium Server CD-ROM including software & documentation	
1.2.436	3BA09525AO	TAPI Premium server embedded in OpenTouch Business Edition - Server including 5 clients software license	
1.2.437	3BA09526AO	TAPI Premium server embedded in OpenTouch Business Edition - 5 additional clients pack software license	
1.2.438	3BA09527AO	TSAPI server embedded in OpenTouch Business Edition -including the first 5 monitorings software license	
1.2.439	3BA09528AO	TSAPI server embedded in OpenTouch Business Edition - 5 additional monitorings pack software license	
1.2.440	3BA09528AB	TSAPI 5 monitor pack bypass software license	
Subtotal Ex Vat			
User applications: XML interfaces			
1.2.441	3BA09977JA	O2G - OTMS RELEASE R2.3 FOR O2G	
1.2.442	3BA09978JA	O2G - OmniPCX Open Gateway - Foundation license	
1.2.443	3BA09979JA	O2G - OmniPCX Open Gateway - Advanced Telephony API - user license	
1.2.444	3BA09979JB	O2G - OmniPCX Open Gateway - Advanced Tel. migration from OT without SPS contract - user license	
1.2.445	3BA09979JC	O2G - OmniPCX Open Gateway - Advanced Tel. free migration from OT with SPS contract - user license	
1.2.446	3BA09979JD	O2G - OmniPCX Open Gateway - Advanced Tel. migration from ICS without SPS contract - user license	
1.2.447	3BA09979JE	O2G - OmniPCX Open Gateway - Advanced Tel. free migration from ICS with SPS contract - user license	
1.2.448	3BA09980JA	O2G - OmniPCX Open Gateway - Management API - user license	
1.2.449	3BA09981JA	O2G - OmniPCX Open Gateway - IP Touch XML - user license	
1.2.450	3BA09982JA	O2G - OmniPCX Open Gateway - Analytics API - pack license	
1.2.451	3BA09983JA	O2G - OmniPCX Open Gateway - Foundation license High Availability	
1.2.452	3BA09984JA	O2G - OmniPCX Open Gateway - High Availability - user license	
1.2.453	3BA09003KA	O2G - OmniPCX Open Gateway - Virtualization	
1.2.454	3BA09043KA	O2G free of charge upgrade	
1.2.455	3BA09044KA	O2G Contact Center Agent - 1 user	
1.2.456	3BA09094KA	O2G - OmniPCX Open Gateway - Foundation - R2.2 software license	
1.2.457	3BA09094KU	O2G release upgrade R2.2	
1.2.458	3BA09096KA	O2G - Cloud Connectivity to Multi-media Contact Center	
Subtotal Ex Vat			112
Rainbow			

1.2.459	3MG07083AA	Rainbow kit including a camera CAM20 and an EGO Personal conference module USB and Bluetooth, OmniSound® with HD audio, full duplex, echo cancellation, noise suppression, 360° microphone	
1.2.460	3MG07084AA	Rainbow kit including a camera CAM50 with a power cord for Europe and an OmniTouch 8135s Compact Conference phone	
1.2.461	3MG07085AA	Rainbow kit including a camera (CAM50), with a power cord for the UK and an OmniTouch 8135s Compact Conference phone	
1.2.462	3MG07086AA	Rainbow kit including a camera (CAM50), with a power cord for the US and an OmniTouch 8135s Compact Conference phone	
1.2.463	3MG07087AA	Rainbow kit including a camera (CAM50), with a power cord for Australia and an OmniTouch 8135s Compact Conference phone	
Subtotal Ex Vat			
Desktop sets: Accessories for 8&9 Series sets			
1.2.464	3EU27009AA	Up to 4xV24 accesses over IP (230V)	
1.2.465	3EU27009UA	Up to 4xV24 accesses over IP (110V)	
1.2.466	3GV27033AB	Handset cord 350mm RJ9/RJ9 (x10)	
1.2.467	3GV27034AB	Handset cord 600mm RJ9/RJ9 (x10)	
Subtotal Ex Vat			
Desktop sets: Common options & accessories for 8&9 Series & Reflexes sets			
1.2.468	3GV28177AA	Quick Disconnect (QD) to RJ9 straight cable (box of 10 cables, Plantronics)	
1.2.469	3GV28047BA	Premium Corded Monaural Wide Band Headset SC232 ALE Sennheiser, Best in class comfort, HD voice clarity, Easy Disconnect + cable QD Jack3,5mm (3p & 4p)	
1.2.470	3GV28048BA	Premium Corded Binaural Wide Band Headset SC262 ALE Sennheiser, Best in class comfort, HD voice clarity, Easy Disconnect + cable QD Jack3,5mm (3p & 4p)	
1.2.471	3GV28041AB	Battery for Bluetooth® handset compatible with 8082 and 8068 Bluetooth Handsets (x1)	
1.2.472	3GV28047AD	Plantronics HW510 wide band corded monaural headset, Quick Disconnect (QD) + QD cable Jack 3,5 mm (3p & 4p)	
1.2.473	3GV28048AD	Plantronics HW520 wide band corded binaural headset, Quick Disconnect (QD) + QD cable Jack 3,5 mm (3p & 4p)	
1.2.474	3BN78158AB	Plantronics C215 low cost monaural Jack 3,5 mm 4 poles corded headset	
1.2.475	3MG08009AA	Battery(Li-ION) for Wide Band Bluetooth Handset	
1.2.476	3GV28184AA	USB interface module 2 relays	
1.2.477	3MK08007AA	Alcatel-Lucent Enterprise AH 11 G Professional Headset, Corded Monaural, RJ9 for DeskPhones	
1.2.478	3MK08008AA	Alcatel-Lucent Enterprise AH 12 G Professional Headset, Corded Binaural, RJ9 for DeskPhones	

1.2.479	3MK08011AA	Alcatel-Lucent Enterprise AH 21 U Premium USB Headset, Corded Monaural, for PC or DeskPhone with USB-A port	
1.2.480	3MK08012AA	Alcatel-Lucent Enterprise AH 22 U Premium USB Headset, Corded Binaural, for PC or DeskPhone with USB-A port	
1.2.481	3MK08014AA	Alcatel-Lucent Enterprise AH 22 M Premium USB Headset, Corded Binaural, for PC or DeskPhone with USB-A port, optimized for Rainbow, IP Desktop Softphone and OTC PC	
Subtotal Ex Vat			
Desktop sets: Power Supply for sets			
1.2.482	3MG27006AA	48V Power supply Europe (x4) compatible with wired and wireless devices	
1.2.483	3MG27006RW	48V Power supply Rest of the world (x4) compatible with wired and wireless devices	
1.2.484	3MG27006AR	48V Power supply Argentina (x4) compatible with wired and wireless devices	
1.2.485	3MG27006KR	48V Power supply KOREA (x4) compatible with My IC Phone 8082, Premium Deskphones and IP Touch 8 Series	
1.2.486	3MG08011AA	8008 Power supply with 5 type of plugs (CCC,EU,SAA,UK,US)	
Subtotal Ex Vat			
Desktop sets: My IC Phone sets			
1.2.487	3MG27113AA	Alcatel-Lucent 8088 SmartDeskPhone, 7" WVGA touch screen, Bluetooth integrated, Wideband audio, 3.5mm stereo headset jack, 10/100/1000 PC connection, 2 USB, HDMI, 5M pixels HD camera, POE or power supply, delivered with Comfort handset	
1.2.488	3MG27112AB	8088 Smart DeskPhone v2, 5M pixels HD camera, new BT handset, 7" WVGA touch screen, sensitive keys, Wideband audio, adjustable foot, 3.5mm headset jack, 10/100/1000 PC connection, BT connectivity, 2 USB, HDMI, POE or power supply	
1.2.489	3MG27112ND	8088 Smart DeskPhone v2, no internal camera, new BT handset, 7" WVGA touch screen, sensitive keys, Wideband audio, adjustable foot, 3.5mm headset jack, 10/100/1000 PC connection, BT connectivity, 2 USB, HDMI, POE or power supply	
1.2.490	3MG27113AB	8088 Smart DeskPhone v2, 7" WVGA touch screen, Bluetooth integrated, Wideband audio, 3.5mm stereo headset jack, 10/100/1000 PC connection, 2 USB, HDMI, 5M pixels HD camera, POE or power supply, delivered with Comfort handset	

1.2.491	3MG27127AA	8088 Smart DeskPhone v3, 5M pixels HD camera, new BT handset, 7" WVGA touch screen, sensitive keys, Wideband audio, adjustable foot, 3.5mm headset jack, 10/100/1000 PC connection, BT connectivity, 2 USB, HDMI, POE or power supply	
1.2.492	3MG27127BA	8088 Smart DeskPhone v3, no internal camera, new BT handset, 7" WVGA touch screen, sensitive keys, Wideband audio, adjustable foot, 3.5mm headset jack, 10/100/1000 PC connection, BT connectivity, 2 USB, HDMI, POE or power supply	
1.2.493	3MG27128AA	8088 Smart DeskPhone v3, 7" WVGA touch screen, Bluetooth integrated, Wideband audio, 3 .5mm stereo headset jack, 10/100/1000 PC connection, 2 USB, HDMI, 5M pixels HD camera, POE or power supply, delivered with Comfort handset	
Subtotal Ex Vat			
Desktop sets: Options & Accessories for My IC Phone sets			
1.2.494	3MG27032AA	Wired comfort soft grip WB handset for Alcatel-Lucent 80x2 My IC Phone and Premium Deskphone 80x8/9 Black	
1.2.495	3BN67215WW	Bluetooth headset: Multipoint, AudiolQ ² with Dual N/C Mic, WindSmart, audio streaming, battery meter, charger (A/C plug EU/UK/US, USB and Car), Plantronics Voyager Legend	
1.2.496	3MG27118AA	Pack of 10 blank shutter for the Alcatel-Lucent 8088 Smart DeskPhone camera. This shutter can be printed with any logo	
Subtotal Ex Vat			
80x8 Premium Deskphone sets			
1.2.497	3MG27202WW	8028s WW Premium Deskphone Moon Grey, 2,8" 64x128 B&W backlight display, Wide Band Corded Confort Handset, 4 programmable keys with Led & Paper Label, Alphabetic Keyboard, Jack 3,5 mm 4 poles, USB, 10/100/1000 PC Connectivity POE	
1.2.498	3MG27203WW	8058s WW Premium Deskphone Moon Grey, 3,5" 320x240 Color display, Wide Band Corded Confort Handset, Alphabetic Keyboard, Jack 3,5 mm 4 poles, Integrated 4 lighted key Smart add-on module, USB, 10/100/1000 PC Connectivity POE	
1.2.499	3MG27204WW	8068s WW Premium Deskphone Moon Grey, 3,5" 320x240 Color display, Wide Band Corded Confort Handset, Bluetooth 4.1 enabler, Alphabetic Keyboard, Jack 3,5 mm 4 poles, USB, 10/100/1000 PC Connectivity POE	

1.2.500	3MG27205WW	8078s WW Premium Deskphone Moon Grey, 5" 800x480 Capacitive Color display, Wide Band Corded Comfort Handset, Bluetooth 4.1 enabler, Alphabetic Keyboard, Jack 3,5 mm 4 poles, USB, 10/100/1000 PC Connectivity POE	
1.2.501	3MG27206WW	8068s WW Premium Deskphone BT Moon Grey, 3,5" 320x240 Color display, Wide Band Bluetooth Wireless Handset, Bluetooth 4.1 enabler, Alphabetic Keyboard, Jack 3,5 mm 4 poles, USB, 10/100/1000 PC Connectivity POE	
1.2.502	3MG27207WW	8078s WW Premium Deskphone BT Moon Grey, 5" 800x480 Capacitive Color display, Wide Band Bluetooth wireless Handset, Bluetooth 4.1 enabler, Alphabetic Keyboard, Jack 3,5 mm 4 poles, USB, 10/100/1000 PC Connectivity POE	
1.2.503	3MG08010AA	8008 Entry-level DeskPhone, 64x128 pixels, black and white LCD, no backlit, 6 soft keys, 2 fast Ethernet ports, Wideband supported. Ethernet cable is not delivered in the box.	
1.2.504	3MG27201AB	8018 Deskphone Moon Grey, NOE-SIP, 64x128 backlit black & white LCD, 6 soft keys, Handsfree, Wideband Comfort Handset, 2 Gig Ethernet Ports, USB, POE or power supply, F1/F2-Hold/Transfer Paper label. Ethernet cable is not delivered in the box.	
1.2.505	3MG08021AA	8008G Entry-level DeskPhone, NOE-SIP, 128x64 pixels, black and white LCD with backlit, 6 soft keys, 2 Gigabit Ethernet ports, HD Audio. Ethernet cable is not delivered in the box.	
1.2.506	3MG08010CE	8008 Cloud Edition Entry-level DeskPhone, SIP, 128x64 pixels, black and white LCD, no backlit, 6 soft keys, 2 fast Ethernet ports, HD Audio. Ethernet cable is not delivered in the box.	
1.2.507	3MG08021CE	8008G Cloud Edition Entry-level DeskPhone, SIP, 128x64 pixels, black and white LCD, with backlit, 6 soft keys, 2 gigabit Ethernet ports, HD Audio. Ethernet cable is not delivered in the box.	
Subtotal Ex Vat			
Options for Premium Deskphone sets			
1.2.508	3MG27105AC	Premium add-on module "s" Moon Grey, 10 programmable keys	
1.2.509	3MG27106AC	Premium add-on module "s" Moon Grey, 40 programmable keys, clip included	
1.2.510	3MG27107AC	Premium Smart display module "s" Moon Grey, 14 programmable keys, clip included	
Subtotal Ex Vat			
Accessories for Premium Deskphone sets			
1.2.511	3MG27114AA	8028/8029 paper labels (x50)	
1.2.512	3MG27115AA	Premium add on 10 key paper labels (x64)	
1.2.513	3MG27116AA	Premium add on 40 key paper labels (x50)	11€
1.2.514	3MG27110AA	Premium Deskphone wall mounting kit	

1.2.515	3BA27856AA	NFC tag stickers package (100 items) for Extended Mobility Application	
1.2.516	3MG27122AA	Premium Add-on 40 clip	
1.2.517	3MG27123AA	Premium Smart Add-on clip	
1.2.518	3MG27210AA	Wall mounting kit for 8018and 8019s DeskPhone	
1.2.519	3MG27211AA	Set of 10 blank clip for 8018 and 8019s hardware customization	
1.2.520	3MG27216AA	Set of 10 plastic foot for 8018 and 8019s DeskPhone	
1.2.521	3MG27124AA	Add-On Spare kit containing 10 long SATA cables, 10 short SATA cables to interconnect Add-on and Premium phone. 10 screws to fix AOM10 to Premium phone	
1.2.522	3MG27208WW	Deskphone Keyboard WW, Magnetic Alphabetic Keyboard	
1.2.523	3MG27209AA	Wide Band Bluetooth Handset, Bluetooth 4.1	
1.2.524	3MG08012AA	8008 Standard handset supporting G.722 codec	
1.2.525	3MG08013AA	8008 Wall mounting kit	
1.2.526	3MG08014AA	8008 Plastic foot (x10)	
1.2.527	3MG08018AA	Pack of 10 ALE Jack 3,5 mm adapter cable (length 100 mm) male Jack 4 poles to female ALE Jack 3 poles	
1.2.528	3MG08019AA	Pack of 10 ALE adapter cable SATA to RJ11 (length 210 mm) for EHS signals (Audio Com, External Ring)	
1.2.529	3MG08020AA	Pack of 10 USB 2.0 to Type C cable (length 1,5 m) to connect computers with a USB Type A port to Premium DeskPhone s series with Type C connector.	
1.2.530	3MG27215AB	Set of 64 paper label of the 8018 and 8019s DeskPhone	
1.2.531	3MG27222AA	Set for 8018 and 8019s DeskPhone including 10 x NOE double sided (F1/F2 or Hold/Transfer) + 10 x SIP double sided (Icons or Blank) + 10 x plastic cover	
1.2.532	3MG27220AA	Super Wide Band comfort handset for Alcatel-Lucent 80xx DeskPhone, Premium DeskPhone and Smart DeskPhone	
Subtotal Ex Vat			
DECT On site mobility equipment: DECT handsets			
1.2.533	3BN67330AB	8232s DECT Handset, contains battery and Belt clip	
1.2.534	3BN67331AB	8232-8242 DECT Handset desktop charger, delivered with USB A cable, requires additional PSU (3BN67335AA or 3BN67336AA)	
1.2.535	3BN67342AB	8242s DECT Handset, contains battery and Belt clip	
1.2.536	3BN67345AA	8262 DECT Handset, contains battery and Belt clip	
1.2.537	3BN67355AA	8212 DECT Handset, contains battery and desktop charger	
1.2.538	3BN07004AA	8212 DECT Handset, contains battery, Desktop Charger and Power Supply Europe 3BN67335AA	
1.2.539	3BN07005AA	8212 DECT handset, contains battery, Desktop charger and Power supply WW 3BN67336AA	117

1.2.540	3BN67360AA	8262 EX DECT Handset, contains battery and Belt clip	
1.2.541	3BN67363AA	Intercom DECT call box, contains european power supply equivalent to ref 3BN67335AA	
1.2.542	3BN67370AA	8254 DECT Handset, contains battery and Belt clip	
1.2.543	3BN67378AA	8234 DECT handset, contains battery and Belt clip	
1.2.544	3BN67380AA	8244 DECT handset, contains battery and Belt clip	
Subtotal Ex Vat			
DECT On site mobility equipment: Accessories for DECT handsets			
1.2.545	3BN67212EU	Bluetooth headset for 500 DECT Handset : Multipoint, AudioIQ ² with Dual N/C Mic, Audio streaming, A2DP, battery meter, charger (A/C plug EU/UK types, USB and Car) Plantronics Voyager Pro	
1.2.546	3BN67332AA	8232/8242/8262 DECT Handset spare battery	
1.2.547	3BN67333AA	8232 DECT Handset spare belt clip, identical as the one delivered with the product	
1.2.548	3BN67334AA	8232 DECT Handset swivel clip, replaces the original belt clip	
1.2.549	3BN67335AA	8232 DECT Handset Desktop charger power supply, with Europe mains plug	
1.2.550	3BN67336AA	8232 DECT Handset Desktop charger power supply, contains US/UK/AUS mains plug	
1.2.551	3BN67337AA	8232 DECT Handset vertical pouch with Belt clip	
1.2.552	3BN67338AA	8232 DECT Handset Horizontal pouch with Belt clip	
1.2.553	3BN67317AA	Swivel carrying case (black color) with keypad cover for Alcatel-Lucent 300 & 400 DECT handset	
1.2.554	3BN67341AA	82x2 DECT Handset dual charger, delivered with USB A-microB cable, requires additional PSU (3BN67335AA or 3BN67336AA)	
1.2.555	3BN67343AA	8242 DECT Handset vertical pouch with Belt clip	
1.2.556	3BN67344AA	8242 DECT Handset Horizontal pouch with Belt clip	
1.2.557	3BN67346AA	8262 DECT Handset desktop dual charger, can charge one 8262 DECT Handset and one spare battery, requires additional PSU EU 3BN67335AA or WW 3BN67336AA	
1.2.558	3BN67347AA	8262 DECT Handset spare Pull Cords (X2)	
1.2.559	3BN67348AA	8262 DECT Handset spare belt clip identical as the one delivered with the product and swivel Belt clip with adapted cover	
1.2.560	3BN67351AA	8262 DECT Handset rack charger, can charge up to 6 handsets and 6 spare batteries, requires additional PSU WW 3BN67353AA	
1.2.561	3BN67352AA	8262 DECT Handset vertical pouch with swivel Belt clip and adapted cover	
1.2.562	3BN67353AA	8262 DECT World Wide Power Supply for Rack Charger	11£

1.2.563	3BN67354AA	8262 DECT Handset Accessories kit contains Belt clip covers (X2), Battery doors (x2), Screws for cover (x4), Pull cord covers (X2) and adapted screwdriver	
1.2.564	3BN67339AB	8232 DECT Interface for firmware update, pack contains 2 devices. It allows 2 simultaneous software upgrades connecting 8232 DECT Handsets 3,5mm jack to PC USB port/Hub. Works with UST Tool which support up to 8 simultaneous software upgrades.	
1.2.565	3BN67356AA	8212 DECT Handset spare desktop charger	
1.2.566	3BN67357AA	8212 DECT Handset vertical pouch with swivel Belt clip	
1.2.567	3BN67359AA	8232 Handset silicone protection case cover, black color, delivered with swivel belt clip. It brings a good protection against drops and shocks, easy to remove, easy to clean.	
1.2.568	3BN67361AA	8262 EX DECT Handset spare battery	
1.2.569	3BN67368AA	8262 Ex DECT spare battery charger with USB connector. Can charge up to 3x 8262 Ex spare batteries (Ref 3BN67361AA). Supplied without PSU. Additional PSU Eu (3BN67335AA) or WW (3BN67335AA) can be used	
1.2.570	3BN67371AA	82x4 DECT Handset desktop single charger, can charge one 82x4 DECT Handset, requires additional PSU EU 3BN67335AA or WW 3BN67336AA	
1.2.571	3BN67372AA	82x4 DECT Handset desktop dual charger, can charge one 82x4 DECT Handset and one spare battery, requires additional PSU EU 3BN67335AA or WW 3BN67336AA	
1.2.572	3BN67373AA	8254 DECT Handset vertical pouch with swivel Belt clip, with screws and adapted cover	
1.2.573	3BN67374AA	82x4 DECT Handset spare belt clip with screws identical as the one delivered with the product	
1.2.574	3BN67375AA	82x4 DECT Handset swivel clip, replaces the original belt clip, delivered with adapted cover and screws	
1.2.575	3BN67376AA	82x4 DECT Handset Belt clip cover x10, delivered with screws, replaces the original belt clip if not used	
1.2.576	3BN67377AA	DECT Handset Desktop charger power supply for 82xx range, with India mains plug	
1.2.577	3BN67379AA	8234 DECT handset vertical pouch with swivel Belt clip and adapted cover	
1.2.578	3BN67381AA	8244 DECT handset vertical pouch with swivel Belt clip and adapted cover	
Subtotal Ex Vat			
DECT On site mobility equipment: Indoor & Outdoor Base stations			
1.2.579	3BN77020BA	8379 DECT IBS Indoor Base Station, including integrated antennas, world wide base station	
1.2.580	3BN77020CA	8379 DECT IBS Indoor Base Station, for external antennas, supplied without antennas, world wide base station	
1.2.581	3BN77020DA	8379 DECT IBS Outdoor Base station, supplied with external antennas, world wide base station	
Subtotal Ex Vat			116

DECT On site mobility equipment: Accessories for Base stations			
1.2.582	3BD52205AA	Alcatel-Lucent gain antenna 8dB right circular polarisation	
1.2.583	3BD52206AA	Alcatel-Lucent gain antenna 8dB left circular polarisation	
1.2.584	3BD52211AA	Alcatel-Lucent SMA male connector (3mm diameter)	
1.2.585	3BD52212AA	Alcatel-Lucent gain antenna 7,5dB omnidirectional	
1.2.586	3BD52213AA	Alcatel-Lucent indoor suspension kit for base station	
1.2.587	3BD52214AA	Indoor/outdoor corner wall support for Alcatel-Lucent base station	
1.2.588	3BD52215AA	Alcatel-Lucent indoor/outdoor remote wall mounting kit for base station	
1.2.589	3BD52217AA	Alcatel-Lucent SMA male/SMA male cord, 5mm diameter, 1m long	
1.2.590	3BD52220AA	Alcatel-Lucent SMA female/SMA male antenna lightning arrester	
1.2.591	3BD52221AA	Alcatel-Lucent SMA female/female adaptor (0°)	
1.2.592	3BD52224AA	Alcatel-Lucent mounting kit for mast diameter 40 to 90mm	
Subtotal Ex Vat			
DECT On site mobility equipment: Accessories for IP-DECT Base stations			
1.2.593	3BN67184AA	Alcatel-Lucent IP-DECT Isolated Outdoor Box for IP-DECT AP	
1.2.594	3BN67185AA	Alcatel-Lucent IP-DECT/IP-xBS 8dBi Gain Antenna for IP-DECT AP with External antennas 3BN67189AA	
1.2.595	3BN67364AA	8318 SIP-DECT Single Base station, contains power supply and RJ45 cable for IP connexion (1m)	
1.2.596	3BN07006AA	8318 SIP-DECT Single Base Station + 1x8212 DECT Handset with Desktop charger	
Subtotal Ex Vat			
IP-xBS DECT Base stations			
1.2.597	3BN67365AA	8378 IP-XBS Indoor Base Station, including integrated antennas, world wide base station	
1.2.598	3BN67366AA	8378 IP-XBS Indoor Base Station, for external antennas, supplied without antennas, world wide base station	
1.2.599	3BN67367AA	8378 IP-XBS Outdoor Base Station, supplied with external antennas, world wide base station	
Subtotal Ex Vat			
WLAN On site mobility equipment: WLAN handsets			
1.2.600	3BN78401AA	Alcatel-Lucent 8118 WLAN Handset includes set, battery, belt clip, regulatory sheet	
1.2.601	3BN78402AA	Alcatel-Lucent 8128 WLAN Handset includes set, battery, belt clip, regulatory sheet	
1.2.602	3BN78421AA	Alcatel-Lucent 8158s WLAN Handset includes set, battery, belt clip, regulatory sheet	

1.2.603	3BN78422AA	Alcatel-Lucent 8168s WLAN Handset includes set, battery, belt clip, regulatory sheet	
Subtotal Ex Vat			
WLAN On site mobility equipment: Accessories for WLAN handsets			
1.2.604	3BN78403AA	Desktop charger Europe for Alcatel-Lucent OmniTouch 81x8 WLAN Handset, with CEE 7/16 mains plug	
1.2.605	3BN78403AB	Desktop charger with UK-US-AUS mains plug for Alcatel-Lucent OmniTouch 81x8 WLAN Handset	
1.2.606	3BN78403AC	Desktop charger alone for Alcatel-Lucent OmniTouch 81x8 WLAN Handset, does not contain power supply	
1.2.607	3BN78404AA	Standard battery for Alcatel-Lucent OmniTouch 8118 and 8128 WLAN Handset	
1.2.608	3BN78406AA	Rack charger World Wide for Alcatel-Lucent OmniTouch 81x8 WLAN Handset, require a separate IEC13 mains cord, can charge up to 6 sets	
1.2.609	3BN78407AA	Batteries Rack charger World Wide for Alcatel-Lucent OmniTouch 8118 and 8128 WLAN Handset, require a separate IEC13 mains cord, can charge up to 6 batteries	
1.2.610	3BN78408AA	Leather carrying case for Alcatel-Lucent OmniTouch 8118 and 8128 WLAN Handset	
1.2.611	3BN78409AA	Belt clip for Alcatel-Lucent OmniTouch 8118 and 8128 WLAN Handset	
1.2.612	3BN78410AA	Swivel clip for Alcatel-Lucent OmniTouch 8118 and 8128 WLAN Handset	
1.2.613	3BN78423AA	Belt clip for Alcatel-Lucent 8158s and 8168s WLAN Handset	
1.2.614	3BN78424AA	Carrying case for Alcatel-Lucent 8158s and 8168s WLAN Handset	
1.2.615	3BN78425AA	Swivel clip for Alcatel-Lucent 8158s and 8168s WLAN Handset	
1.2.616	3BN78426AA	Batteries Rack charger World Wide for Alcatel-Lucent 8168s and 8168s WLAN Handset, require a separate IEC13 mains cord, can charge up to 6 batteries	
1.2.617	3BN78427AA	Li-ION battery Pack for Alcatel-Lucent 8158s and 8168s WLAN Handset	
Subtotal Ex Vat			
Conference modules			
1.2.618	3GV28132AA	Alcatel-Lucent OmniTouch 4135 Compact Conferencing Module	
1.2.619	3GV28133AA	Power supply for 4135/8135s with 7,5m electrical cable	
1.2.620	3GV28134AA	Pair of expansion Microphones for 4135/8135s with 1,5m and 2,5m cables	
1.2.621	3GV28163AA	OT4135 IP Conference Phone Pack, OT4135 IP Conference Phone bundled with Accessories (Network Cable, Expansion Microphones and Transformer)	

1.2.622	3MG08017AA	EGO Personal conference module USB & Bluetooth, OmniSound® with HD audio, full duplex, echo cancellation, noise suppression, 360° microphone, Color LCD 128x160 1.77", Touchscreen, USB 2.0 Micro B, BT 4.0, 3.5 mm headset, 1000 mAh Li-ion battery	
1.2.623	3MG08015AA	Alcatel-Lucent OmniTouch 8135s Compact Conference Phone	
1.2.624	3MG07040AA	Bundle 8135s, Power Supply & Expansion Micro	
1.2.625	3MG08028AA	Konftel 800 SIP, USB, Bluetooth LE Conference Phone for Large meeting Room up to 20 people with simple to use touch interface with daisy chain capabilities and support smart expansion microphones	
1.2.626	3MG08029AA	Konftel Smart Microphone with built-in echo cancellation and background noise suppression to expand the range of the Konftel 800 with 3 meters connecting cable.	
1.2.627	3MG08030AA	Konftel Daisy-chain Cables 5m and 10m to connect up to three Konftel 800 to extends both the sound distribution and pick-up range for maximum coverage in large rooms with more than 20 people.	
Subtotal Ex Vat			
Server & PC platforms: Platforms			
1.2.628	3BA27769AA	Server rack Platform 3-4	
1.2.629	3BA58145AA	Power cable for US	
Server & PC platforms: Software options for platforms			
1.2.630	3BA09811JA	Suse Linux support	
1.2.631	3BA09953JA	Java Runtime Environment support	
1.2.632	3BA09974JA	Suse Linux support renewal without valid SPS contract	
1.2.633	3BA09974JB	Suse Linux support renewal with valid SPS contract	
1.2.634	3BA09084KA	Java Runtime Environment support renewal	
1.2.635	3BA09105KA	Java Runtime Environment support integrated in SPS contract for OmniVista 8770	
1.2.636	3BA09105KB	Java Runtime Environment support integrated in SPS contract for CCS/OmniPCX Enterprise	
1.2.637	3BA09105KC	Java Runtime Environment support integrated in SPS contract for CCS/OpenTouch Business Edition	
1.2.638	3BA09105KE	Java Runtime Environment support integrated in SPS contract for OpenTouch Message Center	
Subtotal Ex Vat			
Complementary equipment: Miscellaneous			
1.2.639	3BA04330AA	Go MidMarket program	
1.2.640	3BA09865JA	OmniPCX Enterprise/8770 software licenses alignment	
Subtotal Ex Vat			
Migration & Upgrade: OpenTouch Business Edition / Multimedia Services			
1.2.641	3BA09403JB	Migration License for System Security Option	122

1.2.642	3BA09404JB	Migration License for System Topology Option	
1.2.643	3BA09405JB	Migration License for Additionnal Client Session Option	
1.2.644	3BA09426JB	Migration License for Alarm User Option	
1.2.645	3BA09427JB	Migration License for Performance User Option	
1.2.646	3BA09428JB	Migration License for Metering User Option	
1.2.647	3BA09429JB	Migration License for Ticket collector User Option	
1.2.648	3BA09430JB	Migration License for Web Directory User Option	
1.2.649	3BA09101JC	OpenTouch migration License for Business IP - 1 user	
1.2.650	3BA09572JB	Migration Standard User Cellular device option license	
1.2.651	3BA09698JC	Migration from 46x5 with valid SPS contract to OpenTouch Business Edition - Message Center option - 1 user discounted license	
1.2.652	3BA09404JC	8770 migration to OTBE - Free license for Topology Option	
1.2.653	3BA09405JC	8770 migration to OTBE - Free license for Additional Client Session Option	
1.2.654	3BA09427JC	8770 migration to OTBE - Free license for Performance User Option	
1.2.655	3BA09736JC	8770 migration to OTBE - Free license for API User Option	
1.2.656	3BA09758JB	Migration from 46x5 to OTMS - 1 OpenTouch Connection universal client option discounted license	
1.2.657	3BA09690JC	Migration from 46x5 with valid SPS contract to OpenTouch Message Center - 1 user discounted license	
1.2.658	3BA09846JC	Migration software license for IP Premium - 1 user with set	
1.2.659	3BA09543JB	Migration license without SES/SPS valid contract to OTBE for OmniVista 8770 SNMP option license	
1.2.660	3BA09915JF	OpenTouch SBC software license R2.3 for IP Centralization	
1.2.661	3BA03262AL	Migration with valid SPS contract - OpenTouch Message Center 2.6 software	
1.2.662	3BA03263AL	Migration with valid SPS contract - OpenTouch Message Center 2.6 virtualized software	
1.2.663	3BA09056KC	OpenTouch Multimedia Services 2.6 software release license	
1.2.664	3BA09056KF	OpenTouch Multimedia Services 2.6 software release license for IP Centralization or Migration	
1.2.665	3BA09057KC	OpenTouch Message Center 2.6 software release license	
1.2.666	3BA09057KF	OpenTouch Message Center 2.6 software release license for IP Centralization or Migration	
Subtotal Ex Vat			
OmniPCX migration & Upgrade			
1.2.667	3BA00769AA	Migration pack including one INT-IP3 board	
1.2.668	3BA00770AA	Migration pack including one Armada board	123

1.2.669	3BA09031JB	IP Desktop Softphone software license (for Migration within IBT program)	
1.2.670	3BA09088JB	Migration license - 1 analog user	
1.2.671	3BA09090JB	License Migration Business UA - 1 user	
1.2.672	3BA09091JB	License Migration Call by Name - 1 user	
1.2.673	3BA09093JB	Migration License Remote Extension - 1 user	
1.2.674	3BA09094JB	Migration License for Mobile DECT 1 user	
1.2.675	3BA09098JB	Migration License for Mobile Executive DECT 1 user	
1.2.676	3BA09101JB	Migration License for Business IP - 1 user	
1.2.677	3BA09180JB	SIP migration license 1 user to SIP SEPLOS (SEPLOS= SIP End Point Level Of Service)	
1.2.678	3BA09723AA	Migration of Alcatel-Lucent OmniPCX Enterprise major software upgrade for a software engine in a stand-alone configuration	
1.2.679	3BA09753AA	Migration of Alcatel-Lucent OmniPCX Enterprise major software upgrade for a software engine in a networked configuration	
1.2.680	3BA09773AB	Alcatel-Lucent OmniPCX 4400 migration. Mobility software license	
1.2.681	3BA09774AA	System migration. Hardkey 0223	
1.2.682	3BA09811JB	Suse Linux support - Migration from Red Hat linux to Suse with valid SPS contract	
1.2.683	3BA09668JC	OpenTouch migration software license for IP device - 1 user with set	
1.2.684	3BA09935JA	System size adjustment - 1 user removal from total user number	
1.2.685	3BA09936JA	System size adjustment - 1 digital software license removal	
1.2.686	3BA09937JA	System size adjustment - 1 analog software license removal	
1.2.687	3BA09938JA	System size adjustment - 1 IP software license removal	
1.2.688	3BA09939JA	System size adjustment - 1 SIP software license removal	
1.2.689	3BA09970JB	Migration to Native encryption without valid Service contract - 1 IP user < 1500 users	
1.2.690	3BA09970JC	Migration to Native encryption with valid Service contract - 1 IP user < 1500 users	
1.2.691	3BA09020KB	Migration to Native encryption without valid Service contract - 1 IP user >= 1500 users	
1.2.692	3BA09020KC	Migration to Native encryption with valid Service contract - 1 IP user >= 1500 users	
1.2.693	3BA09971JC	Migration to Native encryption - 1 Media Gateway	
1.2.694	3BA09971JB	Migration to Native encryption - 1 additional Media Gateway	
Subtotal Ex Vat			
OmniMessage migration			
1.2.695	3BA09103JB	Migration for Alcatel-Lucent 4645 EMAIL Value Pack -1 user	
OmniVista migration			
1.2.696	3BA09362JB	Migration License for OmniVista 8770 Topology Option	124

1.2.697	3BA09363JB	Migration License for OmniVista 8770 Security Option	
1.2.698	3BA09364JB	Migration License for OmniVista 8770 Additional Client License	
1.2.699	3BA09362JC	Migration license with SES/SPS valid contract for OmniVista 8770 Topology Option	
1.2.700	3BA09363JC	Migration license with SES/SPS valid contract for OmniVista 8770 Security Option	
1.2.701	3BA09364JC	Migration license with SES/SPS valid contract for OmniVista 8770 Additional Client License for simultaneous administration (x1)	
1.2.702	3BA04315AA	IP Centralization - Migration license with SES/SPS valid contract to OmniVista 8770	
1.2.703	3BA04316AA	IP Centralization - Migration license with no SES/SPS valid contract to OmniVista 8770 with one module - One user	
1.2.704	3BA04317AA	IP Centralization - Migration license with no SES/SPS valid contract to OmniVista 8770 with Start Pack or 2 modules max - One user	
1.2.705	3BA04318AA	IP Centralization - Migration license with no SES/SPS valid contract to OmniVista 8770 with Full Pack or more than 2 modules - One user	
1.2.706	3BA09916JB	Migration license without SES/SPS valid contract for OmniVista 8770 Start Pack - Base license	
1.2.707	3BA09917JB	Migration license without SES/SPS valid contract for OmniVista 8770 Start Pack - User license	
1.2.708	3BA09918JB	Migration license without SES/SPS valid contract for OmniVista 8770 Full Pack - Base license	
1.2.709	3BA09919JB	Migration license without SES/SPS valid contract for OmniVista 8770 Full Pack - User license	
1.2.710	3BA09920JB	Migration license without SES/SPS valid contract for OmniVista 8770 Metering and Tracking - Base license	
1.2.711	3BA09921JB	Migration license without SES/SPS valid contract for OmniVista 8770 Metering and Tracking - User license	
1.2.712	3BA09922JB	Migration license without SES/SPS valid contract for OmniVista 8770 Unified Management - Base license	
1.2.713	3BA09923JB	Migration license without SES/SPS valid contract for OmniVista 8770 Unified Management - User license	
1.2.714	3BA09924JB	Migration license without SES/SPS valid contract for OmniVista 8770 Alarms - Base license	
1.2.715	3BA09925JB	Migration license without SES/SPS valid contract for OmniVista 8770 Alarms - User license	
1.2.716	3BA09926JB	Migration license without SES/SPS valid contract for OmniVista 8770 Past-Time Performance and OXE/OT VoIP Performance - Base license	

1.2.717	3BA09927JB	Migration license without SES/SPS valid contract for OmniVista 8770 Past-Time Performance and OXE/OT VoIP Performance - User license	
1.2.718	3BA09928JB	Migration license without SES/SPS valid contract for OmniVista 8770 Web Directory - Base license	
1.2.719	3BA09929JB	Migration license without SES/SPS valid contract for OmniVista 8770 Web Directory - User license	
1.2.720	3BA09930JB	Migration license without SES/SPS valid contract for OmniVista 8770 Ticket Collector - Base license	
1.2.721	3BA09931JB	Migration license without SES/SPS valid contract for OmniVista 8770 Ticket Collector - User license	
1.2.722	3BA09916JC	Migration license with SES/SPS valid contract for OmniVista 8770 Start Pack - Base license	
1.2.723	3BA09917JC	Migration license with SES/SPS valid contract for OmniVista 8770 Start Pack - User license	
1.2.724	3BA09918JC	Migration license with SES/SPS valid contract for OmniVista 8770 Full Pack - Base license	
1.2.725	3BA09919JC	Migration license with SES/SPS valid contract for OmniVista 8770 Full Pack - User license	
1.2.726	3BA09920JC	Migration license with SES/SPS valid contract for OmniVista 8770 Metering and Tracking - Base license	
1.2.727	3BA09921JC	Migration license with SES/SPS valid contract for OmniVista 8770 Metering and Tracking - User license	
1.2.728	3BA09922JC	Migration license with SES/SPS valid contract for OmniVista 8770 Unified Management - Base license	
1.2.729	3BA09923JC	Migration license with SES/SPS valid contract for OmniVista 8770 Unified Management - User license	
1.2.730	3BA09924JC	Migration license with SES/SPS valid contract for OmniVista 8770 Alarms - Base license	
1.2.731	3BA09925JC	Migration license with SES/SPS valid contract for OmniVista 8770 Alarms - User license	
1.2.732	3BA09926JC	Migration license with SES/SPS valid contract for OmniVista 8770 Past-Time Performance and OXE/OT VoIP Performance - Base license	
1.2.733	3BA09927JC	Migration license with SES/SPS valid contract for OmniVista 8770 Past-Time Performance and OXE/OT VoIP Performance - User license	
1.2.734	3BA09928JC	Migration license with no SES/SPS valid contract for OmniVista 8770 Web Directory - Base license	
1.2.735	3BA09929JC	Migration license with SES/SPS valid contract for OmniVista 8770 Web Directory - User license	
1.2.736	3BA09930JC	Migration license with SES/SPS valid contract for OmniVista 8770 Ticket Collector - Base license	

1.2.737	3BA09931JC	Migration license with SES/SPS valid contract for OmniVista 8770 Ticket Collector - User license	
1.2.738	3BA00825AB	Migration license without SES/SPS valid contract for OmniVista 8770 Managed Communication Services - User license	
1.2.739	3BA00825AC	Migration license with SES/SPS valid contract for OmniVista 8770 Managed Communication Services - User license	
1.2.740	3BA00858AB	Migration license without SES/SPS contract for OmniVista 8770 Managed Communication Services including multi domain - Base license	
1.2.741	3BA00858AC	Migration license with SES/SPS contract for OmniVista 8770 Managed Communication Services including multi domain - Base license	
1.2.742	3BA00859AB	Migration license without SES/SPS contract for OmniVista 8770 Managed Communication Services including multi domain - User license	
1.2.743	3BA00859AC	Migration license with SES/SPS contract for OmniVista 8770 Managed Communication Services including multi domain - User license	
1.2.744	3BA09052KF	OmniVista 8770 release 4.2 software license for IP centralization or Migration	
Subtotal Ex Vat			
Visual Automated Attendant migration			
1.2.745	3BA09027KB	Visual Automated Attendant - 1 port license without valid SPS contract	
1.2.746	3BA09027KC	Visual Automated Attendant - 1 port license with valid SPS contract	
1.2.747	3BA09028KB	Visual Automated Attendant HA - 1 port license without valid SPS contract	
1.2.748	3BA09028KC	Visual Automated Attendant HA - 1 port license with valid SPS contract	
1.2.749	3BA09082KF	Visual Automated Attendant software license R4.2 for IP Centralization	
Subtotal Ex Vat			
Visual Notification Assistant migration			
1.2.750	3BA09095KF	Visual Notification Assistant software license R1.3 for IP Centralization	
1.2.751	3BA09100KF	Visual Notification Assistant software license R1.4 for IP Centralization	
Subtotal Ex Vat			
OmniTouch CC migration			
1.2.752	3BA09529AB	Migration of CCdistribution, starter pack including 5 agents, software license	
1.2.753	3BA09530AB	Migration of CCdistribution, CCd Engine including 5 agents software license (no supervisor)	
1.2.754	3BA09531AB	Migration of CCdistribution, additional 5 agents pack up to 50 users software license	
1.2.755	3BA09531AC	Transformation of OmniPCX Office ACD to CCdistribution, additional 5 agents pack up to 50 users, software license	
1.2.756	3BA09533AB	Migration of CCsupervision monosite connection, software license	127

1.2.757	3BA09654AB	Migration of CCdistribution 5 agents pack over 50, software license	
1.2.758	3BA09654AC	Transformation of OmniPCX Office ACD to CCdistribution, additional 5 agents pack over 50 users, software license	
Subtotal Ex Vat			
Maintenance			
1.2.759	3EH05009AC	Power supply board kit for 2nd/3rd generation rack 1 (110/220V)	
1.2.760	3EH05011AC	Power supply board kit for 3rd generation rack 3 (110V)	
1.2.761	3EH05013AC	Power supply board kit for 3rd generation rack 3 (220V)	
1.2.762	3EH05021AA	48Volts DC power supply board for Rack1	
1.2.763	3EH05022AA	48Volts DC power supply board for Rack3	
1.2.764	3EH05009AD	Power supply board kit for 2nd generation rack 1 (110V/220V)	
1.2.765	3EH05011AD	Power supply board kit for 2nd generation rack 3 (110V)	
1.2.766	3EH05013AE	Power supply board kit for 2nd generation rack 3 (220V)	
Subtotal Ex Vat			
Professional Services: Integrate & Deploy/OmniPCX Enterprise Off the Shelf Solutions			
1.2.767	3EY98175AA	Basic Installation Pack.This service includes the ticket extractor application installation and configuration, coaching on database content. The price is fixed and travel and expenses are included with this service. Please refer to the document DSD	
1.2.768	3JE11459AA	Visual Automated Attendant port license	
1.2.769	3JE11648AA	Visual Automated Attendant per port one-year maintenance	
1.2.770	3JE11460AA	Visual Automated HA license per port	
1.2.771	3JE11649AA	Visual Automated Attendant HA license per port 1 year maintenance	
1.2.772	3JE11650AA	Visual Automated Attendant 1 day remote support for installation	
1.2.773	3JE11463AA	Visual Automated Attendant IVR license port	
1.2.774	3JE11653AA	Visual Automated Attendant IVR license port 1 year maintenance	
1.2.775	3BA04365AA	Visual Automated Attendant, for tracking	
1.2.776	3BA09027KA	Visual Automated Attendant - 1 port license	
1.2.777	3BA09027KD	Visual Automated Attendant - 1 port upgrade for SPS value setup	
1.2.778	3BA09028KA	Visual Automated Attendant HA - 1 port license	
1.2.779	3BA09028KD	Visual Automated Attendant HA - 1 port upgrade for SPS value Setup	
1.2.780	3BA09029KA	Visual Automated Attendant IVR - 1 port license	
1.2.781	3BA09029KD	Visual Automated Attendant IVR - 1 port upgrade for SPS value setup	
1.2.782	3BA09082KA	Visual Automated Attendant software license R4.2	
1.2.783	3BA09082KU	Visual Automated Attendant software upgrade license R4.2	
1.2.784	3BA09085KA	Visual Automated Attendant upgrade software license with valid SPS contract	12€

1.2.785	3BA09086KA	Visual Automated Attendant upgrade software license without valid SPS contract - 1 port	
Subtotal Ex Vat			
Professional Services: Integrate & Deploy/OTCC Standard Edition Off the Shelf Solutions			
1.2.786	3EY98033AA	CCD statistics customisation - On-site assistance to integration not included in the application price, but strongly advised. Contact professional.services@al-enterprise.com for a service request.	
1.2.787	3EY98989AA	Ticket extractor one year maintenance contract	
1.2.788	3EY96001AA	Standard Edition SoftPanel 5 connections	
1.2.789	3EY96002AA	Standard Edition SoftPanel from 5 to 30 connections	
1.2.790	3EY96003AA	Standard Edition SoftPanel over 30 connections	
1.2.791	3EY96008AA	Standard Edition SoftPanel 5 connections maintenance	
1.2.792	3EY96009AA	Standard Edition SoftPanel from 5 to 30 connections maintenance	
1.2.793	3EY96010AA	Standard Edition SoftPanel over 30 connections maintenance	
Subtotal Ex Vat			
Professional Services: Factory Acceptance			
1.2.794	3BA04362AA	Request for factory acceptance tests - item associated to an ALE Professional Services delivery. To get a quotation, please contact us thru the ALE Business Portal, "quick access" menu, then "Professional Services Offer request"	
Professional Services: Integrate & Deploy/OTCC Service Pack			
1.2.795	3EY98140AA	Basic Installation Pack. This service includes the deployment of the SoftPanel (WBM, Softpanel and Agent Desktop) Solution in the different contact Center environment (standard, Premium, Genesys)	
Professional Services: Integrate & Deploy/OTUC Service Pack			
1.2.796	3EY98984AA	Click to call plugin additional user license	
1.2.797	3EY98986AA	Installation service pack for click to call plugin	
1.2.798	3EY98993AA	Remote installation service pack for the click to call plugin	
1.2.799	3EY98987AA	1 year maintenance contract per click to call plugin user	
Subtotal Ex Vat			
OmniPCX Record: Licenses			
1.2.800	3JE10301AB	OmniPCX Record VoIP Foundation Pack	
1.2.801	3JE10302AB	OmniPCX Record non-IP Foundation Pack	
1.2.802	3JE10303AB	OmniPCX Record VoIP additional Channel	
1.2.803	3JE10304AB	OmniPCX Record non-IP additional Licenses	
1.2.804	3JE10305AB	OmniPCX Record IP Attendant License	12€
1.2.805	3JE10306AB	OmniPCX Record Multi-node option	

1.2.806	3JE10307AB	OmniPCX Record Screen Capture Found Pack	
1.2.807	3JE10308AB	OmniPCX Record Screen Capture additional channel	
1.2.808	3JE10309AB	OmniPCX Record Quality Monitor Foundation Pack	
1.2.809	3JE10310AB	OmniPCX Record Quality Monitor additional channel	
1.2.810	3JE10311AB	OmniPCX Record Silent Monitor option	
1.2.811	3JE10314AB	OmniPCX Record IP Attendant Foundation Pack	
1.2.812	3JE10319AB	OmniPCX Record encryption option	
1.2.813	3JE10333AB	OmniPCX Record Multitenancy option	
1.2.814	3JE10335AB	OmniPCX Record non-DR SIP Foundation Pack	
1.2.815	3JE10336AB	OmniPCX Record non-DR SIP Additional Channel	
1.2.816	3JE10337AB	OmniPCX Record non-DR Video Foundation Pack	
1.2.817	3JE10338AB	OmniPCX Record non-DR Video Additional Channel	
1.2.818	3JE10339AB	OmniPCX Record REST API Foundation Pack	
1.2.819	3JE10340AB	OmniPCX Record REST API Additional License	
1.2.820	3JE10343AB	OmniPCX Record Trunk - PRI License	
1.2.821	3JE10347AB	OmniPCX Record SIP Trunk Foundation Pack	
1.2.822	3JE10348AB	OmniPCX Record SIP Trunk Additional Channel	
1.2.823	3JE10351AB	OmniPCX Record Branch Logger option	
1.2.824	3JE10352AB	OmniPCX Record Provisioning API Foundation Pack	
1.2.825	3JE10353AB	OmniPCX Record Provisioning API additional License	
1.2.826	3JE10354AB	OmniPCX Record Virtual Device Foundation Pack	
1.2.827	3JE10355AB	OmniPCX Record Virtual Device additional License	
1.2.828	3JE10356AB	OmniPCX Record HA VoIP Foundation Pack	
1.2.829	3JE10357AB	OmniPCX Record HA VoIP additional Channel	
1.2.830	3JE10358AB	OmniPCX Record HA non-IP Foundation Pack	
1.2.831	3JE10359AB	OmniPCX Record HA non-IP additional License	
1.2.832	3JE10360AB	OmniPCX Record HA IP Attendant Foundation Pack	
1.2.833	3JE10361AB	OmniPCX Record HA IP Attendant License	
1.2.834	3JE10362AB	OmniPCX Record HA Screen Capture Foundation Pack	
1.2.835	3JE10363AB	OmniPCX Record HA Screen Capture additional Channel	
1.2.836	3JE10364AB	OmniPCX Record HA Quality Monitor Foundation Pack	
1.2.837	3JE10365AB	OmniPCX Record HA Quality Monitor additional channel	
1.2.838	3JE10366AB	OmniPCX Record HA non-DR SIP Foundation Pack	
1.2.839	3JE10367AB	OmniPCX Record HA non-DR SIP additional Channel	13C

1.2.840	3JE10368AB	OmniPCX Record HA non-DR Video Foundation Pack	
1.2.841	3JE10369AB	OmniPCX Record HA non-DR Video additional Channel	
1.2.842	3JE10370AB	OmniPCX Record HA Provisioning API Foundation Pack	
1.2.843	3JE10371AB	OmniPCX Record HA Provisioning API additional License	
1.2.844	3JE10372AB	OmniPCX Record HA Virtual Device Foundation Pack	
1.2.845	3JE10373AB	OmniPCX Record HA Virtual Device additional License	
1.2.846	3JE10374AB	OmniPCX Record HA Trunk - PRI License	
1.2.847	3JE10375AB	OmniPCX Record HA SIP Trunk Foundation Pack	
1.2.848	3JE10376AB	OmniPCX Record HA SIP Trunk additional Channel	
1.2.849	3JE10377AB	OmniPCX Record HA Multi-node option	
1.2.850	3JE10378AB	OmniPCX Record HA Silent Monitor option	
1.2.851	3JE10379AB	OmniPCX Record HA Encryption option	
1.2.852	3JE10380AB	OmniPCX Record HA Multitenancy option	
1.2.853	3JE10381AB	OmniPCX Record HA Branch Logger option	
1.2.854	3JE10384AB	OmniPCX Record SIPREC Voice Foundation Pack	
1.2.855	3JE10385AB	OmniPCX Record SIPREC Voice additional License	
1.2.856	3JE10386AB	OmniPCX Record HA SIPREC Voice Foundation Pack	
1.2.857	3JE10387AB	OmniPCX Record HA SIPREC Voice additional License	
1.2.858	3JE10388AB	OmniPCX Record Data Enrichment Foundation Pack	
1.2.859	3JE10389AB	OmniPCX Record Data Enrichment additional License	
1.2.860	3JE10390AB	OmniPCX Record HA Data Enrichment Foundation Pack	
1.2.861	3JE10391AB	OmniPCX Record HA Data Enrichment additional License	
1.2.862	3JE10394AB	OmniPCX Record SIPREC Video Foundation Pack	
1.2.863	3JE10395AB	OmniPCX Record SIPREC Video additional License	
1.2.864	3JE10396AB	OmniPCX Record HA SIPREC Video Foundation Pack	
1.2.865	3JE10397AB	OmniPCX Record HA SIPREC Video additional License	
Subtotal Ex Vat			
OmniPCX Record: Hardware			
1.2.866	3JE10102AB	OmniPCX Record Packetizer	
1.2.867	3JE10103AB	OmniPCX Record Trunk E1 Packetizer	
1.2.868	3JE10104AB	OmniPCX Record Trunk T1 Packetizer	
Subtotal Ex Vat			
OmniPCX Record: Support & Services			
1.2.869	3JE10500AB	OmniPCX Record Remote Installation Pack	
1.2.870	3JE10501AB	OmniPCX Record Attendant FP Maintenance	
1.2.871	3JE10502AB	OmniPCX Record VoIP Foundation Pack Maintenance	131

1.2.872	3JE10503AB	OmniPCX Record non-IP Foundation Pack Maintenance	
1.2.873	3JE10504AB	OmniPCX Record VoiP additional Channel Maintenance	
1.2.874	3JE10505AB	OmniPCX Record non-IP additional Channel Maintenance	
1.2.875	3JE10506AB	OmniPCX Record Screen Capture FP Maintenance	
1.2.876	3JE10507AB	OmniPCX Record Screen Capture Channel Maintenance	
1.2.877	3JE10508AB	OmniPCX Record Quality Monitor Foundation Pack Maintenance	
1.2.878	3JE10509AB	OmniPCX Record Quality Monitor License Maintenance	
1.2.879	3JE10510AB	OmniPCX Record Packetizer Maintenance	
1.2.880	3JE10511AB	OmniPCX Record Silent Monitor option Maintenance	
1.2.881	3JE10512AB	OmniPCX Record IP Attendant License- 1 year Maintenance	
1.2.882	3JE10513AB	OmniPCX Record Multi-node Maintenance	
1.2.883	3JE10518AB	OmniPCX Record encryption option - 1 year Maintenance	
1.2.884	3JE10545AB	OmniPCX Record Multitenancy Maintenance	
1.2.885	3JE10547AB	OmniPCX Record non-DR SIP FP Maintenance	
1.2.886	3JE10548AB	OmniPCX Record non-DR SIP Additional Channel Maintenance	
1.2.887	3JE10549AB	OmniPCX Record non-DR Video FP Maintenance	
1.2.888	3JE10550AB	OmniPCX Record non-DR Video Additional Channel Maintenance	
1.2.889	3JE10551AB	OmniPCX Record REST API FP Maintenance	
1.2.890	3JE10552AB	OmniPCX Record REST API Additional Licenses Maintenance	
1.2.891	3JE10557AB	OmniPCX Record Trunk E1 Packetizer Maintenance	
1.2.892	3JE10558AB	OmniPCX Record Trunk T1 Packetizer Maintenance	
1.2.893	3JE10555AB	OmniPCX Record Trunk - PRI License Maintenance	
1.2.894	3JE10559AB	OmniPCX Record SIP Trunk FP Maintenance	
1.2.895	3JE10560AB	OmniPCX Record SIP Trunk Additional Channel Maintenance	
1.2.896	3JE10563AB	OmniPCX Record Branch Logger option Maintenance	
1.2.897	3JE10564AB	OmniPCX Record Provisioning API Foundation Pack Maintenance	
1.2.898	3JE10565AB	OmniPCX Record Provisioning API additional License Maintenance	
1.2.899	3JE10566AB	OmniPCX Record Virtual Device Foundation Pack Maintenance	
1.2.900	3JE10567AB	OmniPCX Record Virtual Device additional License Maintenance	
1.2.901	3JE10568AB	OmniPCX Record HA VoIP Foundation Pack Maintenance	
1.2.902	3JE10569AB	OmniPCX Record HA VoIP additional Channel Maintenance	
1.2.903	3JE10570AB	OmniPCX Record HA non-IP Foundation Pack Maintenance	132

1.2.904	3JE10571AB	OmniPCX Record HA non-IP additional License Maintenance	
1.2.905	3JE10572AB	OmniPCX Record HA IP Attendant Foundation Pack Maintenance	
1.2.906	3JE10573AB	OmniPCX Record HA IP Attendant License Maintenance	
1.2.907	3JE10574AB	OmniPCX Record HA Screen Capture Foundation Pack Maintenance	
1.2.908	3JE10575AB	OmniPCX Record HA Screen Capture additional Channel Maintenance	
1.2.909	3JE10576AB	OmniPCX Record HA Quality Monitor Foundation Pack Maintenance	
1.2.910	3JE10577AB	OmniPCX Record HA Quality Monitor additional channel Maintenance	
1.2.911	3JE10578AB	OmniPCX Record HA non-DR SIP Foundation Pack Maintenance	
1.2.912	3JE10579AB	OmniPCX Record HA non-DR SIP additional Channel Maintenance	
1.2.913	3JE10580AB	OmniPCX Record HA non-DR Video Foundation Pack Maintenance	
1.2.914	3JE10581AB	OmniPCX Record HA non-DR Video additional Channel Maintenance	
1.2.915	3JE10582AB	OmniPCX Record HA Provisioning API Foundation Pack Maintenance	
1.2.916	3JE10583AB	OmniPCX Record HA Provisioning API additional License Maintenance	
1.2.917	3JE10584AB	OmniPCX Record HA Virtual Device Foundation Pack Maintenance	
1.2.918	3JE10585AB	OmniPCX Record HA Virtual Device additional License Maintenance	
1.2.919	3JE10586AB	OmniPCX Record HA Trunk - PRI License Maintenance	
1.2.920	3JE10587AB	OmniPCX Record HA SIP Trunk Foundation Pack Maintenance	
1.2.921	3JE10588AB	OmniPCX Record HA SIP Trunk additional Channel Maintenance	
1.2.922	3JE10589AB	OmniPCX Record HA Multi-node option Maintenance	
1.2.923	3JE10590AB	OmniPCX Record HA Silent Monitor option Maintenance	
1.2.924	3JE10591AB	OmniPCX Record HA Encryption option Maintenance	
1.2.925	3JE10592AB	OmniPCX Record HA Multitenancy option Maintenance	
1.2.926	3JE10593AB	OmniPCX Record HA Branch Logger option Maintenance	
1.2.927	3JE10596AB	OmniPCX Record SIPREC Voice Foundation Pack Maintenance	
1.2.928	3JE10597AB	OmniPCX Record SIPREC Voice additional License Maintenance	
1.2.929	3JE10598AB	OmniPCX Record HA SIPREC Voice Foundation Pack Maintenance	
1.2.930	3JE10599AB	OmniPCX Record HA SIPREC Voice additional License Maintenance	
1.2.931	3JE10600AB	OmniPCX Record Data Enrichment Foundation Pack Maintenance	
1.2.932	3JE10601AB	OmniPCX Record Data Enrichment additional License Maintenance	
1.2.933	3JE10602AB	OmniPCX Record HA Data Enrichment Foundation Pack Maintenance	
1.2.934	3JE10603AB	OmniPCX Record HA Data Enrichment additional License Maintenance	
1.2.935	3JE10606AB	OmniPCX Record SIPREC Video Foundation Pack Maintenance	133

1.2.936	3JE10607AB	OmniPCX Record SIPREC Video additional License Maintenance	
1.2.937	3JE10608AB	OmniPCX Record HA SIPREC Video Foundation Pack Maintenance	
1.2.938	3JE10609AB	OmniPCX Record HA SIPREC Video additional License Maintenance	
Subtotal Ex Vat			

IQ Messenger: Licenses			
1.2.939	3JE11320AA	IQ Messenger - Foundation Pack: server license, GUI basic 1 user, I/O contact: 8 In/2 Out, 2 x ESPA in/out, 10 OXE channels	
1.2.940	3JE11325AA	IQ Messenger - License for the use of 1 additional concurrent GUI	
1.2.941	3JE11326AA	IQ Messenger - Basic license for the use of 1 Historical Reporting application.	
1.2.942	3JE11327AA	IQ Messenger - License for the use of 1 additional concurrent Historical reporting Console	
1.2.943	3JE11328AA	IQ Messenger - Basic license for the use of the Real time alarm Console incl. 1 concurrent user license	
1.2.944	3JE11329AA	IQ Messenger - License for the use of 1 additional concurrent real time alarm Console	
1.2.945	3JE11330AA	IQ Messenger - Basic license for the use of the Graphical Floor Plan with LiveTrack incl. 1 concurrent user license	
1.2.946	3JE11331AA	IQ Messenger - License for the use of 1 additional concurrent Graphical Floor Plan user	
1.2.947	3JE11340AA	IQ Messenger - Basic license for the use of SmartApp for Android tablet and phone, incl. 10 Android lic.	
1.2.948	3JE11341AA	IQ Messenger - License for the use of 1 additional SmartApp for Android tablet and phone	
1.2.949	3JE11342AA	IQ Messenger - Basic license for the use of SmartApp for iPad and iPhone, incl. 10 iOS lic.	
1.2.950	3JE11343AA	IQ Messenger - License for the use of 1 additional SmartApp for iPad and iPhone	
1.2.951	3JE11346AA	IQ Messenger - License for 1 additional concurrent channel.	
1.2.952	3JE11353AA	IQ Messenger - Basic license for the use of 1 SMS alarm in/out interface	
1.2.953	3JE11354AA	IQ Messenger - License for the use of 1 additional SMS alarm in/out interface	
1.2.954	3JE11355AA	IQ Messenger - Basic license for the use of 1 ESPA 444 alarm in/out interface	
1.2.955	3JE11356AA	IQ Messenger - License for the use of 1 additional ESPA 444 alarm in/out interface	
1.2.956	3JE11357AA	IQ Messenger - Basic license for the use of 1 E-mail alarm in/out feature	
1.2.957	3JE11358AA	IQ Messenger - License for the use of 1 additional E-mail alarm in/out feature	
1.2.958	3JE11395AA	IQ Messenger - Basic license for the use of dry contacts input , incl. 8 dry contacts inputs	134

1.2.959	3JE11396AA	IQ Messenger - License for the use of 8 additional dry contact inputs	
1.2.960	3JE11397AA	IQ Messenger - Basic license for the use of dry contacts output, incl. 2 dry contact outputs	
1.2.961	3JE11398AA	IQ Messenger - License for the use of 2 additional dry contact outputs	
1.2.962	3JE11399AA	IQ Messenger - Basic license for the use of KNX input alarming, incl. 100 KNX input addresses.	
1.2.963	3JE11400AA	IQ Messenger - License for the use of 100 additional KNX input addresses	
1.2.964	3JE11401AA	IQ Messenger - Basic license for the use of KNX output alarming, incl. 100 KNX output addresses.	
1.2.965	3JE11402AA	IQ Messenger - License for the use of 100 additional KNX output addresses	
1.2.966	3JE11421AA	IQ Messenger - Basic license for the use of ASCII Printer incl. 1 ASCII Printer interface lic.	
1.2.967	3JE11422AA	IQ Messenger - License ASCII Printer for the use of 1 additional ASCII Printer interface	
1.2.968	3JE11423AA	IQ Messenger - Basic license for the use of TAP incl. 1 TAP interface lic.	
1.2.969	3JE11424AA	IQ Messenger - License TAP for the use of 1 additional TAP interface	
1.2.970	3JE11429AA	IQ Messenger - TAP foundation Pack: server license, GUI basic 1 user, I/O contact: 8 In/2 Out, 2 x TAP in/out, 10 OXE channels	
1.2.971	3JE11430AA	IQ Messenger - High Availability: token used to valorised the IQ Messenger HA server including all features implemented on the main server.	
1.2.972	3JE11431AA	IQ Messenger - Personal Security Pack: server license, GUI basic 1 user, 10 OXE channels, 1 license for Graphical FloorPlan, 1 license for RealTime Console, 1 license for historical reporting	
1.2.973	3JE11434AA	IQ Messenger - Basic license for the use of SNMP connector.	
1.2.974	3JE11435AA	IQ Messenger - License for the use of 1 additional SNMP alarm in/out interface	
1.2.975	3JE11454AA	IQ Messenger - License for the use of HTTP I/O interface provide an API based on HTTP protocol, allowing to send an event to the IQ Messenger (start alarm) or to receive a notification from IQ Messenger.	
1.2.976	3JE11455AA	IQ Messenger - Basic license for the use of HL7 interface providing a connection to any medical server communicating via HL-7 protocol	
1.2.977	3JE11456AA	IQ Messenger - License for the use of 1 additional HL7 interface providing a connection to any medical server communicating via HL-7 protocol	
1.2.978	3JE11425AA	IQ Messenger - Basic license for the use of SCAIP CarePhones, incl. 10 SCAIP CarePhones lic.	
1.2.979	3JE11426AA	IQ Messenger - License for the use of 1 additional SCAIP CarePhone	

1.2.980	3JE11393AA	IQ Messenger - Basic license for the use of Condigi Wander Alarm pendants, incl. 10 Wander pendants lic.	
1.2.981	3JE11394AA	IQ Messenger - License for the use of 1 additional Wander Alarm pendant	
1.2.982	3JE11461AA	IQ Messenger - Basic license for the use of the Graphical event assignment with LiveTrack incl. 1 concurrent user license	
1.2.983	3JE11462AA	IQ Messenger - License for the use of 1 additional concurrent Graphical Event Assignement user	
1.2.984	3JE11465AA	IQ Messenger - Basic license for 1 Rainbow account for IQ Messenger allowing in/out messages	
1.2.985	3JE11466AA	IQ Messenger - License for the use of 1 additional Rainbow account	
1.2.986	3JE11467AA	IQ Messenger - Basic license for the use of Location Beacon for SmartApp iOS or Android incl. 10 device licenses	
1.2.987	3JE11468AA	IQ Messenger - License for the use of 1 additional Location Beacon device for SmartApp iOS or Android	
1.2.988	3JE11469AA	IQ Messenger - Basic license for the use of SMPP interface, incl. 1 account license	
1.2.989	3JE11470AA	IQ Messenger - License for the use of 1 additional SMPP interface	
1.2.990	3JE11471AA	IQ Messenger - Basic license for the use of 1 Mindray eGateway alarm using HL7 protocol in/out interface	
1.2.991	3JE11472AA	IQ Messenger - License for the use of 1 additional Mindray eGateway HL7 protocol alarm in/out interface	
1.2.992	3JE11473AA	IQ Messenger - Basic license for the use of 1 Syslog alarm in/out interface	
1.2.993	3JE11474AA	IQ Messenger - Basic license for the use of BACnet interface, incl. 1 account license	
1.2.994	3JE11475AA	IQ Messenger - License for the use of 1 additional BACnet interface	
1.2.995	3JE11709AA	IQ Messenger - Basic license for the use of HTTP I/O interface incl. 10 device lic.	
1.2.996	3JE11710AA	IQ Messenger - License for the use of 1 additional HTTP I/O device	
Subtotal Ex Vat			
IQ Messenger: Licenses (not configured)			
1.2.997	3JE11332AA	IQ Messenger - Basic license for the use of the SIP Server incl. 10 SIP extension licenses	
1.2.998	3JE11335AA	IQ Messenger - Basic license for the use of Call & Conf. on extension or trunk base incl. recording, incl. 4 SIP extensions lic.	
1.2.999	3JE11338AA	IQ Messenger - Basic license for the use of CareScreens, incl. video calling, incl. 10 CareScreen lic.	
1.2.1000	3JE11347AA	IQ Messenger - Basic license for the use of Indigo iCall Nurse Call unit incl. 1 IP unit	
1.2.1001	3JE11349AA	IQ Messenger - Basic license for the use of Indigo iCall Acoustic Monitoring incl. 10 Acoustic Room Unit lic.	
1.2.1002	3JE11351AA	IQ Messenger - Basic license for the use of 1 Schrack ESPA-X alarm in/out interface	13€

1.2.1003	3JE11359AA	IQ Messenger - Basic license for the use of Bosch/Atus paging, messaging, incl. 10 pagers lic.	
1.2.1004	3JE11361AA	IQ Messenger - Basic license for the use of Bosch/Atus paging, personal security, incl. 10 pagers lic.	
1.2.1005	3JE11369AA	IQ Messenger - Basic license for the use of Ascom DECT, messaging, incl. 10 Ascom DECT handsets lic.	
1.2.1006	3JE11371AA	IQ Messenger - Basic license for the use of Ascom DECT, personal security incl. 10 Ascom DECT handsets lic.	
1.2.1007	3JE11373AA	IQ Messenger - Basic license for the use of NEC DECT, messaging, incl. 10 NEC DECT handsets lic.	
1.2.1008	3JE11375AA	IQ Messenger - Basic license for the use of NEC DECT, personal security incl. 10 NEC DECT handsets lic.	
1.2.1009	3JE11377AA	IQ Messenger - Basic license for the use of Basic DECT Room Units, incl. 10 Basic DECT room units lic.	
1.2.1010	3JE11379AA	IQ Messenger - Basic license for the use of Extended DECT Room Units, incl. 10 Extended DECT room units lic.	
1.2.1011	3JE11381AA	IQ Messenger - Basic license for the use of Extended IP Room Units, incl. 10 Extended IP room units lic.	
1.2.1012	3JE11383AA	IQ Messenger - Basic license for the use of DECT Voice Medallions, incl. 10 user lic.	
1.2.1013	3JE11389AA	IQ Messenger - Basic license for the use of Spectralink VoWiFi, messaging, incl. 10 Spectralink VoWiFi handsets lic.	
1.2.1014	3JE11391AA	IQ Messenger - Basic license for the use of Spectralink VoWiFi, personal security, incl. 10 Spectralink VoWiFi handsets lic.	
1.2.1015	3JE11403AA	IQ Messenger - Basic license for the use of Bluetooth positioning incl. 10 Bluetooth device lic.	
1.2.1016	3JE11405AA	IQ Messenger - Basic license for the use of Ekahau positioning incl. 10 Ekahau device lic.	
1.2.1017	3JE11407AA	IQ Messenger - Basic license for the use of NFC RFID tags incl. 10 NFC FRID tags	
1.2.1018	3JE11411AA	IQ Messenger - Basic license for the use of 1 Mobicall server	
1.2.1019	3JE11417AA	IQ Messenger - Basic license for the use of Stentofon, incl. 10 Stentofon devices lic.	
1.2.1020	3JE11419AA	IQ Messenger - Basic license for the use of Kadex, incl. 10 Kadex devices lic.	
1.2.1021	3JE11427AA	IQ Messenger - Basic license for the use of database connector incl. 1 database interface lic.	
1.2.1022	3JE11436AA	IQ Messenger - Basic license for the use of the Robin video device incl. 1 device lic.	
1.2.1023	3JE11438AA	IQ Messenger - Basic license for the use of the Mobotix video device incl. 1 device lic.	
1.2.1024	3JE11440AA	IQ Messenger - Basic license for the use of the Aivex video Security Console incl. 1 concurrent user	

1.2.1025	3JE11442AA	IQ Messenger - Basic license for the use of the Real time Griffis video Security Console incl. 1 concurrent user	
1.2.1026	3JE11444AA	IQ Messenger - Basic license for the use of CareTech IP/GSM CarePhones, incl. 10 CareTech IP / GSM CarePhones lic.	
1.2.1027	3JE11446AA	IQ Messenger - Basic license for the use of Commend, incl. 10 Commend devices lic.	
1.2.1028	3JE11448AA	IQ Messenger - Basic license for the use of 1 Ascom nurse call in/out interface	
1.2.1029	3JE11450AA	IQ Messenger - Basic license for the use of 1 Modbus alarm in/out interface	
1.2.1030	3JE11452AA	IQ Messenger - Basic license for the use of 1 Philips Emergin OAP alarm in/out interface	
1.2.1031	3JE11336AA	IQ Messenger - License for the use of 1 additional Call & Conference SIP extension	
1.2.1032	3JE11339AA	IQ Messenger - License for the use of 1 additional CareScreens, incl. video calling	
1.2.1033	3JE11348AA	IQ Messenger - License Indigo iCall Nurse Call for the use of 1 additional IP unit	
1.2.1034	3JE11350AA	IQ Messenger - License Indigo iCall Acoustic Monitoring for the use of 1 additional Acoustic Room unit	
1.2.1035	3JE11352AA	IQ Messenger - License for the use of 1 additional Schrack ESPA-X alarm in/out interface	
1.2.1036	3JE11360AA	IQ Messenger - License for the use of 1 additional Bosch/Atus pager, messaging	
1.2.1037	3JE11362AA	IQ Messenger - License for the use of 1 additional Bosch/Atus pager, personal security	
1.2.1038	3JE11370AA	IQ Messenger - License for the use of 1 additional Ascom DECT handset, messaging	
1.2.1039	3JE11372AA	IQ Messenger - License for the use of 1 additional Ascom DECT handset, personal security	
1.2.1040	3JE11374AA	IQ Messenger - License for the use of 1 additional NEC DECT handset, messaging	
1.2.1041	3JE11376AA	IQ Messenger - License for the use of 1 additional NEC DECT handset, personal security	
1.2.1042	3JE11378AA	IQ Messenger - License for the use of 1 additional Basic DECT Room Unit	
1.2.1043	3JE11380AA	IQ Messenger - License for the use of 1 additional Extended DECT Room Unit	
1.2.1044	3JE11382AA	IQ Messenger - License for the use of 1 additional Extended IP Room Unit	
1.2.1045	3JE11384AA	IQ Messenger - Basic license for the use of 1 additional DECT Voice Medallion	
1.2.1046	3JE11390AA	IQ Messenger - License for the use of 1 additional Spectralink VoWiFi handset, messaging	
1.2.1047	3JE11392AA	IQ Messenger - License for the use of 1 additional Spectralink VoWiFi handset, personal security	
1.2.1048	3JE11404AA	IQ Messenger - License for the use of 1 additional Bluetooth positioning device	
1.2.1049	3JE11406AA	IQ Messenger - License for the use of 1 additional Ekahau positioning device	13€

1.2.1050	3JE11408AA	IQ Messenger - License for the use of 10 additional NFC RFID tag	
1.2.1051	3JE11412AA	IQ Messenger - License for the use of 1 additional Mobicall server	
1.2.1052	3JE11418AA	IQ Messenger - License for the use of 1 additional Stentofon device	
1.2.1053	3JE11420AA	IQ Messenger - License for the use of 1 additional Kadex device	
1.2.1054	3JE11437AA	IQ Messenger - Basic license for the use of 1 additional Robin device	
1.2.1055	3JE11439AA	IQ Messenger - Basic license for the use of 1 additional Mobotix device	
1.2.1056	3JE11441AA	IQ Messenger - License for the use of 1 additional concurrent Aivex video Security Console	
1.2.1057	3JE11443AA	IQ Messenger - License for the use of 1 additional concurrent Real time Griffid video Security Console	
1.2.1058	3JE11445AA	IQ Messenger - License for the use of 1 additional IP / GSM Caretech CarePhone	
1.2.1059	3JE11447AA	IQ Messenger - License for the use of 1 additional Commend device	
1.2.1060	3JE11449AA	IQ Messenger - License for the use of 1 additional Ascom nurse call in/out interface	
1.2.1061	3JE11451AA	IQ Messenger - License for the use of 1 additional Modbus alarm in/out interface	
1.2.1062	3JE11453AA	IQ Messenger - License for the use of 1 additional Philips Emergin OAP alarm in/out interface	
1.2.1063	3JE11707AA	IQ Messenger - Basic license for the use of the IQ Messenger REST-API interface incl. 10 device lic.	
1.2.1064	3JE11708AA	IQ Messenger - License for the use of 1 additional REST-API device	
1.2.1065	3JE11478AA	IQ Messenger - Basic Identity and Access Management Connector	
1.2.1066	3JE11479AA	IQ Messenger - Basic license for the use of Cisco device, incl. 10 Cisco devices lic.	
1.2.1067	3JE11480AA	IQ Messenger - License for the use of 1 additional Cisco device	
1.2.1068	3JE11481AA	IQ Messenger - Basic license for the use of Cisco WiFi positioning incl. 500 positioning devices	
1.2.1069	3JE11482AA	IQ Messenger - License for the use of 500 additional Cisco WiFi positioning devices	
1.2.1070	3JE11483AA	IQ Messenger - Basic license for the use of SmarterVision, incl. 1 device lic.	
1.2.1071	3JE11484AA	IQ Messenger - License for the use of 1 additional SmarterVision device	
1.2.1072	3JE11485AA	IQ Messenger - Basic license for the use of Aruba WiFi positioning incl 500 positioning devices	
1.2.1073	3JE11486AA	IQ Messenger - License for the use of 500 additional Aruba WiFi positioning devices	
1.2.1074	3JE11487AA	IQ Messenger - Basic license for the use of Spectralink OAI incl. 10 device lic.	
1.2.1075	3JE11488AA	IQ Messenger - License for the use of 1 additional Spectralink OAI device	
1.2.1076	3JE11489AA	IQ Messenger - Basic license for the use of Dräger Medibus RS-232 incl. 10 device lic.	135

1.2.1077	3JE11490AA	IQ Messenger - License for the use of 1 additional Dräger Medibus RS-232 device	
1.2.1078	3JE11491AA	IQ Messenger - Basic license for the use of BD Alaris Syringe Pump RS-232 incl. 10 device lic.	
1.2.1079	3JE11492AA	IQ Messenger - License for the use of 1 additional BD Alaris Syringe Pump RS-232 device	
1.2.1080	3JE11493AA	IQ Messenger - Basic license for the use of BD Alaris Gateway Workstation incl. 1 device lic.	
1.2.1081	3JE11494AA	IQ Messenger - License for the use of 1 additional BD Alaris Gateway Workstation device	
1.2.1082	3JE11495AA	IQ Messenger - Basic license for the use of B. Braun BCC incl. 1 device lic.	
1.2.1083	3JE11496AA	IQ Messenger - License for the use of 1 additional B. Braun BCC device	
1.2.1084	3JE11497AA	IQ Messenger - Basic license for the use of Arcomed incl. 1 device lic.	
1.2.1085	3JE11498AA	IQ Messenger - License for the use of 1 additional Arcomed device	
1.2.1086	3JE11499AA	IQ Messenger - Basic license for the use of CathexisVision incl. 1 device lic.	
1.2.1087	3JE11700AA	IQ Messenger - License for the use of 1 additional CathexisVision device	
1.2.1088	3JE11701AA	IQ Messenger - Basic license for the use of GE Healthcare Datex-Ohmeda Serial incl. 1 device lic.	
1.2.1089	3JE11702AA	IQ Messenger - License for the use of 1 additional GE Healthcare Datex-Ohmeda Serial device	
1.2.1090	3JE11703AA	IQ Messenger - Basic license for the use of GE Healthcare S/5 Computer Interface incl. 1 device lic.	
1.2.1091	3JE11704AA	IQ Messenger - License for the use of 1 additional GE Healthcare S/5 Computer device	
1.2.1092	3JE11705AA	IQ Messenger - Basic license for the use of 1 OAP v4 interface	
1.2.1093	3JE11706AA	IQ Messenger - License for the use of 1 additional OAP v4 interface	
Subtotal Ex Vat			
IQ Messenger: Support & Services			
1.2.1094	3JE11507AA	IQ Messenger - 1 year maintenance & support for foundation pack	
1.2.1095	3JE11510AA	IQ Messenger - License for the use of 1 additional concurrent GUI - 1 year maintenance & support	
1.2.1096	3JE11511AA	IQ Messenger - Basic license for the use of 1 Historical Reporting application. Unlimited users - 1 year maintenance & support	
1.2.1097	3JE11512AA	IQ Messenger - License for the use of 1 additional concurrent Historical reporting Console - 1 year maintenance & support	
1.2.1098	3JE11513AA	IQ Messenger - Basic license for the use of the Real time alarm Console incl. 1 concurrent user license - 1 year maintenance & support	

1.2.1099	3JE11514AA	IQ Messenger - License for the use of 1 additional concurrent real time alarm Console - 1 year maintenance & support	
1.2.1100	3JE11515AA	IQ Messenger - Basic license for the use of the Graphical Floor Plan with LiveTrack incl. 1 concurrent user license - 1 year maintenance & support	
1.2.1101	3JE11516AA	IQ Messenger - License for the use of 1 additional concurrent Graphical Floor Plan user - 1 year maintenance & support	
1.2.1102	3JE11525AA	IQ Messenger - Basic license for the use of SmartApp for Android tablet and phone, incl. 10 Android lic. - 1 year maintenance & support	
1.2.1103	3JE11526AA	IQ Messenger - License for the use of 1 additional SmartApp for Android tablet and phone - 1 year maintenance & support	
1.2.1104	3JE11527AA	IQ Messenger - Basic license for the use of SmartApp for iPad and iPhone, incl. 10 iOS lic. - 1 year maintenance & support	
1.2.1105	3JE11528AA	IQ Messenger - License for the use of 1 additional SmartApp for iPad and iPhone - 1 year maintenance & support	
1.2.1106	3JE11531AA	IQ Messenger - License for 1 additional concurrent channel - 1 year maintenance & support	
1.2.1107	3JE11538AA	IQ Messenger - Basic license for the use of 1 SMS alarm in/out interface - 1 year maintenance & support	
1.2.1108	3JE11539AA	IQ Messenger - License for the use of 1 additional SMS alarm in/out interface - 1 year maintenance & support	
1.2.1109	3JE11540AA	IQ Messenger - Basic license for the use of 1 ESPA 444 alarm in/out interface - 1 year maintenance & support	
1.2.1110	3JE11541AA	IQ Messenger - License for the use of 1 additional ESPA 444 alarm in/out interface - 1 year maintenance & support	
1.2.1111	3JE11542AA	IQ Messenger - Basic license for the use of 1 E-mail alarm in/out feature - 1 year maintenance & support	
1.2.1112	3JE11543AA	IQ Messenger - License for the use of 1 additional E-mail alarm in/out feature - 1 year maintenance & support	
1.2.1113	3JE11580AA	IQ Messenger - Basic license for the use of dry contacts input , incl. 8 dry contacts inputs - 1 year maintenance & support	
1.2.1114	3JE11581AA	IQ Messenger - License for the use of 8 additional dry contact inputs - 1 year maintenance & support	
1.2.1115	3JE11582AA	IQ Messenger - Basic license for the use of dry contacts output, incl. 2 dry contact outputs - 1 year maintenance & support	
1.2.1116	3JE11583AA	IQ Messenger - License for the use of 2 additional dry contact outputs - 1 year maintenance & support	

1.2.1117	3JE11584AA	IQ Messenger - Basic license for the use of KNX input alarming, incl. 100 KNX input addresses. - 1 year maintenance & support	
1.2.1118	3JE11585AA	IQ Messenger - License for the use of 100 additional KNX input addresses - 1 year maintenance & support	
1.2.1119	3JE11586AA	IQ Messenger - Basic license for the use of KNX output alarming, incl. 100 KNX output addresses. - 1 year maintenance & support	
1.2.1120	3JE11587AA	IQ Messenger - License for the use of 100 additional KNX output addresses - 1 year maintenance & support	
1.2.1121	3JE11606AA	IQ Messenger - Basic license for the use of ASCII Printer incl. 1 ASCII Printer interface lic. - 1 year maintenance & support	
1.2.1122	3JE11607AA	IQ Messenger - License ASCII Printer for the use of 1 additional ASCII Printer interface - 1 year maintenance & support	
1.2.1123	3JE11608AA	IQ Messenger - Basic license for the use of TAP incl. 1 TAP interface lic. - 1 year maintenance & support	
1.2.1124	3JE11609AA	IQ Messenger - License TAP for the use of 1 additional TAP interface - 1 year maintenance & support	
1.2.1125	3JE11614AA	IQ Messenger - 1 year maintenance & support for High Availability: token used to valorised the IQ Messenger HA server including all features implemented on the main server.	
1.2.1126	3JE11615AA	IQ Messenger - 1 year maintenance & support for Personal Security pack	
1.2.1127	3JE11617AA	IQ Messenger - 1 year maintenance & support for the use of SNMP connector	
1.2.1128	3JE11618AA	IQ Messenger - 1 year maintenance & support for the use of 1 additional SNMP connector	
1.2.1129	3JE11642AA	IQ Messenger - License for the use of HTTP I/O interface provide an API based on HTTP protocol, allowing to send an event to the IQ Messenger (start alarm) or to receive a notification from IQ Messenger - 1 year maintenance & support	
1.2.1130	3JE11643AA	IQ Messenger - Basic license for the use of HL7 interface providing a connection to any medical server communicating via HL-7 protocol - 1 year maintenance & support	
1.2.1131	3JE11644AA	IQ Messenger - License for the use of 1 additional HL7 interface providing a connection to any medical server communicating via HL-7 protocol - 1 year maintenance & support	
1.2.1132	3JE11610AA	IQ Messenger - Basic license for the use of SCAIP CarePhones, incl. 10 SCAIP CarePhones lic. - 1 year maintenance & support	
1.2.1133	3JE11611AA	IQ Messenger - License for the use of 1 additional SCAIP CarePhone - 1 year maintenance & support	142

1.2.1134	3JE11578AA	IQ Messenger - Basic license for the use of Condigi Wander Alarm pendants, incl. 10 Wander pendants lic. - 1 year maintenance & support	
1.2.1135	3JE11579AA	IQ Messenger - License for the use of 1 additional Wander Alarm pendant - 1 year maintenance & support	
1.2.1136	3JE11651AA	IQ Messenger - Basic license for the use of the Graphical Event Assignement with live track incl. 1 concurrent user license - 1 year maintenance & support	
1.2.1137	3JE11652AA	IQ Messenger - License for the use of 1 additional concurrent Graphical Event Assignement user - 1 year maintenance & support	
1.2.1138	3JE11655AA	IQ Messenger – Basic license for 1 Rainbow account for IQ Messenger allowing in/out messages - 1 year maintenance & support	
1.2.1139	3JE11656AA	IQ Messenger - License for the use of 1 additional Rainbow account - 1 year Maintenance	
1.2.1140	3JE11658AA	IQ Messenger - Basic license for the use of Location Beacon for SmartApp iOS or Android incl. 10 device lic. - 1 year Maintenance	
1.2.1141	3JE11659AA	IQ Messenger - License for the use of 1 additional Location Beacon device for SmartApp iOS or Android - 1 year Maintenance	
1.2.1142	3JE11660AA	IQ Messenger - License for the use of 1 SMPP interface - 1 year Maintenance	
1.2.1143	3JE11661AA	IQ Messenger - License for the use of 1 additional SMPP interface - 1 year Maintenance	
1.2.1144	3JE11662AA	IQ Messenger - Basic license for the use of 1 Mindray eGateway alarm using HL7 protocol in/out interface, 1 year Maintenance	
1.2.1145	3JE11663AA	IQ Messenger - License for the use of 1 additional Mindray eGateway HL7 protocol alarm in/out interface , 1 year Maintenance	
1.2.1146	3JE11664AA	IQ Messenger - Basic license for the use of 1 Syslog alarm in/out interface - 1 year Maintenance	
1.2.1147	3JE11665AA	IQ Messenger - License for the use of 1 BACnet interface - 1 year Maintenance	
1.2.1148	3JE11666AA	IQ Messenger - License for the use of 1 additional BACnet interface - 1 year Maintenance	
1.2.1149	3JE12000AA	IQ Messenger - Basic license for the use of HTTP I/O interface incl. 10 device lic. - 1 year maintenance & support	
1.2.1150	3JE12001AA	IQ Messenger - License for the use of 1 additional HTTP I/O device - 1 year maintenance & support	
Subtotal Ex Vat			
IQ Messenger: Support & Services (not configured)			
1.2.1151	3JE11517AA	IQ Messenger - Basic license for the use of the SIP Server incl. 10 SIP extension licenses - 1 year maintenance & support	

1.2.1152	3JE11520AA	IQ Messenger - Basic license for the use of Call & Conf. on extension or trunk base incl. recording, incl. 4 SIP extensions lic. - 1 year maintenance & support	
1.2.1153	3JE11523AA	IQ Messenger - Basic license for the use of CareScreens, incl. video calling, incl. 10 CareScreen lic. - 1 year maintenance & support	
1.2.1154	3JE11532AA	IQ Messenger - Basic license for the use of Indigo iCall Nurse Call unit incl. 1 IP unit - 1 year maintenance & support	
1.2.1155	3JE11534AA	IQ Messenger - Basic license for the use of Indigo iCall Acoustic Monitoring incl. 10 Acoustic Room Unit lic. - 1 year maintenance & support	
1.2.1156	3JE11536AA	IQ Messenger - Basic license for the use of 1 Schrack ESPA-X alarm in/out interface - 1 year maintenance & support	
1.2.1157	3JE11544AA	IQ Messenger - Basic license for the use of Bosch/Atus paging, messaging, incl. 10 pagers lic. - 1 year maintenance & support	
1.2.1158	3JE11546AA	IQ Messenger - Basic license for the use of Bosch/Atus paging, personal security, incl. 10 pagers lic. - 1 year maintenance & support	
1.2.1159	3JE11554AA	IQ Messenger - Basic license for the use of Ascom DECT, messaging, incl. 10 Ascom DECT handsets lic. - 1 year maintenance & support	
1.2.1160	3JE11556AA	IQ Messenger - Basic license for the use of Ascom DECT, personal security incl. 10 Ascom DECT handsets lic. - 1 year maintenance & support	
1.2.1161	3JE11558AA	IQ Messenger - Basic license for the use of NEC DECT, messaging, incl. 10 NEC DECT handsets lic. - 1 year maintenance & support	
1.2.1162	3JE11560AA	IQ Messenger - Basic license for the use of NEC DECT, personal security incl. 10 NEC DECT handsets lic. - 1 year maintenance & support	
1.2.1163	3JE11562AA	IQ Messenger - Basic license for the use of Basic DECT Room Units, incl. 10 Basic DECT room units lic. - 1 year maintenance & support	
1.2.1164	3JE11564AA	IQ Messenger - Basic license for the use of Extended DECT Room Units, incl. 10 Extended DECT room units lic. - 1 year maintenance & support	
1.2.1165	3JE11566AA	IQ Messenger - Basic license for the use of Extended IP Room Units, incl. 10 Extended IP room units lic. - 1 year maintenance & support	
1.2.1166	3JE11568AA	IQ Messenger - Basic license for the use of DECT Voice Medallions, incl. 10 user lic. - 1 year maintenance & support	
1.2.1167	3JE11574AA	IQ Messenger - Basic license for the use of Spectralink VoWiFi, messaging, incl. 10 Spectralink VoWiFi handsets lic. - 1 year maintenance & support	

1.2.1168	3JE11576AA	IQ Messenger - Basic license for the use of Spectralink VoWiFi, personal security, incl. 10 Spectralink VoWiFi handsets lic. - 1 year maintenance & support	
1.2.1169	3JE11588AA	IQ Messenger - Basic license for the use of Bluetooth positioning incl. 10 Bluetooth device lic. - 1 year maintenance & support	
1.2.1170	3JE11590AA	IQ Messenger - Basic license for the use of Ekahau positioning incl. 10 Ekahau device lic. - 1 year maintenance & support	
1.2.1171	3JE11592AA	IQ Messenger - Basic license for the use of NFC RFID tags incl. 10 NFC FRID tags - 1 year maintenance & support	
1.2.1172	3JE11596AA	IQ Messenger - Basic license for the use of 1 Mobicall server - 1 year maintenance & support	
1.2.1173	3JE11602AA	IQ Messenger - Basic license for the use of Stentofon, incl. 10 Stentofon devices lic. - 1 year maintenance & support	
1.2.1174	3JE11604AA	IQ Messenger - Basic license for the use of Kadex, incl. 10 Kadex devices lic. - 1 year maintenance & support	
1.2.1175	3JE11612AA	IQ Messenger - Basic license for the use of database connector incl. 1 database interface lic. - 1 year maintenance & support	
1.2.1176	3JE11624AA	IQ Messenger - Basic license for the use of the Robin video device incl. 1 device lic. - 1 year Maintenance	
1.2.1177	3JE11626AA	IQ Messenger - Basic license for the use of the Mobotix video device incl. 1 device lic. - 1 year Maintenance	
1.2.1178	3JE11628AA	IQ Messenger - Basic license for the use of the Aivex video Security Console incl. 1 concurrent user - 1 year Maintenance	
1.2.1179	3JE11630AA	IQ Messenger - Basic license for the use of the Real time Griffis video Security Console incl. 1 concurrent user - 1 year Maintenance	
1.2.1180	3JE11632AA	IQ Messenger - Basic license for the use of CareTech IP/GSM CarePhones, incl. 10 CareTech IP / GSM CarePhones lic. - 1 year Maintenance	
1.2.1181	3JE11634AA	IQ Messenger - Basic license for the use of Commend, incl. 10 Commend devices lic. - 1 year Maintenance	
1.2.1182	3JE11636AA	IQ Messenger - Basic license for the use of 1 Ascom nurse call in/out interface - 1 year Maintenance	
1.2.1183	3JE11638AA	IQ Messenger - Basic license for the use of 1 Modbus alarm in/out interface - 1 year Maintenance	
1.2.1184	3JE11640AA	IQ Messenger - Basic license for the use of 1 Philips Emergin OAP alarm in/out interface - 1 year Maintenance	
1.2.1185	3JE11521AA	IQ Messenger - License for the use of 1 additional Call & Conference SIP extension - 1 year maintenance & support	
1.2.1186	3JE11524AA	IQ Messenger - License for the use of 1 additional CareScreens, incl. video calling - 1 year maintenance & support	14€

1.2.1187	3JE11533AA	IQ Messenger - License Indigo iCall Nurse Call for the use of 1 additional IP unit - 1 year maintenance & support	
1.2.1188	3JE11535AA	IQ Messenger - License Indigo iCall Acoustic Monitoring for the use of 1 additional Acoustic Room unit - 1 year maintenance & support	
1.2.1189	3JE11537AA	IQ Messenger - License for the use of 1 additional Schrack ESPA-X alarm in/out interface - 1 year maintenance & support	
1.2.1190	3JE11545AA	IQ Messenger - License for the use of 1 additional Bosch/Atus pager, messaging - 1 year maintenance & support	
1.2.1191	3JE11547AA	IQ Messenger - License for the use of 1 additional Bosch/Atus pager, personal security - 1 year maintenance & support	
1.2.1192	3JE11555AA	IQ Messenger - License for the use of 1 additional Ascom DECT handset, messaging - 1 year maintenance & support	
1.2.1193	3JE11557AA	IQ Messenger - License for the use of 1 additional Ascom DECT handset, personal security - 1 year maintenance & support	
1.2.1194	3JE11559AA	IQ Messenger - License for the use of 1 additional NEC DECT handset, messaging - 1 year maintenance & support	
1.2.1195	3JE11561AA	IQ Messenger - License for the use of 1 additional NEC DECT handset, personal security - 1 year maintenance & support	
1.2.1196	3JE11563AA	IQ Messenger - License for the use of 1 additional Basic DECT Room Unit - 1 year maintenance & support	
1.2.1197	3JE11565AA	IQ Messenger - License for the use of 1 additional Extended DECT Room Unit - 1 year maintenance & support	
1.2.1198	3JE11567AA	IQ Messenger - License for the use of 1 additional Extended IP Room Unit - 1 year maintenance & support	
1.2.1199	3JE11569AA	IQ Messenger - Basic license for the use of 1 additional DECT Voice Medallion - 1 year maintenance & support	
1.2.1200	3JE11575AA	IQ Messenger - License for the use of 1 additional Spectralink VoWiFi handset, messaging - 1 year maintenance & support	
1.2.1201	3JE11577AA	IQ Messenger - License for the use of 1 additional Spectralink VoWiFi handset, personal security - 1 year maintenance & support	
1.2.1202	3JE11589AA	IQ Messenger - License for the use of 1 additional Bluetooth positioning device - 1 year maintenance & support	
1.2.1203	3JE11591AA	IQ Messenger - License for the use of 1 additional Ekahau positioning device - 1 year maintenance & support	
1.2.1204	3JE11593AA	IQ Messenger - License for the use of 10 additional NFC RFID tag - 1 year maintenance & support	
1.2.1205	3JE11597AA	IQ Messenger - License for the use of 1 additional Mobicall server - 1 year maintenance & support	

1.2.1206	3JE11603AA	IQ Messenger - License for the use of 1 additional Stentofon device - 1 year maintenance & support	
1.2.1207	3JE11605AA	IQ Messenger - License for the use of 1 additional Kadex device - 1 year maintenance & support	
1.2.1208	3JE11625AA	IQ Messenger - Basic license for the use of 1 additional Robin device - 1 year Maintenance	
1.2.1209	3JE11627AA	IQ Messenger - Basic license for the use of 1 additional Mobotix device - 1 year Maintenance	
1.2.1210	3JE11629AA	IQ Messenger - License for the use of 1 additional concurrent Aivex video Security Console - 1 year Maintenance	
1.2.1211	3JE11631AA	IQ Messenger - License for the use of 1 additional concurrent Real time Griffid video Security Console - 1 year Maintenance	
1.2.1212	3JE11633AA	IQ Messenger - License for the use of 1 additional IP / GSM Caretech CarePhone - 1 year Maintenance	
1.2.1213	3JE11635AA	IQ Messenger - License for the use of 1 additional Commend device - 1 year Maintenance	
1.2.1214	3JE11637AA	IQ Messenger - License for the use of 1 additional Ascom nurse call in/out interface - 1 year Maintenance	
1.2.1215	3JE11639AA	IQ Messenger - License for the use of 1 additional Modbus alarm in/out interface - 1 year Maintenance	
1.2.1216	3JE11641AA	IQ Messenger - License for the use of 1 additional Philips Emergin OAP alarm in/out interface - 1 year Maintenance	
1.2.1217	3JE11698AA	IQ Messenger - Basic license for the use of the IQ Messenger REST-API interface incl. 10 device lic. - 1 year maintenance & support	
1.2.1218	3JE11699AA	IQ Messenger - License for the use of 1 additional REST-API device - 1 year maintenance & support	
1.2.1219	3JE11669AA	IQ Messenger - Basic Identity and Access Management Connector - 1 year maintenance & support	
1.2.1220	3JE11670AA	IQ Messenger - Basic license for the use of Cisco device, incl. 10 Cisco devices lic. - 1 year maintenance & support	
1.2.1221	3JE11671AA	IQ Messenger - License for the use of 1 additional Cisco device - 1 year maintenance & support	
1.2.1222	3JE11672AA	IQ Messenger - Basic license for the use of Cisco WiFi positioning incl. 500 positioning devices - 1 year maintenance & support	
1.2.1223	3JE11673AA	IQ Messenger - License for the use of 500 additional Cisco WiFi positioning devices - 1 year maintenance & support	
1.2.1224	3JE11674AA	IQ Messenger - Basic license for the use of SmarterVision, incl. 1 device lic. - 1 year maintenance & support	
1.2.1225	3JE11675AA	IQ Messenger - License for the use of 1 additional SmarterVision device - 1 year maintenance & support	

1.2.1226	3JE11676AA	IQ Messenger - Basic license for the use of Aruba WiFi positioning incl 500 positioning devices - 1 year maintenance & support	
1.2.1227	3JE11677AA	IQ Messenger - License for the use of 500 additional Aruba WiFi positioning devices - 1 year maintenance & support	
1.2.1228	3JE11678AA	IQ Messenger - Basic license for the use of Spectralink OAI incl. 10 device lic. - 1 year maintenance & support	
1.2.1229	3JE11679AA	IQ Messenger - License for the use of 1 additional Spectralink OAI device - 1 year maintenance & support	
1.2.1230	3JE11680AA	IQ Messenger - Basic license for the use of Dräger Medibus RS-232 incl. 10 device lic. - 1 year maintenance & support	
1.2.1231	3JE11681AA	IQ Messenger - License for the use of 1 additional Dräger Medibus RS-232 device - 1 year maintenance & support	
1.2.1232	3JE11682AA	IQ Messenger - Basic license for the use of BD Alaris Syringe Pump RS-232 incl. 10 device lic. - 1 year maintenance & support	
1.2.1233	3JE11683AA	IQ Messenger - License for the use of 1 additional BD Alaris Syringe Pump RS-232 device - 1 year maintenance & support	
1.2.1234	3JE11684AA	IQ Messenger - Basic license for the use of BD Alaris Gateway Workstation incl. 1 device lic. - 1 year maintenance & support	
1.2.1235	3JE11685AA	IQ Messenger - License for the use of 1 additional BD Alaris Gateway Workstation device - 1 year maintenance & support	
1.2.1236	3JE11686AA	IQ Messenger - Basic license for the use of B. Braun BCC incl. 1 device lic. - 1 year maintenance & support	
1.2.1237	3JE11687AA	IQ Messenger - License for the use of 1 additional B. Braun BCC device - 1 year maintenance & support	
1.2.1238	3JE11688AA	IQ Messenger - Basic license for the use of Arcomed incl. 1 device lic. - 1 year maintenance & support	
1.2.1239	3JE11689AA	IQ Messenger - License for the use of 1 additional Arcomed device - 1 year maintenance & support	
1.2.1240	3JE11690AA	IQ Messenger - Basic license for the use of CathexisVision incl. 1 device lic. - 1 year maintenance & support	
1.2.1241	3JE11691AA	IQ Messenger - License for the use of 1 additional CathexisVision device - 1 year maintenance & support	
1.2.1242	3JE11692AA	IQ Messenger - Basic license for the use of GE Healthcare Datex-Ohmeda Serial incl. 1 device lic. - 1 year maintenance & support	
1.2.1243	3JE11693AA	IQ Messenger - License for the use of 1 additional GE Healthcare Datex-Ohmeda Serial device - 1 year maintenance & support	
1.2.1244	3JE11694AA	IQ Messenger - Basic license for the use of GE Healthcare S/5 Computer Interface incl. 1 device lic. - 1 year maintenance & support	14€

1.2.1245	3JE11695AA	IQ Messenger - License for the use of 1 additional GE Healthcare S/5 Computer device - 1 year maintenance & support	
1.2.1246	3JE11696AA	IQ Messenger - Basic license for the use of 1 OAP v4 interface - 1 year maintenance & support	
1.2.1247	3JE11697AA	IQ Messenger - License for the use of 1 additional OAP v4 interface - 1 year maintenance & support	
	Proactive Services (PAER)		
1.2.1248	PS-PAER-5	PS-ProActive Engineer Resource-5 days	
1.2.1249	PS-PAER-20	PS-ProActive Engineer Resource-20 days	
1.2.1250	PS-PAER-60	PS-ProActive Engineer Resource-60 days	
Subtotal Ex Vat			
Visual Notification Assistant: Licenses & DVD			
1.2.1251	3BA09032KA	Visual Notification Assistant - 1 user	
1.2.1252	3BA09034KA	Visual Notification Assistant Rainbow - 1 user	
1.2.1253	3BA09035KA	Visual Notification Assistant Mass broadcast - 1 user	
1.2.1254	3JE11657AA	Visual Notification Assistant 2 days remote support for installation	
1.2.1255	3BA09088KA	Visual Notification Assistant upgrade software license with valid SPS contract	
1.2.1256	3BA09089KA	Visual Notification Assistant upgrade software license without valid SPS contract - 1 user	
1.2.1257	3BA09095KA	Visual Notification Assistant software license R1.3	
1.2.1258	3BA09095KU	Visual Notification Assistant software upgrade license R1.3	
1.2.1259	3BA09100KA	Visual Notification Assistant software license R1.4	
1.2.1260	3BA09100KU	Visual Notification Assistant software upgrade license R1.4	
Subtotal Ex Vat			
Dispatch Console: Licenses			
1.2.1261	3BA09102KA	Dispatch Console - Foundation - R2.0 software license	
1.2.1262	3BA09103KA	Dispatch Console - 1 user license	
1.2.1263	3BA09104KA	Dispatch Console - 1 conference port	
1.2.1264	3JE12002AA	Dispatch Console 2 days remote support for installation	
Subtotal Ex Vat			
Support Services: Software Support Services			
1.2.1265	3EY99617AA	OTCS HMP Voice License 1 Port - 1Y Supp	
1.2.1266	3EY99618AA	OTCS HMP RTP G711 License 1 Port-1Y Supp	
1.2.1267	3EY99619AA	OTCS HMP Cold Backup - 1Y Support	
Subtotal Ex Vat			
Support service for Phone sets			
1.2.1268	3EY99680AC	3-years RTF hardware extension service including warranty. This item is valid for 1000 €/ \$ WPL of wired phone sets. Calculate and order the right quantity to cover the total WPL price of the wired phones of your product order.	14€

1.2.1269	3EY99680AE	5-years RTF hardware extension service including warranty. This item is valid for 1000 €/€ WPL of wired phone sets. Calculate and order the right quantity to cover the total WPL price of the wired phones of your product order.	
1.2.1270	3EY99681AC	3-years AVR hardware extension service including warranty. This item is valid for 1000 €/€ WPL of wired phone sets. Calculate and order the right quantity to cover the total WPL price of the wired phones of your product order.	
1.2.1271	3EY99681AE	5-years AVR hardware extension service including warranty. This item is valid for 1000 €/€ WPL of wired phone sets. Calculate and order the right quantity to cover the total WPL price of the wired phones of your product order.	
1.2.1272	3EY99682AC	3-years RTF hardware extension service including warranty. This item is valid for 1000 €/€ WPL of wireless phone sets. Calculate and order the right quantity to cover the total WPL price of the wireless phones of your product order.	
1.2.1273	3EY99682AE	5-years RTF hardware extension service including warranty. This item is valid for 1000 €/€ WPL of wireless phone sets. Calculate and order the right quantity to cover the total WPL price of the wireless phones of your product order.	
1.2.1274	3EY99683AC	3-years AVR hardware extension service including warranty. This item is valid for 1000 €/€ WPL of wireless phone sets. Calculate and order the right quantity to cover the total WPL price of the wireless phones of your product order.	
1.2.1275	3EY99683AE	5-years AVR hardware extension service including warranty. This item is valid for 1000 €/€ WPL of wireless phone sets. Calculate and order the right quantity to cover the total WPL price of the wireless phones of your product order.	
Subtotal Ex Vat			
On Demand Access Support: On Demand Access TS			
1.2.1276	3EY10041AA	On demand access to Technical Support for OmniPCX Enterprise	
1.2.1277	3EY11072AA	On demand access to Technical Support for CCiVR	
1.2.1278	3EY11074AA	On demand access to Technical Support for CCPremium application	
1.2.1279	3EY12022AA	On demand access to Technical Support for OmniTouch Unified Communication	
Subtotal Ex Vat			
Customized Support Services: Customized Support Services			
1.2.1280	3EY99020AA	Customized support service unit for specific services	
Partner Tools: Technical tools			
1.2.1281	3BN78414AA	Configuration cradle for Alcatel-Lucent OmniTouch 81x8 WLAN Handset. Cradle connected to PC with included USB cable.	

1.2.1282	3BN67191AA	DECT IP-xBS Site Survey Kit for on-site Coverage Installation -Worldwide-including handsets, headset, chargers, power bank, external antennas	
1.2.1283	3BN67192AA	DECT IP-xBS Telescopic Tripod for the Site Survey Kit, height 6m	
Subtotal Ex Vat			
Rainbow Subscription Services			
1.2.1284	3EY95100AA	Rainbow Essential Subscription	
1.2.1285	3EY95101AA	Rainbow Business Subscription	
1.2.1286	3EY95101AB	Rainbow Business PrePaid 1 User 1 Year	
1.2.1287	3EY95101AD	Rainbow Business PrePaid 1 User 3 Years	
1.2.1288	3EY95101AF	Rainbow Business PrePaid 1 User 5 Years	
1.2.1289	3EY95102AA	Rainbow Enterprise Subscription	
1.2.1290	3EY95102AB	Rainbow Enterprise PrePaid 1 User 1 Year	
1.2.1291	3EY95102AD	Rainbow Enterprise PrePaid 1 User 3 Years	
1.2.1292	3EY95102AF	Rainbow Enterprise PrePaid 1 User 5 Years	
1.2.1293	3EY95103AB	Rainbow Enterprise Conference PrePaid 1 User 1 Year	
1.2.1294	3EY95105AA	Rainbow Room 1 User 1 Month	
1.2.1295	3EY95105AB	Rainbow Room 1 User 1 Year	
1.2.1296	3EY95105AD	Rainbow Room 1 User 3 Years	
1.2.1297	3EY95105AF	Rainbow Room 1 User 5 Years	
1.2.1298	3EY95106AA	Rainbow Connect 1 User 1 Month	
1.2.1299	3EY95106AB	Rainbow Connect 1 User 1 Year	
1.2.1300	3EY95106AD	Rainbow Connect 1 User 3 Years	
1.2.1301	3EY95106AF	Rainbow Connect 1 User 5 Years	
Subtotal Ex Vat			
Support Services: Software Support Services			
1.2.1302	OEM SPS-SES support services OXE	Percentage of software Quotation Value	
1.2.1303	OEM SPS-SES support services OV8770	Percentage of software Quotation Value	
1.2.1304	OEM SPS-SES support services OTCS	Percentage of software Quotation Value	
1.2.1305	OEM SPS-SES support services OTBE / OTMS	Percentage of software Quotation Value	
1.2.1306	OEM SPS-SES support services OTBE / VAA	Percentage of software Quotation Value	
1.2.1307	OEM SPS-SES support services OTBE / VNA	Percentage of software Quotation Value	
1.2.1308	OEM SPS-SES support services DISPATCH Console	Percentage of software Quotation Value	
Subtotal Ex Vat			
SPS and Software Upgrade of existing system (3 Years)			
1.2.1309	SAMMY MARKS	Per system	
1.2.1310	TSHWANE HOUSE (MUNITORIA)	Per system	151
Subtotal Ex Vat			

Rainbow Alert Services			
1.2.1311	RB-Alert	Pricing per user per month: Alert Monthly	
1.2.1312	RB-Alert-1Y	Pricing per user per month: Alert 1-Year prepaid	
1.2.1313	RB-Alert-3Y	Pricing per user per month: Alert 3-Year prepaid	
1.2.1314	RB-Alert-5Y	Pricing per user per month: Alert 5-Year prepaid	

2.3 PRICE SCHEDULE MAINTENANCE OF THE CURRENT VOICE AND DATA NETWORK

SOFTWARE AS A SERVICE		Measurement	Unit Price (Excl VAT)
2.1.001	Splunk	per month	
2.1.002	URL Filtering Solution	per month	
Subtotal Ex Vat			

SOFTWARE AS A SERVICE		Measurement	Percentage %
2.1.003	OEM SPS-SES support services OXE	Percentage of software Quotation Value	
2.1.004	OEM SPS-SES support services OV8770	Percentage of software Quotation Value	
2.1.005	OEM SPS-SES support services OTCS	Percentage of software Quotation Value	
2.1.006	OEM SPS-SES support services OTBE / OTMS	Percentage of software Quotation Value	
Subtotal Ex Vat			

SPS and Software Upgrade of existing system (3 Years)		Measurement	Unit Price (Excl VAT)
2.1.007	SAMMY MARKS	Per system	
2.1.008	TSHWANE HOUSE (MUNITORIA)	Per system	
2.1.009	CENTURION	Per system	
2.1.010	C DE WET	Per system	
2.1.011	WALTLOO	Per system	
2.1.012	CAPITAL PARK	Per system	
2.1.013	ROSSLYN	Per system	
2.1.014	BOSMAN EMERGENCY SERVICES	Per system	
Subtotal Ex Vat			

*if the software is licensed/devices base indicate that the monthly price is per license/device

2.4 PRICE SCHEDULE CALL LOGGING PRODUCT DESCRIPTIONS AND CODES

Atmos Appliance - Standard SIP Extension Side Recording - NB: This product is only working on Standard SIP. Proprietary SIP is NOT supported			
Item	Product Code	Detail	Unit Price (Excl Vat)
Once Off Capex			
2.2.001	APSW	Atmos Appliance (Software Module only with 10 licenses)	
2.2.002	ASTDSIPEXT	Atmos Standard SIP extensions - Additional per license	
2.2.003	AAI	Atmos Appliance Installation	
2.2.004	AAI	Atmos Appliance Installation (Software)	
2.2.005	CCSAEL42000R	CallCab EL 42000 Desktop PC Foundation with redundancy - 2 x 1TB drives & 4GB RAM	
2.2.006	CCSAEL82000D	CallCab EL 82000 Desktop PC Foundation with redundancy - 2 x 1TB drives & 8GB RAM	
2.2.007	DELLR240V	Dell R240 - with 2 x 2 TB Drives - VoIP Recording using Port mirror up to 90 channels	
Subtotal Ex Vat			
Recurring - Monthly Charge (OPEX)			
2.2.008	AC1,000	Atmos Cloud - 1 000 hours	
2.2.009	AC4,000	Atmos Cloud - 4 000 hours	
2.2.010	AC10,000	Atmos Cloud - 10 000 hours	
2.2.011	AC20,000	Atmos Cloud - 20 000 hours	
2.2.012	AC50,000	Atmos Cloud - 50 000 hours	
2.2.013	AC100,000	Atmos Cloud - 100 000 hours	
2.2.014	AC250,000	Atmos Cloud - 250 000 hours	
2.2.015	AC500,000	Atmos Cloud - 500 000 hours	
2.2.016	AC1,000,000	Atmos Cloud - 1 000 000 hours	
2.2.017	APMQC	Atmos PLUS Module - Supervisor QC	
2.2.018	APMSup	Atmos PLUS Module - Supervisor	
2.2.019	APMSRLAN	Atmos PLUS - Atmos Screen recording and live agent notes per agent	
2.2.020	APMPCI	Atmos Plus - PCI Compliance Module per extension	
Subtotal Ex Vat			
Atmos Cloud Storage for Backups: Recurring Monthly Charge			
2.2.021	AC1,000	Atmos Cloud - 1 000 hours	
2.2.022	AC4,000	Atmos Cloud - 4 000 hours	
2.2.023	AC10,000	Atmos Cloud - 10 000 hours	
2.2.024	AC20,000	Atmos Cloud - 20 000 hours	
2.2.025	AC50,000	Atmos Cloud - 50 000 hours	
2.2.026	AC100,000	Atmos Cloud - 100 000 hours	
2.2.027	AC250,000	Atmos Cloud - 250 000 hours	
2.2.028	AC500,000	Atmos Cloud - 500 000 hours	
2.2.029	AC1,000,000	Atmos Cloud - 1 000 000 hours	
2.2.030	APMQC	Atmos PLUS Module - Supervisor QC	
2.2.031	APMSup	Atmos PLUS Module - Supervisor	
2.2.032	APMSRLAN	Atmos PLUS - Atmos Screen recording and live agent notes per agent	
2.2.033	APMPCI	Atmos Plus - PCI Compliance Module per extension	
Subtotal Ex Vat			
Atmos Foundation Hybrid Recording Solution with onsite storage and back-up cloud storage			
Once Off Capex			
2.2.034	AtmosFBP	Atmos Foundation Base Package	
2.2.035	AtmosFBP	Atmos Foundation Base Package (with Atmos Storage)	
2.2.036	AtmosF4Ana	Atmos Foundation - 1 Port or Agent (Analogue / Digital)	
2.2.037	AtmosF1PRI	Atmos Foundation - 1 PRI (30 Channels)	
2.2.038	AtmosF5VOIP	Atmos Foundation - 1 VoIP Channel	
2.2.039	CCSAEL42000R	CallCab EL 42000 Desktop PC Foundation with redundancy - 2 x 1TB drives & 4GB RAM	
2.2.040	CCSAEL82000D	CallCab EL 82000 Desktop PC Foundation with redundancy - 2 x 1TB drives & 8GB RAM	
2.2.041	AtmosInst	Atmos Foundation Installation & SLA - Retail	154
2.2.042	AtmosInst	Atmos Foundation Installation & SLA – Retail 1	

2.2.043	TAA	Travel, accommodation and allowance	
Subtotal Ex Vat			
Atmos Foundation Hybrid Recording Solution: Recurring Monthly Charge			
2.2.044	AC1,000	Atmos Cloud - 1 000 hours	
2.2.045	AC4,000	Atmos Cloud - 4 000 hours	
2.2.046	AC10,000	Atmos Cloud - 10 000 hours	
2.2.047	AC20,000	Atmos Cloud - 20 000 hours	
2.2.048	AC50,000	Atmos Cloud - 50 000 hours	
2.2.049	AC100,000	Atmos Cloud - 100 000 hours	
2.2.050	AC250,000	Atmos Cloud - 250 000 hours	
2.2.051	AC500,000	Atmos Cloud - 500 000 hours	
2.2.052	AC1,000,000	Atmos Cloud - 1 000 000 hours	
2.2.053	APMQC	Atmos PLUS Module - Supervisor QC	
2.2.054	APMSup	Atmos PLUS Module - Supervisor	
2.2.055	APMSRLAN	Atmos PLUS - Atmos Screen recording and live agent notes per agent	
2.2.056	APMPCI	Atmos Plus - PCI Compliance Module per extension	
Subtotal Ex Vat			
Atmos on Premises – Premises based recording solution (No Cloud Connection)			
Once Off Capex			
2.2.057	CCSPEXP	Atmos on Prem Starter Pack	
2.2.058	CCAGEXP	Atmos on Prem Agent/Extension License	
2.2.059	CCPOEXP	Atmos on Prem Trunk License	
2.2.060	CCEXPSCR	Atmos on Prem Client License (screen capture) - Per License	
2.2.061	CCQTEXP	Atmos on Prem Quality Tracker Module	
2.2.062	CCSAPCI	PCI Compliance Module	
2.2.063	NGX800CAR	NGX800	
2.2.064	NGX1600CAR	NGX1600	
2.2.065	NGX2400CAR	NGX2400	
2.2.066	NGX MX80	NGXMX80CAR	
2.2.067	LD809CAR	LD809	
2.2.068	LD1609EHCAR	LD1609	
2.2.069	LD2409EHCAR	LD2409	
2.2.070	910-0801-004	HPX (10/10) - Starter Pack	
2.2.071	910-0909-001	HPXMedia License- 10pk	
2.2.072	910-0910-002	HPXMedia License- 20pk	
2.2.073	910-0910-005	HPXMedia License- 50pk	
2.2.074	910-0909-001	HPX Expansion License (10 pk)	
2.2.075	910-0909-002	HPX Expansion License (20 pk)	
2.2.076	910-0909-003	HPX Expansion License (30 pk)	
2.2.077	910-0909-005	HPX Expansion License (50 pk)	
2.2.078	DP6409D	DP6409 (T1/E1)	
2.2.079	CCSAEL163000	CallCab EL 163000 Desktop PC - Dealer	
2.2.080	HPML350	HP ML350 Gen 10 2x2 TB Drives 16GB RAM - Takes 4 PCI-e cards (DP,NGX or LD cards)	
2.2.081	DELLR240V	Dell R240 - Replacement DELLT320 - with 2x2 TB Drives 8GB RAM - VoIP Recording	
2.2.082	DELLR240P	Dell R240 - 2x2TB Drives & 8GB RAM - Replacement DELLR230 and R320 with Ailogix PCI Smart Expansion 7 Slots-Takes 7 PCI cards for (DP,NGX or LD cards)	
2.2.083	CCEXPINST	Installation Atmos on Prem	
2.2.084	TAA	Travel, accommodation and allowance	
2.2.085	TRAIN	Training	
2.2.086	SOFTASS	Software Assurance - per year	
2.2.087	BRONZE_SL	Annual Bronze SLA - Annual per year	
2.2.088	SILVER_SL	SLA Silver - Annual per year	
2.2.089	GOLD_SL	SLA Gold - Annual per year	
2.2.090	GOPL_SL	SLA Gold Plus - Annual per year	
2.2.091	CUST_SL	Platinum SLA Custom - Annual per year	
Subtotal Ex Vat			15€
Atmos Teams Recording			

2.2.092	atmos-mteurs-100	Atmos Compliance Recording for MS Teams Voice License	
2.2.093	atmos-vid-102	Microsoft Teams Video Server	
2.2.094	atmos-mschat-103	Atmos Compliance Recording for MS Teams Chat License	
2.2.095	atmos-vid-101	Microsoft Teams Video and Screen Share Recording	
Subtotal Ex Vat			

2.5 PRICE SCHEDULE COMMAND CENTRE EQUIPMENT, PRODUCT DESCRIPTIONS AND CODES

Item Nr	Part Number	Description	Unit Cost (Excl Vat)
2.3.001	MXP600	Hand- portable radio (GPS, Bluetooth and WAP capable)	
		Including:	
2.3.002	MDH77PCN6TZ5AN	MXP600 UHF PTW952HEB	
2.3.003	QA07838AA	ADD: MXP600 350-470 ROM TEA1	
2.3.004	QA08198AA	POWER SOLUTION PACKAGE	
2.3.005	QA07982AA	ADD: BATT LIION IMPRES 2 IP68 1900T	
2.3.006	QA07992AA	ADD: ANTENNA, STUBBY, UHF1 (380-430 MHZ) 60MM	
2.3.007	GA01768AA	ADD: MR2021.1 SOFTWARE	
2.3.008	QA08286AA	ADD: EXTRA BATT LIION IMPRES 2 IP68 1900T	
2.3.009	QA07988AA	ADD: TETRA MTP850 S BELT CLIP 2IN	
2.3.010	QA08015AA	ADD:SIMULTANEOUS DUC EXT EU	
2.3.011	QA07953AA	ADD: MXP600 QUICK START GUIDE ENGLISH (EN-EN)	
2.3.012	QA07987AA	ADD: DUST COVER, GCAI MINI	
2.3.013	QA08214AA	ADD: 3YR ENH WARR W REPAIR	
2.3.014	QA08202AB	ENHANCE PRODUCTIVITY AND EFFICIENCY	
2.3.015	QA08201AA	ENHANCE SAFETY AND SECURITY	
2.3.016	QA08200AA	ENHANCE COVERAGE AND CAPACITY	
Subtotal Ex Vat			
2.3.017	MXP600	Ruggedised Hand- portable radio (GPS, Bluetooth and WAP capable)	
		Including:	
2.3.018	MDH77PCN6TZ5AN	MXP600 UHF PTW952HEB	
2.3.019	QA07838AA	ADD: MXP600 350-470 ROM TEA1	
2.3.020	QA08198AA	POWER SOLUTION PACKAGE	
2.3.021	QA07982AA	ADD: BATT LIION IMPRES 2 IP68 1900T	
2.3.022	QA07992AA	ADD: ANTENNA, STUBBY, UHF1 (380-430 MHZ) 60MM	
2.3.023	GA01768AA	ADD: MR2021.1 SOFTWARE	
2.3.024	QA08286AA	ADD: EXTRA BATT LIION IMPRES 2 IP68 1900T	
2.3.025	QA07988AA	ADD: TETRA MTP850 S BELT CLIP 2IN	
2.3.026	QA08015AA	ADD:SIMULTANEOUS DUC EXT EU	
2.3.027	QA07953AA	ADD: MXP600 QUICK START GUIDE ENGLISH (EN-EN)	
2.3.028	QA07987AA	ADD: DUST COVER, GCAI MINI	
2.3.029	QA08214AA	ADD: 3YR ENH WARR W REPAIR	
2.3.030	QA08202AB	ENHANCE PRODUCTIVITY AND EFFICIENCY	
2.3.031	QA08201AA	ENHANCE SAFETY AND SECURITY	15€
2.3.032	QA08200AA	ENHANCE COVERAGE AND CAPACITY	

Subtotal Ex Vat			
2.3.033		MXP600 ACCESSORIES	
		Including:	
2.3.034	AN000354A01	ANTENNA STUBBY UHF1 ANTENNA STUBBY UHF1 (380-430 MHZ) 60MM	
2.3.035	PMAE4100A	ANTENNA STUBBY UHF (380-470 MHZ) 9CM	
2.3.036	PMAE4022B	UHF WHIP ANTENNA (380-480MHZ)	
2.3.037	PMLN6288A	5-COLOR RINGS FOR ANTENNA(NEON YELLOW)	
2.3.038	PMLN6287A	5-COLOR RINGS FOR ANTENNA(NEON GREEN)	
2.3.039	PMLN6289A	5-COLOR RINGS FOR ANTENNA (RED)	
2.3.040	PMLN6285A	5-COLOR RINGS FOR ANTENNA (BLUE)	
2.3.041	PMLN6286A	5-COLOR RINGS FOR ANTENNA (PEARL WHITE)	
2.3.042	PMNN4801A	BATT LIION IMPRES 2 IP68 1900T	
2.3.043	PMNN4802A	BATT LIION IMPRES 2 IP68 3400T	
2.3.044	PMNN4582A	BATTERY PACK BATT LIION IMPRES 2 IP68 2900T	
2.3.045	NNTN8244A	CHR DUAL UNIT EXT NA/LA	
2.3.046	NNTN8245A	CHR DUAL UNIT EXT EU	
2.3.047	NNTN8246A	CHR DUAL UNIT EXT UK	
2.3.048	PMLN6495A	SIMULTANEOUS DUC EXT UK	
2.3.049	PMLN6494A	SIMULTANEOUS DUC EXT EU	
2.3.050	PMLN6493A	SIMULTANEOUS DUC EXT US/NA/JP/TAIWAN	
2.3.051	PS000042A32	POWER SUPPLY ADAPTOR POWER- WALL CUBE AC DC SWITCH MODE 5W 100 V - 240 V SINECO EU	
2.3.052	PS000042A33	POWER SUPPLY ADAPTOR POWER- WALL CUBE AC DC SWITCH MODE 5W 100 V - 240 V SINECO UK/HK	
2.3.053	PS000042A31	POWER SUPPLY ADAPTOR POWER- WALL CUBE AC DC SWITCH MODE 5W 100 V - 240 V SINECO US/JP	
2.3.054	PS000042A01	POWER SUPPLY ADAPTOR POWER- WALL CUBE AC DC SWITCH MODE 5W 100 V - 240 V 5.5MM BARREL US/JP	
2.3.055	PS000042A02	POWER SUPPLY ADAPTOR POWER- WALL CUBE AC DC SWITCH MODE 5W 100 V - 240 V 5.5MM BARREL EU	
2.3.056	PS000042A03	POWER SUPPLY ADAPTOR POWER- WALL CUBE AC DC SWITCH MODE 5W 100 V - 240 V 5.5MM BARREL UK/HK	
2.3.057	NNTN8234A	CHR DUC EXT BASE ONLY	
2.3.058	25012022001	PWR SUPPLY US/NA/JAPAN/TAIWAN	
2.3.059	25012022002	PWR SUPPLY EU	
2.3.060	25012022003	PWR SUPPLY UK	
2.3.061	PMPN4400A	CHGR DESKTOP MULTI-UNIT IMPRES 2 1 DISPLAY EXT PS 100-240VAC BASE	
2.3.062	PMPN4156A	CHGR DESKTOP MULTI UNIT IMPRES 2 1 DISPLAY EXT PS BASE	
2.3.063	3087791G01	POWER CORD US	
2.3.064	3087791G04	CABLE POWER CORD EURO 250 VAC 3A	
2.3.065	3087791G07	POWER CORD UK	
2.3.066	PMLN8306A	BASE-CRADLE MXP600 NON-CHRG CRADLE KIT RF	
2.3.067	PMLN8305A	BASE-CRADLE MXP600 NON-CHRG CRADLE KIT NO RF	
2.3.068	AS000403A01	TETRA MODULAR CHARGER BARNEY INSERT	157

2.3.069	BR000482A01	BRACKET,CHGR MODULAR, WALL MOUNT	
2.3.070	PMPN4533A	CHGR DESKTOP 1 MULTI UNIT EXT 90W PS 100-240VAC US/NA	
2.3.071	PMPN4534A	CHGR DESKTOP 1 MULTI UNIT EXT 90W PS 100-240VAC EU	
2.3.072	PMPN4535A	CHGR DESKTOP 1 MULTI UNIT EXT 90W PS 100-240VAC UK/HK	
2.3.073	PMPN4543A	CHGR DESKTOP 2 MULTI UNIT 1 BRACKET EXT 90W PS 100-240VAC US/NA	
2.3.074	PMPN4544A	CHGR DESKTOP 2 MULTI UNIT 1 BRACKET EXT 90W PS 100-240VAC EU	
2.3.075	PMPN4545A	CHGR DESKTOP 2 MULTI UNIT 1 BRACKET EXT 90W PS 100-240VAC UK/HK	
2.3.076	PMPN4553A	CHGR DESKTOP 4 MULTI UNIT 2 BRACKET EXT 201W PS 100-240VAC US/NA	
2.3.077	PMPN4554A	CHGR DESKTOP 4 MULTI UNIT 2 BRACKET EXT 201W PS 100-240VAC EU	
2.3.078	PMPN4555A	CHGR DESKTOP 4 MULTI UNIT 2 BRACKET EXT 201W PS 100-240VAC UK/HK	
2.3.079	AS000403A01	TETRA MODULAR CHARGER BARNEY INSERT	
2.3.080	BR000482A01	BRACKET,CHGR MODULAR, WALL MOUNT	
2.3.081	PMPN4401A	CHGR DESKTOP MULTI-UNIT IMPRES 2 1 DISPLAY EXT PS 100-240VAC NA/LA/CA	
2.3.082	PMPN4402A	CHGR DESKTOP MULTI-UNIT IMPRES 2 1 DISPLAY EXT PS 100-240VAC EURO	
2.3.083	PMPN4403A	CHGR DESKTOP MULTI-UNIT IMPRES 2 1 DISPLAY EXT PS 100-240VAC UK	
2.3.084	PMPN4217A	CHGR DESKTOP MULTI UNIT IMPRES 2 1 DISPLAY EXT PS EURO	
2.3.085	PMPN4218A	CHGR DESKTOP MULTI UNIT IMPRES 2 1 DISPLAY EXT PS UK/HK	
2.3.086	PMPN4216A	CHGR DESKTOP MULTI UNIT IMPRES 2 1 DISPLAY EXT PS US	
2.3.087	GMAE4290A	ANT. DIGITAL CAR KIT TETRA / GPS	
2.3.088	GMAE4293A	ANT. DIGITAL CAR KIT UHF / GPS	
2.3.089	NNTN8040A	Vehicular Power Adapter	
2.3.090	PMLN8308A	BASE-CRADLE MXP600 W VEH PWR ADPT HOLDER RF	
2.3.091	PMLN8310A	BASE-CRADLE MXP600 W VEH PWR MOD & CBL RF	
2.3.092	PMLN8307A	BASE-CRADLE MXP600 W VEH PWR ADPT HOLDER NO RF	
2.3.093	PMLN8309A	BASE-CRADLE MXP600 W VEH PWR MOD & CBL NO RF	
2.3.094	RLN4570A	BREAKAWAY CHEST PACK	
2.3.095	HLN6602A	UNIVERSAL CHESTPACK	
2.3.096	RLN4815A	FANNY PACK CARRY ACCESSORY	
2.3.097	NTN5243A	STRAP	
2.3.098	HLN9767C	CARRY ACCESSORY-STRAP WRIST STRAP	
2.3.099	PMLN5580A	2.5" REPLACEMENT SWL B.L MT850 S	
2.3.100	PMLN5611A	3.0 INCH SWIVEL BELT LOOP	
2.3.101	PMLN5610A	2.5 INCH SWIVEL BELT LOOP	
2.3.102	PMLN8183A	LIGHTWEIGHT LEATHER CASE WITH 3 INCH SWIVEL BELT LOOP	15€

2.3.103	PMLN8184A	LIGHTWEIGHT LEATHER CASE WITH 2.5 INCH SWIVEL BELT LOOP	
2.3.104	PMLN8185A	CARRY ACCESSORY-CASE LIGHTWEIGHT LEATHER CASE FOR PETER JONES KCLICKFAST CLIP	
2.3.105	PMLN8181A	2.5-INCH BELT CLIP	
2.3.106	PMLN5616B	CARRY ACCESSORY-BELT CLIP TETRA MTP850 S BELT CLIP 2IN	
2.3.107	PMLN8025A	CARRY ACCESSORY-BELT CLIP PETER JONES STUD VERSION 2	
2.3.108	GMDN0497A	PETER JONES BELT DOCK 38MM	
2.3.109	GMDN0566AC	PETER JONES BELT LOOP 50MM AND DOCK	
2.3.110	GMDN0445AA	PETER JONES RSM TAG	
2.3.111	GMDN0445AC	PETER JONES BELT LOOP 50MM W/DOCK LOW HANG	
2.3.112	WALN4307A	PETER JONES SCREW MOUNT	
2.3.113	GMLN4488A	PETER JONES BELT DOCK 50MM	
2.3.114	PMLN8025A	CARRY ACCESSORY-BELT CLIP PETER JONES STUD VERSION 2	
2.3.115	GMDN0386A	CARRYCASE ASSEMBLY CLAMSHELL PLAS SEW-ON DOCK	
2.3.116	GMDN0547A	DOUBLE TONGUE TAG DOCK	
2.3.117	PMLN8185A	CARRY ACCESSORY-CASE LIGHTWEIGHT LEATHER CASE FOR PETER JONES KCLICKFAST CLIP	
2.3.118	PMKN4129A	TETRA USB DATA CABLE	
2.3.119	PMKN4127A	BOTTOM CONNECTOR SERIAL DATA CABLE	
2.3.120	PMKN4124A	E2EE KVL CABLE	
2.3.121	PMMN4128A	RM780 IMPRES WINDPORTING REMOTE SPEAKER MICROPHONE LARGE (IP68)	
2.3.122	PMMN4131A	AUDIO ACCESSORY-REMOTE SPEAKER MICROPHONE RM730 IMPRES WINDPORTING REMOTE SPEAKER MICROPHONE SMALL (IP68)	
2.3.123	PMLN8120A	AUDIO ACCESSORY-EARPIECE RX ONLY XL CLEAR TUBE EARPIECE 3.5MM JACK	
2.3.124	PMLN8082A	AUDIO ACCESSORY-EARPIECE 1-WIRE XL CLEAR TUBE EARPIECE	
2.3.125	PMLN8083A	AUDIO ACCESSORY-EARPIECE 2-WIRE XL CLEAR TUBE EARPIECE	
2.3.126	PMLN8084A	AUDIO ACCESSORY-EARPIECE 3-WIRE XL CLEAR TUBE EARPIECE	
2.3.127	PMLN8087A	AUDIO ACCESSORY-EARPIECE 1-WIRE SHORT CORD XL CLEAR TUBE EARPIECE RX ONLY	
2.3.128	PMLN8247A	AUDIO ACCESSORY-EARPIECE RX ONLY ADJUSTABLE D-STYLE EARPIECE WITH GCAI-MINI	
2.3.129	PMLN8248A	AUDIO ACCESSORY-EARPIECE RX ONLY OVER-THE-EAR EARPIECE WITH GCAI-MINI	
2.3.130	NTN2572A	EARPIECE W/12" CABLE	
2.3.131	PMLN7851A	OPERATIONAL CRITICAL WIRELESS EARPIECE PTT	
2.3.132	NNTN8295A	1-WIRE EARBUD 116CM CORD BLACK	
2.3.133	NNTN8294A	1-WIRE EARBUD 29CM CORD BLACK	
2.3.134	PMLN7052A	AUDIO ACCESSORY-SURVEILLANCE SURVEILLANCE KIT FOR OCW/MCW	1-WIRE 155

2.3.135	NNTN8433A	ACCESSORY KIT OCW COMPLETELY DISCREET SURVEILLANCE KIT	
2.3.136	PMLN8086A	OVER-THE-HEAD HEADSET	
2.3.137	PMLN8085A	BEHIND-THE-HEAD HEADSET	
2.3.138	NNTN8191D	ACCESSORY KIT ACCESSORY KIT ASSY ACCY BT ACCY KIT STD PAIR NCHGR	
2.3.139	PS000042A12	POWER SUPPLY ADAPTOR POWER- WALL CUBE AC DC SWITCH MODE 5W 100 V - 240 V MICRO-USB EU	
2.3.140	PS000042A13	POWER SUPPLY ADAPTOR POWER- WALL CUBE AC DC SWITCH MODE 5W 100 V - 240 V MICRO-USB UK/HK	
2.3.141	PS000042A11	POWER SUPPLY ADAPTOR POWER- WALL CUBE AC DC PWR SUPPLY ADPT WALL CUBE AC DC SWITCH MODE 5W 100V-240V MICRO-USB US/JP	
2.3.142	PMHN4429A	DUST COVER GCAI MINI	
2.3.143	PMHN4210A	BOTTOM CONNECTOR DUST COVER	
2.3.144	HW002461A01	KNOB KNOB RFID EU	
2.3.145	HW002462A01	KNOB KNOB RFID US	
2.3.146	GM0368A	MXP600 STANDARD CAR KIT	
Subtotal Ex Vat			
2.3.147		ST7500-RADIO (Executive-Portable Radio)	
		Including:	
2.3.148	MDH94PCL6TZ5AN	ST7500 UHF PTM412DER	
2.3.149	QA07503AA	ST7500 380-430MHZ TEA1	
2.3.150	GA01768AA	ADD: MR2021.1 SOFTWARE	
2.3.151	QA06811AA	ENABLE GPS FEATURE	
2.3.152	QA06812AA	ENABLE BT AUDIO & OBJECT PUSH	
2.3.153	QA06813AA	ENABLE TOGGLE RF POWER CLASS	
2.3.154	QA02038AA	ENABLE CELL SELECT BY TALKGRP	
2.3.155	QA02028AA	ENABLE CALL OUT FEATURE	
2.3.156	QA07444AA	ADD: STUBBY 28MM (380-430MHZ)	
2.3.157	QA07449AA	DEL: AUDIO ACCESSORIES	
2.3.158	QA07445AA	ADD: CARRY HOLSTER W SWIVEL CLIP	
2.3.159	QA07450AA	ADD: ST7500 QUICK START GUIDE-EN	
2.3.160	QA05742AA	ADD: SFS LITE 3 YEAR	
2.3.161	QA07588AA	ADD: BATT IMPRES2 LIION 2300T	
2.3.162	QA07596AA	ADD: DUST COVER ST7500	
2.3.163	QA07645AA	ADD: CHARGER SINGLE UNIT IMPRES 2 BATTERY ONLY EXT PS EU	
Subtotal Ex Vat			
2.3.164		ST7500 ACCESSORIES	
		Including:	
2.3.165	PMLN7841A	CARRY ACCESSORY-HOLSTER,CARRY HOLSTER WITH SWIVEL CLIP	
2.3.166	PMLN7842A	CARRY ACCESSORY-HOLSTER,CARRY HOLSTER WITH PETER JONES	
2.3.167	PMLN7863A	CARRY ACCESSORY-STRAP,FLEXIBLE SHOULDER STRAP	16C
2.3.168	PMLN7865A	CARRY ACCESSORY-STRAP,EPAULETTE STRAP	

2.3.169	ST7500-OC-CHARGER	ST7500- CHARGER ACCESSORY-OPTION CLASS	
2.3.170	PMPN4446A	CHARGER,CHARGER DESKTOP SINGLE-UNIT IMPRES 2 BATTERY-ONLY EXT PS 100-240VAC EU	
2.3.171	ST7500-OC-ANTENNA	ST7500- ANTENNA ACCESSORY-OPTION CLASS	
2.3.172	AN000169A01	ANTENNA, STUBBY,STUBBY 28MM (380-430MHZ)	
2.3.173	AN000262A01	ANTENNA, STUBBY,STUBBY 57MM (380-430MHZ)	
2.3.174	ST7500-OC-BATTERY	ST7500- BATTERY ACCESSORY-OPTION CLASS	
2.3.175	PMHN4389A	KIT, BATTERY DOOR	
2.3.176	PMNN4510B	BATT IMPRES2 LIION 2300T	
2.3.177	ST7500-OC-AUDIO	ST7500- AUDIO ACCESSORY-OPTION CLASS	
2.3.178	PMLN6900A	AUDIO ACCESSORY-EARPIECE,1-WIRE RCV ONLY QD TRANS TUBE BLK	
2.3.179	PMMN4550A	AUDIO ACCESSORY-REMOTE SPEAKER MICROPHONE,IMPRES RSM SMALL 3.5 JACK EMERG	
2.3.180	PMLN7844A	AUDIO ACCESSORY-EARPIECE,3.5MM RECEIVE ONLY EARPIECE W TRANS/TUBE	
2.3.181	NNTN8191C	ASSY,ACCY,BT ACCY KIT, STD PAIR, NCHGR	
2.3.182	NTN2572A	EARPIECE W/12" CABLE	
2.3.183	NNTN8294A	1-WIRE EARBUD,29CM CORD,BLACK	
2.3.184	NNTN8295A	1-WIRE EARBUD,116CM CORD,BLACK	
2.3.185	PMLN6463A	ACCESSORY KIT,BUSINESS WIRELESS ACCESSORY KIT	
2.3.186	PMLN7203A	FLEXIBLE-FIT SWIVEL EARPIECE W/ BOOM MIC, MULTIPACK	
2.3.187	NNTN8433A	ACCESSORY KIT,OCW COMPLETELY DISCREET SURVEILLANCE KIT	
2.3.188	PMLN7851A	OPERATIONAL CRITICAL WIRELESS EARPIECE PTT	
2.3.189	PMLN7940A	ACCESSORY KIT,SMALL EARBUD FOR OCW BT PTT, REPLACEMENT (PACK OF 5)	
2.3.190	PMLN7941A	ACCESSORY KIT,LARGE EARBUD FOR OCW BT PTT, REPLACEMENT (PACK OF 5)	
2.3.191	PMLN7181A	FLEXIBLE-FIT SWIVEL EARPIECE W/ BOOM MIC	
2.3.192	ST7500-OC-MISC	ST7500- MISCELLANEOUS ACCESSORY-OPTION CLASS	
2.3.193	CB000521A01	CABLE, DATA,USB CABLE, 1500MM	
2.3.194	HN001402A01	COVER-COVER,DUST (ST7500)	
2.3.195	PMKN4024A	ST7500 SI700 CABLE	
2.3.196	PMKN4203A	CABLE,CABLE,PROGRAMMING CABLE (ST7500)	
2.3.197	PS000277A02	POWER SUPPLY ADAPTOR,PS WALL 100-240V FIXED BLADE EU 5V/3A L6 USB-C	
2.3.198	PMLN7636A	ANTENNA ID BAND (GREY-PACK OF 10PCS)	
2.3.199	PMLN7637A	ANTENNA ID BAND (YELLOW-PACK OF 10PCS)	
2.3.200	PMLN7638A	ANTENNA ID BAND (RED-PACK OF 10PCS)	
2.3.201	PMLN7639A	ANTENNA ID BAND (BLUE-PACK OF 10PCS)	
2.3.202	PMLN7640A	ANTENNA ID BAND (PURPLE-PACK OF 10PCS)	
2.3.203	PMLN7951A	LABEL,KIT, COSMETIC LABEL (50PCS)	
Subtotal Ex Vat			

2.3.204		ST7000-RADIO (Covert TETRA Radio terminal)	
		Including:	
2.3.205	MDH67PCL6TZ5AN	ST7000 UHF PTM412DE	
2.3.206	QA06518AA	ST7000 380-430MHZ TEA1	
2.3.207	GA01694AA	ADD: MR19 SOFTWARE	
2.3.208	QA06811AA	ENABLE GPS FEATURE	
2.3.209	QA06813AA	ENABLE TOGGLE RF POWER CLASS	
2.3.210	QA06812AA	ENABLE BT AUDIO & OBJECT PUSH	
2.3.211	QA02027AA	ENABLE PERMANENT DISABLE FEATURE	
2.3.212	QA06698AA	ADD: STUBBY 25MM (380-430MHZ)	
2.3.213	QA06716AA	ADD: PS WALL 240VAC UNIVERSAL EURO ADAPTER 5VDC/1.5A L6 USB-C	
2.3.214	QA07625AA	ADD: CHGR VEHICULAR ADAPTER VPA	
2.3.215	QA06704AA	ADD: 3.5MM 2-WIRE EARPIECE W TRANS/TUBE	
2.3.216	QA06701AA	ADD: CARRY HOLSTER	
2.3.217	QA06706AA	ADD: ST7000 QUICK START GUIDE-EN	
2.3.218	QA05742AA	ADD: SFS LITE 3 YEAR	
2.3.219	QA06980AA	ADD: BATT IMPRES2 LIION 2300T	
2.3.220	QA07635AA	ADD: SECOND BATT IMPRES2 LIION 2300T	
		Subtotal Ex Vat	
2.3.221		ST7000 ACCESSORIES	
		Including:	
2.3.222	AN000168A01	ANTENNA, STUBBY,STUBBY 25MM (380-430MHZ)	
2.3.223	PMLN7636A	ANTENNA ID BAND (GREY-PACK OF 10PCS)	
2.3.224	PMLN7637A	ANTENNA ID BAND (YELLOW-PACK OF 10PCS)	
2.3.225	PMLN7638A	ANTENNA ID BAND (RED-PACK OF 10PCS)	
2.3.226	PMLN7639A	ANTENNA ID BAND (BLUE-PACK OF 10PCS)	
2.3.227	PMLN7640A	ANTENNA ID BAND (PURPLE-PACK OF 10PCS)	
2.3.228	ST7000-OC-AUDIO	ST7000-AUDIO ACCESSORY-OPTION CLASS	
2.3.229	PMLN7540A	3.5MM MONO EARBUD W MIC/PTT	
2.3.230	PMLN7541A	3.5MM 2-WIRE EARPIECE W TRANS/TUBE	
2.3.231	NTN2572A	EARPIECE W/12" CABLE	
2.3.232	NNTN8294A	1-WIRE EARBUD,29CM CORD,BLACK	
2.3.233	PMLN6463A	ACCESSORY KIT,BUSINESS WIRELESS ACCESSORY KIT	
2.3.234	PMLN7203A	FLEXIBLE-FIT SWIVEL EARPIECE W/ BOOM MIC, MULTIPACK	
2.3.235	NNTN8433A	ACCESSORY KIT,OCW COMPLETELY DISCREET SURVEILLANCE KIT	
2.3.236	NNTN8191C	ASSY,ACCY,BT ACCY KIT, STD PAIR, NCHGR	
2.3.237	PMLN7181A	FLEXIBLE-FIT SWIVEL EARPIECE W/ BOOM MIC	
2.3.238	PMLN7851A	OPERATIONAL CRITICAL WIRELESS EARPIECE PTT	
2.3.239	PMLN7940A	ACCESSORY KIT,SMALL EARBUD FOR OCW BT PTT, REPLACEMENT (PACK OF 5)	
2.3.240	PMLN7941A	ACCESSORY KIT,LARGE EARBUD FOR OCW BT PTT, REPLACEMENT (PACK OF 5)	162
2.3.241	PMHN4359A	KIT, BATTERY DOOR	

2.3.242	NNTN8191C	ASSY,ACCY,BT ACCY KIT, STD PAIR, NCHGR	
2.3.243	HW001104A01	REMOVAL TOOL, BATTERY DOOR	
2.3.244	PMNN4510B	BATT IMPRES2 LIION 2300T	
2.3.245	PMLN7510A	CARRY HOLSTER	
2.3.246	PMLN7511A	CARRY ACCESSORY-STRAP,MTP SLING	
2.3.247	PMKN4196A	CABLE, ASSEMBLY,USB-C TO USB-A	
2.3.248	CB000521A01	CABLE, DATA,USB CABLE, 1500MM	
Subtotal Ex Vat			
2.3.249		MTM5400 UHF DASH	
		Including:	
2.3.250	MDM85PFS6TZ5AN	MTM5400 UHF DASH MTR953C	
2.3.251	GA01674AA	ADD: MTM5X00 380-430 TEA1	
2.3.252	GA01702AA	ADD: CH DASH/DESK ROMAN	
2.3.253	GA01768AA	ADD: MR2021.1 SOFTWARE	
2.3.254	GA00134AA	ADD: COMP FIST MIC GCAI	
2.3.255	GA00517AA	ADD: SPEAKER 13W	
2.3.256	GA00130AA	ADD: DIN MOUNT frame	
2.3.257	G320AH	ADD: BATTERY POWER CABLE 3M	
2.3.258	GA00514AA	ADD: ANT COMBINED TETRA/GPS 380-430	
2.3.259	G115AC	DEL: ANTENNA TETRA	
2.3.260	GA00480AA	ADD: MTM5x00 QSG - ENGLISH	
2.3.261	QA03185AA	ENABLE GPS FEATURE	
2.3.262	QA02038AA	ENABLE CELL SELECT BY TALKGRP	
2.3.263	G802AA	ADD: TAMPER EVIDENT LABEL	
2.3.264	GA01237AA	ADD: SFS LITE 3 YEAR	
2.3.265	QA02023AA	ENABLE WAP FEATURE	
2.3.266	QA02298AA	ENABLE GATEWAY FEATURE	
2.3.267	QA02065AA	ENABLE REPEATER FEATURE	
Subtotal Ex Vat			
2.3.268		MTM5400 UHF REMOTE MTR953C	
		Including:	
2.3.269	MDM85PFS6TZ6AN	MTM5400 UHF REMOTE MTR953C	
2.3.270	GA01674AA	ADD: MTM5X00 380-430 TEA1	
2.3.271	GA01710AA	ADD: CH REMOTE ROMAN	
2.3.272	GA01768AA	ADD: MR2021.1 SOFTWARE	
2.3.273	GA00134AA	ADD: COMP FIST MIC GCAI	
2.3.274	GA00517AA	ADD: SPEAKER 13W	
2.3.275	GA01766AA	ADD: TRUNNION LOW PROFILE (EMEA)	
2.3.276	GA00133AA	DEL: POWER SUPPLY	
2.3.277	GA00131AA	ADD : ENH CTRL HD DIN TRUNNION	
2.3.278	GA00124AA	ADD: REM CABLE (RADIO TO C/H) 3M	
2.3.279	GA00122AA	ADD: REM KIT FOR ENH CTRL HD	
2.3.280	G320AH	ADD: BATTERY POWER CABLE 3M	
2.3.281	GA00121AA	DEL: Line cord	

2.3.282	GA00514AA	ADD: ANT COMBINED TETRA/GPS 380-430	
2.3.283	G115AC	DEL: ANTENNA TETRA	
2.3.284	GA00480AA	ADD: MTM5x00 QSG - ENGLISH	
2.3.285	QA03185AA	ENABLE GPS FEATURE	
2.3.286	QA02027AA	ENABLE PERMANENT DISABLE FEATURE	
2.3.287	QA02038AA	ENABLE CELL SELECT BY TALKGRP	
2.3.288	GA00643AA	ADD: TOROID EMC SUPPRESSION KIT	
2.3.289	G802AA	ADD: TAMPER EVIDENT LABEL	
2.3.290	GA01237AA	ADD: SFS LITE 3 YEAR	
2.3.291	QA02023AA	ENABLE WAP FEATURE	
2.3.292	QA02298AA	ENABLE GATEWAY FEATURE	
2.3.293	HKVN4761A	DMO GATEWAY LICENSE	
2.3.294	QA02065AA	ENABLE REPEATER FEATURE	
Subtotal Ex Vat			
2.3.295		MTM5500 UHF REMOTE (Boot Mount Radio with multiple remote control heads	
		Including:	
2.3.296	MDM85PFT6TZ6AN	MTM5500 UHF REMOTE MTR953C	
2.3.297	GA01674AA	ADD: MTM5X00 380-430 TEA1	
2.3.298	GA01743AA	ADD: DUAL ECH REMOTE ROMAN	
2.3.299	GA01768AA	ADD: MR2021.1 SOFTWARE	
2.3.300	GA00134AA	ADD: COMP FIST MIC GCAI	
2.3.301	GA00517AA	ADD: SPEAKER 13W	
2.3.302	GA01766AA	ADD: TRUNNION LOW PROFILE (EMEA)	
2.3.303	GA00133AA	DEL: POWER SUPPLY	
2.3.304	GA00131AA	ADD : ENH CTRL HD DIN TRUNNION	
2.3.305	G320AH	ADD: BATTERY POWER CABLE 3M	
2.3.306	GA00121AA	DEL: Line cord	
2.3.307	GA00828AA	ADD: ETHERNET CABLE, 5M	
2.3.308	GA00838AA	DEL: Y-Cable	
2.3.309	GA00514AA	ADD: ANT COMBINED TETRA/GPS 380-430	
2.3.310	G115AC	DEL: ANTENNA TETRA	
2.3.311	GA00480AA	ADD: MTM5x00 QSG - ENGLISH	
2.3.312	GA00919AA	ADD: TSCH QUICK START GUIDE - EN	
2.3.313	QA03185AA	ENABLE GPS FEATURE	
2.3.314	QA02027AA	ENABLE PERMANENT DISABLE FEATURE	
2.3.315	QA02038AA	ENABLE CELL SELECT BY TALKGRP	
2.3.316	QA03160AA	ENABLE ENHANCED DUAL CONTROL HEAD	
2.3.317	G802AA	ADD: TAMPER EVIDENT LABEL	
2.3.318	GA01237AA	ADD: SFS LITE 3 YEAR	
2.3.319	GA00944AA	ADD: 2ND COMP FIST MIC GCAI	
2.3.320	GA00947AA	ADD: 2ND SPEAKER, 13W	
2.3.321	GA00941AA	ADD: 2ND ENH CTRL HD TRUNNION	
2.3.322	GA00933AA	ADD: 2ND ETHERNET CABLE, 5M	

2.3.323	QA02023AA	ENABLE WAP FEATURE	
2.3.324	QA02297AA	ENABLE GATEWAY & REPEATER FEATURES	
2.3.325	QA02065AA	ENABLE REPEATER FEATURE	
Subtotal Ex Vat			
2.3.326		MTM5400 UHF DESK (Desktop Mount Radio)	
		Including:	
2.3.327	MDM85PFS6TZ4AN	MTM5400 UHF DESK MTR953C	
2.3.328	GA01674AA	ADD: MTM5X00 380-430 TEA1	
2.3.329	GA01702AA	ADD: CH DASH/DESK ROMAN	
2.3.330	GA01768AA	ADD: MR2021.1 SOFTWARE	
2.3.331	GA00138AA	ADD: DESK MIC GCAI	
2.3.332	GA00119AA	DEL: Speaker	
2.3.333	GA00641AA	ADD: DESKTOP TRAY W SPK	
2.3.334	GA01204AA	ADD: POWER SUPPLY SMALL	
2.3.335	G320AH	ADD: BATTERY POWER CABLE 3M	
2.3.336	G722AA	ADD: LINE CORD EURO	
2.3.337	G957AA	DEL: ANTENNA GPS	
2.3.338	QA02027AA	ENABLE PERMANENT DISABLE FEATURE	
2.3.339	QA02038AA	ENABLE CELL SELECT BY TALKGRP	
2.3.340	G115AC	DEL: ANTENNA TETRA	
2.3.341	GA00480AA	ADD: MTM5x00 QSG - ENGLISH	
2.3.342	G802AA	ADD: TAMPER EVIDENT LABEL	
2.3.343	GA01237AA	ADD: SFS LITE 3 YEAR	
Subtotal Ex Vat			
2.3.344		MTM5400 UHF MOTORCYCLE MTR953C	
		Including:	
2.3.345	MDM85PFS6TZ2AN	MTM5400 UHF M'CYCLE MTR953C	
2.3.346	GA01674AA	ADD: MTM5X00 380-430 TEA1	
2.3.347	GA01696AA	ADD: CH M/C ROMAN	
2.3.348	GA01768AA	ADD: MR2021.1 SOFTWARE	
2.3.349	GA00799AA	ADD: SMART VISOR MIC	
2.3.350	GA00517AA	ADD: SPEAKER 13W	
2.3.351	GA01766AA	ADD: TRUNNION LOW PROFILE (EMEA)	
2.3.352	GA00129AA	ADD: M/C ENH CTRL HD TRUNNION	
2.3.353	GA00122AA	ADD: REM KIT FOR ENH CTRL HD	
2.3.354	G320AH	ADD: BATTERY POWER CABLE 3M	
2.3.355	GA00515AA	ADD: ANT GPS ONLY PANEL/ROOF MOUNT	
2.3.356	G910AA	ADD: ANT MOTORCYCLE TETRA 410 - 430	
2.3.357	GA00480AA	ADD: MTM5x00 QSG - ENGLISH	
2.3.358	QA02023AA	ENABLE WAP FEATURE	
2.3.359	QA03185AA	ENABLE GPS FEATURE	
2.3.360	MTM5400-RFSH-OC-TORO	MTM5400 REFRESH TOROID OPTION CLASS	16€
2.3.361	GA00643AA	ADD: TOROID EMC SUPPRESSION KIT	

2.3.362	G802AA	ADD: TAMPER EVIDENT LABEL	
2.3.363	GA01237AA	ADD: SFS LITE 3 YEAR	
Subtotal Ex Vat			
2.3.364		MTM5400 ACCESSORIES	
		Including:	
2.3.365	RMN5111B	HEAVY DUTY MICROPHONE	
2.3.366	RMN5107B	COMPACT MOBILE MIC	
2.3.367	PMMN4086A	HEARER SPKR MIC W JACK VOL C & EMER	
2.3.368	RMN5054B	SMART VISOR MIC	
2.3.369	PMMN4087B	AUDIO ACCESSORY-HEADSET,VISOR MOUNTED MICROPHONE	
2.3.370	MDHLN7016A	IMPRES TELEPHONE STYLE HANDSET KIT	
2.3.371	RSN4002A	ACCESSORY KIT,13W EXT SPEAKER	
2.3.372	RSN4004A	5W EXT SPEAKER	
2.3.373	RSN4003A	7.5W EXT SPEAKER	
2.3.374	PMKN4119B	SPEAKER EXTENSION CABLE	
2.3.375	RLN5926A	PUSH BUTTON PTT	
2.3.376	RLN4858A	GOOSENECK PTT	
2.3.377	RLN4836AR	EMERGENCY FOOT SWITCH	
2.3.378	GMLN5091A	EXTERNAL ALARM RELAY	
2.3.379	PMLN5072A	KIT, MOTOTRBO REAR ACCESSORY CONNECTOR	
2.3.380	PMWN4024B	ETHERNET ECH REMOTE ROMAN	
2.3.381	PMWN4025A	TELEPHONE STYLE CH (TSCH) ROMAN	
2.3.382	PMLN7009A	ETHERNET DATA EXPANSION CTRL HEAD	
2.3.383	PMLN4912A	TRUNNION KIT	
2.3.384	PMLN5093A	ENH CTRL HD DIN TRUNNION	
2.3.385	PMLN6346A	SLIM MOUNTING BRACKET	
2.3.386	GLN7317A	Installationsatz (groess. Buegel)	
2.3.387	GLN7324A	Standard-Installationsatz	
2.3.388	RLN4779A	KEY LOCK MTG KIT	
2.3.389	PMLN5094A	DIN MTG KIT	
2.3.390	PMPN4076A	WEDGE POWER SUPPLY	
2.3.391	PMPN4055A	POWER SUPPLY	
2.3.392	HPN4007D	POWER SUPPLY 14V 15A UNI 110/240 VAC US PLUG	
2.3.393	PMKN4165A	CABLE ASSEMBLY	
2.3.394	NTN7373AR	110V CHGR LINE CORD	
2.3.395	NTN7374AR	220V CHGR LINE CORD	
2.3.396	NTN7375AR	240V UK POWER SUPPLY	
2.3.397	PMKN4141A	TETRA MOBILE ETHERNET CABLE, 3M	
2.3.398	PMKN4140A	TETRA MOBILE ETHERNET CABLE, 5M	
2.3.399	PMKN4139A	TETRA MOBILE ETHERNET CABLE, 7M	
2.3.400	PMKN4138A	TETRA MOBILE ETHERNET CABLE, 10M	
2.3.401	PMKN4136A	TETRA MOBILE ETHERNET CABLE, 12M	
2.3.402	PMKN4146A	TETRA MOBILE ETHERNET CABLE, 15M	16€
2.3.403	PMKN4135A	TETRA MOBILE ETHERNET CABLE, 40M	

2.3.404	PMKN4176A	CABLE,TRANSCEIVER CROSS OVER ETHERNET CABLE 0.5M	
2.3.405	PMKN4177A	CABLE, ASSEMBLY,TRANSCEIVER CROSS OVER ETHERNET CABLE 3M	
2.3.406	PMKN4178A	CABLE, ASSEMBLY,TRANSCEIVER CROSS OVER ETHERNET CABLE 7M	
2.3.407	PMKN4104A	ACTIVE DATA CABLE	
2.3.408	PMKN4110A	USB FLASH CABLE	
2.3.409	GKN6270A	Stromversorgungskabel (3m) zur Verbindung von Funkgerat mit Batterie (10A)	
2.3.410	GKN6274A	Stromversorgungskabel (7m)	
2.3.411	PMKN4120A	IGNITION SENSE CABLE	
2.3.412	PMKN4133A	RECH Y-CABLE	
2.3.413	PMKN4134A	TSCH Y-CABLE	
2.3.414	PMLN6487A	KIT, ACCESSORY CONNECTOR	
2.3.415	PMLN6335A	COLOR CODE (WHITE) PACK OF FIVE	
2.3.416	PMLN6336A	COLOR CODE (GREEN) PACK OF FIVE	
2.3.417	PMLN6337A	COLOR CODE (RED) PACK OF FIVE	
2.3.418	PMLN6338A	COLOR CODE (YELLOW) PACK OF FIVE	
2.3.419	PMLN6339A	COLOR CODE (BLUE) PACK OF FIVE	
2.3.420	GMAE4507A	ANT. COMB TETRA/GPS 380-430MHZ SMA	
2.3.421	PMAE4269A	TETRA/GPS COMBO ANTENNA 430MHZ - 472MHZ SMA	
2.3.422	GMAG4253A	ANT. GPS ONLY PANEL MOUNT SMA	
2.3.423	GMAG4254A	ANT. GPS ONLY MAGNETIC MOUNT SMA	
2.3.424	PMKN4114A	GPS ADAPTOR	
2.3.425	GMAE4253A	ANT. TETRA GLASS MOUNT 380 - 400MHZ	
2.3.426	GMAE4254A	ANT. TETRA GLASS MOUNT 410 - 430MHZ	
2.3.427	GMAE4255A	ANT. TETRA PANEL MOUNT 380 - 430MHZ	
2.3.428	GMAE4256B	ANT TETRA MAG MT 380-430MHZ	
2.3.429	GMAE4258B	ANT TETRA COVERT STRP 380-410MHZ	
2.3.430	GMAE4259A	ANT. TETRA COVERT STRIP 410 -430MHZ	
2.3.431	GMAE4260A	ANT. TETRA LOW PROFILE 380 -400MHZ	
2.3.432	GMAE4261A	ANT. TETRA LOW PROFILE 410 -430MHZ	
2.3.433	GMAE4262A	ANT. TETRA WALL MOUNT 380 - 400MHZ	
2.3.434	GMAE4263A	ANT. TETRA WALL MOUNT 410 -430MHZ	
2.3.435	GMAE4266A	ANT. MOTORCYCLE TETRA 380 - 400MHZ	
2.3.436	GMAE4267A	ANT. MOTORCYCLE TETRA 410 - 430MHZ	
2.3.437	GMAE4270A	ANT. GLASS MOUNT 450 - 470MHZ	
2.3.438	GMAE4271A	ANT. PANEL / ROOF MOUNT 430 -470MHZ	
2.3.439	GMAE4272A	ANT. MAGNETIC MOUNT 430 -470MHZ	
2.3.440	GMAE4273A	ANTENNA, STAMPED METAL,ANT.COVERT GLASS STRIP 420 - 465MHZ	
2.3.441	GMAE4273A	ANTENNA, STAMPED METAL,ANT.COVERT GLASS STRIP 420 - 465MHZ	
2.3.442	GMAE4274A	ANT. LOW PROFILE 430 - 470MHZ	
2.3.443	GMAE4275A	ANT. WALL MOUNT 430 -470MHZ	

2.3.444	GMAE4279A	ANT. WHIP FLEX TETRA 380 - 400MHZ	
2.3.445	GMAE4280A	ANT. WHIP FLEX TETRA 410 - 430MHZ	
2.3.446	GMAE4281A	ANT. WHIP FLEX TETRA 380 - 430MHZ	
2.3.447	GMAE4282A	ANT. WHIP TETRA 380 - 400MHZ	
2.3.448	GMAE4283A	ANT. WHIP TETRA 400 - 430MHZ	
2.3.449	GMAE4284A	ANT. WHIP TETRA 380 - 430MHZ	
2.3.450	GMAE4285A	Ant. Whip Hinged Flex Tetra 450MHz	
2.3.451	GMLN4276A	ANT MOUNT TYPE M8 (REQUIRES WHIP)	
2.3.452	GMLN4277A	ANT MOUNT TYPE M8 PLUS (REQ WHIP)	
2.3.453	GMLN4278A	ANT MAG MOUNT (REQUIRES WHIP)	
2.3.454	GMAE4284A	ANT. WHIP TETRA 380 - 430MHZ	
2.3.455	RMN5106A	DESKTOP MIC	
2.3.456	PMWN4009C	CH DASH/DESK ENGLISH	
2.3.457	PMWN4017D	CH REMOTE ENGLISH	
2.3.458	PMWN4002C	CH M/C ENGLISH	
2.3.459	PMLN4908B	DATA EXPANSION CONTROL HEAD ENH	
2.3.460	PMLN4904B	REMOTE HEAD ENH	
2.3.461	GMLN5089B	DATA JUNCTION BOX W / ACC CONNECTOR	
2.3.462	PMKN4101A	6M JUNCTION CABLE TO TRANSCEIVER	
2.3.463	PMKN4102A	4M JUNCTION CABLE TO TRANSCEIVER	
2.3.464	PMKN4103A	2M JUNCTION CABLE TO TRANSCEIVER	
2.3.465	HLN9457A	Zubehoranschluss-Bausatz 16-polig	
2.3.466	GMMN4063B	AUDIO ACCESSORY-HEADSET,FIST MICROPHONE	
2.3.467	GMSN4066A	SPEAKER MODULE ASSEMBLY,EXTERNAL SPEAKER 13W	
2.3.468	GMSN4078B	SMALL SPEAKER 5W	
2.3.469	GMKN4084A	SPEAKER EXTENSION CABLE	
2.3.470	RLN4857B	PUSHBUTTON PTT	
2.3.471	PMLN5092A	BRACKET,M/C ENH CTRL HD TRUNNION, SS	
2.3.472	GLN7318A	Feststations-Untersatz ohne Lautsprecher	
2.3.473	RSN4005A	DESKTOP TRAY W/SPEAKER	
2.3.474	RKN4077A	REM MT CABLE 3M	
2.3.475	RKN4078A	REMOTE MNT CBL 5M W/O MANUAL	
2.3.476	RKN4079A	REMOTE MNT CBL 7M W/O MANUAL	
2.3.477	PMKN4020A	CABLE, ASSEMBLY,REMOTE MOUNT CABLE - 10M	
2.3.478	PMKN4030A	NGCH MC TELCO CABLE, 2.3M	
2.3.479	PMKN4029A	EXPANSION CBL, 25PIN, GCAI, USB	
2.3.480	PMKN4056A	GCAI ACC EXPANSION CABLE 4M	
2.3.481	AVE2412	24 TO 12 Volt CONVERTOR - 10AMP (DC TO DC)	
Subtotal Ex Vat			

2.3.482		MTM5500 ACCESSORIES	
		Including:	
2.3.483	RMN5111B	HEAVY DUTY MICROPHONE	16€
2.3.484	RMN5107B	COMPACT MOBILE MIC	

2.3.485	PMMN4086A	HEARER SPKR MIC W JACK VOL C & EMER	
2.3.486	RMN5054B	SMART VISOR MIC	
2.3.487	PMMN4087B	AUDIO ACCESSORY-HEADSET,VISOR MOUNTED MICROPHONE	
2.3.488	MDHLN7016A	IMPRES TELEPHONE STYLE HANDSET KIT	
2.3.489	RSN4002A	ACCESSORY KIT,13W EXT SPEAKER	
2.3.490	RSN4004A	5W EXT SPEAKER	
2.3.491	RSN4003A	7.5W EXT SPEAKER	
2.3.492	PMKN4119B	SPEAKER EXTENSION CABLE	
2.3.493	RLN5926A	PUSH BUTTON PTT	
2.3.494	RLN4858A	GOOSENECK PTT	
2.3.495	RLN4836AR	EMERGENCY FOOT SWITCH	
2.3.496	GMLN5091A	EXTERNAL ALARM RELAY	
2.3.497	PMLN5072A	KIT, MOTOTRBO REAR ACCESSORY CONNECTOR	
2.3.498	PMWN4024B	ETHERNET ECH REMOTE ROMAN	
2.3.499	PMWN4025A	TELEPHONE STYLE CH (TSCH) ROMAN	
2.3.500	PMLN7009A	ETHERNET DATA EXPANSION CTRL HEAD	
2.3.501	PMLN4912A	TRUNNION KIT	
2.3.502	PMLN5093A	ENH CTRL HD DIN TRUNNION	
2.3.503	PMLN6346A	SLIM MOUNTING BRACKET	
2.3.504	GLN7317A	Installationssatz (groess. Buegel)	
2.3.505	GLN7324A	Standard-Installationssatz	
2.3.506	RLN4779A	KEY LOCK MTG KIT	
2.3.507	PMLN5094A	DIN MTG KIT	
2.3.508	PMPN4055A	POWER SUPPLY	
2.3.509	GPN6145B	MOBILE RADIO PSU 138W	
2.3.510	HPN4007D	POWER SUPPLY 14V 15A UNI 110/240 VAC US PLUG	
2.3.511	PMKN4165A	CABLE ASSEMBLY	
2.3.512	NTN7373AR	110V CHGR LINE CORD	
2.3.513	NTN7374AR	220V CHGR LINE CORD	
2.3.514	NTN7375AR	240V UK POWER SUPPLY	
2.3.515	PMKN4141A	TETRA MOBILE ETHERNET CABLE, 3M	
2.3.516	PMKN4140A	TETRA MOBILE ETHERNET CABLE, 5M	
2.3.517	PMKN4139A	TETRA MOBILE ETHERNET CABLE, 7M	
2.3.518	PMKN4138A	TETRA MOBILE ETHERNET CABLE, 10M	
2.3.519	PMKN4136A	TETRA MOBILE ETHERNET CABLE, 12M	
2.3.520	PMKN4146A	TETRA MOBILE ETHERNET CABLE, 15M	
2.3.521	PMKN4135A	TETRA MOBILE ETHERNET CABLE, 40M	
2.3.522	PMKN4104A	ACTIVE DATA CABLE	
2.3.523	PMKN4110A	USB FLASH CABLE	
2.3.524	GKN6270A	Stromversorgungskabel (3m) zur Verbindung von Funkgerat mit Batterie (10A)	
2.3.525	GKN6274A	Stromversorgungskabel (7m)	
2.3.526	PMKN4120A	IGNITION SENSE CABLE	165
2.3.527	PMKN4133A	RECH Y-CABLE	

2.3.528	PMKN4134A	TSCH Y-CABLE	
2.3.529	PMLN6487A	KIT, ACCESSORY CONNECTOR	
2.3.530	PMLN6335A	COLOR CODE (WHITE) PACK OF FIVE	
2.3.531	PMLN6336A	COLOR CODE (GREEN) PACK OF FIVE	
2.3.532	PMLN6337A	COLOR CODE (RED) PACK OF FIVE	
2.3.533	PMLN6338A	COLOR CODE (YELLOW) PACK OF FIVE	
2.3.534	PMLN6339A	COLOR CODE (BLUE) PACK OF FIVE	
2.3.535	GMAE4507A	ANT. COMB TETRA/GPS 380-430MHZ SMA	
2.3.536	PMAE4269A	TETRA/GPS COMBO ANTENNA 430MHZ - 472MHZ SMA	
2.3.537	GMAG4253A	ANT. GPS ONLY PANEL MOUNT SMA	
2.3.538	GMAG4254A	ANT. GPS ONLY MAGNETIC MOUNT SMA	
2.3.539	PMKN4114A	GPS ADAPTOR	
2.3.540	GMAE4253A	ANT. TETRA GLASS MOUNT 380 - 400MHZ	
2.3.541	GMAE4254A	ANT. TETRA GLASS MOUNT 410 - 430MHZ	
2.3.542	GMAE4255A	ANT. TETRA PANEL MOUNT 380 - 430MHZ	
2.3.543	GMAE4256B	ANT TETRA MAG MT 380-430MHZ	
2.3.544	GMAE4258B	ANT TETRA COVERT STRP 380-410MHZ	
2.3.545	GMAE4259A	ANT. TETRA COVERT STRIP 410 -430MHZ	
2.3.546	GMAE4260A	ANT. TETRA LOW PROFILE 380 -400MHZ	
2.3.547	GMAE4261A	ANT. TETRA LOW PROFILE 410 -430MHZ	
2.3.548	GMAE4262A	ANT. TETRA WALL MOUNT 380 - 400MHZ	
2.3.549	GMAE4263A	ANT. TETRA WALL MOUNT 410 -430MHZ	
2.3.550	GMAE4266A	ANT. MOTORCYCLE TETRA 380 - 400MHZ	
2.3.551	GMAE4267A	ANT. MOTORCYCLE TETRA 410 - 430MHZ	
2.3.552	GMAE4270A	ANT. GLASS MOUNT 450 - 470MHZ	
2.3.553	GMAE4271A	ANT. PANEL / ROOF MOUNT 430 -470MHZ	
2.3.554	GMAE4272A	ANT. MAGNETIC MOUNT 430 -470MHZ	
2.3.555	GMAE4273A	ANTENNA, STAMPED METAL, ANT.COVERT GLASS STRIP 420 - 465MHZ	
2.3.556	GMAE4274A	ANT. LOW PROFILE 430 - 470MHZ	
2.3.557	GMAE4275A	ANT. WALL MOUNT 430 -470MHZ	
2.3.558	GMAE4279A	ANT. WHIP FLEX TETRA 380 - 400MHZ	
2.3.559	GMAE4280A	ANT. WHIP FLEX TETRA 410 - 430MHZ	
2.3.560	GMAE4281A	ANT. WHIP FLEX TETRA 380 - 430MHZ	
2.3.561	GMAE4282A	ANT. WHIP TETRA 380 - 400MHZ	
2.3.562	GMAE4283A	ANT. WHIP TETRA 400 - 430MHZ	
2.3.563	GMAE4284A	ANT. WHIP TETRA 380 - 430MHZ	
2.3.564	GMAE4285A	Ant. Whip Hinged Flex Tetra 450MHz	
2.3.565	GMLN4276A	ANT MOUNT TYPE M8 (REQUIRES WHIP)	
2.3.566	GMLN4277A	ANT MOUNT TYPE M8 PLUS (REQ WHIP)	
2.3.567	GMLN4278A	ANT MAG MOUNT (REQUIRES WHIP)	
2.3.568	HD400	HD400 Base Antenna	
Subtotal Ex Vat			
2.3.569		TPG2200 UHFR2 TETRA Two Way Pager	
		Including:	

2.3.570	MDH22QCK6TZ1AN	TPG2200 UHFR2 PTPA612NE	
2.3.571	QA06833AA	ADD: TPG2200 400-430MHZ TEA1	
2.3.572	GA01768AA	ADD: MR2021.1 SOFTWARE	
2.3.573	QA06811AA	ENABLE GPS FEATURE	
2.3.574	QA06813AA	ENABLE TOGGLE RF POWER CLASS	
2.3.575	QA06837AA	ADD: EU CHARGER	
2.3.576	QA06841AA	ADD: TPG2200 QUICK START GUIDE - EN	
2.3.577	QA04622AA	ADD: SFS LITE 3 YEAR	
2.3.578	QA06839AA	ADD: HOME STATION	
2.3.579	QA06956AA	ADD: HOLSTER, BLACK	
2.3.580	QA06981AA	ADD: BATT IMPRES2 LIION 2300T	
2.3.581	PMNN4510B	BATT IMPRES2 LIION 2300T	
		Subtotal Ex Vat	
2.3.582		TETRA Two Way Pager Accessories	
		Including:	
2.3.583	QA06839AA	ADD: HOME STATION	
2.3.584	QA06956AA	ADD: HOLSTER, BLACK	
2.3.585	QA06981AA	ADD: BATT IMPRES2 LIION 2300T	
2.3.586	TPG2200-OC-CARRY	TPG2200-CARRYING ACCESSORY-OPTION CLASS	
2.3.587	PMLN6074A	WRIST STRAP	
2.3.588	PMLN7605A	CARRY ACCESSORY-POUCH,CARRY CASE HOLDER	
2.3.589	PMLN7606A	CARRY ACCESSORY-HOLSTER,TETRA PAGER CARRY HOLDER	
2.3.590	TPG2200-OC-CHARGER	TPG2200-CHARGER ACCESSORY-OPTION CLASS	
2.3.591	PMPN4287A	CHARGER DESKTOP MULTI-UNIT IMPRES 2 1 DISPLAY EXT PS 100-240VAC EU	
2.3.592	TPG2200-OC-BATTERY	TPG2200-BATTERY ACCESSORY-OPTION CLASS	
2.3.593	PMHN4371A	COVER-COVER,KIT, BATTERY COVER	
2.3.594	PMNN4510B	BATT IMPRES2 LIION 2300T	
2.3.595	TPG2200-OC-PW-SUPPLY	TPG2200-POWER SUPPLY ACCESSORY-OPTION CLASS	
2.3.596	PS000150A22	PS WALL 240VAC UNIVERSAL EURO ADAPTER 5VDC/1.5A L6 USB-C	
2.3.597	TPG2200-OC-MISC	TPG2200-MISCELLANEOUS ACCESSORY-OPTION CLASS	
2.3.598	PMAE4108A	ANTENNA, WHIP,380MHZ-430MHZ	
2.3.599	PMKN4196A	CABLE, ASSEMBLY,USB-C TO USB-A	
2.3.600	PMPN4142A	TPG2200 HOME STATION	
		Subtotal Ex Vat	

2.3.601		VB400 AND ACCESSORIES	
		Including:	
2.3.602	VB-440-64-QR-N	VideoBadge VB-440, FHD BWC. 64Gbyte. QR mount. w/o VM	
2.3.603	VM-EPL-VB-1-N	Licence: 1x VideoManager for VideoBadge, inc. ONStream	171
2.3.604	DC-200/EU	DockController DC-200, PSU, EU power & LAN cable	

2.3.605	VB-400-DOCK14/EU	14 port VB-400 USB dock, PSU and EU power cable	
2.3.606	VB-400-QR-KFTILT	VideoBadge VB-400 Tilting KlickFast for QR base	
2.3.607	RF-220	RFID RF-220 reader & base (MIFARE, MULTI-ISO, and LF)	
2.3.608	RF-STICKER-10	10x RFID sticker-style tags	
2.3.609			
2.3.610	VB-400-DOCK-SOLO	Single port VB-400 USB docking accessory, USB cable	
2.3.611	VB-400-QR-KFSTUD	VideoBadge VB-400 KlickFast Stud for QR base	
2.3.612	VB-400-QR-SPORT	VideoBadge VB-400 Sports Camera fitting for QR base	
2.3.613	KF-MAGMOUNT	Klick Fast magnetic mounting set (supplied w/o magnets)	
2.3.614	KF-MOLLEVEST	Klick Fast dock for MOLLE vests	
2.3.615	KF-LOOP	Klick Fast radio loop dock	
2.3.616	VM-ESA-36M	VideoManager Enterprise Software Assurance - 36M	
2.3.617	VB-400-QR-KFTILT3	VB-400 22 Degree Offset Tilt Mount	
2.3.618	VB-400-QR-KFTILT2	VB-400 WideTilt KlickFast Mount, QR base	
2.3.619	VB-400-POUCH-KF	VB400 carrying pouch (KF version only)	
2.3.620	VB-400-HP-QR	VB400 Cruciform QR Base	
2.3.621	VB-400-EXT-ADAPT	VB400 external accessory adaptor	
2.3.622	VB-400-EXT-CHARGE	USB Type-A to VB400 cable	
2.3.623	VB-VB-BRK-CABLE-120	VB to breakpoint cable, 1.2m	
2.3.624	VB-VB-BRK-CABLE-40	VB to breakpoint, half-cable, 0.4m	
2.3.625	VB-VB-X-CABLE-140	VB to X-series cable, with no cable-break, 1.4m	
2.3.626	VB-400-DOCK14-12MW	Warranty: VideoBadge VB-400 14-port USB dock, 12m	
2.3.627	VB-400-DOCK14-24MW	Warranty: VideoBadge VB-400 14-port USB dock, 24m	
2.3.628	VB-400-SOLO-12MW	Warranty: VideoBadge VB-400 one-port USB dock, 12m	
2.3.629	VB-400-SOLO-24MW	Warranty: VideoBadge VB-400 one-port USB dock, 24m	
2.3.630	VB-400-12MW-N	Warranty: VB-400 series camera, 12m h/w only	
2.3.631	VB-400-24MW-N	Warranty: VB-400 series camera, 24m h/w only	
2.3.632	DC-200-12MW	Warranty: DockController DC-200, 12m	
2.3.633	DC-200-24MW	Warranty: DockController DC-200, 24m	
Subtotal Ex Vat			
2.3.634		LEX L11	
		Including:	
2.3.635	STDRAD0790AB	LEX L11 EMEA STANDARD MODEL	
2.3.636	HK2110A	LEX L11 HANDHELD EMEA REGION	
2.3.637	STDBAT0790AA	STD: IMPRES 2 LI-ION 2500 MAH BATTERY (PMNN4545)	
2.3.638	QA07479AA	ADD: WALL CHARGER UNIVERSAL EURO PLUG	
2.3.639	VA00898AA	3YR ESSENTIAL SERVICE	
2.3.640	HKVN4631A	3YR SOFTWARE SUBSCRIPTION LTE	
2.3.641	STDSMA0790AA	3YR SMA	
Subtotal Ex Vat			
2.3.642		LEX L11 ACCESSORIES	
		Including:	
2.3.643	CB000756A01	CABLE,1000 MM,USB-A TO USB-C,LEX L11	172
2.3.644	CB000754A01	CABLE,1000 MM,USB-C TO USB-C,LEX L11	

2.3.645	GMLN5503B	WIRELESS RSM PORTABLE SOLUTION W/ DESK CHARGER (EU)	
2.3.646	GMLN5504B	WIRELESS RSM PORTABLE SOLUTION W/ DESK CHARGER (UK)	
2.3.647	MDRLN6561B	WIRELESS PORTABLE RSM	
2.3.648	PS000150A32	PS WALL 240VAC UNIVERSAL EURO ADAPTER 5VDC/1.5A L6 USB-A DETACHABLE	
2.3.649	PMPN4341A	CHGR DESKTOP MULTI UNIT IMPRES 2 1 DISPLAY EXT PS EURO	
2.3.650	PMPN4351A	CHGR DESKTOP DUAL UNIT IMPRES 2 EXT PS EURO	
2.3.651	PS000277A02	POWER SUPPLY ADAPTOR,PS WALL 100-240V FIXED BLADE EU 5V/3A L6 USB-C	
2.3.652	PMMN4096B	WIRELESS BLUETOOTH ACCESSORY-WIRELESS REMOTE SPEAKER MICROPHONE,WIRELESS REMOTE SPEAKER MIC	
2.3.653	PMNN4545A	BATTERY PACK,BATT IMPRES2 LIION IP68 2500T	
2.3.654	PMNN4546A	BATTERY PACK,BATT IMPRES2 LIION IP68 5000T	
2.3.655	HN001154A01	COVER-COVER,SLIM BATTERY COVER L11	
2.3.656	HN001155A01	COVER-COVER,HI CAP BATTERY COVER L11	
2.3.657	PMLN7845A	CARRY HOLSTER WITH PETER JONES STUD ASSEMBLY	
2.3.658	PMLN7779A	CHGR VEHICULAR ADAPTER	
2.3.659	PMLN7837A	CRADLE VEHICULAR	
2.3.660	PMLN7912A	ACCESSORY KIT,VEHICULAR, WITH SUCTION BASE	
2.3.661	PS000278A02	POWER SUPPLY ADAPTOR,PS WALL 100-240V FIXED BLADE EU PPS L6 USB-C	
2.3.662	GMDN0512A	PETER JONES CLAMP DOCK BELT CLIP WITH KLICK FAST	
2.3.663	GMDN0513A	PETER JONES LEATHER BELT CLIP WITH KLICK FAST	
Subtotal Ex Vat			
2.3.664		LXN505	
		Including:	
2.3.665	TT3553A	LXN 505 4G/LTE BC28 5W BASESTATION	
2.3.666	DSLXN505STAGESVS	LXN 505 ULTRA PORTABLE STAGING	
2.3.667	TT3554A	MANPACK BACKPACK FOR LXN 505	
2.3.668	DDN2838A	LXN 505 802.11B/G/N WIFI MODEM	
2.3.669	DDN2866A	LXN 505 LTE MODEM	
2.3.670	DDN3062A	BB-2590/U 8.7 H LOW TEMP RECHARGEABLE LITHIUM ION BATTERY	
2.3.671	DDN3063A	BB-2590/390/2557 FULL CHARGER MEDIUM RATE	
2.3.672	WAVE5000-SYSTEM	WAVE5000 SYSTEM - PTO MODEL	
2.3.673	WAVE5000SYS-OC-BASEM	WAVE5000 SYSTEM-BASE MODEL-OPTION CLASS	
2.3.674	TT3142A	NEW WAVE SYSTEM	
2.3.675	TT06266AA	WAVE SOFTWARE	
2.3.676	TT06267AA	WAVE COMMUNICATION CHANNEL - NO RADIO SYSTEM INTEGRATION	
2.3.677	TT06207AA	WAVE MOBILE COMMUNICATOR (ANDROID OR IOS)	
2.3.678	TT06174AA	ARUS - 3 YEAR - WAVE SERVER LICENSING	17c

2.3.679	TT06180AA	ARUS - 3 YEAR - WAVE COMM CHANNEL - NO RADIO SYS INTEGRATION	
2.3.680	TT06210AA	ARUS - 3 YEAR - WAVE MOBILE COMMUNICATOR (ANDROID OR IOS)	
2.3.681	DDN2858A	DRAGONFORCE USER LICENSES (QUANTITY 100)	
2.3.682	DDN3162A	LXN 505 DRAGONFORCE YEARLY RENEWAL	
2.3.683	LSV04S00667B	LTE ESST W/RMT CONN	
2.3.684	SVC01SVC0456A	BROADBAND SMA	
2.3.685	SSV04S00985A	DRAGONFORCE APPLICATION SMA	
Subtotal Ex Vat			
2.3.686		MCC7500 Console HW and SW	
		Including:	
2.3.687	GMLN1161A	MCC7500C WITH NEXTGEN ACCESSORIES	
2.3.688	B1951B	MICROPHONE, DESKTOP, USB	
2.3.689	B1952B	SPEAKER, DESKTOP, USB	
2.3.690	GMLN5495B	HP MONITOR 21.5 INCH	
2.3.691	CA03338AA	ADD: OS LICENSE WIN10 LTSB	
2.3.692	CA00140AB	ADD: AC LINE CORD, EUROPEAN	
2.3.693	ZA00786FD	ADD: MCC7500C SW NEXT GEN D9.1.1	
2.3.694	CA03413AA	ADD: USB CABLE, TYPE A TO TYPE C, 4.5M	
2.3.695	CA03407AA	ADD: AC LINE CORD, EUROPE	
2.3.696	CA03405AA	ADD: POWER SUPPLY WITH DC CORD	
2.3.697	CA03413AA	ADD: USB CABLE, TYPE A TO TYPE C, 4.5M	
2.3.698	GM0339A	D9.1.1 CONSOLE SOFTWARE SSL	
2.3.699	ZA01342AA	ADD: CONSOLE SW SSL USB DRIVE	
2.3.700	ZA00736CL	ADD: REMOTE API SERVER	
2.3.701	ZA01304AB	ADD: MCC7500C NEXT GEN ACC SW	
2.3.702	ZA00297BR	ADD: ALPHNUM TEXT SW	
Subtotal Ex Vat			

2.6 PRICE SCHEDULE HOSTING SOLUTION PRODUCT DESCRIPTIONS AND CODES

Secure Hosting

Item Number	Product Code	Product Description	Unit Cost (Excl Vat)
2.4.001	UWR-001	Ultra DC Smart Rack - monthly rental	
2.4.002	UP-002	Ultra DC Power per kVA - monthly rental	
2.4.003	US-001	Ultra DC Service Fee - monthly rental	

2.4.004	UX-003	Ultra DC Cross Connect Fee - monthly rental	
2.4.005	UIA-001	Ultra DC Internet Access - 100Mb increments - monthly subscription	
Subtotal Ex Vat			

Firewall

Item Number	Product Code	Product Description	Unit Cost (Excl Vat)
2.4.006	MX105-HW-LIC3Y	MX105 - Router/Firewall with 3y Enterprise Security license	

Managed Tin Server

Item Number	Product Code	Item Description	Unit Cost (Excl Vat)
2.4.007	DHW-ELS	Entry Level Business Server	
2.4.008	DHW-MLS	Mid-Level Business Server	
2.4.009	DHW-HLS	High-Level Business Server	
Subtotal Ex Vat			

Managed Tin Server - MS Server Operating System

Item Number	Product Code	Item Description	Unit Cost (Excl Vat)
2.4.010	SM-ELS-MS	Entry Level Business Server - MS Server	
2.4.011	SM-MLS-MS	Mid-Level Business Server - MS Server	
2.4.012	SM-MLS-MSSQL	Mid-Level Business Server - MS SQL	
2.4.013	SM-HLS-MS	High-Level Business Server - MS Server	
2.4.014	SM-HLS-MSSQL	High-Level Business Server - MS SQL	

Subtotal Ex Vat	
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Cloud Virtual Server

Item Number	Product Code	Item Description	Unit Cost (Excl Vat)
2.4.015	v-CPU	CPU (per virtual CPU)	
2.4.016	v-RAM	RAM (per GB)	
2.4.017	v-Storage	Storage (per GB) - min 100GB	
2.4.018	v-FW	Virtual Firewall (per instance)	
2.4.019	<i>v-PORTAL</i>	<i>V-Management Portal - per VM instance</i>	
Subtotal Ex Vat			

Back-Up

Item Number	Product Code	Item Description	Unit Cost (Excl Vat)
2.4.020	ENB-PC	Endpoint Backup, per Device, Monthly	
2.4.021	ENB-PC-TU	Additional Capacity, Monthly	
2.4.022	EBU-MS365-E+	Office 365 Backup Enterprise Plus [Email,One Drive,Sharepoint] , Monthly	
2.4.023	ENB-SVR	Server Backup - Backup with Unlimited Agents,, Monthly	
2.4.024	ENB-SVR-TU	Additional Storage per TB, Monthly	
2.4.025	SFS-CS	Secure File System Cloud Storage	
Subtotal Ex Vat			

Hosted Voice Communications

Item Number	Product Code	Item Description	Unit Cost (Excl Vat)
2.4.026	OE-HVC	Office Extension	
2.4.027	EE-HVC	Executive Extension	
2.4.028	UC-HVC	UC Extension	
2.4.029	AA-HVC	Auto Attendant	
2.4.030	RC-HVC	Receptionist Client	
2.4.031	VM-HVC	Voice Mail	
2.4.032	FM-HVC	Fax Mail	
2.4.033	CR-HVC	Call Recording	
2.4.034	RS-HVC	Recording Hours - 1000	
2.4.035	RS-HVC	Recording Hours - 4000	
2.4.036	RS-HVC	Recording Hours - 10000	
2.4.037	RS-HVC	Recording Hours - 20000	
2.4.038	RS-HVC	Recording Hours - 50000	
2.4.039	CCP-HVC	Call Centre - Premium	
2.4.040	CCWB-HVC	Call Centre - Wall Board	
2.4.041	ACA-HVC	Atom Call Analytics	
Subtotal Ex Vat			

2.7 PRICE SCHEDULE CRM SOLUTION PRODUCT DESCRIPTIONS AND CODES

Item Number	Product Number	Description	Cost (Excl Vat)
2.5.001	867958-B21	HPE ProLiant DL360 Gen10 4LFF Configure-to-order Server	
2.5.002	867958-B21 B19	HPE DL360 Gen10 4LFF CTO Server	
2.5.003	P02592-B21	Intel Xeon-Gold 5218 (2.3GHz/16-core/125W) Processor Kit for HPE ProLiant DL360 Gen10	
2.5.004	P00920-B21	HPE 16GB (1x16GB) Single Rank x4 DDR4-2933 CAS-21-21-21 Registered Smart Memory Kit	
2.5.005	P00920-B21 0D1	Factory Integrated	
2.5.006	861691-B21	HPE 1TB SATA 6G Business Critical 7.2K LFF SC 1-year Warranty Multi Vendor HDD	
2.5.007	861691-B21 0D1	Factory Integrated	
2.5.008	P01366-B21	HPE 96W Smart Storage Lithium-ion Battery with 145mm Cable Kit	
2.5.009	P01366-B21 0D1	Factory Integrated	
2.5.010	804331-B21	HPE Smart Array P408i-a SR Gen10 (8 Internal Lanes/2GB Cache) 12G SAS Modular Controller	
2.5.011	804331-B21 0D1	Factory Integrated	
2.5.012	865408-B21	HPE 500W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	
2.5.013	865408-B21 0D1	Factory Integrated	
2.5.014	512485-B21	HPE iLO Advanced 1-server License with 1yr Support on iLO Licensed Features	
2.5.015	512485-B21 0D1	Factory Integrated	
2.5.016	789388-B21	HPE 1U LFF Gen9 Easy Install Rail Kit	
2.5.017	789388-B21 0D1	Factory Integrated	
Subtotal Ex Vat			

Recurring			
Item Number	Description		Cost (Excl Vat)
2.5.018	Outbound Email Monthly Usage (GC-170-NV-OUTEMAILMU)	Subscription Fees	
2.5.019	PureCloud 3 Concurrent User (PC-170-NV-USR3C)	Subscription Fees	
2.5.020	PureCloud for SAP CRM Connector Add-On Concurrent (PC-170-NV-SFTSAPCRMPEFC)	Subscription Fees	
On-Demand Charges			
2.5.021	PureCloud 3 Concurrent User On-Demand (PC-170-NV-USER3C)	User Fees	
2.5.022	PureCloud BOYC Premises Virtual Usage (PC-170-NV-PCEDGE-VIR)	Add-ons	
2.5.023	PureCloud BYOC Premises Virtual Usage (PC-170-NVPCEDGE-VIR)	Add-ons	
2.5.024	PureCloud for SAP CRM Connector Add-On Concurrent Overage (PC-170-NV-SFTSAPCRMPEFC)	AppFoundry Subscriptions	
Non-Recurring			
2.5.025	PureSuccess (Genesys Cloud Customer Success Program)	PureSuccess Offer	
Subtotal Ex Vat			

2.8 PRICE SCHEDULE HAUWEI NETWORK PRODUCT DESCRIPTIONS AND CODES

Item Nr	Item Code	Item Description	Unit Price (excl vat)
Stack Cables			
3.1.001		SFP+,10G,High Speed Direct-attach Cables,1m, SFP+20M, CC2P0.254B(S),SFP+20M,Used indoor	
3.1.002		SFP+,10G,High Speed Direct-attach Cables,3m, SFP+20M,CC2P0.254B(S),SFP+20M,Used indoor	
3.1.003		SFP+,10G,High Speed Cable,5m, SFP+20M,CC2P0.254B(S),SFP+20M,LSFRZH For Indoor	
3.1.004		QSFP+,40G,High Speed Direct-attach Cables,1m, QSFP+38M,CC8P0.254B(S),QSFP+38M,Used indoor	
3.1.005		QSFP+,40G,High Speed Direct-attach Cables,3m, QSFP+38M,CC8P0.32B(S),QSFP+38M,Used indoor	
3.1.006		QSFP28,100G,High Speed Direct-attach Cables,5m, (QSFP28),CC8P0.4B(S),QSFP28,Used indoor	
3.1.007		QSFP28,100G,High Speed Direct-attach Cables,1m, (QSFP28),CC8P0.254B(S),QSFP28,Used indoor	
3.1.008		QSFP28,100G,High Speed Direct-attach Cables,3m, (QSFP28),CC8P0.254B(S),QSFP28,Used indoor	
3.1.009		QSFP28,100G,High Speed Direct-attach Cables,5m, (QSFP28),CC8P0.4B(S),QSFP28,Used indoor	
Subtotal Ex Vat			
Transceivers			
3.1.010		Electrical Transceiver, SFP,GE,Electrical Interface Module(100m,RJ45)	
3.1.011		Optical Transceiver,eSFP,GE,Multi-mode Module(850nm,0.55km,LC)	
3.1.012		Optical Transceiver,eSFP,GE,Single-mode Module(1310nm,10km,LC)	
3.1.013		Optical Transceiver,eSFP,GE,Single-mode Module(1310nm,40km,LC)	
3.1.014		Optical Transceiver,eSFP,GE,Single-mode Module(1550nm,40km,LC)	
3.1.015		Optical Transceiver,eSFP,GE,Single-mode Module(1550nm,80km,LC)	
3.1.016		10GBase-USR Optical Transceiver,SFP+,10G,Multi-mode Module(850nm,0.1km,LC)	
3.1.017		Optical Transceiver,SFP+,10G,Multi-mode Module(850nm,0.3km,LC)	
3.1.018		Optical Transceiver,SFP+,10G,Single-mode Module(1310nm,10km,LC)	
3.1.019		Optical Transceiver,SFP+,10G,Single-mode Module(1550nm,40km,LC)	
3.1.020		10GBase-ZR Optical Transceiver,SFP+,10G,Single-mode Module(1550nm,80km,LC)	
3.1.021		Optical Transceiver,SFP+,9.8G,Single-mode Module(1310nm,1.4km,LC)	

3.1.022		10GBase,BIDI Optical Transceiver,SFP+,10G,Single-mode Module(TX1270nm/RX1330nm,10km,LC)	
3.1.023		10GBase,BIDI Optical Transceiver,SFP+,10G,Single-mode Module(TX1330nm/RX1270nm,10km,LC)	
3.1.024		Optical Transceiver,SFP+,10G,BIDI Single-mode Module(TX 1330nm/RX 1270nm,40km,LC)	
3.1.025		Optical Transceiver,SFP+,10G,BIDI Single-mode Module(TX 1270nm/RX 1330nm,40km,LC)	
3.1.026		25GBase-SR Optical Transceiver-SFP28-25G Multi-mode(850nm,0.1km,LC)	
3.1.027		25GBase-LR Optical Transceiver-SFP28-25G Single-mode(1310nm,10km,LC)	
3.1.028		40GBase-eSDLC Optical Transceiver,QSFP+,40G,Multi-mode(850nm,PAM4,0.1km-OM3,0.3km-OM4,LC)	
3.1.029		40GBase-iSR4 Optical Transceiver,QSFP+, 40G,Multi-mode (850nm,0.15km,MPO)(connecting to one QSFP+ or four SFP+)	
3.1.030		40GBase-eSR4 Optical Transceiver,QSFP+, 40G,Multi-mode (850nm,0.3km,MPO)(connecting to one QSFP+ or four SFP+)	
3.1.031		40GBASE-LR4 optical transceiver, QSFP+, 40G, single-mode module (1310nm, 10km, LC)	
3.1.032		40GBase-ER4 Optical Transceiver,QSFP+, 40G,Single-mode Module (1310nm,40km,LC)	
3.1.033		100GBase-ER4 Optical Transceiver,QSFP28,100G,Single-mode module (1310nm,40km,LC)	
3.1.034		100GBase-CWDM4 Optical Transceiver,QSFP28, 100G,Single-mode module (1310nm,2km,LC)	
3.1.035		100GBase-LR4 Optical Transceiver,QSFP28, 100G,Single-mode module (1310nm,10km,LC)	
3.1.036		100GBase-SR4 Optical Transceiver,QSFP28, 100G,Multi-mode (850nm,0.1km,MPO)	
3.1.037		High Speed Transceiver,QSFP28,1310nm,100G,-4.3dBm,4.5dBm,-8.6dBm,LC,SMF,10km	
3.1.038		High Speed Transceiver,QSFP28,1310nm,100G,-2.9dBm,2.9dBm,-20.9dBm,LC,40km	
3.1.039		High Speed Transceiver,QSFP28,1311nm,50Gb/s,-4dBm,4.2dBm,-8.8dBm,LC,SMF,10km	
3.1.040		High Speed Transceiver,QSFP28,1311nm,50Gb/s,1.5dBm,8dBm,-15dBm,Stright LC,SMF,40km	
3.1.041		High Speed Transceiver,QSFP+,850nm,41.25Gbps,-7.6dBm,0.5dBm,-9.5dBm,MPO,MMF,0.15km	
3.1.042		Optical Transceiver(SFP+,850nm,10Gb/s,-7.3~-1dBm,-9.9dBm,LC, MM,0.3km)	
3.1.043		Optical Transceiver(SFP+,1310nm,10Gb/s,-8.2~-0.5dBm,-12.6dBm,LC,SM,10km)	
3.1.044		Optical Transceiver(SFP+,1550nm,9.95~11.1Gb/s,-4.7~4dBm,-14.1dBm,LC,SM,40km)	

3.1.045		Optical transceiver(eSFP,1310nm,1.25Gb/s,-9dBm--3dBm,-20dBm,LC,SM,10km)	
3.1.046		Optical Transceiver(eSFP,1310nm,1.25Gb/s,-5-0dBm,-23dBm,LC,SM,40km)	
3.1.047		High Speed Transceiver,QSFP+,1310nm,41.25Gbps,-7dBm,2.3dBm,-11.5dBm,LC,SMF,10km	
3.1.048		High Speed Transceiver,QSFP28,1310nm,100G,-2.9dBm,2.9dBm,-20.9dBm,LC,40km_24x7 maintenance, 3 yrs	
3.1.049		High Speed Transceiver,QSFP28,1310nm,100G,-4.3dBm,4.5dBm,-8.6dBm,LC,SMF,10km_24x7 maintenance, 3 yrs	
3.1.050		100GBase-SR4 Optical Transceiver,QSFP28,100G,Multi-mode (850nm,0.1km,MPO)_ 24x7 maintenance, 3 yrs	
3.1.051		100GBase-LR4 Optical Transceiver,QSFP28,100G,Single-mode module (1310nm,10km,LC)_ 24x7 maintenance, 3 yrs	
3.1.052		100GBase-CWDM4 Optical Transceiver,QSFP28,100G,Single-mode module (1310nm,2km,LC)_ 24x7 maintenance, 3 yrs	
3.1.053		100GBase-ER4 Optical Transceiver,QSFP28,100G,Single-mode module (1310nm,40km,LC)_ 24x7 maintenance, 3 yrs	
Subtotal Ex Vat			
Access switch			
3.1.054		8*10/100/1000BASE-T ports, 4*10GE SFP+ ports, PoE+, AC power	
3.1.055		Basic SW,Per Device	
3.1.056		,Foundation license Series,Per Device	
3.1.057		Foundation, Series, SnS,Per Device(: 3 years)	
3.1.058		8*10/100/1000BASE-T ports, 4*10GE SFP+ ports, PoE+, AC power_24x7 maintenance, 3 yrs	
3.1.059		24*10/100/1000BASE-T ports, 4*10GE SFP+ ports, PoE+, AC power	
3.1.060		24*10/100/1000BASE-T ports, 4*10GE SFP+ ports, PoE+, AC power_ 24x7 maintenance, 3 yrs	
3.1.061		48*10/100/1000BASE-T ports, 4*10GE SFP+ ports, PoE+, AC power	
3.1.062		48*10/100/1000BASE-T ports, 4*10GE SFP+ ports, PoE+, AC power_ 24x7 maintenance, 3 yrs	
3.1.063		48*10/100/1000BASE-T ports,4*10GE SFP+ ports,PoE+,	
3.1.064		Basic SW,Per Device	
3.1.065		Foundation license Series,Per Device	
3.1.066		,Foundation license Series,SnS,Per Device3 years)	
3.1.067		1000W AC Power Module	
3.1.068		48*10/100/1000BASE-T ports,4*10GE SFP+ ports,PoE+, _24x7 maintenance, 3 yrs	
3.1.069		24*10/100/1000BASE-T ports,4*10GE SFP+ ports,PoE+,	

3.1.070		24*10/100/1000BASE-T ports,4*10GE SFP+ ports,PoE+, _24x7 maintenance, 3 yrs	
3.1.071		48*10/100/1000BASE-T ports, 4*10GE SFP+ ports, 1*expansion slot, PoE+,	
3.1.072		Basic SW,Per Device	
3.1.073		Foundation license Series,Per Device	
3.1.074		Foundation license Series,SnS,Per Device(3 years)	
3.1.075		48*10/100/1000BASE-T ports, 4*10GE SFP+ ports, 1*expansion slot, PoE+,_24x7 maintenance, 3 yrs	
3.1.076		24*10/100/1000BASE-T ports, 4*10GE SFP+ ports, 1*expansion slot, PoE+	
3.1.077		24*10/100/1000BASE-T ports, 4*10GE SFP+ ports, 1*expansion slot, PoE+,_24x7 maintenance, 3 yrs	
Subtotal Ex Vat			

Mgig Switch			
3.1.078		24*100M/1G Ethernet ports, optional RTU upgrade to 2.5/5/10G, 4*10GE SFP+ ports, 1*expansion slot, PoE++,	
3.1.079		Basic SW,Per Device	
3.1.080		Foundation license,Per Device	
3.1.081		Foundation license,SnS,Per Device(3 years)	
3.1.082		1000W AC Power Module	
3.1.083		24*100M/1G Ethernet ports, optional RTU upgrade to 2.5/5/10G, 4*10GE SFP+ ports, 1*expansion slot, PoE+,_24x7 maintenance, 3 yrs	
3.1.084		2.5&10G Bundle(36*100M/1G/2.5G, 12*100M/1G/2.5G/5G/10G Ethernet ports, Optional RTU upgrade to 5/10G, 4*25GE + 2*40GE or 2*100GE, 1*expansion slot, PoE++, 1*1000W AC power	
3.1.085		Series Basic SW,Per Device	
3.1.086		Foundation license,Per Device	
3.1.087		Foundation license ,SnS,Per Device(3 years)	
3.1.088		2.5&10G Bundle(36*100M/1G/2.5G, 12*100M/1G/2.5G/5G/10G Ethernet ports, Optional RTU upgrade to 5/10G, 4*25GE + 2*40GE or 2*100GE, 1*expansion slot, PoE+,_ 24x7 maintenance, 3 yrs	
Subtotal Ex Vat			
3.1.089		4 slot Assembly Chassis	
3.1.090		main control unit E	
3.1.091		switch fabric unit E(X1)	
3.1.092		24-port 10GE SFP+ interface and 24-port GE SFP interface card (X6S,SFP+)	

3.1.093		40-port 25GE SFP28 interface card (X6H,SFP28)	
3.1.094		6-port 100GE QSFP28 interface card (X6S,QSFP28)	
3.1.095		3000W AC Power Module(Black)	
3.1.096		Basic SW,Per Device	
3.1.097		Foundation license,Per Device	
3.1.098		Foundation license SnS,Per Device(3 years)	
3.1.099		Advanced license,Per Device	
3.1.100		Advanced,license,SnS,Per Device(3 years)	
3.1.101		4 Slot Assembly Chassis_24x7 maintenance, 3 yrs	
3.1.102		100GBase-SR4 Optical Transceiver,QSFP28,100G,Multi-mode (850nm,0.1km,MPO)_ 24x7 maintenance, 3 yrs	
3.1.103		24-port 10GE SFP+ interface and 24-port GE SFP interface card (X6S,SFP+)_24x7 maintenance, 3 yrs	
3.1.104		6-port 100GE QSFP28 interface card (X6S,QSFP28)_ 24x7 maintenance, 3 yrs	
3.1.105		40-port 25GE SFP28 interface card (X6H,SFP28)_ 24x7 maintenance, 3 yrs	
3.1.106		8 Slot Assembly Chassis	
3.1.107		8 Slot Assembly Chassis_24x7 maintenance, 3 yrs	
Subtotal Ex Vat			
Core Switch Fixed			
3.1.108		24*10GE SFP+ ports, 4*25GE SFP28 ports, 4*100GE QSFP28 ports,	
3.1.109		300W AC Power Module	
3.1.110		Basic SW,Per Device	
3.1.111		Foundation license,Per Device	
3.1.112		Foundation license ,SnS,Per Device(3 years)	
3.1.113		24*10GE SFP+ ports, 4*25GE SFP28 ports, 4*100GE QSFP28 ports,_ 24x7 maintenance, 3 yrs	
3.1.114		24*10GE SFP+ ports, 6*40GE QSFP28 ports, optional license for upgrade to 6*100GE QSFP28,	
3.1.115		600W AC Power Module(Back to Front, Power panel side exhaust)	
3.1.116		24*10GE SFP+ ports, 6*40GE QSFP28 ports, optional license for upgrade to 6*100GE QSFP28, _24x7 maintenance, 3 yrs	
3.1.117		48*10GE SFP+ ports, 6*40GE QSFP28 ports, optional license for upgrade to 6*100GE QSFP28	
3.1.118		Advanced license ,Per Device	
3.1.119		Advanced license SnS,Per Device(3 years)	

3.1.120		48*10GE SFP+ ports, 6*40GE QSFP28 ports, optional license for upgrade to 6*100GE QSFP28, 24x7 maintenance, 3 yrs	
Subtotal Ex Vat			
Item Nr	Item Code	Item Description	Unit Price (excl vat)
Firewall			
3.1.121		2*GE WAN+8*GE Combo+2*10GE SFP+,1 AC power)	
3.1.122		M.2 SSD,SATA 6Gb/s-240GB,Hot-Swappable	
3.1.123		HardDisk-1000GB-SATA-7200rpm-2.5"-64M-hot-swap-built-in-Front Panel-Silver	
3.1.124		Extension Guide Rail	
3.1.125		Threat Protection Subscription 36 Months	
3.1.126		2*GE WAN+8*GE Combo+2*10GE SFP+,1 AC power) 24x7 maintenance, 3 yrs	
3.1.127		2*GE WAN+8*GE Combo+2*10GE SFP+,1 AC power	
3.1.128		Threat Protection Subscription 36 Months	
3.1.129		2*GE WAN+8*GE Combo+2*10GE SFP+,1 AC power_24x7 maintenance, 3 yrs	
3.1.130		12*GE RJ45+8*GE SFP+4*10GE SFP+ ,1 AC power	
3.1.131		Threat Protection Subscription 36 Months	
3.1.132		12*GE RJ45+8*GE SFP+4*10GE SFP+ ,1 AC power_24x7 maintenance, 3 yrs	
3.1.133		12*GE RJ45+12*10GE SFP+ + 2*40GE QSFP+,2 AC power	
3.1.134		Threat Protection Subscription 36 Months (Applies to USG6650E)	
3.1.135		12*GE RJ45+12*10GE SFP+ + 2*40GE QSFP+,2 AC power_24x7 maintenance, 3 yrs	
Subtotal Ex Vat			
Data Centre Core Switch chassis			
3.1.136		8 slot Chassis, 2* MPUD,4*SFU04F,4*3000W AC & HVDC, full Fans)	
3.1.137		Advanced SW License	
3.1.138		Advanced SW License for SnS-Year(3 years)	
3.1.139		Chassis, 2* MPUD,4*SFU04F,4*3000W AC & HVDC, full Fans N1-CloudFabric	
3.1.140		4 slot Chassis, 2* MPUD,4*SFU08F,4*3000W AC & HVDC, full Fans	
3.1.141		48-port 10GE interface card (FD-G, SFP+)	
3.1.142		36-port 40GE interface card (FD-G, QSFP+)	
3.1.143		18-port 100GE interface card (FD-G, QSFP28)	
3.1.144		100GBase-SR4 Optical Transceiver,QSFP28,100G,Multi-mode (850nm,0.1km,MPO)_Co-Care Premier 100GBase-SR4 Optical Transceiver,QSFP28,100G,Multi-mode (850nm,0.1km,MPO)_36Month(s)	

3.1.145		CE16808 AC Bundle1 (Chassis, 2* MPUD,4*SFU08F,4*3000W AC & HVDC, full Fans)_Co-Care Premier CE16808 Chassis_36Month(s)	
3.1.146		18-port 100GE interface card (FD-G, QSFP28)_Co-Care Premier CE16800 18 port 100GE interface card (FD-G, QSFP28)_36Month(s)	
3.1.147		36-port 40GE interface card (FD-G, QSFP+)_Co-Care Premier CE16800 36-port 40GE interface card (FD-G, QSFP+)_36Month(s)	
3.1.148		48-port 10GE interface card (FD-G, SFP+)_Co-Care Premier CE16800 48-port 10GE interface card (FD-G, SFP+)_36Month(s)	
Subtotal Ex Vat			
TOR switches			
3.1.149		48*10GE RJ45,6*100GE QSFP28,2*AC power modules,4*fan modules,port-side intake)	
3.1.150		Advanced SW License	
3.1.151		Advanced SW License for SnS-Year(3 years)	
3.1.152		48*10GE RJ45,6*100GE QSFP28,2*AC power modules,4*fan modules,port-side intake_24x7 maintenance, 3 yrs	
3.1.153		48*10G SFP+, 6*100G QSFP28, 2*AC power modules, 4*fan modules, port-side intake	
3.1.154		48*10G SFP+, 6*100G QSFP28, 2*AC power modules, 4*fan modules, port-side intake_24x7 maintenance, 3 yrs	
3.1.155		48*25G SFP28, 6*100G QSFP28, 2*AC power modules, 4*fan modules, port-side intake	
3.1.156		48*25G SFP28, 6*100G QSFP28, 2*AC power modules, 4*fan modules, port-side intake_24x7 maintenance, 3 yrs	
Subtotal Ex Vat			
WLAN			
3.1.157		Access Point 11ax outdoor,2+2/2 dual bands,external antenna,BLE)	
3.1.158		matched load,0~2GHz,50ohm,2W,Ntype plug,male	
3.1.159		Waterproof Adhesive Tape ,50mm*1.65mm*1.0m,Black	
3.1.160		Insulating Adhesive Tape,19mm*0.18mm*10m,Black,General	
3.1.161		Outdoor Enhanced Weather-Resistant Cable Tie,300*3.6mm,Black	
3.1.162		Foundation,11ax AP,Per Device	
3.1.163		Foundation,11ax AP,SnS,Per Device(3 years)	
3.1.164		Access Point (11ax outdoor,2+2/2 dual bands,external antenna,BLE)_24x7 maintenance, 3 yrs	
3.1.165		Access Point (11ax outdoor,4+4 dual bands,external antenna,BLE)	
3.1.166		Access Point (11ax outdoor,4+4 dual bands,external antenna,BLE)_24x7 maintenance, 3 yrs	

3.1.167		Access Point (11ax indoor,4+6 dual bands,external antenna,USB,IoT Slot,BLE,Optional RTU upgrade to 4+8/4+4+4/4+6+Scan)	
3.1.168		Isotropic Antenna,2400~2500MHz/5150~5850MHz,3dBi/4dBi,RP-SMA-J,1 port,without bracket	
3.1.169		Access Point (11ax indoor,4+6 dual bands,external antenna,USB,IoT Slot,BLE,Optional RTU upgrade to 4+8/4+4+4/4+6+Scan)_ 24x7 maintenance, 3 yrs	
3.1.170		Access Point (11ax indoor,Dedicated 3rd Radio,4+12 dual bands,smart antenna,USB,IoT Slot,BLE)	
3.1.171		Access Point (11ax indoor,Dedicated 3rd Radio,4+12 dual bands,smart antenna,USB,IoT Slot,BLE)_ 24x7 maintenance, 3 yrs	
3.1.172		Access Point (11ax indoor,2+2 dual bands,smart antenna,USB,BLE)	
3.1.173		Access Point (11ax indoor,2+2 dual bands,smart antenna,USB,BLE)_ 24x7 maintenance, 3 yrs	
3.1.174		Access Point (11ax indoor,2+4 dual bands,smart antenna,USB,BLE)	
3.1.175		Access Point (11ax indoor,2+4 dual bands,smart antenna,USB,BLE)_ 24x7 maintenance, 3 yrs	
3.1.176		Access Point (11ax indoor,2+2+4 tri bands,smart antenna,USB,BLE)	
3.1.177		Access Point (11ax indoor,2+2+4 tri bands,smart antenna,USB,BLE)_ 24x7 maintenance, 3 yrs	
3.1.178		WLAN Controller (12*GE ports, 12*10GE SFP+ ports, 2*40GE QSFP+ ports,) manages 2K AP	
3.1.179		600W AC Power Module(Back to Front, Power panel side exhaust)	
3.1.180		Access Controller AP Resource License(1 AP)	
3.1.181		WLAN Controller(12*GE ports, 12*10GE SFP+ ports, 2*40GE QSFP+ ports, no power)_ 24x7 maintenance, 3 yrs	
3.1.182		WLAN Controller mainframe (10*GE ports, 2*10GE SFP+ ports, with the AC/DC adapter) managing 256 APs	
3.1.183		Access Controller AP Resource License(1 AP)	
3.1.184		Access Controller AP Resource License(8 AP)	
3.1.185		Access Controller AP Resource License(16 AP)	
3.1.186		Access Controller AP Resource License(32 AP)	
3.1.187		Access Controller AP Resource License(64 AP)	
3.1.188		Access Controller AP Resource License(128 AP)	
3.1.189		WLAN controller mainframe (10*GE ports, 2*10GE SFP+ ports, with the AC/DC adapter)_ 24x7 maintenance, 3 yrs	
3.1.190		Access Controller AP Resource License(1 AP)_ 24x7 maintenance, 3 yrs	
3.1.191		Access Controller AP Resource License(8 AP)_ 24x7 maintenance, 3 yrs	

3.1.192		Access Controller AP Resource License(16 AP)_ 24x7 maintenance, 3 yrs	
3.1.193		Access Controller AP Resource License(32 AP)_ 24x7 maintenance, 3 yrs	
3.1.194			
3.1.195		Access Controller AP Resource License(64 AP)_ 24x7 maintenance, 3 yrs	
3.1.196		Access Controller AP Resource License(128 AP)_ 24x7 maintenance, 3 yrs	
Subtotal Ex Vat			

MPLS Routers			
3.1.157		8 Slot Router Basic Configuration (Includes Chassis,2*IPU-1T2, 2*AC Power,)	
3.1.158		2-Port 50GBase/1-Port 100GBase-QSFP28 FlexE MACsec Physical Interface Card(PIC)	
3.1.159		4-Port 25GE(SFP28)/10GE(SFP+) MACsec Physical Interface Card (PIC)	
3.1.160		10-Port 10GE/GE LAN/WAN-SFP+ MACsec Physical Interface Card(PIC)	
3.1.161		Advanced SW License	
3.1.162		Time Synchronization Function License	
3.1.163		Advanced SW License SnS(3 years)	
3.1.164		Time Synchronization Function License SnS(3 years)	
3.1.165		8 Slot Router (Includes Chassis,2*IPU-1T2, 2*AC Power, 24x7 maintenance, 3 yrs	
3.1.166		4-Port 25GE(SFP28)/10GE(SFP+) MACsec Physical Interface Card (PIC)_ 24x7 maintenance, 3 yrs	
3.1.167		10-Port 10GE/GE LAN/WAN-SFP+ MACsec Physical Interface Card(PIC)_ 24x7 maintenance, 3 yrs	
3.1.168		2-Port 50GBase/1-Port 100GBase-QSFP28 FlexE MACsec Physical Interface Card(PIC)_ 24x7 maintenance, 3 yrs	
3.1.169		14 Slot Router Configuration (Includes Chassis,2*IPU-1T2-A, 2*AC Power,	
3.1.170		2-Port 50GBase/1-Port 100GBase-QSFP28 Physical Interface Card(PIC)	
3.1.171		14 Slot Router Configuration (Includes Chassis,2*IPU-1T2-A, 2*AC Power,)_ 24x7 maintenance, 3 yrs	
3.1.172		10-Port 10GE/GE LAN/WAN-SFP+ MACsec Physical Interface Card(PIC)_ 24x7 maintenance, 3 yrs	
3.1.173		2-Port 50GBase/1-Port 100GBase-QSFP28 Physical Interface Card(PIC)_ 24x7 maintenance, 3 yrs	
3.1.174		14 Slot Router Advanced SW License	
3.1.175		14 Slot Router Time Synchronization Function License	
3.1.176		14 Slot Router Advanced SW License SnS(3 years)	
3.1.177		N1-NetEngine 8000 M14 Series Time Synchronization Function License SnS(Annual fee validity period : 3 years from " PO signed plus 90 days ")	
3.1.178		14 Slot Router Configuration (Includes Chassis,2*IPU-1T2-A, 2*AC Power,)_ 24x7 maintenance, 3 yrs	
3.1.179		10-Port 10GE/GE LAN/WAN-SFP+ MACsec Physical Interface Card(PIC)_ 24x7 maintenance, 3 yrs	
3.1.180		2-Port 50GBase/1-Port 100GBase-QSFP28 Physical Interface Card(PIC)_ 24x7 maintenance, 3 yrs	
3.1.181		Router Configuration (Includes Chassis, Fixed Interface(16*10GE + 12*GE),2*AC Power,)	
3.1.182		Advanced SW License	

3.1.183		Time Synchronization Function License	
3.1.184		Advanced SW License SnS(3 years)	
3.1.185		Time Synchronization Function License SnS(3 years)	
3.1.186		Router Configuration (Includes Chassis, Fixed Interface(16*10GE + 12*GE),2*AC Power,)_ 24x7 maintenance, 3 yrs	
Subtotal Ex Vat			
Access Router (Branch)			
3.1.187		2*GE combo WAN,8*GE LAN (PoE+),1*USB2.0,802.11b/g/n/ac,2*2MIMO,1*MIC slot	
3.1.188		Foundation license Series,Per Device	
3.1.189		Foundation license SnS,Per Device(3 years)	
3.1.190		2*GE combo WAN,8*GE LAN (PoE+),1*USB2.0,802.11b/g/n/ac,2*2MIMO,1*MIC slot_24x7 maintenance, 3 yrs	
3.1.191		2*GE combo WAN, 1*10GE(SFP+) WAN, 8*GE LAN, 1*GE combo LAN, 2*USB, 2*SIC	
3.1.192		1-Port Channelized E1/T1/PRI/VE1 Multiflex Trunk Interface Card	
3.1.193		5G NR/LTE/WCDMA Interface Card	
3.1.194		RJ45-to-DB9,Adapter Console Cable,3m	
3.1.195		2*GE combo WAN, 1*10GE(SFP+) WAN, 8*GE LAN, 1*GE combo LAN, 2*USB, 2*SIC_24x7 maintenance, 3 yrs	
3.1.196		integrated chassis, 1*SRU slot, 4*SIC slot, 2*WSIC slot, 2*XSIC slot, 2*power slot	
3.1.197		Service and Router Unit 400H, 14*10GE(SFP+), 10*GE Copper, 1*USB2.0	
3.1.198		2-Port Sync/Async Serial Port Interface Card	
3.1.199		1-Port GE Combo WAN Interface Card	
3.1.200		8-Port Fractional E1 WAN Interface Card	
3.1.201		8-Port Async Serial Port Interface Card	
3.1.202		350W AC Power Module(Silver)	
3.1.203		integrated chassis, 1*SRU slot, 4*SIC slot, 2*WSIC slot, 2*XSIC slot, 2*power slot_24x7 maintenance, 3 yrs	
3.1.204		Isotropic Antenna,3m,698MHz-960MHz/1710MHz-2690MHz,SMA-J	
3.1.205		Side strip bracket	
Subtotal Ex Vat			
NMS			
3.1.206		NMS Platform	
3.1.207		NMS Platform, 1 Year Subscription and Support	

3.1.208		NMS Network Management License, 1 Device	
3.1.209		NMS Network Management License, 1 Year Subscription and Support, 1 Device	
3.1.210		NMS WLAN Management License, 1 AP	
3.1.211		NMS WLAN Management License, 1 Year Subscription and Support, 1 AP	
3.1.212		NMS Server Management License, 1 Device	
3.1.213		NMS Server Management License, 1 Year Subscription and Support, 1 Device	
3.1.214		NMS Virtualization Management License, 1 CPU	
3.1.215		NMS Virtualization Management License, 1 Year Subscription and Support, 1 CPU	
3.1.216		NMS Storage Management License, 1 Device	
3.1.217		NMS Storage Management License, 1 Year Subscription and Support, 1 Device	
3.1.218		NMS Video Surveillance Management License, 1 Camera	
3.1.219		NMS Video Surveillance Management License, 1 Year Subscription and Support, 1 Camera	
3.1.220		NMS PON Management License, 1 ONU	
3.1.221		NMS PON Management License, 1 Year Subscription and Support, 1 ONU	
3.1.222		NMS PON Management License, 1 ORE	
3.1.223		NMS PON Management License, 1 Year Subscription and Support, 1 ORE	
3.1.224		NMS PON Optical Path Visual Diagnosis-1 PON port	
3.1.225		NMS PON Optical Path Visual Diagnosis, 1 Year Subscription and Support-1 PON port	
Subtotal Ex Vat			
SDN For Campus Network			
3.1.226		Management Platform Software	
3.1.227		Management Platform Software,Subscription And Support, 3 Year(3 years)	
3.1.228		Server Enterprise Configuration(2*24Core/2.2GHz CPU,12*32G Memory,12*1200GB SAS HDD,Raid Card(2G cache,SuperCap),2*4 GE,2*2 10GE SFP+,2*900W AC)	
3.1.229		Server Enterprise Configuration(2*24Core/2.2GHz CPU,12*32G Memory,12*1200GB SAS HDD,Raid Card(2G cache,SuperCap),2*4 GE,2*2 10GE SFP+,2*900W AC)_ 24x7 maintenance, 3 yrs	
Subtotal Ex Vat			
SDN For IP MPLS			
3.1.230		512G Standard Configuration(2*28Core/2.2GHz CPU,16*32G Memory,12*1200GB SAS HDD,Raid Card(2G cache,SuperCap),2*4 GE,2*2 25GE/10GE SFP+,2*900W AC)	
3.1.231		Basic Platform and Web Portal Software Package(0-6000 eNEs per site),Perpetual License	

3.1.232		NCE Geo redundancy system(0~6000 eNEs),Perpetual License	
3.1.233		Basic Function Package for IP NE Management (per 50 equivalent NEs), Perpetual License	
3.1.234		Basic Function Package for IP Network Analysis (per 50 equivalent NEs), Perpetual License	
3.1.235		Basic Northbound Interface for Manager(Includes SNMP, CORBA, XML, etc.),per 50 equivalent NEs,Perpetual License	
3.1.236		NCE Geo redundancy system(0~6000 eNEs), 3 Years Subscription and Support	
3.1.237		Basic Function Package for IP NE Management (per 50 equivalent NEs), 3 Year Subscription and Support	
3.1.238		Basic Function Package for IP Network Analysis (per 50 equivalent NEs),3 Years Subscription and Support	
3.1.239		Basic Platform and Web Portal Software Package(0-6000 eNEs per site),3 Years Subscription and Support	
3.1.240		Basic Northbound Interface for Manager(Includes SNMP, CORBA, XML, etc.),per 50 equivalent NEs,3 Year Subscription and Support	
Subtotal Ex Vat			
Video conferencing			
3.1.241		HUAWEI IdeaHub Pro 65,HUAWEI IdeaHub(65-inch infrared screen,HD Camera,built-in microphone&speaker,cable assembly)	
3.1.242		HUAWEI IdeaHub Pro 86,HUAWEI IdeaHub(86-inch infrared screen,HD Camera,built-in microphone&speaker,cable assembly)	
3.1.243		HUAWEI IdeaHub S 65,HUAWEI IdeaHub(65-inch infrared screen,HD Camera,built-in microphone&speaker,cable assembly)	
3.1.244		HUAWEI IdeaHub S 86,HUAWEI IdeaHub(86-inch infrared screen,HD Camera,built-in microphone&speaker,cable assembly)	
3.1.245		HUAWEI IdeaHub Board Pro 65,IFP-UG65-02,Intelligent Collaboration Device 65-inch infrared screen,Jade white	
3.1.246		HUAWEI IdeaHub Board Pro 86,IFP-UG86-02,Intelligent Collaboration Device 86-inch infrared screen,Jade white,Including Wall Bracket	
3.1.247		IdeaHub Series OPS I5,OPS(I5-8500,8G DDR4,128G SSD,4K60,windows10 SAC)	
3.1.248		IdeaHub Series OPS I7,OPS(I7-8700,16G DDR4,256G SSD,4K60,windows10 SAC)	
3.1.249		HUAWEI IdeaHub Wall Mount Bracket	
3.1.250		65 inch white Rolling Stand	
3.1.251		86 inch white Rolling Stand	
3.1.252		IdeaShare Key	
3.1.253		CloudLink Camera200(1080P60)	
3.1.254		HUAWEI IdeaHub Pro 65,HUAWEI IdeaHub (65-inch infrared screen, HD Camera, built-in microphone&speaker,cable assembly)	

3.1.255		HUAWEI IdeaHub Pro 86,HUAWEI IdeaHub(86-inch infrared screen,HD Camera,built-in microphone&speaker,cable assembly)	
3.1.256		HUAWEI IdeaHub S 65,HUAWEI IdeaHub(65-inch infrared screen,HD Camera,built-in microphone&speaker,cable assembly)	
3.1.257		HUAWEI IdeaHub S 86,HUAWEI IdeaHub(86-inch infrared screen,HD Camera,built-in microphone&speaker,cable assembly)	
3.1.258		HUAWEI IdeaHub Board Pro 65,IFP-UG65-02,Intelligent Collaboration Device 65-inch infrared screen,Jade white	
Subtotal Ex Vat			
Unlicensed Radio/Microwave			
3.1.259	RTN 510 or similar	Microwave, AP, 4.91~5.97GHz,with installation material, need another PoE++ Device	
3.1.260		Microwave, RT, 4.91~5.97GHz, antenna integrated, with installation material	
3.1.261		Sector Antenna-dual polarization-N-with bracket-4.9~5.97GHz,16.5dBi	
3.1.262		Directional Antenna-dual polarization-AS6D03SSN-with bracket-4.9~5.97GHz,22dBi	
3.1.263		Symmetry Twist Cable,10m,100ohm,SFTP CAT5E,0.53mm,24AWG,4Pairs,Black,Outdoor Cable for AP	
3.1.264		Traditional Signal Cable,6m,network port 8-bit-I,CC4P0.5B,network port 8-bit-I,for RT	
3.1.265		Outdoor AC power injector	
3.1.266		Indoor DC power injector	
3.1.267		Outdoor DC power injector	
3.1.268		Indoor AC power injector for RT	
3.1.269		Basic Capacity License (Up to 40M) (per RT)	
3.1.270		Extended Capacity License (Above 40M) (per RT)	
3.1.271		AES Encryption Function (Per RT)	
3.1.272		PTP Function Enable RTU (Per Antenna)	
3.1.273		PTP AES Encryption Function (Per AP)	
3.1.274		Integrated site system, 220Vac Single-Phase or 110Vac Dual-Live Wire, PoE++ and PoE, Natural Heat Dissipation	
3.1.275		Lithium Battery, 48V, 20Ah	
3.1.276		Lithium Battery, 48V, 50Ah	
3.1.277		5m Mast	
3.1.278		RTN510 Microwave, AP, Co-Care Premier 24x7x4H Service-36Month(s)	
3.1.279		RTN510 Microwave, RT, Co-Care Premier 24x7x4H Service-36Month(s)	
3.1.280			

Subtotal Ex Vat			
Licensed Radio/Microwave			
3.1.281	General	Outdoor Cabinet System	
3.1.282		Antenna, 900mm,UHP-M,Dual Polarization,Separate Mount,40dBi,1.8deg,30dB	
3.1.283		Antenna, 1800mm,UHP-M,Dual Polarization,Separate Mount,45.3dBi,0.9deg,30dB	
3.1.284		Antenna, A07S12HAC, 7/8G, 1200mm, HP, single, Direct (XMC)/ Separate(All RTN ODU)	
3.1.285		upd	
3.1.286		25m Mast	
3.1.287		Radio ODU, Include ODU Installation Materials	
3.1.288		RTU-Link Transmission Capacity (Per 100M)	
3.1.289		RTU-GE Port (Per Port)	
3.1.290		RTU-10GE Port (Per Port)	
3.1.291		RTU-XPIC for ISM6 (Per IF)	
3.1.292		RTU-XPIC for ISV3 (Per IF)	
3.1.293		Versatile IF Board	
3.1.294		Versatile Dual IF Board	
3.1.295		Outdoor Ethernet Cable	
3.1.296		Outdoor Fiber	
3.1.297		Outdoor PGND Cable	
3.1.298		Radio IDU, 4*GE(RJ45)+2*10GE(SFP+)+16*E1+2*GE/STM-1(SFP) Include IDU Installation Materials	
3.1.299	RTN 980L	RTN 980L IP split-mount microwave IDU Chasis	
3.1.300		RTN 980L IP split-mount microwave IDU System CSHN	
3.1.301		RTN 980L IP split-mount microwave IDU System CSHNA	
3.1.302		RTN 980L IP split-mount microwave IDU System CSHNU	
3.1.303		RTN 980L IP split-mount microwave IDU IF1 Board	
3.1.304		RTN 980L IP split-mount microwave IDU IFU2 Board	
3.1.305		RTN 980L IP split-mount microwave IDU IFX2 Board	
3.1.306		RTN 980L IP split-mount microwave IDU ISU2 Board	
3.1.307		RTN 980L IP split-mount microwave IDU ISX2 Board	

3.1.308		RTN 980L IP split-mount microwave IDU ISV3 Board	
3.1.309		RTN 980L IP split-mount microwave IDU ISM6 Board	
3.1.310		RTN 980L IP split-mount microwave IDU EG4 Ethernet Service Board	
3.1.311		RTN 980L IP split-mount microwave IDU EG4P Ethernet Service Board	
3.1.312		RTN 980L IP split-mount microwave IDU EM6T Ethernet Service Board	
3.1.313		RTN 980L IP split-mount microwave IDU EM6TA Ethernet Service Board	
3.1.314		RTN 980L IP split-mount microwave IDU EM6F Ethernet Service Board	
3.1.315		RTN 980L IP split-mount microwave IDU EM6FA Ethernet Service Board	
3.1.316		RTN 980L IP split-mount microwave IDU EX1 Ethernet Processing Board	
3.1.317		RTN 980L IP split-mount microwave IDU EMS6 Ethernet Processing Board	
3.1.318		RTN 980L IP split-mount microwave IDU EFP8 Ethernet Processing Board	
3.1.319		RTN 980L IP split-mount microwave IDU SL1D TDM Interface Board Native	
3.1.320		RTN 980L IP split-mount microwave IDU SL1DA TDM Interface Board Native	
3.1.321		RTN 980L IP split-mount microwave IDU SP3S TDM Interface Board Native	
3.1.322		RTN 980L IP split-mount microwave IDU SP3D TDM Interface Board Native	
3.1.323		RTN 980L IP split-mount microwave IDU CQ1 TDM Interface Board Packet	
3.1.324		RTN 980L IP split-mount microwave IDU ML1 TDM Interface Board Packet	
3.1.325		RTN 980L IP split-mount microwave IDU MD1 TDM Interface Board Packet	
3.1.326		RTN 980L IP split-mount microwave IDU AUX Auxillary Interface Board	
3.1.327		RTN 980L IP split-mount microwave IDU PIU Auxillary Power Board	
3.1.328		RTN 980L IP split-mount microwave IDU Fan Board	
3.1.329		RTN 980L IP split-mount microwave ODU XMC-2 IS2 Mode	
3.1.330		RTN 980L IP split-mount microwave ODU XMC-2 IS3 Mode	
3.1.331		RTN 980L IP split-mount microwave ODU XMC-3 IS3 Mode	
3.1.332		RTN 980L IP split-mount microwave ODU XMC-3 IS6 Mode	
3.1.333		RTN 980L IP split-mount microwave ODU Antenna Single Polarized	
3.1.334		RTN 980L IP split-mount microwave ODU Antenna Dual Polarized	
3.1.335		RTN 980L IP split-mount microwave ODU Antenna Dual Polarized Coupler	
3.1.336		RTN 980L IP split-mount microwave ODU Antenna Hybrid Coupler	
3.1.337		RTN 980L IP split-mount microwave ODU Antenna OMT (Orthogonal Mode Transducer)	
3.1.338		RTN 980L IP split-mount microwave ODU Antenna Mounting Bracket	

3.1.339		RTN 980L IP split-mount microwave ODU Antenna Flexible Waveguide	
3.1.340		RTN 980L Integrated LH Rack	
3.1.341		RTN 980L SLB2CSHLU Unified Long Haul System Control and Cross-connect Board	
3.1.342		RTN 980L NE License	
3.1.343		RTN 990L Basic Software Package	
3.1.344		Co-Care Premier 24x7x4H Service-36Month(s)	
3.1.345	RTN 950A	RTN 950A IP split-mount microwave IDU Chasis	
3.1.346		RTN 950A IP split-mount microwave IDU System CSHO	
3.1.347		RTN 950A IP split-mount microwave IDU IFU2 Board	
3.1.348		RTN 950A IP split-mount microwave IDU ISU2 Board	
3.1.349		RTN 950A IP split-mount microwave IDU ISX2 Board	
3.1.350		RTN 950A IP split-mount microwave IDU ISV3 Board	
3.1.351		RTN 950A IP split-mount microwave IDU ISM6 Board	
3.1.352		RTN 950A IP split-mount microwave IDU EG4 Ethernet Service Board	
3.1.353		RTN 950A IP split-mount microwave IDU EG4P Ethernet Service Board	
3.1.354		RTN 950A IP split-mount microwave IDU EM6D Ethernet Processing Board	
3.1.355		RTN 950A IP split-mount microwave IDU EMS6 Ethernet Processing Board	
3.1.356		RTN 950A IP split-mount microwave IDU EFP8 Ethernet Processing Board	
3.1.357		RTN 950A IP split-mount microwave IDU SL1DA TDM Interface Board Native	
3.1.358		RTN 950A IP split-mount microwave IDU SP3S TDM Interface Board Native	
3.1.359		RTN 950A IP split-mount microwave IDU SP3D TDM Interface Board Native	
3.1.360		RTN 950A IP split-mount microwave IDU CQ1 TDM Interface Board Packet	
3.1.361		RTN 950A IP split-mount microwave IDU ML1 TDM Interface Board Packet	
3.1.362		RTN 950A IP split-mount microwave IDU MD1 TDM Interface Board Packet	
3.1.363		RTN 950A IP split-mount microwave IDU MN1 Multi Protocol Board	
3.1.364		RTN 950A IP split-mount microwave IDU AUX Auxillary Interface Board	
3.1.365		RTN 950A IP split-mount microwave IDU Fan Board	
3.1.366		RTN 950A IP split-mount microwave IDU TCU6 E1 Connector	
3.1.367		RTN 950A IP split-mount microwave ODU XMC-2 IS2 Mode	
3.1.368		RTN 950A IP split-mount microwave ODU XMC-2 IS3 Mode	

3.1.369		RTN 950A IP split-mount microwave ODU XMC-3 IS3 Mode	
3.1.370		RTN 950A IP split-mount microwave ODU XMC-3 IS6 Mode	
3.1.371		RTN 950A IP split-mount microwave ODU Antenna Single Polarized	
3.1.372		RTN 950A IP split-mount microwave ODU Antenna Dual Polarized	
3.1.373		RTN 950A IP split-mount microwave ODU Antenna Dual Polarized Coupler	
3.1.374		RTN 950A IP split-mount microwave ODU Antenna Hybrid Coupler	
3.1.375		RTN 950A IP split-mount microwave ODU Antenna OMT (Orthogonal Mode Transducer)	
3.1.376		RTN 950A IP split-mount microwave ODU Antenna Mounting Bracket	
3.1.377		RTN 950A IP split-mount microwave ODU Antenna Flexible Waveguide	
3.1.378		RTN 950A NE License	
3.1.379		RTN 950A Basic Software Package	
3.1.380		Co-Care Premier 24x7x4H Service-36Month(s)	
3.1.345	RTN 910	RTN 910A IDU Chasis	
3.1.346		RTN 910A IDU System CSHR Board (Integrated)	
3.1.347		RTN 910A IDU IF Board ISM6	
3.1.348		RTN 910A IDU IF Board ISV3	
3.1.349		RTN 910A IDU Ethernet EG4 Board	
3.1.350		RTN 910A IDU Ethernet EG4P Board	
3.1.351		RTN 910A IDU TDM Board SL1DA	
3.1.352		RTN 910A IDU TDM Board SP3S	
3.1.353		RTN 910A IDU TDM Board CQ1	
3.1.354		RTN 910A IDU TDM Board ML1	
3.1.355		RTN 910A IDU TDM Board MD1	
3.1.356		RTN 910A IDU AUX Board	
3.1.357		RTN 910A IDU Fan	
3.1.358		RTN 910A ODU XMC-2 IS2 Mode	
3.1.359		RTN 910A ODU XMC-2 IS3 Mode	
3.1.360		RTN 910A ODU XMC-3 IS3 Mode	
3.1.361		RTN 910A ODU XMC-3 IS6 Mode	
3.1.362		RTN 910A ODU Antenna Single Polarized	

3.1.363		RTN 910A ODU Antenna Dual Polarized	
3.1.364		RTN 910A ODU Antenna Dual Polarized Coupler	
3.1.365		RTN 910A ODU Antenna Hybrid Coupler	
3.1.366		RTN 910A ODU Antenna OMT (Orthogonal Mode Transducer)	
3.1.367		RTN 910A ODU Antenna Mounting Bracket	
3.1.368		RTN 910A ODU Antenna Flexible Waveguide	
3.1.369		RTN 910A NE License	
3.1.370		RTN 910A Basic Software Package	
3.1.371		Co-Care Premier 24x7x4H Service-36Month(s)	
3.1.372	RTN 905	RTN 905 IDU Integrated Chasis 1A	
3.1.373		RTN 905 IDU Integrated Chasis 2A	
3.1.374		RTN 905 IDU Integrated Chasis 1C	
3.1.375		RTN 905 IDU Integrated Chasis 1E	
3.1.376		RTN 905 IDU Integrated Chasis 2E	
3.1.377		RTN 905 ODU Antenna	
3.1.378		RTN 905 ODU Antenna Mounting Bracket	
3.1.379		RTN 905A NE License	
3.1.380		RTN 905A Basic Software Package	
3.1.381		Co-Care Premier 24x7x4H Service-36Month(s)	
3.1.382	RTN 320F	RTN 320F Full Outdoor Radio Transmission Device Supporting Two Microwave Links	
3.1.383		RTN 320F Antenna	
3.1.384		RTN 320F Antenna Hybrid Coupler	
3.1.385		RTN 320F Antenna OMT (Orthogonal Mode Transducer)	
3.1.386		RTN 320F NE License	
3.1.387		RTN 320F Basic Software Package	
3.1.388		Co-Care Premier 24x7x4H Service-36Month(s)	
3.1.389	RTN 380AX	RTN 380AX Full Outdoor Microwave Transmission Device	
3.1.390		RTN 380AX Outdoor PI	

3.1.391		RTN 380AX Indoor PI	
3.1.392		RTN 380AX Hybrid Coupler	
3.1.393		RTN 380X Optical Splitter	
3.1.394		RTN 380AX Antenna	
3.1.395		RTN 380AX NE License	
3.1.396		RTN 380AX Basic Software Package	
3.1.397		Co-Care Premier 24x7x4H Service-36Month(s)	
3.1.398	RTN 380A	RTN 380A Full Outdoor Microwave Transmission Device	
3.1.399		RTN 380A Outdoor PI	
3.1.400		RTN 380A Indoor PI	
3.1.401		RTN 380A Hybrid Coupler	
3.1.402		RTN 380A Optical Splitter	
3.1.403		RTN 380A Antenna	
3.1.404		RTN 380A NE License	
3.1.405		RTN 380A Basic Software Package	
3.1.406		Co-Care Premier 24x7x4H Service-36Month(s)	
Subtotal Ex Vat			

C3 PRICE SCHEDULE

C3.1 GENERAL PRICING APPLICABLE TO PART 1 AND PART 2

This section is applicable to both parts ie applicable to:

- Part 3: Expansion of the current network: Supply, Delivery, Deployment, Configuration and Maintenance of New Equipment in the Network as and when required
- Part 4: Operate and Maintain the existing Alcatel/Huawei network

Item Nr	Item Code	Item Description	Unit	Unit Price Exclusive Of VAT
4.1.001	WF00001	Certified ACSE's for Data (Certified Switch Expert) (per month per person)	pmpp	
4.1.002	WF00002	Certified ACSE's for Voice (per month per person)	pmpp	
4.1.003	WF00003	Certified Switch (Data) Experts (Highest OEM qualification) (per month per person)	pmpp	
4.1.004	WF00004	Certified Voice Experts (Highest OEM qualification) (per month per person)	pmpp	
4.1.005	WF00005	OEM Certified ACFE for Data Switching (per month per person)	pmpp	
4.1.006	WF00006	OEM Certified ACFE for Voice Switching (per month per person)	pmpp	
4.1.007	WF00007	OEM Certified ACSE for WLAN (per month per person)	pmpp	
4.1.008	WF00008	OEM Certified ACFE for WLAN (per month per person)	pmpp	
4.1.009	WF00009	OEM Certified WAN expert (per month per person)	pmpp	
4.1.010	WF00010	OEM Certified Management expert (OmniVista-SAM-CPAM) (per month per person)	pmpp	
4.1.011	WF00011	Network Monitoring And Report Administrative Personnel (per week per person)	pwpp	
4.1.012	WF00012	Draughtsman Skilled In GIS And Visio (per week per person)	pwpp	
4.1.013	WF00013	Security And Firewall Expert (per week per person)	pwpp	
4.1.014	WF00014	Quality Controller (per week per person)	pwpp	
4.1.015	WF00015	Radio Technicians (per week per person) Must be certified for high site work and must have own safety gear and test equipment	pwpp	
4.1.016	WF00016	Professional Services Engineer/Expert (per week per person)	pwpp	
4.1.017	WF00017	Operations Manager (per month per person)	pmpp	
4.1.018	WF00018	Project Manager (per month per person)	pmpp	
4.1.019	WF00019	Programme Manager (per month per person)	pmpp	
4.1.020	WF00020	Admin Officer/Clerks (per week per person)	pwpp	
4.1.021		Sniffer		200

4.1.022	SNF00001	- per quarterly sniff (lumpsum/sniff)	lump	
4.1.023	SNF00002	- per sniff on requirement (lumpsum/sniff)	lump	
4.1.024		Radio/High Sites		
4.1.025	RAD001	Dismantling and removing old radio equipment	Per hour	
4.1.026	RAD002	Dismantling radio equipment and remounting (same site or could be moved to different site)	Per hour	
4.1.027	RAD003	Re-alignment of radio equipment (antennas)	Per hour	
Subtotal Ex Vat				

Notes:

pwpp = per week per person

pmpp = per month per person

lump = lumpsum

Item Nr	Training	Measurement	Unit Price (Excl VAT)
4.1.028	ICT personnel skilled training	per person per day	
4.1.029	CoT personnel product training (for example new handset)	per person per session	
4.1.030	Learner Training	deemed inclusive as Value Added Service	n/a
4.1.031	OEM ACFE certification training Data	Per student incl exam	
4.1.032	OEM ACFE certification training Voice	Per student incl exam	
4.1.033	OEM ACFE certification training WLAN	Per student incl exam	
4.1.034	OEM ACFE certification training Management	Per student incl exam	
Subtotal Ex Vat			

Item Nr	Transport Service	Measurement	Unit Price (Excl VAT)
4.1.035	Light Delivery Vehicle to transport switches other equipment	per km for a load	

Subtotal Summary	
Subtotal for	Subtotal Amount
	Excl Vat
Data Switching Equipment	
OmniSwitch 6360 Series (Standard Access Switch)	201

OmniSwitch 6465 Series (Industrial Basic Switches)	
OmniSwitch 6560 Series (MultiGig Switches)	
OmniSwitch 6860 Series (Advanced Switches)	
OmniSwitch 6865 Series (Advanced Industrial Switches)	
OmniSwitch 6900 Series (Core POD switches)	
OmniSwitch 9900 Series (Core Chassis Switches)	
Transceivers	
Wireless LAN	
UCOPIA	
Network Management	
MPLS	
FIREWALLS	
Firewall Tools	
Firewall Additional	
ForcePoint Web Security (Or Equivalent Solution)	
Radios	
UPS	
Generators	
SOLAR	
MISC	
OpenTouch Business Edition / Multimedia Services Platforms: Infrastructure Server & Software	
OpenTouch Business Edition / Multimedia Services Software: Infrastructure Options	
OpenTouch Business Edition / Multimedia Services Software: Users Common Options	
OpenTouch Business Edition / Multimedia Services Software: System Releases and DVDs	
OpenTouch Business Edition / Multimedia Services Software: Miscellaneous	
System cabinets : Enterprise Base System - Appliance Server	
System cabinets : Enterprise Base System - IP Communication Server	
Alcatel Lucent Voice	
OmniPCX Common hardware: Power Supply back-up	
OmniPCX Crystal hardware: Infrastructure	
OmniPCX Crystal hardware: Power Supply	202

OmniPCX Software: Communication software options	
OmniPCX Software: Desktop communication services	
OmniPCX Software: Mobility services	
OmniPCX Software: Voice & Media services	
OmniPCX Software: Call handling services	
OmniPCX Software: VoIP services	
OmniPCX Software: SIP services	
OmniPCX Software: Security services	
OmniPCX Software: SBC services	
OmniPCX Software: Networking services	
OmniPCX Software: Accounting management services	
OmniPCX Software: System release & Upgrade	
OmniPCX Software: System IP Centralization program	
Operator Attendant Consoles	
OmniMessage: 4645 Voice mail	
OmniVista 8770: Network Management application	
OmniVista 8770: Options & Upgrade	
OmniVista 8770: MCS Edition	
OmniTouch CC Standard Edition: CCdistribution & ACR	
OmniTouch CC Standard Edition: CCsupervision	
OmniTouch CC Standard Edition: CCinterfaces	
OmniTouch CC Standard Edition: CCagent	
OmniTouch CC Premium Edition: Interaction CC	
Genesys Compact Edition: Interaction CC	
OpenTouch Customer Service : Media Packs - Base Media	
OpenTouch Customer Service : Management	
OpenTouch Customer Service : Agents	
OpenTouch Customer Service : Routing	
OpenTouch Customer Service : Voice Portal	
OpenTouch Customer Service : Resources	
OpenTouch Customer Service: DVD & Releases	203

User applications: OmniTouch Unified Communication	
OpenTouch Message Center	
User applications: CSTA interfaces	
User applications: TAPI/TSAPI interfaces	
User applications: XML interfaces	
Rainbow	
Desktop sets: Accessories for 8&9 Series sets	
Desktop sets: Common options & accessories for 8&9 Series & Reflexes sets	
Desktop sets: Power Supply for sets	
Desktop sets: My IC Phone sets	
Desktop sets: Options & Accessories for My IC Phone sets	
80x8 Premium Deskphone sets	
Options for Premium Deskphone sets	
Accessories for Premium Deskphone sets	
DECT On site mobility equipment: DECT handsets	
DECT On site mobility equipment: Accessories for DECT handsets	
DECT On site mobility equipment: Indoor & Outdoor Base stations	
DECT On site mobility equipment: Accessories for Base stations	
DECT On site mobility equipment: Accessories for IP-DECT Base stations	
IP-xBS DECT Base stations	
WLAN On site mobility equipment: WLAN handsets	
WLAN On site mobility equipment: Accessories for WLAN handsets	
Conference modules	
Server & PC platforms: Platforms	
Complementary equipment: Miscellaneous	
Migration & Upgrade: OpenTouch Business Edition / Multimedia Services	
OmniPCX migration & Upgrade	
OmniMessage migration	
OmniVista migration	
Visual Automated Attendant migration	
Visual Notification Assistant migration	204

OmniTouch CC migration	
Maintenance	
Professional Services: Integrate & Deploy/OmniPCX Enterprise Off the Shelf Solutions	
Professional Services: Integrate & Deploy/OTCC Standard Edition Off the Shelf Solutions	
Professional Services: Factory Acceptance	
Professional Services: Integrate & Deploy/OTCC Service Pack	
Professional Services: Integrate & Deploy/OTUC Service Pack	
OmniPCX Record: Licenses	
OmniPCX Record: Hardware	
OmniPCX Record: Support & Services	
IQ Messenger: Licenses	
IQ Messenger: Licenses (not configured)	
IQ Messenger: Support & Services	
IQ Messenger: Support & Services (not configured)	
Visual Notification Assistant: Licenses & DVD	
Dispatch Console: Licenses	
Support Services: Software Support Services	
Support service for Phone sets	
On Demand Access Support: On Demand Access TS	
Customized Support Services: Customized Support Services	
Partner Tools: Technical tools	
Rainbow Subscription Services	
Support Services: Software Support Services	
SPS and Software Upgrade of existing system (3 Years)	
Rainbow Alert Services	
Call Logging	
<u>Price schedule maintenance of the current voice and data network:</u>	
Software as a Service: Slunk & URL	
Software as a Service: OEM Services	
SPS and Software Upgrade of existing system (3 Years)	

Price schedule call logging product descriptions and codes (Atmos Appliance - Standard SIP Extension Side Recording - NB: This product is only working on Standard SIP. Proprietary SIP is NOT supported)	
Once Off Capex	
Recurring - Monthly Charge (OPEX)	
Atmos Cloud Storage for Backups: Recurring Monthly Charge	
Atmos Foundation Hybrid Recording Solution with onsite storage and back-up cloud storage	
Atmos Foundation Hybrid Recording Solution: Recurring Monthly Charge	
Atmos on Premises – Premises based recording solution (No Cloud Connection)	
Once Off Capex	
Atmos Teams Recording	
Command Centre Equipment	
Hand- portable radio (GPS, Bluetooth and WAP capable) (MXP600)	
Ruggedized Hand- portable radio (GPS, Bluetooth and WAP capable) (MXP600)	
MXP600 ACCESSORIES	
ST7500-RADIO (Executive-Portable Radio)	
ST7500 ACCESSORIES	
ST7000-RADIO (Covert TETRA Radio terminal)	
ST7000 ACCESSORIES	
MTM5400 UHF DASH	
MTM5400 UHF REMOTE MTR953C	
MTM5500 UHF REMOTE (Boot Mount Radio with multiple remote control heads)	
MTM5400 UHF DESK (Desktop Mount Radio)	
MTM5400 UHF MOTORCYCLE MTR953C	
MTM5400 ACCESSORIES	
MTM5500 ACCESSORIES	
TPG2200 UHFR2 TETRA Two Way Pager	
TETRA Two Way Pager Accessories	
VB400 AND ACCESSORIES	
LEX L11	
LEX L11 ACCESSORIES	
LXN505	20€

MCC7500 Console HW and SW	
Cloud Hosting	
Secure Hosting	
MX105 - Router/Firewall with 3y Enterprise Security license	
Managed Tin Server	
Managed Tin Server - MS Server Operating System	
Cloud Virtual Server	
Back-Up	
Hosted Voice Communications	
CRM Price Schedule and product description	
PRICE SCHEDULE CRM SOLUTION PRODUCT DESCRIPTIONS AND CODES	
Recurring Cost	
On Demand Charges	
Non-recurring	
Price schedule Huawei network product descriptions and codes	
Stack Cables	
Transceivers	
Access switch	
Mgig Switch	
4 Slot Assembly	
Core Switch Fixed	
Firewall	
Data Centre Core Switch chassis	
TOR switches	
WLAN	
MPLS Routers	
Access Router (Branch)	
NMS	
SDN For Campus Network	
SDN For IP MPLS	
Video conferencing	207

Unlicensed Radio/Microwave	
Licensed Radio/Microwave	
On Site High Level Resource Cost	
Training Cost per Resource	
Transport Services	
Totals for this tender (excl Vat) (Voice and Data Switching equipment)	
Vat	
Totals for this tender (incl Vat) (Voice and Data Switching equipment)	

11 ALL MUNICIPALITY BIDDING DOCUMENTS (MBD) FORMS/FORM OF CONTRACT

SCM to ensure inclusion of the documents

12 MARKET ANALYSIS

The city of Tshwane reserves the right to conduct market analysis. Should the city exercise this option, Where a tenderer offers a price that is deemed not to be viable to supply goods or services as required, written confirmation will be made with the tenderer if they will be able to deliver on the price, if a tenderer confirm that they cannot, The tenderer will be disqualified on the basis of being non-responsive.

On confirmation by the bidder, a tight contract to mitigate the risk of non-performance will be entered into with the service provider. Further action on failures by the supplier to deliver will be handled in terms of the contract including performance warnings and listing on the database of restricted suppliers.

The city further reserves the right to negotiate a market related price with a tenderer scoring the highest points. If the tenderer does not agree to a market-related price, the city reserves the right to negotiate a market-related price with the tenderer scoring the second highest points, if the tenderer scoring the second highest points does not agree to a market-related price, negotiate a market-related price with the tenderer scoring the third highest points. If a market-related price is not agreed, the city reserves the right to cancel the tender.

13. DRAFT SERVICE LEVEL AGREEMENTS

The draft SLA per section of this tender is provided for in Part E of the Tender Specifications. Specification to be accompanied by draft service level agreements, as is provided for in the tender documents and eventual service providers submissions to Council

Part 2: General Specifications applicable to all parts of the tender

Part 2: GENERAL SPECIFICATIONS

2.1 Applicability

General specifications are applicable to all the parts of the Tender.

2.2 Compatibility

Switches and equipment must be hundred percent (100%) compatible with the existing system based network (open standards). The tenderer should include the installation material wherever required. All essential items including cables (inclusive of power & stacking cables), connectors, cage nuts, etc. needed for the smooth operation of the equipment shall be assumed to have been included in the quoted price/items if these have not been quoted separately.

2.3. Programs, Projects, Maintenance and Audit Services

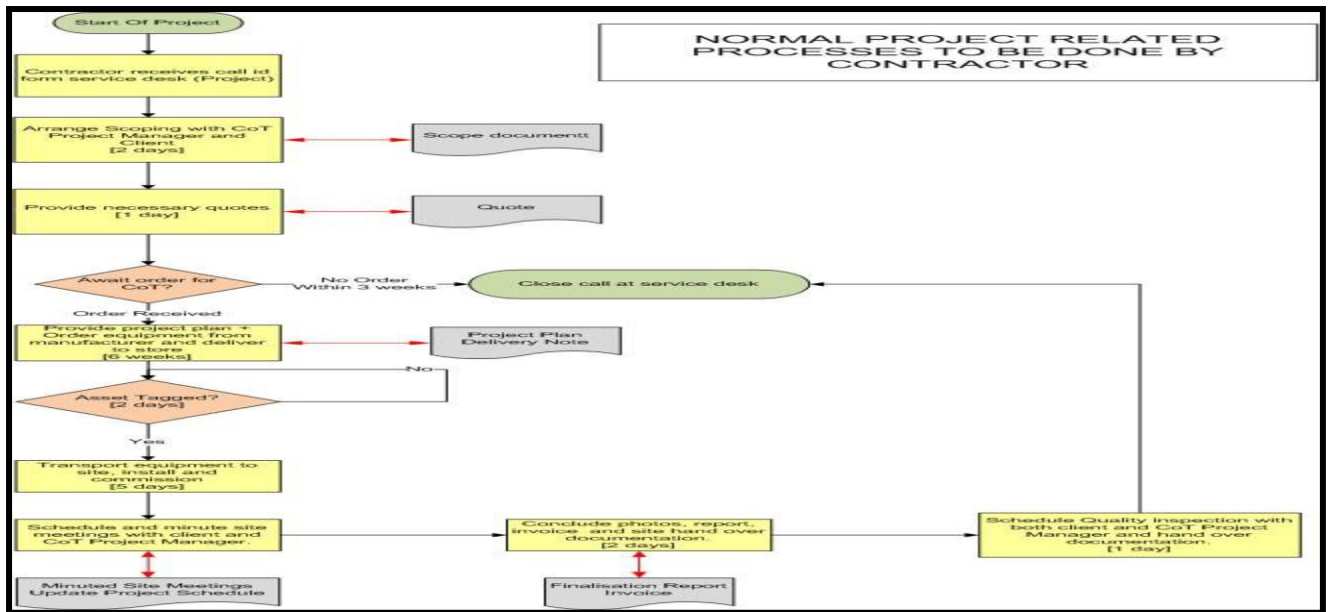
2.3.1 Projects (Extending The Network)

In the main, the tender is about supporting the current data and voice networks. The switches and associated transceivers like Gigabit Interface Converters, shall be delivered, installed, configured and commissioned at the various sites as per the price list (bill of quantities) as and when required. Although cabling and associated cabinets are not part of this contract, the connecting fiber leads shall be supplied and installed by the successful contractor along with the switch or switches.

The contractor shall also patch the users on the switch (patch cables will be supplied by others) and also ensure that every user is connected to the network before signing off on the site. Patching shall be done neatly and a quality inspection will be done by CoT personnel before payment will be made for a specific site. Detailed project role out plans must be supplied as to manage the process from start to finish, when new equipment roll-out is required.

As soon as the project is completed, a final Project Close-Off Report must be submitted to Council by the approved Service Provider Project Manager, within 2 weeks from the go-live to officially hand the site over to relevant Director responsible for ICT infrastructure in Council to allow for the official hand-over to the maintenance teams.

The process is described in the flow chart below, mainly to give an indication of the process but also to list the required documents and to indicate the time frames associated with this. The process can be changed by CoT at any time during the contractual period to incorporate additional requirements or changes.



2.3.2 Programs

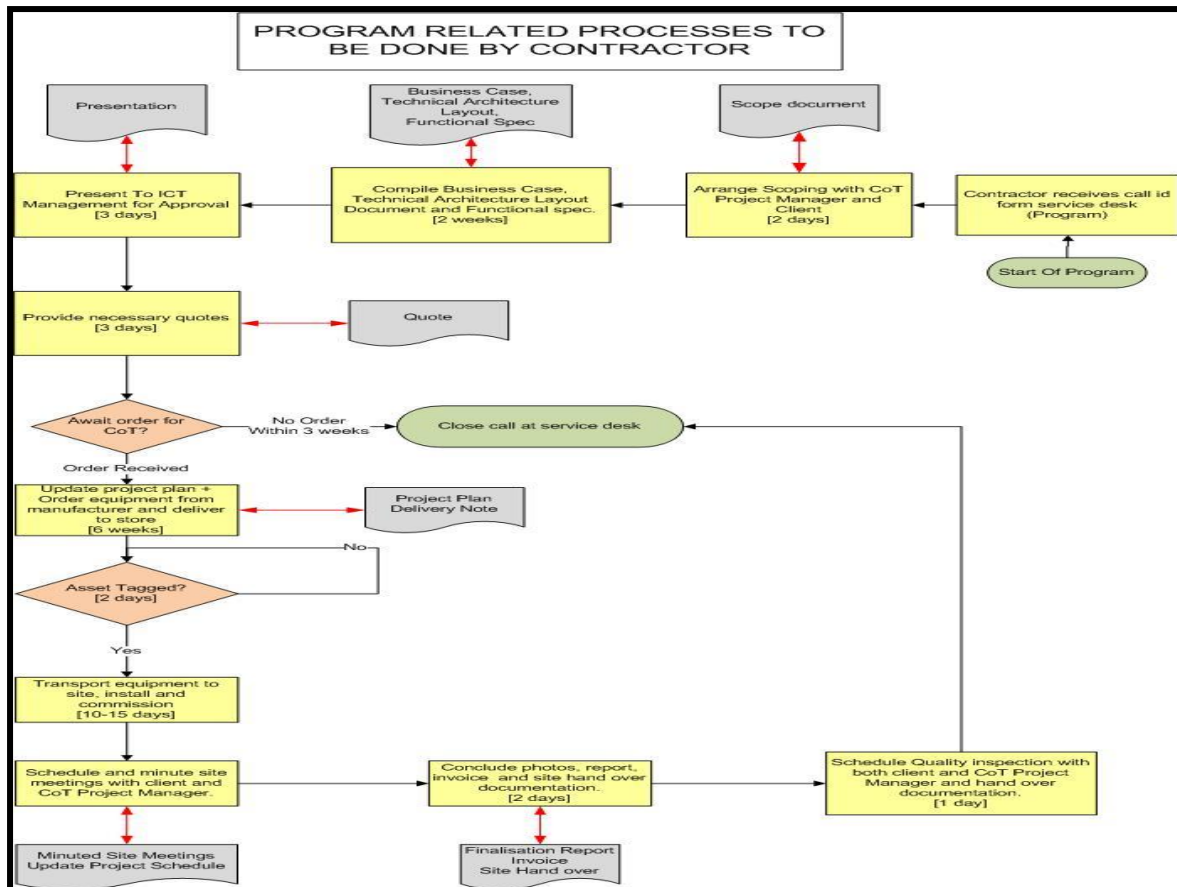
For the purpose of this document, Programs will be defined as special projects that might be required from time to time. CoT will define these special projects. Business cases (BC) are applicable where the BC are required by CoT for strategic decision making and to determine infrastructure technology deployment. Project proposals by the contractor applies once the CoT has determined the scope of a project to meet the specific requirement CoT might have at that stage, with limited scope based on a strategic decision.

The Programs will have similar steps than the projects, but in addition need the following documentation that must be completed by the contractor and must be submitted to ICT Management for approval:

- Business Case
 - o Cover page
 - o Table of contents
 - o Authority Signatures
 - o Executive Summary
 - o Business Needs and Desired Outcomes
 - Strategic environment
 - Strategic Fit
 - Detailed description of business need
 - Scope
 - o Analysis and Recommendations
 - Evaluation Criteria
 - Possible Options
 - Viable options
 - o Viable Options
 - Strategic Alignment
 - Costs
 - Cost Benefit Analysis and return on investment

- Implementation and capacity considerations
 - Impact
 - Risks
 - Policy considerations
 - Advantages and disadvantages
- o Recommendation
- o Managing the Investment
- o Project Management Strategy
- o Appendices (if applicable)
- o Glossary
- Technical Architecture Layout
 - o Containing all technical detail of the project
 - o Hardware details
 - Switch specifications
 - Servers, Storage, Backup and Archiving requirements
 - Necessary SQL design templates (where applicable)
 - Infrastructure requirements i.e. cabling, electrical, air-conditioning, etc.
 - o Layout diagrams/drawings of the various components
 - o Detailed quotes
 - o Risk Matrix
 - o Project Plan
- Functional Specification for example the functional requirements of a Call Centre – client to sign off. Said FS refers to the solution functionality as determined by the Client, and excludes technical requirements.

The process is described in the flow chart below, mainly to give an indication of the process but also to list the required documents and to indicate the time frames associated with this. The process can be changed by CoT at any time during the contractual period to incorporate additional requirements or changes.



2.3.3 Maintenance

The successful Tenderer must have sufficient maintenance stock to enable immediate replacement of equipment (whether the equipment is covered by an SLA or not).

Planned down time for equipment replacements and for any network changes must be done in accordance with/in collaboration with CoT's Change Control Policy's (basic ITIL principles).

Faulty equipment under warranty/SLA:

Faulty equipment under warranty and SLA must be replaced immediately under said SLA without any additional cost to CoT. Faulty equipment under warranty and SLA will then be repaired off-site by the Service Provider and returned to site within a period of 6 weeks. A fault report must accompany the equipment. Should the equipment not be repairable, then replacement equipment must be provided without any charges to the CoT.

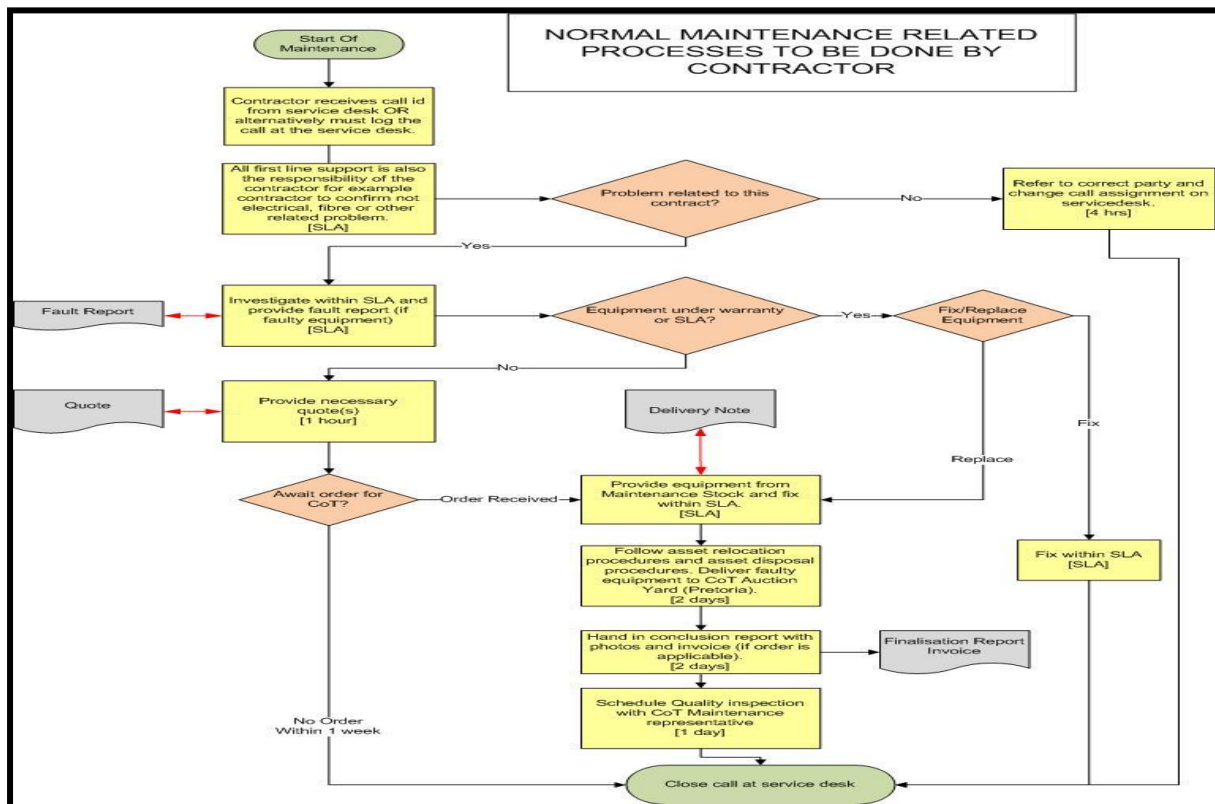
Faulty older equipment not covered by warranty/SLA:

Faulty equipment must be disposed by the official CoT asset disposal procedures and such equipment must be delivered to the Auction Yard in the CBD by the appointed tenderer.

Faulty equipment that is not covered by warranty/SLA will be ordered via the official Procurement procedures. However, such equipment must also be replaced immediately with loan stock to ensure continuity of service. It will be expected from the Service Provider to bi-annually provide to Council an equipment replacement plan, with regards to equipment in this tender scope.

New/replacement equipment must first be delivered to Dam Stores in Centurion (or alternative storage facility nominated by the CoT) where it will be asset tagged and must meet CoT's MFMA requirements²¹² with regards to delivery and payment issues, including all relevant insurances. Said equipment must

then be delivered to site where equipment must be installed, configured and commissioned. All cost related to delivery to the store and final site must be included in the costing.



2.4. Overview Of Current CoT Data Backbone Infrastructure

Solution proposed must be able to fully integrate to the current system and support the same level of functionality and seamless integration of all functions and features. This will be the sole responsibility of the Service Provider to ensure functionality.

2.4.1 Data Platforms

The CoT have developed a carrier grade, high availability, secure and easy to manage infrastructure to carry IP data, voice and video. All applications are thus supported across the existing 1 and 10 Gigabit Ethernet Backbone. Edge or user accesses are all based on Ethernet standards ranging in speeds depending on the need. All networking equipment delivers Layer 2/3/4 switching functionality. The submitter will need to augment the existing high availability IP infrastructure to deliver Value Added Services to CoT existing and future users.

The physical infrastructure is mainly based on fiber optic connectivity (multimode, single mode and long haul single mode) with copper cabling, Cat5e, Copper 10 and 6 (Cat = Category) and wireless links used as required.

The network enables extensive quality of service to support existing response-time critical applications and multimedia services like voice over IP with provision for video on demand and conferencing systems.

Radio links exist ranging from 11 Mbps to 300 Mbps. Wi-Fi (Aruba) equipment is deployed at several sites including public Wi-Fi access.

Any solution provided by the service provider must adhere to a certified carrier grade solution as part of this submission. The solution offered must preferably be scalable to eliver network connectivity on213

the back-bone from 10Gbps to 100Gbps on a single ASIC. Please provide detail as to how this is to realised.

2.4.2 Voice Platforms

CoT currently utilizes a range of products to fulfil in its voice needs which is seamlessly integrated as a converged voice and data network. It has a wide range of voice products to full-fill these needs including the PCX Enterprise, remote shelves, management software and a wide range of phones ranging through products like analogue phones, digital phones and IP phones. The same quality/standard of equipment must be provided. Any solutions submitted as part of this tender must expand on this model. The same features and functionality must be maintained by any solution proposed by the vendors.

2.4.3 Management Platform

The CoT has implemented a single Management platform to manage and maintain all the core voice and data equipment, using management applications and SAM (Service Aware Manager).

The centralized management platform covers all the aspects of the management from network hardware configuration, security, Virtual Local Area Networks (VLANs), Quality of Service (QoS), Intrusion Detection System (IDS) integration, and telephony services. These configuration settings are propagated across the entire network in a single operation.

Additionally the Quarantine Manager Application interfaces with the installed IDS devices to automatically isolate any user detected as propagating viruses, using the dynamic, mobile VLAN capabilities.

It will be required of the successful tenderer to provide monthly reports, using their own network management tools with the same functionality as mentioned earlier in this section. In addition the successful tenderer will be required to use industry approved Sniffers (1 GB and 10 GB ETHERNET PORTS – Copper and Fiber interfaces). These management tools must be updated regularly to support new features and must also be available to display on overhead monitors and to CoT network personnel.

All reporting is relevant to utilisation, performance, virus activity, service attacks, traffic analysis, etc. All reporting must be made available at set times during the month, and must also be available for any ad hoc requests. All information on the systems is confidential and must at all times be routed through the correct channels and protocols. The successful vendor will be responsible for any licensing fees applicable to sniffers or any other diagnostic software needed to properly support and maintain the environment. The voice/data network must be properly documented (drawings) containing all relevant information such as IP addressing, physical interfaces etc.

2.4.4 Additional Information

The appointed supplier will have to implement and maintain new equipment and integrate it seamlessly with the current based infrastructure, working with the existing support Service Provider who has a maintenance contract for some of the existing equipment.

2.4.5 Network General Information

Key facts:

Number of Users	12 000 (Data) + 14 000 (Voice Users)
Total Switches	±896
Nr of ports	±21 000
Nr of buildings connected	±370 buildings

LAN Ranges: 10/100Mb, 1000 Mb, 10Gig

LAN types: Multi-Mode & Single-Mode fiber, UTP Cat 5, Copper 10, Cat 6

WAN ranges: 64 kbps, 128 kbps, 512 kbps, 2 Mb, 4 Mb, 11/300Mb, 1000 Mb,
10 000 Mb

WAN types: Diginet, ISDN, Wireless Radio, Gigabit Ethernet, 10 Gig Ethernet, MPLS

Wi-Fi: Deployed mostly at conference rooms and libraries.

Network diagrams will only be given to the appointed service provider due to their confidential nature.

2.5. Technical Support Staff And Skills

2.5.1 General

2.5.1.1 Skill Requirements

A complete organogram of the resource base to be deployed at the CoT must be provided. Only certified professionals, on the highest possible certification from the particular OEM, are allowed to configure data and voice equipment.

Proof of certifications must be submitted along with the bid, failure to adhere to this will lead to disqualification. All identified/nominated resources as listed below, must be deployed on Councils premises and be available to the Council Contract Manager, being the relevant Deputy Directors responsible for the deployment and management of this infrastructure. If such proof cannot be supplied, the bid shall be disqualified. The following summarized technical profile must be attached along with certification:

Name And Surname	
Date of Appointment	
Certifications	
Qualifications	
Experience	
Duration Working For Company	
Designation	
Nature Of Work	

If CoT deems it necessary, it will request a replacement resource if any resource is not performing according to expectations.

2.5.1.2 Working Hours and Availability

Working hours for Tshwane is from 7:30 to 16:00. All professionals and the project manager need to be onsite during office hours. In this regard also refer to the SLA. Suitable office space will be provided by Tshwane. As some projects/programs can influence the availability of major core switches, such projects/programs can only be done after hours. Prices must therefore include for the overtime requirements, not only for the implementation of the project but also should maintenance issues arise.

Where personnel need to take annual leave or training courses, suitable back-up arrangements must be made to ensure continuity of services. The replacement resource must still be available on site.

2.5.1.3 Standby/Overtime

To ensure service coordination, a roster will be set up for three (3) months in advance for resource planning. At least one team must be on standby after hours, on public holidays and over weekends. Information must be available at all times with the name and contact detail of the persons on standby.

After hour, weekend and public holiday support will be determined by need to resolve issues and problems and to execute planned activities. This support needs to be catered for and, as with standby, provided for by the contractor as per contracting company's HR policy.

In an event of a failure or maintenance issue, the standby person will be notified and must respond in terms of the SLA (Service Level Agreement) contained within this document.

2.5.1.4 Reporting Levels And Communication Protocol

The following applies:

- All resources and project managers to report directly to the CoT Deputy Director responsible for the Networks/Telecommunications services and/or their appointed representative.
- All resources and project managers will adhere to all requests and ad hoc tasks issued to them.
- Project managers\installation and maintenance teams\all other onsite resources of the contractor to interact with project managers of the CoT.
- All reports on SLA issues to be reported directly to the Deputy Director or approved representative.
- All Departmental requests for equipment and services to be referred to the applicable CoT Deputy Director (or approved representative), as body responsible for all related projects.
- All personnel to adhere to the communication protocol. The communication protocol is via the appointed CoT Director responsible for the Networks/Telecommunications services. All requests for hardware or services will be via this office. Under no circumstances shall a contractor give feedback to any director but the CoT Director responsible for Networks (or appointed representative). Contractors shall not set up / attend meetings with other directors, or represent ICT in any form or meeting unless express permission was granted, and shall adhere to CoT procedures at all times.

2.5.1.5 ITIL And Change Control

All activities need to be planned and executed as per ITIL practices. The existing CoT forms can be utilized, or modified if the need dictates.

No work will be carried out on the network unless a Change Control was submitted by the successful contractor to ICT. Request for changes must be accompanied by an impact study and the necessary change control as to not to result in unnecessary Maintenance calls. Due notification/communication to users will in some cases be necessary.

In a project setup, communications must be via the project managers. If however, the project managers and team cannot agree, both parties can escalate the matter to ICT Management for final decision. ²¹⁶

2.5.1.6 Meetings And Presentations

The contractor will be required to schedule and minute a bi-weekly (forth nightly) meeting with the CoT. The following must be standing discussion points:

- Reporting on complaints i.e. complaints received and scheduling information etc.
- Reporting on status of projects

The contractor may also be required to attend AdHoc meetings as and when required (for example project meeting with the client CoT). From time-to-time, the contractor will be required to either present or prepare a presentation for Top Management.

2.5.1.7 Reporting And Documentation

The following documentation is a requirement:

- Monthly network reports reporting on programs, projects and maintenance.
- Weekly maintenance feedback reports
 - Inclusive of all historical complaints
 - Statistics on calls completed within SLA, out of SLA, not completed (and reasons for not completing)
- Need to supply Business Case(s) on request – normally two weeks will be given to compile Business Cases.
- Weekly progress schedules.
- Update all network related architecture for example network drawings
- Technical Architectural Specifications
- Functional Specifications
- Presentations
- Quotes
- Project Plan (+associated project manager) for every project
- Minutes of meetings
- All related documentation that might be listed in this Tender
- Sniff report to be handed in after every sniff request
- Any ad hoc documentation as required from time-to-time.

The CoT does have a service desk, but it remains the responsibility of the contractor to collect the necessary data with regards to maintenance calls and projects. Also note that all calls and projects must be logged at the CoT service desk.

2.5.2 Required Skill Set

2.5.2.1 Certified Switch (Data) Experts

Part 1: Deployment of new equipment

The successful vendor will be required to have and deploy permanently on site, for the duration of the contract and guarantee period, at least two OEM Certified Data Switch Experts. The certified professionals must have the highest possible certification from the particular OEM and must ensure seamless integration into the current system based network.

Part 2: Maintenance of the current network

The successful vendor will be required to have and deploy permanently on site, for the duration of the contract at least two Certified Switch Experts for maintenance of the current network.

2.5.2.2 Certified Voice Experts

Part 1: Deployment of new equipment

The successful vendor will be required to have and deploy permanently on site, for the duration of the contract and guarantee for the period at least two Certified Voice Experts. The certified professionals must have the highest possible certification from the particular OEM and must ensure seamless integration into the current environment.

Part 2: Maintenance of the current network

The successful vendor will be required to have and deploy permanently on site, for the duration of the contract at least two Certified Voice Expert for maintenance of the current network.

2.5.2.3 Operations Manager

Part 2: Maintenance of the current network

The successful vendor will be required to have and deploy permanently on site, for the duration of the contract and guarantee period, an Operations Manager. The duties of the Operations Manager are listed below:

- Day to day management of all maintenance related issues.
- Responsible for monthly reports that provide SLA statistics, projects and other related business information and statistics applicable to all areas of the Service Provider's services to Tshwane.
- Monthly minuted meetings with Deputy Directors and Directors to discuss Operational Reports.
- Service Desk Calls (Maintenance): Handling of daily complaints. Complaints are issued via the Service Desk. The Operations Manager must ensure that the call is logged with the correct category. Completion reaction times will be used as a metric to determine performance. This is a daily activity.
- Procurement tracking and reporting on a weekly and monthly basis. This includes correct invoicing.
- Single point of contact to discuss problems on maintenance issues
- Related ad-hoc tasks.

2.5.2.4 Project Manager (As and when required)

Part 1: Deployment of new equipment

The successful vendor will be required to have and deploy a project manager on an as and when basis. The duties of the project manager are listed below:

- Minute site (project) meetings with attendance register with all involved parties (including voice, data, UTP, fiber, the customer etc.).²¹⁸

- Weekly summarized project feedback to the Deputy Directors on progress and important dates/events as well as possible delays.
- Single point of contact to discuss problems on projects
- Provide reports with regards to projects and programs
- Scheduling of teams
- Attend site scoping's
- To manage projects according to sound project management principles
- Signing-off of the site and checking correctness of invoice.
- Quality control inspections of sites after completion
- Ensuring completeness of documentation i.e. test results, drawings etc.
- Order tracking

It consists of seven stages:

1. Site scoping stage or site visit to determine extent of project. This consists of all involved parties including fibre, UTP, data-voice contractors, the client etc.
 - Held at location where equipment/linkage is required.
 - Investigate the Link-up Premises as well for example to check availability of spare fiber, Gig ports/blades, ATM ports/blades etc.
2. Quotation Stage
 - Contractor to arrange for quotes.
3. Planning Stage
 - Complete project templates and all planning required for the project including possible change control procedures.
4. Ordering
 - Client/CoT will obtain the necessary order
 - Contractor to ordering equipment after official order has been issued by CoT.
5. Installation
 - Establish and Mobilize teams.
 - Arrange delivery of equipment on site.
 - Site inspections
 - Minute site meetings on site with all involved parties. Minutes should include responsibilities of role players (**Involved Parties**) and due dates on tasks. Sound project management principles must be used.
 - Solving and communicating possible installation problems
 - Summarized reporting to Supervisor and feedback as required.

- Conformance to specifications unless reasons exist for non-conformance.
- Inform parties of completion of sub-stages i.e. UTP Cabling completed, Fiber installation completed, Fiber termination and splicing completed, Voice and Data completed.

6. Certification

- Certification for UTP/Fiber Installation
- Neatness of data and voice equipment
- Site as per original condition
- Quality Control

7. Invoicing and completion

- Ensure that invoices are requested and handed in with Payment voucher.
- Ensure that invoice data is received by Supervisor and thereafter handed to the Tshwane Financial Representative.
- Tag keys and arrange for storage in key box.
- Invoices must be handed in after completion (sign-off) within 3 working days.

2.5.2.5 Network Sniffing Expert

Please note: If CoT deems it fit to do so, the services of an external sniffer expert will be obtained where necessary or to double check results. However, the contractor will be required to make the following services available for a reputable sniffing expert.

2.5.2.5.1 Quarterly Sniffs

Quarterly sniffs will be scheduled to ensure that the network is stable. The Sniffing Expert shall sniff the core network for a period of five working days and then submit a detailed report with the finds and corrective measures.

Prices quoted will be per quarterly sniff of five days including for the time needed to examine the sniff and to prepare the report. Prices to include all software and hardware required (it remains the property of the Networking Sniffing Expert or the bidder). Change control procedures must be followed before the sniff is undertaken.

The successful tenderer must ensure that corrective actions are taken as pointed out via the sniff report.

2.5.2.5.2 Sniff On Requirement

Sniffs on requirements will be scheduled when users complain about slow access on the network. The Sniffing Expert shall sniff a particular user(s) and/or system and the building for a period of three working days and then submit a detailed report with the finds and corrective measures.

Prices quoted will be per sniff of three days including for the time needed to examine the sniff and to prepare the report. Prices to include all software and hardware required (it remains the property of the Networking Sniffing Expert or the bidder). Change control procedures must be followed before the sniff is undertaken.

The successful tenderer must ensure that corrective actions are taken as pointed out via the sniff report.

2.5.2.5 Engineer Professional Services

An Engineer from OEM Professional Services will be required for a minimum period of one week per annum for the duration of the contract to health check and audit of the complete environment. A report with findings and recommendations must be provided to CoT within 3 weeks from departure of the engineer. The maintenance incumbent will be required to implement any CoT approved recommendations. The cost for this engineer must be included in the maintenance fees.

2.5.2.6 Additional Resources

Below is a list of additional resources that may be contracted from time to time as the need arise. The vendor must price the resources but CoT is under no obligation to make use said resources:

- Wi-Fi technicians
- Network Monitoring specialist
- Security and Firewall expert
- Quality Controller
- Radio Technicians

2.5.3 Additional Requirements

2.5.3.1 First Line And Expert Support

Not only will the contractor be responsible for expert and all network related support, but for first line support as well. This imply that it is the contractor's responsibility to rule out any electrical, fibre or other related issues that causes the network to be down. The issue must be escalated to ensure faster response times. The contractor must therefore also have the necessary test equipment to determine whether the network is down due to a fibre related problem.

2.5.3.2 Network Drawings and Project Templates

Network drawings must be updated regularly and must also show the fibre connection and type of fibre between the switches. After every project or change, the network drawing must be updated to reflect the necessary updates/changes.

2.5.3.3 Transport Service

New equipment must be delivered to the ICT store for asset tagging. The contractor must therefore provide a transport service inclusive of the necessary insurance, to transport the equipment to the ICT store and then to site after it was asset tagged.

The same transport service must be used to deliver faulty, end-of-life, old and redundant equipment to the Auction Yard, inclusive of the necessary insurance. Official disposal of asset procedures must be adhered to.

2.5.3.4 Radio Support

Radios are mostly located on water towers, reservoirs and other high sites. Support here must be certified for working on heights and any other OHS requirements.

2.5.3.5 Support Teams

2.5.3.5.1 Project Teams

Project teams will only be assigned to projects and will include a certified Data and Voice expert as well as a project manager. They will be responsible for all projects and programmes.

2.5.3.5.2 Maintenance Teams

Maintenance teams will only be assigned to maintenance and will include certified Data and Voice experts. They will be responsible for the daily maintenance activities. Maintenance teams will be responsible for the support on the whole network therefore inclusive of:

- Newly deployed equipment once guarantee\SLA has expired
- Older Equipment

2.5.3.6 Workload

Should CoT determine that the work load is strenuous, it will inform the contractor to deploy additional teams with immediate effect. This cost must be included in the labour charges quoted in the schedules.

2.5.3.7 Test Equipment

It is the responsibility of the contractor to issue test equipment to the required resources. The following equipment must be on site 24/7:

- VOIP testers
- Network analysis\assistant tools
- OTDR
- Cable testers to test UTP cabling
- Wireless fault tracing tools
- Voice Technical Repair Tool Sets

It is the successful tender's responsibility to provide all tools and test equipment and to ensure that the equipment is maintained and calibrated according to manufacturer's standards. The contractor shall employ or contract suitably qualified and trained personnel to provide the Services to Tshwane in terms of this agreement.

The personnel must be certified and under no circumstances will Tshwane be used as a training facility. Costing related to test equipment must be included in the support costs. After conclusion of the contract, the test equipment will remain the property of the contractor.

2.5.3.8 Leave Arrangements Etc.

The contractor must provide a list with additional ACSE's to act as replacements for example for leave arrangements, courses etc.

2.6 Pricing And Pricing Schedules

2.6.1 Invitation

Please note that this is a mere invitation to do business and under no circumstances whatsoever shall it be construed as an "offer" giving rise to any contractual obligations on the part of the CoT. The City of Tshwane shall not be bound to accept the proposal submitted by the contractor and reserves the right to accept the whole or part of the said proposal. The CoT further reserves the right to negotiate and/or renegotiate, whichever is applicable, the terms and conditions and quantities of the proposal.

2.6.2 Total Cost Of Ownership [TCO]

A Price proposal is required to be prepared as part of the response. The CoT procurement initiatives are centered on the TCO approach and want vendors to take cognizance of this and assist the CoT in driving down the total cost by considering all the cost drivers making up the component cost.

2.6.3 Pricing Schedules

The cost proposal must be submitted in writing on the schedule within this document. A spreadsheet format will be made available electronically and bidders must complete (but not change) the schedule electronically. If the price on the electronic schedule differ from the hand written/typed schedule, then the price of the hand/typed written schedule will take precedence and the electronic schedule will be changed accordingly. The electronic schedule is required to assist the Tender Evaluation Team.

2.6.4 Inclusion Of All Costs

The Contractor shall be deemed to have satisfied himself before submitting his tender as to the correctness and sufficiency of the tender and to have taken account of all that is required for the full and proper execution of the contract and to have included in his rates and prices all costs related to the supplies.

The prices quoted/tendered must include for handling, packing, loading, transport, delivery, off-loading, transit, shipping, checking, travel, accommodation, subsistence, installation, configuration, commissioning, insurance, administrative costs (such as documents and manuals required), execution, supervision, furnishing of tools required for assembly, extraordinary and/or any other cost.

In other words, the CoT will not entertain any claims for additional costs. Price must include for all requirements as stipulated in this document.

2.6.5 Submission Of Quote

All costs incurred in the submission of the quote shall be for the account of the vendor, whether such quote is successful or not.

2.6.6 Quantities

CoT reserves the right to reduce or increase the quantities (again note that the quantities provided is only for evaluation purposes and NOT for ordering purposes) of items without any change in unit cost.

2.6.7 Delivery Penalty Clause

If supplier fails to deliver any or all of the goods within the period specified in the contract, CoT shall, without prejudice to its other remedies under the contract, deduct from the contract price, as liquidated damages, a sum equivalent to 1% of the value of the delayed goods per week of delay until actual delivery up to a maximum deduction of 10 % of the contract sum. Once the maximum is reached, CoT may consider the termination of the contract. Notwithstanding the above, CoT may, without prejudice to any other remedy for breach of contract, by written notice of default sent to the supplier, terminate this contract in whole or in part:

- if the supplier fails to deliver any or all the goods within the period specified in the contract or within any extension thereof granted by CoT;
- or if the supplier fails to perform any other obligation(s) under the contract.

2.6.8 Quote All Items

The bidder should quote/tender on all the items as listed in the attached Item Price List. No omissions, will be accepted as it will seriously compromise the evaluation process as the total quoted price per Service Provider will then not be equitable to one another. Incomplete quotations not providing all item

prices are grounds for summary dismissal with no recourse from the SP to contest or later provide outstanding item prices.

2.6.9 License Fees

All License Fees for all software deployed on this contract must be included in the contract price. This implies free full version upgrades for the contractual- and warranty period. All software bought as part of this contract, remains the property of the CoT. Should CoT decide not to renew license fees, CoT will be Authorised to continue using the fully functional version at no additional cost. No annual license fees will be entertained as part of this tender.

2.6.10 Power/Stacking/Fibre Cords

To be included in the price of the main switch/equipment.

2.6.11 Firmware or Software Updates

All Firmware/OS software updates for all switches/routers/firewalls/other network equipment deployed on this contract must be included in the contract price. This implies free full version upgrades for the contractual- and warranty period. All firmware/software OS procured or installed as part of this contract, remains the property of the CoT. No annual license fees will be entertained as part of this tender.

2.7 Training

2.7.1 Training ICT personnel: Within the tender the successful contractor should provide on-site training for ICT personnel in order that they can operate the equipment supplied. A suitable venue will be provided by CoT, and the contractor will be responsible for the training facilitator, equipment needed and the necessary manuals.

2.7.2 Training CoT personnel: This item shall include equipment usage training. For example, if new phones are deployed, then the contractor must train the personnel to use the new phones.

2.7.3 Training Learners: Skills transfer shall also be done to accommodate at least 5 learners per year during the contractual period.

2.8 General Conditions

2.8.1 Authorised Representative: The bidder must be a reputed manufacturer or his authorized representative of the product offered. In case of representative, the authority from the manufacturer/distributor must be submitted. The bids received without authority are liable to be rejected.

2.8.2 Language: The offers, all correspondence and documents related to the tender exchanged by the tenderer and the Contracting Authority must be written in the language of the procedure which is English.

2.8.3 Ethics: Any attempt of negotiation direct or indirect on the part of the tender with the authority to whom he has submitted the tender or authority who is competent finally to accept it after he has submitted his tender or any endeavor to secure any interest for an actual or prospective tenderer or to influence by any means the acceptance of a particular tender will render the tender liable to be excluded from consideration.

Any attempt by a candidate or tenderer to obtain confidential information, enter into unlawful agreements with competitors or influence the committee or the Contracting Authority during the process of examining, clarifying, evaluating and comparing tenders will lead to the rejection of his candidacy or tender and may result in administrative penalties.

When putting forward a candidacy or tender, the candidate or tenderer shall declare that he is affected by no potential conflict of interest and has no equivalent relation in that respect with other tenderers or parties involved in the project. Should such a situation arise during execution of the contract, the Contractor must immediately inform the Contracting Authority.

The Contractor must at all times act impartially and as a faithful adviser in accordance with the code of conduct of his profession. The Contractor shall refrain from making public statements about the project or services without the Contracting Authority's prior approval. The Contractor may not commit the Contracting Authority in any way without its prior written consent.

For the duration of the contract the Contractor and his staff shall respect human rights and undertake not to offend the political, cultural and religious mores of the beneficiary state.

- 2.8.4 **Confidentiality:** The information contained in this RFP document, or provided by management or staff of The City of Tshwane, is solely for the purpose of providing Vendors with information on which to submit their proposals. It is intended only for the person or entity to which it is addressed and may contain confidential and/or privileged information and material. Any review, retransmission, dissemination or other use of, or taking of any action, in reliance upon this information by persons or entities other than the intended recipient, is prohibited. Recipients of this document shall respect the confidentiality of the information contained herein together with any other information obtained during the course of the RFP process.

The Contractor and his staff shall be obliged to maintain professional secrecy for the entire duration of the contract and after its completion. All information, reports and documents drawn up or received by the Contractor shall be confidential. The contractor shall not, save in so far as may be necessary for the purposes of the contract's execution, publish or disclose any particulars of the contract without the prior consent in writing from CoT. If any disagreement arises as to the necessity for any publication or disclosure for the purpose of the contract, the decision of CoT shall be final.

- 2.8.5 **Laws and Regulations:** The Contractor shall respect and abide by all laws and regulations in force in South Africa and the by-laws and regulations of CoT and shall ensure that his/her personnel, their dependent's, and his/her local employees also respect and abide by all such laws and regulations. The Contractor shall indemnify CoT against any claims and proceedings arising from any infringement by the Contractor, his/her employees and their dependents of such laws and regulations.

The successful tenderer will be required to comply with the requirements of the Occupational Health and Safety Act, Act 85 of 1993 and regulations as amended. Further information in this regard may be obtained from the Occupational Health and Safety, @ telephone number (012) 358-0069.

- 2.8.6 **Extension of Period Of Implementation:** The Contractor may request an extension to the period of implementation if his implementation of the contract is delayed, or expected to be delayed, for any of the following reasons:

- a) Extra or additional supplies ordered by CoT
- b) Exceptional weather conditions which may affect installation of the supplies;
- c) Physical obstructions or conditions which may affect delivery of the supplies, which could not reasonably have been foreseen by a competent contractor;
- d) Failure of the CoT to fulfil its obligations under the contract;
- e) Any suspension of the delivery and/or installation of the supplies which is not due to the Contractor's default;
- f) Force majeure;

- g) Any other causes referred to in these General Conditions which are not due to the Contractor's default.

Within 15 days of realizing that a delay might occur, the Contractor shall notify the Project Manager of his intention to make a request for extension of the period of implementation to which he considers himself entitled and, save where otherwise agreed between the Contractor and the Project Manager, within 30 days provide the Project Manager with comprehensive details so that the request can be examined.

The Project Manager will submit the written request for approval and within 30 days CoT shall, by written notice to the Contractor after due consultation with the necessary authority and, where appropriate, the Contractor, grant such extension of the period of implementation as may be justified, either prospectively or retrospectively, or inform the Contractor that such extension was not granted.

2.8.7 Projects and or Variation Orders: Variations may include additions, omissions, substitutions, changes in quality, quantity, form, character, kind, as well as drawings, designs or specifications where the supplies are to be specifically manufactured for the Contracting Authority, method of shipment or packing, place of delivery, and in timing of implementation of the supplies.

Variation Orders will be given in writing on an official letterhead of the CIO (Chief Information Officer). No variation shall be made orally. Prior to issuing an administrative order for a variation, the Project Manager shall notify the Contractor of the nature and form of that variation. As soon as possible, after receiving such notice, the Contractor shall submit to the Project Manager a proposal containing:

- a description of the tasks, if any, to be performed or the measures to be taken and an implementation Programme;
- any necessary modifications to the implementation Programme or to any of the Contractor's obligations under the contract;
- any adjustment to the contract price

Following the receipt of the Contractor's submission, the Project Manager shall, after due consultation with the Contracting Authority and, where appropriate, the Contractor, decide as soon as possible whether or not the variation should be carried out. If the Project Manager decides that the variation is to be carried out, he shall issue an administrative order stating that the variation is to be made at the prices and under the conditions given in the Contractor's submission.

2.8.8 Trademark: In certain instances, where a reference has been made to a specific make or source, process, trademark, patent or product type, the reference is made only to describe a type of product classification (and all of its equivalents) for which no universally approved industry standard, benchmark or other sufficiently detailed or intelligible description is available at the time of the issuance of the procurement notice. In any and all such instances, the tendering party and the Contracting Authority shall interpret such a description as inclusive of any equivalent (or better) and the Contracting Authority shall accept for evaluation and procurement purposes as "compatible" any specification which is equivalent or better, irrespective of the actual nomenclature used by the tendering party.

2.9 Passwords

Network technicians will be required to use unique usernames and passwords on the switches to effectively track any changes implemented on the network. Any outgoing Service Provider must make provision that this be provided to Council to allow for service continuity.

The admin password will remain the property of the City and unauthorized changing of the admin password will not be allowed. In the event of the City requesting the changing of the admin password,

it will be done with the necessary Change Control and only once approved by the Director Infrastructure. The new admin password will then be stored in a safe location by the Director Infrastructure.

2.10 Non-Disclosure Agreement

The contractor will be required to sign the CoT Non-Disclosure Agreement when appointed.

PART 3: EXPANSION OF CURRENT ALCATEL/HAUWEI NETWORK

Part 3: Expansion of the current Alcatel/Huawei network

Supply, Delivery, Deployment, Configuration And Maintenance Of New Network Equipment For The Expansion of The Current Corporate Network

3. NEW EQUIPMENT

3.1 Scope

This section, **Supply, Delivery, Deployment, Configuration and Maintenance of New Network Equipment**, describes the technical and other specifications to which the new data or voice equipment must adhere to. All equipment procured under this section, will also need to be maintained by the service provider from which it was procured, for the duration of the contract and warranty/guarantee period.

The following resources must be provided (refer Part 2):

- 2 x Data switch experts
- 2 x Voice switch experts
- 1 x Project Manager

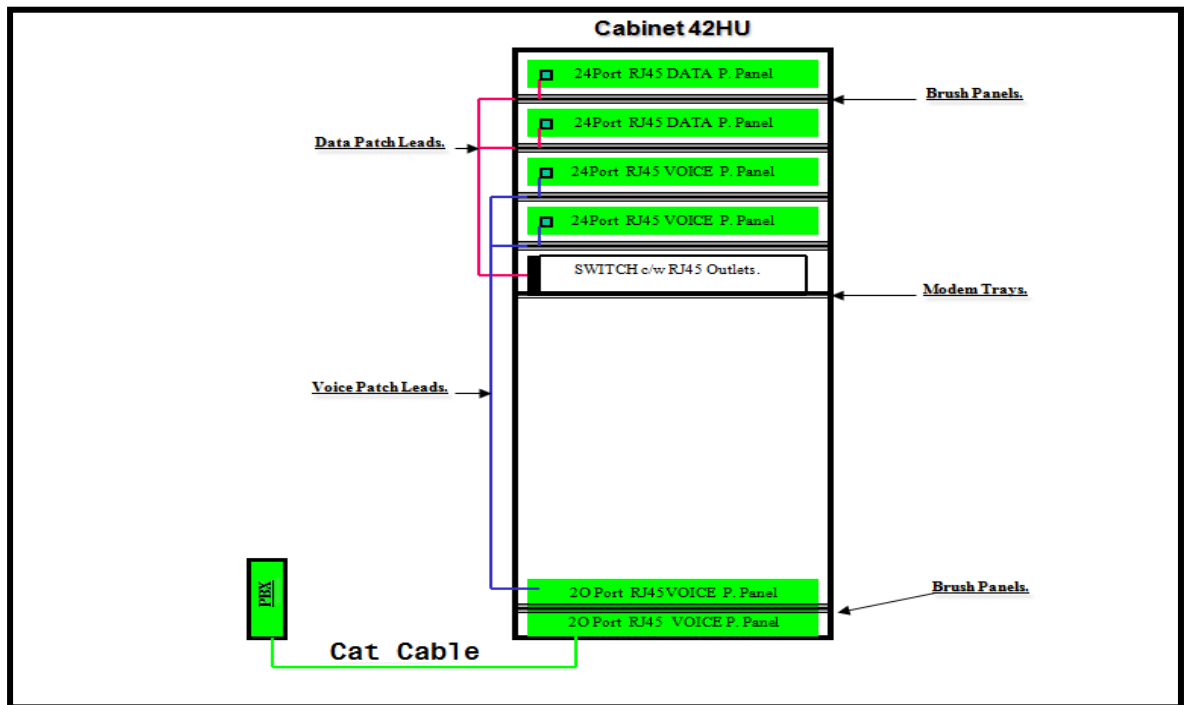
If CoT deem further resources to be necessary, they will be contracted from the price list.

3.2 Cabling And Cabinets

Cabling will be done by others with exception of the following:

- Supply, deliver and install fibre patch leads required to connect the switch with the existing backbone fibre.
- Supply, deliver and install stacking cables and or fibre patch leads required to stack or connect switches or other network equipment.
- Supply, deliver and install electrical power cords as per South African power standards.
- Patch existing users – patch cables will be supplied by others.

Electrical outlets will be supplied by others. A standard layout drawing for a 42U 600x800mm cabinet is shown below but position of the switch may vary and therefore final position must be confirmed by the relevant CoT Project Manager.



3.3 Equipment Requirements

The successful contractor shall be responsible for setting up a working solution and therefore equipment must be 100% compatible and interactable with existing equipment. It will be the responsibility of the supplier to make the whole system operational. This includes configurations of all existing and new equipment and installation of any necessary software as may be required, and to install the equipment on site at the appointed tenderer's cost.

All proposed networking equipment (routers, L3 switch, etc.) must support SNMP protocol (version 2 & 3). Any other Hardware/software required for the proper functioning of the system must be quoted for.

3.3.1 Data Equipment (This applies to both the Alcatel/Lucent and Hauwei products)

3.3.1.1 Switches

Switches shall be suitable to mount securely along the width of the 19" cabinet. The switches must be fastened in accordance with manufacture specifications and all screws, bolts and other fastening accessories must be supplied and fastened by the successful contractor.

Switches shall have a minimum of (8 and 12) 24 ports. Ports shall be 100/1000 Mbps autosensing ports with the ability to force the port speed if required. Core switches shall be linked to Access Level Switches via 1000Mbps fibre optic ports. All switches shall have a minimum of two fibre uplink ports supporting different Gigabit Interface Converters. Backbone cabling will be supplied by others (with the exception of the fibre patch leads).

Through the use of Virtual LAN technology, it will be possible to virtually isolate the networks of individual CoT Departments/Divisions and restrict/control access to these networks. There is, thus, a need to have strict security measures to segregate these different users although they will be on the same communication backbone. Each Department/Division should be able to function as a Virtual Local Area Network (VLAN). Suppliers should configure VLAN over the Layer 3 switches to ensure security of the various LANs.

To make effective use of bandwidth switches must support features like Quality of Service (QoS)/Traffic Shaping, Policy Based Routing or any other suitable traffic engineering mechanism should also be configured.

Switches must be standards based.

All switches provided as part of this tender must adhere to the below technical specifications to ensure the seamless integration aspect to work as flawlessly as is necessary. Failure to comply with these specifications will result in disqualification of the SP's submission to Council.

3.3.1.1.1 Core Switch

- Large Gigabit and 10 and 40 Gigabit Ethernet port density and performance; offering up to 768 Gigabit Ethernet ports and up to 96 10-Gigabit Ethernet ports on the same chassis-based system.
- Smart Continuous Switching: Hot Swap, Management Module Fail-over, Power Monitoring, and Redundancy.
- No single point of failure and a sub-second fail-over in its redundant configuration.
- Redundant Management and Redundant Switch Fabric.
- Hot swappable components and hot insertable support: switch modules, SFPs/XFPs.
- Redundant Power Supplies (Redundant 1:1 power) and Redundant 1:1 PoE power provided by the PoE P/S.
- Spanning Tree robustness (Single or Multiple STP options): IEEE 802.1D (STP) (802.1D spanning tree for loop free topology and link redundancy) and IEEE 802.1w-Rapid Reconfiguration of Spanning Tree
- Ring Rapid Spanning Tree optimized for ring topology to provide less than 100ms convergence time.
- IEEE 802.1s multiple spanning tree and per-VLAN spanning tree (1x1).
- Fast forwarding mode on user ports to bypass 30-second delay for spanning tree.
- Preventing unauthorized spanning-tree enabled attached bridges from operating.
- BPDU blocking – automatically shuts down switch ports being used as user ports if a spanning tree BPDU packet is seen. Preventing unauthorized spanning-tree enabled attached bridges from operating.
- Priority queues: eight hardware-based queues per port.
- VRRP (Virtual Router Redundancy Protocol), and OSPF ECMP (Equal Cost Multipath Protocol).
- Dynamic link aggregation IEEE 802.3ad (that supports automatic configuration of link aggregates with other switches) with resilient uplink capabilities.
- MC-LAG
- Static link aggregation (that supports automatic configuration of link aggregates with other switches).
- IEEE 802.1s: MISTP (802.1s) is an IEEE standard which allows several VLANs to be mapped to a reduced number of spanning-tree instances. This is possible since most networks do not²³¹

need more than a few logical topologies. Each instance handles multiple VLANs that have the same Layer-2 topology.

- Software Resiliency: The proposed product must provide fully redundant and resilient system components to insure continuous, non-stop operation. This includes redundant subsystems, hot swappable modules, load-sharing components, “hitless software loading”, downloadable bootstrap, and image rollback which allows the system to automatically re-load previous configurations and software versions.
- Software image rollback and configuration recovery.
- Image and configuration synchronization for Management Modules.
- Hitless loading of optional software (routing/security), without re-booting.
- Broadcast storm control.
- Downloadable bootstrap.
- Chassis thermal protection/shutdown.
- Hardware monitoring, temperature monitoring, and power monitoring and management.
- Short “cold” and “warm” boot times.
- Built-in security and device hardening.
- Network and Link Resiliency: Network and link resiliency are important parts of network availability, and the proposed product must support advanced routing, load sharing, and mechanisms for fast reconfiguration of links between switches, servers, and other network devices:
 - VRRP (Virtual Router Redundancy Protocol), and OSPF Equal Cost Multipath Protocol
- Topological Network Redundancy: In order to provide the highest levels of availability throughout an enterprise, it is important to build redundancy and resiliency into the topology at the network level to ensure that links have backups and traffic is always flowing:
 - Physical redundancy
 - Layer-2 and layer-3 redundancies
- Switch must have modular slots to support following modules -1000Base-T, 1000Base-SX and 1000Base-LX, 10Gig and 40 Gig
- Switch must support standards - IEEE 802.3: 10BASE-T (Ethernet), IEEE 802.3u: 100BASE-TX (Fast Ethernet), IEEE 802.3z/ab: 1000Base-X (Gigabit Ethernet), IEEE 802.3x (full-duplex flow control)
- Switch must support following features: IEEE 802.1p (Priority Queuing), IEEE 802.1d (Spanning Tree Protocol), IEEE 802.1Q (VLAN), Link Aggregation (IEEE 802.3ad Trunking), IGMP (RFC 1112), Port Mirroring, Jumbo Frame Support and MAC/IP address filtering.
- Switch must have the following SNMP features - SNMP (RFC 1157), Remote Monitoring MIB (RFC 2819), Bridge MIB (RFC 1493), 802.1Q Bridge MIB (RFC 2674).
- Switch must have following Management features - Telnet, RS232 Console Port, Web-Based Management Interface, SNMP, Four RMON groups (1: statistics, 2: history, 3: history, 9: events)

- Switch must be able to filter out data packets based on certain MAC or IP address. This will block these network packets from accessing the network.
- Switch must support ICMP router discovery, Proxy ARP, Routing Information Protocol (RIP v1 and RIP v2), Open Shortest Path First (OSPFv2) for routing path management in a network.
- Switch must support Port-based and Tagged VLAN, which are compliant to IEEE 802.1Q standard and must be able to link these VLANs with wire-speed routing.
- Switch must support min 256 IP subnets / L2 tagged VLANs to segment the IP or MAC-based networks to reduce the network broadcast and improve the performance of the network.
- Must support server load balancing
- Must be a fully distributed architecture with modular software design for scalability
- Must offer Carrier Class Availability (99.999%)
- Must offer high levels of Security capabilities (DOS, A-VLAN's, SSL, Port Binding rules)

Technical Requirements for a Highly Secure System

- Partitioned Management – PM: Protected multiple user access control (i.e., the switch must provide a full suite of commands that allow the user to create and modify User IDs and Passwords (multiple administrative profiles) for access to switch management). The PM feature can utilize an on-board database, or RADIUS, LDAP authentication servers (user profiles are stored within these servers).
- Authenticated Switch Access (ASA): the proposed product must support a user access control or device access control with Secure Access Logging (AAA service) which can utilize an on-board database, RADIUS, LDAP, or ACE authentication servers.
- Automatic Log-out based on a pre-configured timer .
- Port Mapping (Private VLANs).
- Denial of Service Attack Defense (DOS protection).
- TAD traffic anomaly detection
- IEEE 802.1x industry standard port-based authentication challenges users with a password before allowing network access (The proposed product must support IEEE 802.1x used in conjunction with emerging security technologies to provide a method to verify an end user and their device status and either allow admission or quarantine the device to a safe environment where the deficiencies can be remedied).
- IEEE 802.1x multi-client, multi-VLAN support for per-client authentication and VLAN assignment.
- IEEE 802.1x with group mobility.
- IEEE 802.1x with MAC based authentication, group mobility or “guest” VLAN support.
- MAC-based authentication for non-802.1x host.
- Dynamic User Network Profile
- LLDP (LLDP-MED)
- Access Guardian support.
- Port Binding.

- Authenticated VLAN that challenges users with username and password and will support dynamic VLAN access based on user.
- Support for host integrity check and remediation VLAN.
- Security through the implementation of a Quarantine Manager and quarantine VLAN, with Security automation
 - Quarantine VLANs
 - Isolation of intruders through a Quarantine Manager
- PKI authentication for SSH access.
- Learned Port Security (LPS) or MAC address lockdown that will allow only known devices to have network access preventing unauthorized network device access.
- The proposed product must support User authentication.
- Centrally authentication through a RADIUS, TACACS+, LDAP or ACE server.
- The proposed product must support RADIUS and LDAP admin authentication that will prevent unauthorized switch management.
- TACACS+ client allows for authentication-authorization and accounting with a remote TACACS+ server.
- Secure Shell (SSH), Secure Socket Layer (SSL) for HTTPS and SNMPv3 for encrypted remote management communication.
- Access Control Lists (ACLs) to filter out unwanted traffic including denial of service attacks; Access control lists (ACLs) must be per port, MAC SA/DA, IP SA/DA, TCP/ UDP port; Flow based filtering in hardware (L1-L4).
- Support for Access Control List Manager (ACLMAN).
- Support for Microsoft Network Access Policy (NAP) protocol.
- Switch protocol security:
 - MD5 for RIPv2, OSPFv2 and SNMPv3
 - SSHv2 for secure CLI session with PKI support
 - SSLv3 for secure HTTP session
- DHCP Snooping, DHCP IP Spoof protection.
- The proposed product must restrict user ports from sending control traffic (BPDU, RIP, OSPF, BGP).
- The proposed product must prevent IP source address spoofing.

Technical Requirements for a Highly Intelligent system

- Virtual local area networks (VLANs)
 - Up to 4,094 VLANs, and up to 4,094 VLAN tags value support.
 - Per port, 802.1Q and policy based VLAN including authentication VLAN (A-VLAN). 234

- The proposed product must support wire-speed and feature rich Quality of Service (QoS).
- Industry classification standards including 802.1Q/p, TOS, and DiffServ, which will be enhance with complementary features such as extensive QoS mappings and re-tagging of prioritization:
 - o IEEE 802.1p, ToS, DSCP marking.
 - o QoS mapping: 802.1p to 802.1p and ToS and DSCP, ToS to ToS and 802.1p and DSCP, DSCP to DSCP and 802.1p and ToS
 - o Classification per port, 802.1p (CoS) value, MAC SA/DA, TOS precedence, DSCP value, IP SA/DA, TCP/UDP port range.
 - o 8 egress queues per port to support Strict (SP), Weighted Round Robin (WRR), and/or hybrid queuing (Strict + Weighted Round Robin queuing algorithms).
 - o Eight hardware-based queues with flow-based classification and processing.
 - o Ingress bandwidth rate limiting per port/flow in 64k increments.
 - o Egress bandwidth rate limiting per port in 1Mbps increments.
- Wire-speed everything including switching, routing, ACLs, QoS, traffic redirection and Server Load Balancing.
- Featuring full wire rate (including first packet) and 10GigE single flow support.
- Native support for IPv4 and IPv6 for network future proofing
 - o Full IPv6 support with hardware-based forwarding, classification and tunnelling.
 - o Ability to interconnect the IPv6 “island” through an existing IPv4 network through hardware-based tunnelling.
 - o Use of IPv6 across public organizations.
 - o Ability to connect to the IPv6 backbone.
 - o Ability to control IPv6 flows with extensive QoS/ACL policies.
- The proposed product must support extensive Multicast (L2 non-IP/IPv4/IPv6) IM-DM, PIM-SMv2 and PIM-SSM and DVMRPv3.
- Wire-rate multicast using hardware-based replication in all configurations.
- The proposed product must support high-density traffic aggregation in mission critical business network cores.
- The proposed product must provide fast network response time; including hardware-based source learning, and first packet handling in hardware.
- The proposed product must support Server Load Balancing (SLB).
- Full power-over-Ethernet (PoE) IEEE 802.3af support.
- Residential bridging features: DHCP option-82, DHCP-Snooping and Port Mapping.
- Routing Protocols: IPv4 and IPv6, RIPng, RIPv1/v2 and OSPFv2andv3 and OSPF-ECMP and BGPv4.

Technical Requirements for a Highly Manageable system

- NMS: Data and services network management including OneTouch QoS (PolicyView with OneTouch QoS centralizes and simplifies QoS configuration network wide) and SecureView.
- Carrier-Class Dynamic Group Mobility (GM).
- The proposed product must support dynamic user mobility with authentication that would allow the user to connect securely anywhere and have access to their resources without admin intervention or reconfiguration.
- The proposed product must support converged applications such as the VoIP.
- Diagnosing Switch problems:
 - Port Mirroring: Port based, port mirroring for troubleshooting, supports four sessions with multiple (24) sources-to-one destination configuration.
 - Port monitoring feature that will allow capture of Ethernet packets to a file, or for on-screen display to assist in troubleshooting.
 - SFlow support to monitor and effectively control and manage the network usage.
 - RMON: Support of RFC2819 RMON group (1-Statistics, 2-History, 3-Alarm, and 9-Events).
- Switch Health Monitoring.
- Monitoring Memory Tools and Switch Configuration.
- Switch Logging.
- Local (on the flash) and remote logging (Syslog).
- Logging into the Switch through Telnet, FTP, HTTP, SSH, SSL, and SNMPv1 and v2 and v3.
- Remote telnet management or secure shell access using SSH.
- Secured file upload using SFTP, or SCP.
- SNMPv1/v2/v3.
- Authentication or AAA Servers.
- Policy Servers; Authentication Servers such as RADIUS, LDAP, TACACS+, and ACE.
- Policy-Based Management with LDAP Directory Services.
- System File Management.
- Dual image and dual configuration file storage providing backup.
- The proposed product must support an intuitive CLI.
- The proposed product must support a web-based Element Management with an easy-to-use point and click and with a built-in help for easy configuration of new technology features.
- The proposed product must support remote telnet management or secure shell.
- The proposed product must support secured file upload using SFTP, or SCP.
- Port based, port mirroring for troubleshooting, that will support four sessions with 24 sources to one destination configuration.

- The proposed product must support human readable ASCII based configuration files for offline editing and bulk configuration.
- The proposed product must support managing Switch Users Accounts and Partitioned Management features.
- The proposed product must support the management of Switch Security.
- The proposed product must support IGMPv1/v2/v3 snooping to optimize multicast traffic.
- The proposed product must support BootP/DHCP client that will allow auto-config of switch IP information to simplify deployment.
- The proposed product must support Auto-negotiating 10/100/1000 ports that will automatically configure port speed and duplex setting.
- The proposed product must support Auto MDI/MDIX that will automatically configure transmit and receive signals to support straight thru and crossover cabling.
- DHCP relay to forward client requests to a DHCP server.
- DHCP Option-82 and DHCP Snooping.
- Integration with an SNMP manager for network wide management.
- System event log.
- Network Time Protocol (NTP) for network wide time synchronization.
- Interswitching Protocols.
- Mapping Adjacency Protocol for building topology maps within the SNMP Manager NMS application .
- GMAP and GVRP for 802.1Q-compliant VLAN pruning and dynamic VLAN creation.
- SFN (Software Defined Networking)

3.3.1.1.2 Layer 3 Distribution or Core Switch And Layer 3 Distribution Or Edge Stackable Switch

The following are applicable to a 24 Port Managed Ethernet Switch:

- Ports:
 - o 22 auto-sensing 100/1000 ports (IEEE 802.3u Type 100Base-TX, IEEE 802.3ab Type 1000Base-T)
 - o Media Type: Auto-MDIX
 - o Duplex: Full Duplex - Auto sensing of communication speed and auto negotiation of duplex mode.
 - o 2 dual-personality ports each port can be used as either an RJ-45 10/100/1000 port (IEEE 802.3 Type 10Base-T; IEEE 802.3u Type 100Base-TX; IEEE 802.3ab 1000Base-T Gigabit Ethernet) or an open mini-GBIC slot (for use with mini-GBIC transceivers) for 1000Base-SX, 1000Base-LX, 100Base-FX MM, 100Base-FX SM.

The following are applicable to a 48 Port Managed Ethernet Switch:

- Ports:

- o 44 auto-sensing 100/1000 ports (IEEE 802.3u Type 100Base-TX, IEEE 802.3ab Type 1000Base-T)
- o Media Type: Auto-MDIX
- o Duplex: Full Duplex - Auto sensing of communication speed and auto negotiation of duplex mode.
- o 4 dual-personality ports each port can be used as either an RJ-45 10/100/1000 port (IEEE 802.3 Type 10Base-T; IEEE 802.3u Type 100Base-TX; IEEE 802.3ab 1000Base-T Gigabit Ethernet) or an open mini-GBIC slot (for use with mini-GBIC transceivers) for 1000Base-SX, 1000Base-LX, 100Base-FX MM, 100Base-FX SM.

Layer 3 Capabilities of 24 and 48 Port Managed Ethernet Switches:

- Support Routing Protocols such as RIP v1/2 and OSPF.

The following are applicable to a 24 and 48 Port Managed Ethernet Switches:

- Protocols:
 - o TCP/IP
 - o NetBEUI
 - o Spanning Tree
 - o DHCP/BOOTP Interoperation
 - o Domain Name System (DNS) support.
 - o Trivial File Transfer Protocol (TFTP) and/or FTP support.
 - o Network Timing Protocol (NTP) support.

Management Protocols:

- o IEEE 802.1AB Link Layer Discovery Protocol (LLDP)
- o SSH, SNMP v1, v2c, and v3 and Telnet interface support.
- o Has SNMP agent, Supports SMP MIB II, Supports Bridging MIB, Allows out-ofband management via serial port, Allows in-band management via telnet, Allows graphical management via Web interface, Supports RMON, Complete with management S/W.
- Standards:
 - o All switches to be standards based
 - o IEEE 802.3 (SNAP encapsulated tagged and untagged frames)
 - o IEEE 802.3u
 - o IEEE 802.3x
 - o IEEE 802.1D
 - o IEEE 802.1p Priority

- o IEEE 802.1Q VLANs - port based and Tagged VLAN from any port using standards-based 802.1Q tagging.
 - o IEEE 802.3z/IEEE 802.3 ab
 - o IEEE 802.3x Flow Control
 - o IEEE 802.3ad Link Aggregation Control Protocol (LACP)
 - o RFC 1534 DHCP/BOOTP Interoperation
- Mounting:
 - o 19" standard Rack mountable with mounting kit.
 - o Maximum use of 2 Rack Units (RU)
- Management Console:
 - o Switch should be manageable through Console port, Telnet, SNMP, HTTP, RMON, HTTPS and SSH
 - o Must have console port.
 - o Provide console cable, power cables and operating manuals.
- Authentication:
 - o TACACS+ and RADIUS authentication
- Administration:
 - o Allows software upgrade via FTP/TFTP
- Performance:
 - o Throughput up to 35.7 million pps (64-byte packets)
 - o Switching capacity 48 Gbps
- Security Features:
 - o Access Control List
 - o Rate Limiting
 - o Port Security (by MAC address filtering)
 - o IP filtering
 - o MAC based port level security, multilevel access security for console
- Indicators and Diagnostic LED's:
 - o Per-port status: Link integrity, activity, speed, full-duplex
 - o System status: System, RPS, link status, link duplex, link speed
- Environmental Ranges:

- o Operating temperature: 0°C to 45°C
- o Storage temperature: -25° to 70°C
- o Operating relative humidity: 10 to 85%
- AC Input Voltage:
 - o Standard South Africa Power Supply: 220/230 v (±10%), 50 Hz (±5%).
 - o Must support power redundancy.
- Expansion through cascading:
 - o Switch should be stackable i.e. manageable via single IP address, up to 8 units.
- Quality of Service:
- Other:
 - o LAN Base Image installed
 - o 16 Gbps switching fabric
 - o Capable up to 8000 MAC addresses
 - o Capable up to 255 IGMP groups.
 - o Configurable maximum transmission unit (MTU) of up to 9000 bytes, with a maximum Ethernet frame size of 9018 bytes for bridging on Gigabit Ethernet ports, and up to 1998 bytes for bridging of Multiprotocol Label Switching (MPLS) tagged frames on both 10/100 and 10/100/1000 ports.
 - o Up to 255 VLANs per switch.
 - o Four thousand VLAN Ids.
 - o Voice VLAN for voice traffic on a separate VLAN.
 - o Dynamic VLAN assignment.
 - o Dynamic, port-based security.
 - o Port security to authenticate the port and manage network access for all MAC addresses
 - o Unicast MAC filtering.
 - o Unknown unicast and multicast port blocking.
 - o SSHv2 and SNMPv3 based network security.
 - o Support port monitoring and mirroring.
 - o DHCP snooping.
 - o Multilevel security on console to prevents unauthorized users from altering the switch configuration.

- o Rate limiting based on source and destination IP address, source and destination MAC address, using QoS ACLs (IP ACLs or MAC ACLs), class maps, and policy maps.
- o Web based Setup to configure the switch
- o Management capabilities on a per-port and per-switch basis.
- o Support spanning tree per VLAN and Rapid Spanning Tree (IEEE 802.1w).
- o Bandwidth aggregation through EtherChannel technology enhances fault tolerance and offers higher-speed aggregated bandwidth between switches
- o Supports additional frame formats: Ethernet II (tagged and untagged)
- o Allows VLAN operation, Supports priority queuing, Supports IGMP snooping, Supports DVMRP
- o Support Jumbo Frames
- o Must offer Carrier Class Availability (99.999%)
- o Must offer support for in-Line Power for IP phones using IEEE 802.3af standard
- o Must offer support for 16 ports aggregation using IEEE 802.3ad standard

3.3.1.1.3 Layer 2 Edge Stackable Switch

The following are applicable to a 24 Port Managed Ethernet Switch:

- Ports:
 - o 22 auto-sensing 100/1000 ports (IEEE 802.3u Type 100Base-TX, IEEE 802.3ab Type 1000Base-T)
 - o Media Type: Auto-MDIX
 - o Duplex: Full Duplex - Auto sensing of communication speed and auto negotiation of duplex mode.
 - o 2 dual-personality ports each port can be used as either an RJ-45 10/100/1000 port (IEEE 802.3 Type 10Base-T; IEEE 802.3u Type 100Base-TX; IEEE 802.3ab 1000Base-T Gigabit Ethernet) or an open mini-GBIC slot (for use with mini-GBIC transceivers) for 1000Base-SX, 1000Base-LX, 100Base-FX MM, 100Base-FX SM.

The following are applicable to a 48 Port Managed Ethernet Switch:

- Ports:
 - o 44 auto-sensing 100/1000 ports (IEEE 802.3u Type 100Base-TX, IEEE 802.3ab Type 1000Base-T)
 - o Media Type: Auto-MDIX
 - o Duplex: Full Duplex - Auto sensing of communication speed and auto negotiation of duplex mode.
 - o 4 dual-personality ports each port can be used as either an RJ-45 10/100/1000 port (IEEE 802.3 Type 10Base-T; IEEE 802.3u Type 100Base-TX; IEEE 802.3ab²⁴¹ 1000Base-T Gigabit Ethernet) or an open mini-GBIC slot (for use with mini-GBIC transceivers) for 1000Base-SX, 1000Base-LX, 100Base-FX MM, 100Base-FX SM.

The following are applicable to a 24 and 48 Port Managed Ethernet Switches:

- Protocols:
 - o TCP/IP
 - o NetBEUI
 - o Spanning Tree
 - o DHCP/BOOTP Interoperation
 - o Domain Name System (DNS) support.
 - o Trivial File Transfer Protocol (TFTP) and/or FTP support.
 - o Network Timing Protocol (NTP) support.
- Management Protocols:
 - o IEEE 802.1AB Link Layer Discovery Protocol (LLDP)
 - o SSH, SNMP v1, v2c, and v3 and Telnet interface support.
 - o Has SNMP agent, Supports SMP MIB II, Supports Bridging MIB, Allows out-of-band management via serial port, Allows in-band management via telnet, Allows graphical management via Web interface, Supports RMON, Complete with management S/W.
- Standards:
 - o IEEE 802.3 (SNAP encapsulated tagged and untagged frames)
 - o IEEE 802.3u
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 - o IEEE 802.1p Priority
 - o IEEE 802.1Q VLANs - port based and Tagged VLAN from any port using standards-based 802.1Q tagging.
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- o Switch should be manageable through Console port, Telnet, SNMP, HTTP, RMON, HTTPS and SSH
 - o Must have console port.
 - o Provide console cable, power cables and operating manuals.
- Authentication:
 - o TACACS+ and RADIUS authentication
- Administration:
 - o Allows software upgrade via FTP/TFTP
- Performance:
 - o Throughput up to 35.7 million pps (64-byte packets)
 - o Switching capacity 48 Gbps
- Security Features:
 - o Access Control List
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 - o Port Security (by MAC address filtering)
 - o IP filtering
 - o MAC based port level security, multilevel access security for console
- Indicators and Diagnostic LED's:
 - o Per-port status: Link integrity, activity, speed, full-duplex
 - o System status: System, RPS, link status, link duplex, link speed
- Environmental Ranges:
 - o Operating temperature: 0°C to 45°C
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 - o Operating relative humidity: 10 to 85%
- AC Input Voltage:
 - o Standard South Africa Power Supply: 220/230 v ($\pm 10\%$), 50 Hz ($\pm 5\%$).
 - o Must support power redundancy.
- Expansion through cascading:
 - o Switch should be stackable i.e. manageable via single IP address, up to 8 units.
- Quality of Service

Other:

- o LAN Base Image installed
- o 16 Gbps switching fabric
- o Capable up to 8000 MAC addresses
- o Capable up to 255 IGMP groups.
- o Configurable maximum transmission unit (MTU) of up to 9000 bytes, with a maximum Ethernet frame size of 9018 bytes for bridging on Gigabit Ethernet ports, and up to 1998 bytes for bridging of Multiprotocol Label Switching (MPLS) tagged frames on both 10/100 and 10/100/1000 ports.
- o Up to 255 VLANs per switch.
- o Four thousand VLAN Ids.
- o Voice VLAN for voice traffic on a separate VLAN.
- o Dynamic VLAN assignment.
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- o Port security to authenticate the port and manage network access for all MAC addresses
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- o Unknown unicast and multicast port blocking.
- o SSHv2 and SNMPv3 based network security.
- o Support port monitoring and mirroring.
- o DHCP snooping.
- o Multilevel security on console to prevents unauthorized users from altering the switch configuration.
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- o Management capabilities on a per-port and per-switch basis.
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- o Bandwidth aggregation through EtherChannel technology enhances fault tolerance and offers higher-speed aggregated bandwidth between switches
- o Supports additional frame formats: Ethernet II (tagged and untagged)
- o Allows VLAN operation, Supports priority queuing, Supports IGMP snooping, Supports DVMRP
- o Support Jumbo Frames
- o Must offer Carrier Class Availability (99.999%)

- o Must offer support for in-Line Power for IP phones using IEEE 802.3af standard
- o Must offer support for 16 ports aggregation using IEEE 802.3ad standard

3.3.1.2 Routers

Router characteristics:

- Modular chassis routers are preferred
- Hot swappable line cards
- Interface cards/ports:
 - o 8 port 10/100/1000 Mbps Ethernet
 - o 4 port T1/E1 with RJ48C connectors
 - o 4 port serial (V.35/X.21)
- Data rates:
 - o Non-channelized T1/E1: Up to 2Mbps
 - o Channelized T1/E1: Minimum 24 x 64kbps
- Protocol Support
 - o Point-to-Point Protocol (PPP)
 - o Frame Relay encapsulation
 - o High-Level Data Link Control (HDLC)
 - o Multilink PPP (MLPPP)
 - o Multilink Frame Relay (MFR)
- Manageable via:
 - o CLI
 - o HTTP
 - o SNMP
- Management Capabilities:
 - o System status warnings
 - o Reporting
 - o Detailed threat descriptions and remediation information queries
 - o GUI user interface
- Diagnostics:
 - o Digital diagnostic loopback
 - o Payload loopback
 - o Line loopback
 - o Alarm Indication Signal
 - o LED's for: Active, Fault, Local Alarm, Remote Alarm, Carrier detect and loopback
- E1 Interface
 - o Transmit/Receive rate: 2.048 Mbps
 - o Framing format: CRC4, non-CRC4
 - o DTE /DCE interface: ITU-T G.704/G.703
- T1 Interface
 - o Transmit/Receive rate: 1.544 Mbps
 - o Framing Format: D4 super frame and extended super frame
 - o DTE /DCE interface: ITU-T G.704/G.703
- Channel Service Unit/Data Service Unit
 - o Selectable cable length

- Routing
 - Static
 - RIP v1/2 dynamic routing
 - VPN routing and forwarding
 - Virtual Router Redundancy Protocol (VRRP)
 - Generic Routing Encapsulation (GRE): IP
 - Border Group Protocol (BGP)/OSPF dynamic routing
- Firewall Features
 - NAT (Network Address Translation)
 - Stateful packet inspection and filtering
 - Network Attack Detection
 - TCP reassembly for packet protection
 - Malformed packet protection
 - Protocol anomaly: IP, TCP, UDP
 - Application Layer Gateway
 - FTP
 - TFTP
 - DNS
 - DHCP
 - SIP
 - Network File System (NFS)
 - Real Time Streaming Protocol (RTSP)
- QoS
 - L3/4 traffic policy definition
 - Ingress policing
 - Egress shaping and priority egress scheduling
 - Differential Services (DiffServ)
 - Call admission control
- VPN (IPSEC)
 - Site-to-site VPN tunnels minimum 2000 tunnel interfaces
 - Encryption: DES, 3DES and AES
 - Authentication (MD-5 and SHA-1)
 - Perfect Forward Secrecy
 - IPSec NAT traversal
 - IKE with pre-shared key or PKI
- Intrusion Detection and Prevention
 - IP Spoofing, Backdoor and DoS Detection
 - Worm, Trojan and Reconnaissance protection
 - Protection against proliferation from infected system
 - Request and response side attack protection
 - Traffic interpretation: Reassembly and Normalization
 - Prevention Mechanisms
 - Drop packets
 - TCP resets client and/or server
 - Notification via log viewer or Syslog
- LAN Features
 - STP

- o Bridging
- o VLAN support
- o Access, trunk and hybrid mode
- o Integrated Routing and bridging
- o Port Mirroring
- Network Services
 - o DHCP relay/server
 - o DNS client
 - o FTP/TFTP client
 - o Telnet server/client
 - o Radius client
 - o TACACS client
- Administration
 - o Local administration db
 - o Chassis manager (where relevant)
 - o System management and logging
 - o Support MIB's for example Standard and custom MIB's, MIB II
 - o Ping and traceroute
- Standards
 - o IEEE 802.1D 2004 (STP)
 - o IEEE 802.1X (Port-based Network Access Control)
 - o IEEE802.1x (EAP)
 - o IEEE802.1Q (Tagging)
 - o IEEE802.2 (Logical Link Control)
 - o IEEE802.3 (Ethernet CSMA-CD)
 - o IEEE802.3ab (1000BaseT)
 - o IEEE802.3z (1000BaseX)
 - o ITU-T G.703. G.704

3.3.1.3 Hardware Based Firewalls

Hardware Based Firewall Characteristics:

- State-full Packet Filtering - Must have a TCP State Aware Packet Filter Technology.
- Throughput 200Mbps scalable to 400 Mbps.
- Concurrent connections: 130,000
- Simultaneous VPN tunnels: 2000
- 168-bit 3DES IPsec VPN throughput : Up to 135 Mbps with VAC+ or 63 Mbps with VAC
- 128-bit AES IPsec VPN throughput: Up to 130 Mbps with VAC+
- 256-bit AES IPsec VPN throughput: Up to 130 Mbps with VAC+
- Support for unlimited number of networks.
- Support for unlimited number of users.

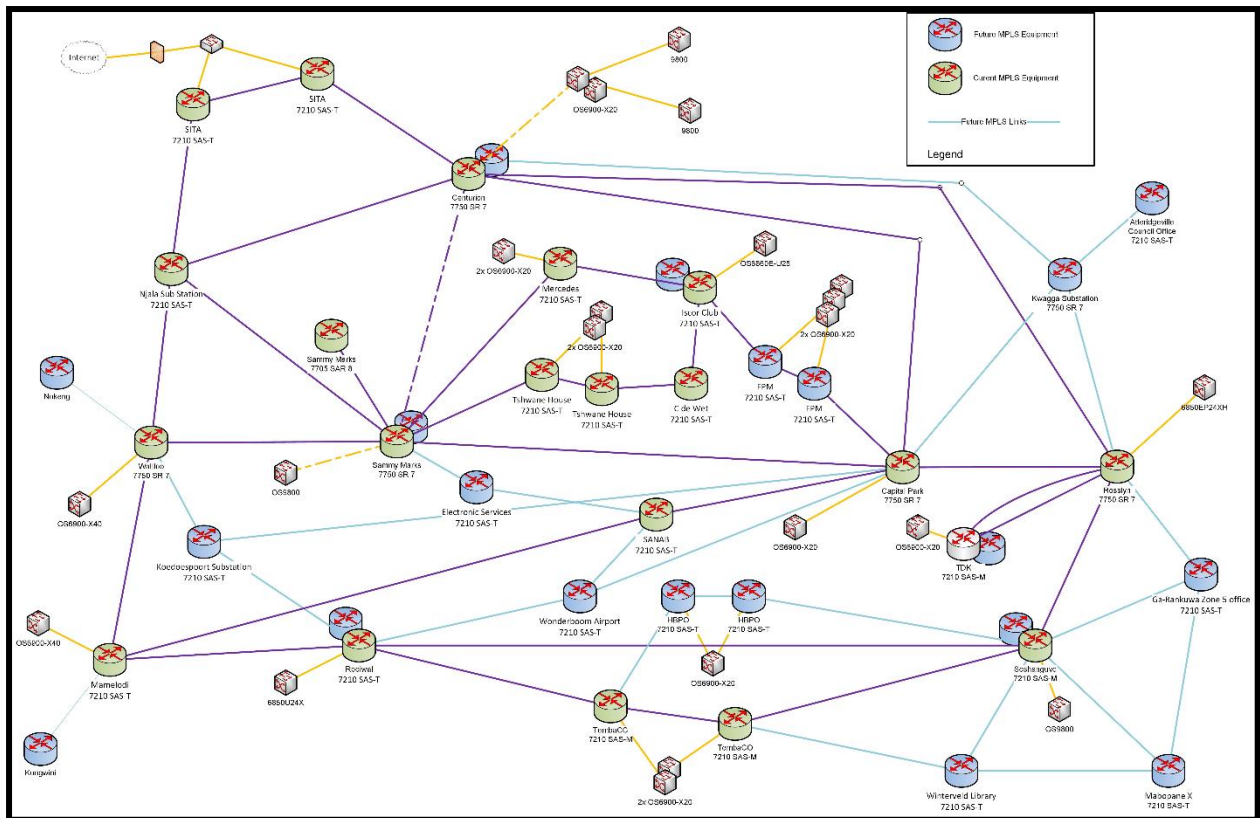
- Support Dynamic NAT and Static NAT. Capability to redirect the port requests to user configurable ports (PAT).
- Integrated Security – Must have an inbuilt Anti-spoof engine to drop all such packets.
- Ability to drop all the IP fragment packets.
- Protection against popular attacks such as ping-of-death attack, tear-drop attack, etc.
- Administrator must be able to configure the default timeout for TCP/UDP services.
- Ability to send mail alerts to the administrator.
- Ability to log the number of active TCP/UDP sessions.
- Must have firewall configuration backup and restore facility.
- IP Traffic Control to be based on Source, Destination, Protocols, Ports, etc.
- Provide secure encrypted Web-based Remote Management.
- Provide different privileges for administration and management.
- Display firewall server's current date and time in remote Administrative Console.
- Able to create policies based on Objects
- Must be able to reconfigure the firewall parameters and policies from remote console.
- Provide selective viewing of Logs based on source, destination, source port, destination port, rule number, time etc.
- Auto refresh the most recent logs while viewing.
- VLAN (802.1Q) support.
- Electro Magnetic Compatibility (EMC): FCC Part 15 (CFR 47) Class A, ICES-003 Class A with UTP, EN55022 Class A with UTP, CISPR 22 Class A with UTP, AS/NZ 3548 Class A with UTP, VCCI Class A with UTP, EN55024, EN50082-1 (1997), CE marking, EN55022 Class B with FTP, Cispr 22 Class B with FTP, AS/NZ 3548 Class B with FTP, VCCI Class B with FTP.

3.3.1.4 Transceivers/Convertors

- Depending on the situation, 100/1000Base-SX/LX (fibre) to 100/1000Base-T/TX (copper).
- Must be standards based. One or more of the following standards shall apply depending on the transceiver/convertor.
 - o IEEE 802.3ab
 - o IEEE 802.3z
 - o IEEE 802.3u
- Connectors: SC/LC (fibre), RJ-45 (copper)
- Full Duplex Support
- Must support crossover detection and auto-correction
- Status LED for Power and Link/Activity
- Must function with standard South African supply voltage i.e., 220/230V single phase.

3.3.1.5 MPLS (Multi-Protocol Label Switching)

CoT has invested in a MPLS backbone, and the tenderers must offer equipment that will integrate 100% with the existing solution. The existing backbone is shown below:



3.3.1.6 Optical Service Switch

Characteristics:

- DWDM switch
- GigE and 10GigE multiplexing
- 1/2/4/8 Gigabit fiber channel multiplexing
- E1/DS1, STM-1, STM-4, and STM-16 multiplexing
- Ring and point to point from 10 to 40 Gb/s
- SDH-alike protection possibilities

Typical deployment:

- Data center interconnection
- Private WAN for large enterprises

3.3.2 Wi-Fi Equipment

The CoT has an existing Wi-Fi network, but this network will be extended in future. The network provides for:

- Free public Wi-Fi access to the public at Customer Care and Libraries
- Boardroom and building access via Wi-fi for CoT personnel
- Future inclusion of Wi-Fi blanket to cover the City.

Some futures that the network must be able to support:

- Security related to public and CoT users
- Redundancy solutions i.e., should the controller fail, a backup controller must enable²⁴ continuous and seamless integration.

- The ability to load more than one SSID on an AP should the need arise ie for VIP Wi-Fi, Public Wi-Fi or normal CoT everyday use.
- Software related to Wi-Fi support, coverage, security, data usage etc.

3.3.3 Security

Network security devices (software/hardware based) to be included in the pricing:

- Firewalls (Internal to network and edge protection) for example Fortinet Unified Threat Management
- InfoExpress Cybergatekeeper
- Wi-Fi security

A firewall is a set of related services, located at a network gateway server that protects the resources of a private network from users from other outside networks. Traditional network firewall services use IP-based access/deny policies, while more recent technologies allow deep packet inspection, being able to enforce policies on acceptable application usage and detection of malicious out-of-band transactions.

The service is made up of various service “layers”, with options according to customer requirements:

- Range of security appliances (firewalls) and associated software / applications, from leading security vendors, provided as SP Equipment
- Fault management; 24x7 customer helpdesks, on-site maintenance and proactive service monitoring
- Configuration management; application patches and changes to customer security policy
- Service reports; service availability, security-related events
- Security consultancy to assist the customer in defining their security requirements (covered by cross-functional services SOW)
- Project managed service installation and service commissioning (covered by cross-functional services SOW)

The optional features provided within the service include (where applicable):

- High availability (resilient) designs
- IPSec VPNs
- De-Militarized Zones (DMZs)
- Threat mitigation

3.3.4 Voice Equipment

Any solution offered to Council must integrate seamlessly without any loss of features. No current feature may be implicated or lost in this process. Should any service provider offer a solution other than the current deployed infrastructure deployed, said service provider must guarantee said integration. Any current and future development cost to enable this requirement will be for the service provider's account. This will extend into the warrantee and guarantee period.

3.3.4.1 System Architecture

3.3.4.1.1 IP PBX General Specifications and Infrastructure

- The system should provide telephony functions on any underlying data infrastructure – it must be scalable to support and voice/data convergence and traffic increases – as new sites are brought into the network.
- The system call server must be based on SW easily updatable and manageable
- Guaranteed system uptime of 99,999%
- The systems should be able to use SIP end points as extensions for the users and SIP trunks to be interconnected with other IP PBX and to access value added applications like collaboration or Unified Messaging
- The system should offer the choice between distributed or centralized communication servers and media gateways without jeopardizing the WAN VoIP links, features level and applications availability
- The system should integrate with TDM equipment and enable any mix between IP or TDM and Wired or Wireless phones
- The system should be scalable, distributable and modular
- The system should manage CAC (Call Admission Control) mechanisms to optimize the usage of the bandwidth in the WAN for multi-site configurations
- The system must manage a large range of telephonic services, integrated contact center applications, collaboration and Unified Messaging applications
- The system must be able to interoperate with other telephone systems and endpoints using the below standards – Qsig GF, Qsig BC, DPNSS, DSS1, H232, SIP.
- The IP PBX system should provide standard APIs compliant with Internet standards like XML, SOAP & WSDL for CTI, call control and management functions
- The IP PBX system should also provide legacy APIs such as CSTA, TAPI, CSTA
- The IP PBX system should provide call routing points for connecting Contact Center applications

3.3.4.1.2 System Hardware and Software

- The IP PBX hardware must have high flexibility in term of capacity, system upgrade and support IP & TDM without external interfaces.
- The Call Server should able to support minimum 15000 users in a standalone configuration and support up to 100 000 users in a virtual and multi-servers network group.
- The Call Server should able to handle traffic minimum 300K BHCA.
- The system must support the following external telephony interface signalling: E1 CCS PRI (VN3-4-6-7 / ETSI) DASS2, E1 CAS (R2, Q421, MFC Ericsson, Q23, Decadic), T1 CCS generic, T1 CAS, T0 ISDN BRI (VN3-4-6-7 / ETSI), E&M, Analogue Loop Start and Ground Start (with FSK and DTMF CLIP).
- The switching must be able to handle Power over Ethernet devices. PoE devices must be managed for: Economic efficiency according to device needs, Security to avoid overload of the system or the device.

- For bandwidth intensive users, the bidder should be able to supply a switch device to distribute PoE to supplementary Ethernet devices.
- The device must be an economic, plug and play device that offers: auto negotiated 10/100/1000 BT transfer, port-based and 802.1Q VLAN support, 802.3af remote power.
- The proposed system should be based on "open" software architecture, Linux being the preferred one.
- The architecture based on soft-switches should permit the geographical relocation of the communication servers through a standard IP network. Media Gateways should be carrying the interface cards, which should generate their own feeds from a common source.
- The system's software can be hosted in appliance servers or in blade servers architectures
- The system must manage, control and support a range of IP telephone stations for both voice and telephony applications as well as IP application stations for voice, telephony, and Web services support
- The proposed system must support native IP communications in direct or "peer-to-peer" with only the telephone signalling transiting back toward the controlling communications server.
- The voice and signalling frames should be marked [tagged] in order to be recognized. The standards of marking supported will be: Level 2: IEEE 802.1p/Q and Level 3: TOS / DiffServ
- The system should support for voice encoding the following standards: G.711, G.723.1, G.729A.
- The proposed communications system must support H.323, SIP, XML technology
- The proposed system should integrate an H.323 gatekeeper server, without external equipment, that offers the following services: - Automatic registration of the H.323 terminal and assignment of a call number by the RAS protocol; - Resolution of the address, the terminal H.323 can be identified by its call number or by its IP address that can be assigned dynamically by a DHCP server; - establishment of communications in direct mode.
- The proposed system should include the gateways required to allow the buyer to acquire H.323 or SIP devices to interoperate with the traditional telephony devices (digital stations, IP, analogue, private or public lines).
- The proposed system should permit the integration of SIP terminals with other terminals. The SIP modules are: SIP Proxy, Registrar and Gateway
- The hardware of the proposed system must be compliant with the European directive: Restriction of Hazardous Substances in electrical and electronic equipment (RoHS)
- The proposed telecommunication system should allow the use of high level XML APIs based on Web technology standards (XML/SOAP) to ease creation of telephony and call control features for integrating telephony services into web applications.

3.3.4.1.3 Required Profile of the proposed solution

To provide an economic future-proof network, it is important that the current and future working methods should be studied. An audit must be done to qualify and quantify these different types of communications for the client needs and requirements. Based on this type of study the bidder should be able to:

- Determine the types of telephony hardware devices required by the different types company personnel
- Determine the types of telephony services required for the company personnel

- Provide the reasons for the choice of products
- Based on the findings the bidder should be able to provide the devices and services listed in the audit

3.3.4.1.4 System Management

- The IP PBX system should provide a suite of applications and tools to permanently evaluate and report the operational health of the system. It should provide the following functions:
 - Software licensing check
 - Automatic recognition of plugged sets
 - User moving
 - Monitoring of all the events on the system
 - Capture of performance and level of use of the resources
 - Register and log all calls and give accounting information
 - Monitor and register all users, attendants, trunks activity to generate traffic and level of use analysis
- The IP PBX system must include the possibility to have remote maintenance access via dial-up having access to the system for configuring, diagnosis and monitoring. This access must be protected with security mechanism to prevent unauthorized intrusions.
- The system must include a dedicated management server/platform that will be based on the latest technologies, such as JAVA/JEE. This server should support a minimum of five (5) clients having different access rights to the applications
- The management platform must provide a single graphical client (Graphical User Interface GUI) as well as a web based interface
- The Management platform must provide web access allowing the administrator to manage the system to use any PC with an internet browser
- The management platform must use a client-server architecture allowing different administration clients to be connected to the system
- The management platform must perform at least the following tasks:
 - Configuration and programming of services, users, categories and all system parameters and features. This module must provide centralized management in local or remote environments of a single system or a network. The network manager will be able to quickly and easily edit, create or delete any network object, by the use of import/export functions and multiple operations
 - Faults and Alarms management of all the incidents and fail reports generated by the system itself informing date, hour, severity level and action recommended to take. This module must be able to centralize the alarms and events of the system, and
 - Notify an alarm depending to the severity level sending an e-mail or activating an script performing an specific action
 - Register and generate statistics for the alarms and events in the network in a daily scheme
 - Each Alarm must include at least: An identification number, The severity level, The manage object, The notification time, Additional Information, The event type, The probable cause, A Fault diagnosis.
 - Generate reports and graphics about the statistics of the alarms and its correspondent resolution time

- Accounting of all calls generated by the users including cost, date, hour. Must provide different options to group the billing of the calls (cost center, extension number, trunk, user, city/area associated to dialled numbers). The accounting module must be able to:
 - Adapt to the financial organization of the company along the cost centers and the organization levels
 - Manage carriers' fees to apply specific costs. Must be able to manage multi-carrier schemes
 - Define thresholds for phone usage and Tracking/monitoring this activity, providing a graphical view of the accounting thresholds per user, cost center or group
- Generate reports and graphics classified by: User, Cost Centre, Organizational Level, Duration, Pin, Project Code, Number Dialled (Destination), Carried used.
- Performance and traffic Analysis of the operation of the system. This must include at least the following information:
 - Measurement of response time
 - Measurement of the VoIP traffic
 - Statistics on the quality of VoIP calls
 - Statistics on the line-occupancy ratio for incoming calls
 - Reports and graphics on attendant, trunks and users traffic
 - Occupancy rates of the different internal and external links
 - Average time spent waiting for an attendant
- The performance module must provide specific tracks on the voice over IP calls to better follow-up of the VoIP traffic and quality, for this, the system must measure:
 - VoIP volume of traffic (volume sent, received and lost)
 - It must generate reports of this activity by periods of time (hourly, daily, monthly)
- Optional must provide:
 - Directory, module to manage the telephone directory. This must be LDAP compatible to be synchronized with other directory applications, must also allow web access and provide information on all desktops allowing click to call features to the users.
 - The management server should provide an application that offers a topological view of the telecommunications system that constitutes the organization's network, as well as the links that exist between sites.
 - The management platform must allow the administrator to generate reports and graphics of the activity per period of time in terms of traffic, accounting and alarms and giving the possibility to generate statistics of all this analysis. Those reports must be predefined but the option to personalize the reports must be also available. These reports should be exportable in HTML, pdf, excel and LDAP(.ldif) formats
- All IP PBX management applications (Fault & alarms, Configuration, Accounting and performance) should belong to a single platform and a single image for data storage, minimizing operation expenses.

- Optionally the management platform should offer a monitoring module which allows the administrator to easily monitor the accounting thresholds of the users of cost centers in graphical interface and must allow to send an e-mail or an alarm in case of threshold crossing.
- The management platform must include an troubleshooting & diagnosis tool accessible by WEB to be used by non-expert administrators
- The management platform should be able to be integrated with enterprise global network management platforms (like CA Unicenter TNG, HP Openview, or IBM Tivoli) using standard protocol SNMP.

3.3.4.1.5 System Security

- The bidder must only propose an offer that meets with at least the EAL2 requirements of the Common Criteria (ISO-15408) standards
- The system must support centralized firewall management
- The system must support dynamic pin holing to limit access security breaches
- Call Server Security
- The Operating System used by the call server must not use or natively support network resource sharing services (such as NFS, Samba, LPR, etc)
- The Call Server and Media Gateways must provide self-protection mechanisms to counter Denial of Service attacks
- The call Server must avoid the usage of possible virus, worm and Trojan infestation points, such as internal e-mail servers
- The call server must avoid the usage of automatic "download & execute" programs or services from databases or Internet inbound connections
- Internet access from the call server must be restricted to administrator initiated remote maintenance tasks only
- The System must support Network Time Protocol V4.1.2 (RFC 1305) to synchronize the system data/time of network devices
- The System must support Syslog services for both internal and external command and configuration control accounting with a minimum of 5 day history
- The Call Server must not employ the use of a 'default' password that is viable beyond the period of installation.
- The password & access control must include at least:
 - o Shadow Passwords to prevent the possibility of an aggressor to easily read or deduce system or account access passwords.
 - o Password Aging with configurable time periods
 - o Usage of MD5 algorithm (or stronger) for password encryption
 - o Internal OS controls for remote point of access restriction and service availability. (i.e. TCP Wrappers & Trusted Hosts)
 - o Account access authentication/restriction using external RADIUS resources.

- o Media Gateways should not host services such as proxy, FTP, Telnet or local dynamic routing to prevent exploitation in Distributed Denial of Service attacks.
- o IP Phones should not support direct, external initiated, connections via HTTP, telnet, FTP, TFTP or any other protocol as means to prevent distributed Denial of Service attack exploitation.

Network Security

- The system should offer maximum availability, with the switchover of call control processing functions to an alternate or redundant processor (or soft-switch control point) in the event of significant fault. The redundancy scheme should conform to the model used in most computer systems: the complete "mirroring" of the information (both static and dynamic data.) The switch over between 2 redundant call control processors should not interrupt existing and established communications.
- All critical resource elements (call server, hard disks, data bases, IP interfaces, DSP resources, clocking sources, etc.) must be redundant and in a hot-standby configuration, allowing to install them in two (2) different data centres physically separate
- Media Gateways must have survival mechanisms that allow them to maintain nearly 100% of the telephony services for their users, in case of failure in the WAN links where the signalling with the call server drops.
- IP Phones must support 802.1x (EAP-MD5 or better) for authentication and access control to the network, this mechanism must allow the user to be connected to the call server once he has passed the authentication process; not before.
- The system should have the capability to, based on standard mechanisms (such as 802.1Q and DHCP), assign automatically the corresponding voice VLAN number to the IP station clients during IP station initialization, allowing for the separation of voice and data traffic at the IP station.
- The IP station must have the ability to strip any VLAN tags assigned to traffic entering the network through the 'guest port' of the IP station, and further have the ability to switch that traffic into an identified data VLAN, further enhancing enforced voice and data traffic separation.
- The IP station must have the ability to disable its 'guest port

Management Security

- Administration users connecting directly to the Call Server (console) must be authenticated via a RADIUS server before gaining access to the call server.
- All management traffic between a remote console/session and the call server must be encrypted. (SSH for direct command line sessions, HTTPS (SSL) for web sessions, SFTP for file transfers, etc.)
- Administrators connecting to a management platform must be authenticated via a RADIUS server prior to gaining access to the management platform
- Management flows between the management platform and the call server must be encrypted (SSH, SSL, CMISE, SNMPv3)
- The management platform must provide Role Based Account Management to define different levels of administrator access depending on specific function responsibility.
- The management Platform must provide a backup mechanism for all critical system information in both a manual and an automatic/scheduled archival and a Disaster Recovery mechanism.

Application / Communication Security

- The IP PBX system should provide complete encryption capabilities with the ability to encrypt all traffic (media and call control signaling) between IP phones, softphones, call controllers, media gateways and all other associated endpoints via a strong encryption algorithm (AES, IPsec and SRTP, for example).
- The encryption solution should be hardware-based in order to eliminate system degradation and transmission delay times.
- The system should encrypt the voice content as well as the signaling between the IP station and the call server.
- The encryption solution should be easy to deploy with factory pre-installed certificates and automatic key distribution facilities, requiring no “at-the-phone” intervention
- Wireless IP Phones must support WPA2(AES) for traffic encryption proposes
- For multi-node solutions, IP stations must be capable of communicating via encrypted streams between any and all physical and logical network areas
- Application users should be authenticated using a RADIUS system before being granted access to application servers or associated resources.
- Any web based application must use HTTPS encryption

3.3.4.1.6 Telephony Services

The offered system must support the following services without any external/additional server to support them:

- Text mini-message between advanced sets
- Reception of absence mini-message from the called user
- Calling Line Identification Restriction (CLIR) for local / internal calls
- Communication timeout on outgoing call
- Barring for internal and external calls
- Call Waiting on: Busy set, busy hunting group, busy voice mail
- Intrusion on busy set
- Intrusion on busy set: On no Reply, On busy
- Call back to last caller: Local / Internal, External
- Automatic call back (activate / cancel) on: No reply, busy set, busy trunk group
- Call back request (activate / cancel) on: No reply, Busy Set
- Call back request notification by : LED on the user's set, Icon on wireless phones, Voice guide for analogue sets
- Dial by name with central directory repository
- Last number redial
- Multiple redial

- Abbreviated dialling
- Automatic call set-up on unhook
- Private call / Personal Identification Number (PIN)
- Distinctive ringing for internal and external calls on all types of sets
- Call Overflow: Overflow on either busy or no reply, Overflow on both busy and no reply, Overflow on out of order
- Timed call overflow on no reply
- Call Pick up: Individual or in group
- No Replied Calls Repertory: Local / internal calling numbers with caller name, date and time of calls
- Enquiry call / enquiry call cancel
- Call transfer on: Reply, No reply, Busy
- Call transfer to: Set, Hunting Group, Attendant, Voice Mail, Trunk to call transfer, Trunk to timed transfer
- Three Participants Conference (Multiple)
- Meet-Me Conference
- Announcement / Paging on Loudspeaker
- Announcement / Paging on Loudspeaker
- Calling party name identification (CNID)
- Direct inward dial (DID)
- Direct outward dial (DOD)
- Direct inward system access (DISA)
- User set creation : user validation of his set created by attendant
- User moving : personal plug in / plug out by prefix
- Call recording on voice mail
- Voice guides indicating/helping users independent of type of set
- Outgoing call with business account code (by prefix or suffix)
- DTMF / Pulse Transparency
- Appointment Reminder
- Call Hold
 - o Automatic exclusive hold (in case of enquiry call or call waiting consultation)
 - o Manual exclusive hold (by Hold or line key or by prefix)
 - o Common hold (by Common hold key)

- o Mutual hold (initial hold by Hold key)
- Call Forwarding:
 - o Unconditional
 - o On no reply
 - o On busy
 - o On Busy or No Reply
 - o On ringing (Call Deflection)

- Forwarding destination:
 - Set
 - Voice Mail
 - Hunting Group
 - Attendant of Attendant Group
 - Call Centre Group
 - Automated Attendant
 - External Number
- Substitution
- Monoline or multiline mode for advanced sets
- Multiline key per directory number for advanced sets
- Multi-directory number (DN) for advanced sets
- Multi-directory numbers (DN) with supervision (indication of state) of:
 - o Set
 - o Trunk
 - o Trunk group
- Manager / Secretary features:
 - o Call Filtering with manager control
 - o Manager/Secretary hot line
 - o Private Line for Manager set
 - o Absent secretary key
 - o Secret listening of the secretary by the manager
 - o Multiple Managers / Multiple Secretaries
- Twinset: Two multiline sets with (same) Directory Number (TDN) and common voice mail and accounting
- Personal password for
- set lock override for DOD
- set unlock
- Substitution and DISA
- DND
- General mini messaging consultation
- Programming individual repertory

- key programming
- follow-me
- remote forwarding
- private call
- consultation of no replied calls repertory
- Hunting Groups
- Do not Disturb

3.3.4.1.7 End User Devices and Terminals

- End Users must be able to access all telephony services
- Voice prompts or guides (multi language) the system should guide users during the various steps needed to activate specific features by means of voice guides that indicate the services available at each stage of a call.
- Multi-language display on TDM and IP stations - The language presented on the station displays must be changeable by the user directly. When the user makes this change, the modification of the display language will automatically synchronize the language of the vocal guides and the prompts on the voice-messaging component.
- Call (dial) by name - Users whose station is equipped with a display and alphabetic keyboard should have the capability to call, to transfer, or forward calls to other internal or external parties by entering their NAME.
- Multi-key / Multiple-number stations - This function allows a user with a station that is assigned only one number, to simultaneously establish several outgoing or incoming calls. Each station key can be programmed for a different extension number, to permit easy differentiation of incoming calls.
- Call Screening - Several screening stations can supervise a screened station. A screening station can screen several stations and lastly a station can have the status of screening station and screen station simultaneously
- Work groups - Users should be able to clustered in Supervised workgroup, station group or Intercom group
- Text messaging - Users whose station is equipped with a display and alphabetic keyboard must be able to conveniently access a text messaging service, allowing them to exchange short messages from terminal to terminal
- Automated attendant - the system should be equipped with an automated attendant system that, under designated conditions, welcomes outside callers, and proposes (in an interactive manner) a way to reach a desired service or pre-defined party
- Music on hold - The music source will support X seconds of operation, and should provide a good tonal quality. For reliability, the system proposed should be digital (magnetic devices are excluded) regardless of whether it is integrated into the system or external to the system.
- Direct Inward System Access – DISA - allow a user who is calling from outside of the system to establish an internal or external system connection from his or her DTMF telephone.
- Remote management of the telephone - allow a user who is outside of the system to modify the answering modes of his or her telephone terminal (voice messaging, external call-back, etc.)

- IP Telephone stations should support dial by name features using alphanumeric qwerty integrated keyboard

IP Telephone stations should support:

- 802.1x (MD5) for authentication
- Remote power feed per the 802.3af standard or local 120 / 230 -volt feed
- Auto-sensing 10/100 Ethernet switch interfaces
- PC port 10/100
- IP address Assignment by DHCP or statically configured
- QoS (Internal the station and priority to the voice signal)
- Frame marking voice level 2 802.3 p / Q and level 3 ToS / DiffServ
- Transparent recovery of frames by the associated PC (not by the station)
- Fixed or dynamic assignment of the IP address by customer DHCP
- AES for voice content encryption
- G.711, G.723.1 and G.729a Audio compression

IP and TDM Telephone and application stations should support:

- Large colour or black and white adjustable screen at least for the IP phones
- Context-sensitive keys associated to the display – These contextual keys are linked to the context displayed on the screen to directly activate function
- Navigation keys to navigate inside the graphical interface (change of application or context, return to the home page)
- Numeric keypad to dial a number or enter digits in an entry field
- Integrated alphabetic keyboard for functions such as text messaging and dial by name
- Full duplex hands-free mode with echo cancellation • Audio operation to tune audio levels, mute, loudspeaker,
- Connector for headset or additional speakerphone
- Automatic and transparent switch from one to another communication mode (headset, handset, hands-free, etc.)
- Wireless Bluetooth® capabilities (Based on 1.2 Bluetooth® specification) at least for the IP phone
- Open to applications: Access to corporate or external Web based application via third party SDKs, APIs (XML, SIP)
- The system must support an IP Softphone application that allows the users to manage their calls from a PC. This user must have access to the full set of telephony services without any degradation. The voice should be manage by the multimedia resources of the PC

- The system should support PC based Attendant terminals that have a colour screen, as well as attendant station software that can be used on PCs that are not dedicated to the attendant operation

Attendant operator positions should support the following features:

- Station Supervision
- Manual or Automatic answer
- Call by name to internal or external parties
- Text Messaging
- Multiple Attendant positions
- Call Recording
- The phone sets should support alphanumeric integrated keyboard
- The system must support an Attendant IP softphone application that allows the operators to manage the calls from a PC. This application must support the same features of the Attendant operator. The voice should be managed by the multimedia resources of the PC.

3.3.4.1.8 Wireless Terminals

The system should support a fully integrated and feature rich wireless phones solution for either TDM or IP sets

- Telephone sets must comply with current RoHS requirements
- The mobile phones should be tested and certificated for: Dust, Humidity, Physical Abuse (Drop Test)
- The level of services offered on either TDM and IP wireless sets must be the same of the desktop phones and only restricted by each kind of set ergonomics itself.

Mobility requirements

- The system must provide for: Dect, VoWlan, Cellular Extension, Dual Mode, Softphones, VPN
- Mobile Applications such as: Microsoft Win 5/6, Symbian, Nokia Intellisync Call Connect Client

IP Wireless Phones

- The IP Wireless Phones should support Wi-Fi 802.11b 2,4 GHz radio
- The IP Wireless Phones should support Wi-Fi 802.11b 5,150_5,825 GHz radio
- The IP Wireless Phones should support G.711a, G.711mu and G.729 audio compression codecs
- The type of transmission should support 802.11a, 802.11g: Orthogonal Frequency- Division Multiplexing (OFDM), or 802.11b: Direct Sequence Spread Spectrum (DSSS)
- Transmission data rates should be in the 802.11b network: 11, 5.5, 2, 1 Mb/s, auto rate selection, or for 802.11a and 802.11g: up to 54 Mb/s
- The IP Wireless solution must offer a QoS on the Wi-Fi radio spectrum solution

- If a spectra link Voice priority is used - Spectralink Radio Protocol- Timed Delivery- Spectralink CAC
- Without Spectralink:- Wi-Fi Multimedia (WMM)- U-APSD- Tspec, the IP wireless phones should have at least following functions:
 - o 128x64 pixels display
 - o 4 dynamic keys having function according communication state
 - o 1 Key to access the functions menu of the phone
 - o 1 key to navigate on the menu
 - o 1 function key to access a customization menu
 - o Option to connect a corded headset
- The IP Wireless phones must support IP address assignment by DHCP
- The IP Wireless phones must support the following standards for security features:
 - o 128 bit static Wired Equivalent Privacy (WEP)
 - o Wi-Fi Protected Access (WPA)
 - o WPA Pre-Shared Key (PSK)
 - o Temporal Key Integrity Protocol (TKIP)
 - o IEEE 801.11i, Wi-Fi Protected Access 2 (WPA2)
 - o Advanced Encryption System (AES) Algorithm
 - o The telephone must support G.711, G.729a/ab voice encoding
- The IP Wireless phone must provide easy access to the dial by name features of the IP PBX system
- In addition to the standard 256 Latin characters, Greek, Cyrillic and Unicode characters should be handled
- Supported languages should include: French, English, Spanish, German, Dutch, Portuguese, Italian, and Greek
- If required by the client, a push to talk feature should be available

TDM Wireless Phones

- The system must offer a range of TDM Wireless Phones that support the below standards:
 - o Digital Enhanced Cordless Telecommunications (DECT): 1880 - 1900 MHz
 - o Digital Enhanced Cordless Telecommunications (DECT): 1900 - 1930 MHz
- The TDM Wireless Phones should have at least following functions:
 - o Graphic Display with monochrome or colour availability, as required by the client
 - o Dynamic keys

- o Menu access key
- o Navigation key
- o Directory key
- o Trackpoint key
- o Volume Key
- o Option to connect a corded headset
- o As required, a loudspeaker should be available
- The TDM Phone should support the following security features:
 - o International Portable User Identity (IPU-I) for user identification proposes
 - o 128 bits encryption key for authentication
 - o 64 bits key for signalling and content encryption
- The TDM Wireless phone should support (for DECT) the GAP and Advanced GAP (AGAP) mobility level of services
- The TDM wireless phone must provide easy access to the dial by name features of the IP PBX system

3.3.4.1.9 Voice Messaging Systems

- Voice Messaging system must be fully integrated to the call server and should not require external server to be hosted
- Voice Messaging system must be fully integrated to the call server and should not require external server to be hosted
- Voice Messaging system must be manageable from the system management platform
- Answering or answering with date stamp - The system should provide voice mailbox holders the choice of two functions: answering the messages or answering them with a date stamp
- When a call is forwarded to the voice messaging system, the box holder will be able to choose between two personalized announcements. If the personal announcement has not been recorded, the standard system announcement will be substituted automatically.
- Recording of calls conversation - The holder of a voice mailbox must be able to take advantage of this service to record internal or external calls. Recorded calls will receive the same service as messages that have been left by callers.
- Forwarding of voice mail messages - The box holder will be able to send a copy of previously received messages to other boxes (with or without requesting acknowledgement of receipt.
- Call by name - To provide universal access, it must be possible to select a voice mailbox by its name by using the telephone dialling keypad. The caller will be guided in this operation by voice prompts.
- Multiple languages - To ensure consistency with the system voice prompts, the proposed system should be multi-lingual, offering four different languages
- The voice messaging system should be centralized or distributed to serve different sites

- The notification of messages must be on: LED/Icon on Phone, Voice Guide, Outbound call to any telephone number
- The voice messaging systems must provide silence detection to avoid recording of blanks at beginning or end of recording
- The System should allow distribution lists for message broadcast
- The System must allow the caller reaching a mailbox to choice forwarding destination
- The System must provide External Info-Service / Audiotex
- Additionally, the voice message system must provide the following features:
 - o Record of standard Greeting
 - o Record of alternate greeting
 - o Record Name
 - o Urgent delivery option
 - o Voice mail navigation (rewind, pause, forward, play)
 - o Skip Greeting
 - o Confirmation to send recorded message
- Visual user interface with sensitive keys on large screen phones
- Autoplay of unheard/new messages
- Delete messages
- Save messages
- Reply Messages

3.3.4.1.10 Convergence

General

- To offer an economic solution, the client must be able to select an efficient IP network that takes into account voice, data and mobility
- The bidder must provide a coherent system that, by its convergent qualities offers superior network security, availability and manageability
- The convergence should provide seamless behaviour provided for the data and voice requirements
- The management should ensure the best possible use of routing to maintain voice and data traffic

Availability

- The bidder must provide a high level terabit capacity switch that can handle a fully converged IP communication network
- Blade centre support

- To reduce power and installation costs, the bidder must be able to offer PoE capabilities to distribute power as required according to the device class
- PoE must be managed in a secure way to provide for real economy and reliability
- Any homogenous network must be able to support up to 15000 IP users in a standalone and 100000 users in a multi network configuration

Security

- Any converged network must include a comprehensive structured security architecture to cover traffic inside and outside the network
- The security management should be centralized to improve cohesion
- To maintain security and availability the converged solution must be resilient and offer: 802,1x authentication for IP phones, Voice/data LAN partitioning, dynamic firewall pin-holing.

Management:

- The converged solution must offer centralised management solutions for the entire system that can offer:
 - o QoS management
 - o Inventory management for all IP devices and addresses
 - o Performance management that can handle nearly all third-party devices switches and IP Phones
 - o Central firewall management

3.3.4.1.11 Value Added and Mobility Services

- Automatic Route Selection (ARS) to select the best route available to set up a call in terms of resources availability and cost
- The system should support free desktop / free seating features in stand alone or in multi-site
- The system should support an integrated cellular extension solution providing full IP PBX features from cellular-mobile phones supporting:
- The cellular extension application should not require external server, must be embedded into the IP PBX
- User of Cellular extension must be equipped with contextual menus running on any cellular phone: SIM based, Windows Mobile 5 and 6 based or Symbian based
- The system should support Dual Mode (Wi-Fi/GSM) terminals, Symbian & Windows Mobile 5 or 6 based to run both cellular extension and/or Wi-Fi softphones.
- The system should support Nokia Intellisync Call Connect Client
- The Dual mode cellular extension should be possible for SIP clients
- The system must allow remote users to be connected using softphone applications and having the same level of service as they were at the office desk
- The system should support users' mobile devices to work in tandem mode with the desktop phone

3.3.4.1.12 Voice Logging Services, Call Logging Functions

Council at present has no Voice Logging facility in place with the previous VL deployed no longer being supported. This created a situation where Council was left in a situation where legal requirements to recording of calls could not be done leaving Council legally liable. Therefore, a cloud based Voice Logging solution is requested here.

The service provider must either be able to host and provide such a solution to Council here, or have access to a reputable, existing subcontractor that will be able to provide suchlike service to Council. This submission must be high efficient, scalable and vendor neutral.

It must provide Council with the following value propositions:

- Superior agility, flexibility and scale-ability,
- Increase in productivity due to the feedback that can be derived from the recorded telephone traffic and messages logged,
- Decrease in Capital and Operational cost normally encountered when Voice Logging services are bought and deployed,
- Increase in ROI as little or no Capital Cost will be involved, as any equipment bought will be provided as part of the operational cost incurred,
- Compliancy with all legislative requirements expected from the Emergency Management and 1st responder departments, thus decreasing Council's legislative risks due to non-compliance here and that Council cannot now record or log any call traffic,
- Role any/all recorded/logged voice traffic will play in the normal disaster recovery process Council regularly faces/has to deal with,
- Given the scale-ability expected from a cloud based solution, a solution focused approach would be much easier to achieve.

The managed services are expected to be provided here. These below services would be seen to be in support of the Voice Logging services requested here and will have this point of departure as its focus point:

- Connectivity Services,
- Data Mobility Services,
- Hosting and Computing Services,
- Communication Services, and
- Value Added Convergence Services

The following solution overview, as expected by Council, is relevant here:

As Council needs to keep its Capital investment as low possible here, a hybrid solution is requested here, whereby on site equipment deployed (Onsite Recording Equipment) is to be deployed and used with most of the recorded traffic/data is to be stored in the cloud. This must cater for long term recording and storage of recorded traffic/data. All calls to be recorded must be 100% compliant and individually secured and encrypted at the source. The solution must be able accommodate all calls recorded from any brand of PBX, trunk or VoIP extension.

3.4 Command Centre Deployment (TMPD and EMS departments) (Part 2.5 of the Pricing Schedule)

The IT department also has the mandate to procure, install and maintain other systems as needed by council, one of these systems is emergency services solutions needed for the emergency services departments. We have looked at various options throughout the market and need at minimum the specifications as listed below:

- video analytics,
- cloud solutions,
- security cameras,
- video management software and hardware,
- and access control.

Body worn cameras:

CoT need a mobile video security solution that protects people and proves professionalism. Next-generation body-worn cameras capture high-quality audio and video from the wearer's perspective.

Seamless integration with existing video management infrastructure via Wi-Fi enhances situational awareness in the control room, delivering a powerful new narrative and enabling a smarter response.

The solutions and products needed should be suited to applications where shift-long battery life and high-quality video evidence capture is required. Rugged build quality. High performance. Multiple ways to connect. Delivering the features, you need to take control of every situation. We would require at least the following features:

- Wi-Fi streaming,
- Built-in GPS functionality,
- Bluetooth sensor monitoring,
- Ruggedized exterior, 64GB storage minimum,
- Slimline battery (up to 12hrs recording time),
- 1 year manufacturer's warranty.
- Pre / post-record captures the moments that matter
- Full HD recording in 1080p
- Bluetooth® & Wi-Fi® connectivity
- Peer-assisted recording
- Secure file encryption
- Flexible mounting options

Video Management Software:

Tactical Video Management benefits are twofold; Administrators can simultaneously use Video and view the TVM live video wall, allowing them to continue working whilst maintaining visibility of users' actions.

Furthermore, the live map feature ensures peace of mind for administrators with a large pool of cameras to supervise - a continuously updating side menu lists every action taken by the cameras on the map, and these actions are audited like normal in Video Management software.

Features required would be:

- **Live Maps:** Users can see all their devices' locations on a live map, no matter the size of estate.
- **Live Video Wall:** a customizable, full-screen video wall which can feature a minimum of nine livestreams simultaneously.
- **Location Trail:** Administrators can track the most recent movements of a device by toggling their location trail.
- **Alerts:** the option to configure certain alerts for specific devices - for instance, if the device is low on battery, or if it has just started recording.
- **Integration:** be used both as a standalone tool and in tandem with other products: for example, it can track a fleet of Patrol enabled cars.
- **Followed Devices:** Users can "follow" multiple devices to ensure that the map will scale to include them, so they are never off-screen.

- **Application for mobile devices:** the city requires an app that can be loaded on mobile devices and linked to the body worn cameras, this would allow instantaneous playback of recorded video without the video being altered in any way.

It should also give you real time updates regarding your body cameras power levels, so you can make the most of its battery life. Ensuring that your camera is focused on the correct area and being able to see what your camera sees through the App's viewfinder and use our wide range of mounts to make the most of its vision.

No video or metadata is stored on the App itself. Once the camera has been docked and connected to Video Management software, all video and metadata will be offloaded from the camera automatically. Users cannot bypass evidential security workflow through the application. videos are stored securely and cannot be deleted, ensuring that all footage will be offloaded to the video management software.

- **Automatic device discovery**
- **Support for third-party ONVIF® compliant cameras and encoders**
- **Support for H.265, H.264, MPEG4, MJPEG and JPEG2000 video compression**
- **Recording schedules**
- **Light and dark user interface themes to suit different viewing environments**
- **Video analytics overlays**
- **UMD timeline filtering with Skip Play**
- **Intelligent Motion, thumbnail and event search**
- **Two-factor authentication**
- **Two-person authenticated recorded video viewing**

Video Infrastructure:

The City of Tshwane has the need to manage thousands of cameras to secure large areas within the City, using a complete solution helps take the risk out of deployment and maintenance. Network Video Recorders and appliances will be required for enhanced system performance and ease of use.

Access Control:

To support an envisaged command Centre and make sure only authorized people has access an access control system is needed, the Access Control system is a physical access control system for enterprise-class installations, designed to help you focus on securing your people, property and assets, while giving you the flexibility to respond to alerts wherever you are. It seamlessly integrates with command Centre software (ACC) to provide you with a powerful and unified security solution that helps you proactively monitor and secure your sites.

It should support the following features:

- Quick online license management
- Email notification
- Event monitoring and schedules
- Identity search, import/export and management
- Panel and door status
- Preconfigured and custom reports
- Firmware updates
- OSDP In/Out reader support
- Backup and restore
- PoE compatible Mercury hardware
- Migration from ACM Embedded Controller
- Mercury and HID hardware interoperability
- Software integrations (video, intrusion, wireless locks and visitor management)
- Support for Mercury Security large, encoded card formats
- Biometric integrations
- Graphic maps and muster dashboard
- Photo import/export
- Alarm management and acknowledgment
- Badging
- Multi-language

- System configuration templates for doors, wiring, input, output and readers, to enable quick Batch Add setup
- Mercury Security panel certificates for added security

3.5 Hosting Solutions across the Voice and Data services spectrum (Part 2.6 of the Pricing Schedule)

Hosting is a relatively new development in the market that has not yet been fully investigated and embraced by Council as to date Council has predominantly been focusing on own bought and deployed technology. With the resultant high capex input cost and continued annual upgrade cost to stay recent as well the exorbitant licensing cost as is being charged.

Council is now looking towards moving towards the hosting environment with all of its IT applications, platforms and services. Thus is it expected of the Service Provider whom will be providing this service to Council to apply the following principles:

- Any solution thus provided must ensure against data loss and must provide in for the insurance cost that might e brought about by any form of data, hardware or software loss. The cost for this must be provided for and will be for the account of the Service Provider.
- The service provided to Council must be built in such a way that it exceeds the minimum industry norms and must be flexible and adaptable to meet changes in Council's needs without having to go the tender route again.
- The Disaster Recovery DC must be TIA certified to ensure that it complies to all set norms and standards.
- The SLA provided must be set at the 99% level.
- Guaranteed power availability beyond 4.4kW per rack, per customer must be guaranteed.
- Strict security controls must be applied to ensure rack isolation is guaranteed.
- Access control and video monitoring, remotely accessible (Remote Hands)
- Advanced fire detection & suppression and in-row precision cooling using the latest free air cooling solutions to reduce cost,
- Prime Location for disaster recovery DC,s must be identified preferably in Tshwane or if not available there, in the larger Gauteng area.
- BMS system (or a comparative system providing the same functions) must be provided to monitor all aspects of the Data Centre (24/7/365).
- Unrestricted Interconnects must be provided for.
- Skilled, technical resources – 6 Certified Uptime Institute Data Centre Design Engineers
- The solution provided must be a Intelligent Data Centre to allow for the use of and deployment of the latest AI technologies to improve security and enhance monitoring.
- Hosted Unified Communication solution must be deployed to ensure that a unified secure voice solution can be done from any location.
- **The following Security principles must be provided for:**
 - 24/7/365 on-site automated security
 - Proximity & Biometric Access Control
 - Digital Security Video Surveillance
 - Follow Me AI controlled surveillance
 - Automated reception visitor control'
 - 512 bit SSL encryption depending on Client Certification
- **The following Support principles must be provided for:**
 - Dark Disaster Recovery Facility
 - 24/7 Data Centre Remote Monitoring
 - Advanced Resolution System
 - Trouble Ticketing System
- **The following Connectivity principles must be provided for:**
 - Unlimited Connectivity
 - Private VLAN via Public & Private NW
 - Geographically redundant DNS
 - Dual-Stack IPv4 and IPv6 Capable

- **The following Power, Fire and Cooling principles must be provided for:**
- A & B redundant Electrical Distribution configured 2(n+n), better than TIA 3 certified.
- Fully redundant in row Cooling System configured 2(n+1), better than TIA 3 certified
- Fire detection and Gas Suppression system (Co2)
- **The following Advanced Monitoring principles must be provided for**
- Remote monitoring systems, infrared cameras with unlimited recording preserved to be provided for
- Biometric access control system throughout the facility must be provided for
- 19 inch 42U racks with electronic access control

3.6 CRM Solution Deployment (i.e. Genesys) for deployment on the Voice and Data services spectrum at all of Councils Customer Care Client facing sites and at various existing Call Centres (Part 2.7 of the Pricing Schedule)

Council's currently deployed call centre deployment is sub-standard and no longer provides in its functional needs and must be replaced totally as it does not provide the interactive services Council needs. Since acquiring the current solution the development has mostly been toward a cloud based and/or hybrid solution to circumvent the exorbitant high capex entry cost. Given that the technology (Hardware/Software) is mostly provided by the Service Provider, the technical detail required, is as below.

Normally Council would not make mention of any product. Given that an example is necessary here to discuss, a Genesys/Edge collaboration product is used as the example here. The Genesys platform/product base is not vendor specific but is technology specific, thus it can thus be used. Should a tenderer have access to a different solution other than the example mentioned, but the solution will provide the same functionality as requested, said tenderer can proceed to do so.

The solution must provide for telephony and unified communication services. These services must collaborate and work together. The Unified Comms functionality must be provided free as part of the solution. Upgrading the licenses to a higher license level, must ensure that the lower-level licensing and functions still be available on the higher level as well.

Full call centre/contact centre features must be available as part of this product/portfolio. The active agent numbers to be thus deployed must be scalable by activating more licenses. The standard cloud licensing solution must allow for seasonal changes where the needs for agents exceed the normal licensing figures. The solution must then allow for the seasonal increase as needed without any additional long term cost impact here.

The following service levels must be provided *(These services must be seen as the minimum requirements per level. Additional functions as per the SP's offered solution may vary upwards and include more, or differently named functions, providing the same functionality as requested below is provided)*

Level 1:

- IVR
- ACD queueing (inbound)
- ACD routing (inbound)
- Preview Dialing
- Progressive Dialing
- Supervisor reporting
- Analytics

Level 2: (Including all of Level 1 functions)

- Additional ACD queueing and routing
- Web Chat
- Email
- Call Back
- Predictive/Priority/Agentless Outbound
- Outbound Blending
- Script Designer
- Dual Channel Call Recording
- Quality Management
- WFM Manual Scheduling

Level 3 (Including all of Level 1 & 2 functions)

- Additional ACD queueing and Routing
- SMS
- Facebook
- Twitter
- Whatsapp
- Screenshare
- Co-Browse
- Screen Recording & Screen Share
- Advanced Workforce Management
- Predictive Engagement
- SAP Integration Add On

(Below is a list of Features that would normally be found with the Genesys range of products that is used as the example here. These features must be seen as the listed range of features (might have different names with other solutions) that is requested here. Any Service Provider that would rather submit a different solution, other than the example used, can do so, providing that the submitted solution makes provision for these or similar/like-wise features)

Para Number	Product Category	Feature	Feature Availability	Unit Cost (Excl Vat)
3.6	Analytics & Reporting	Manual Assignment (Cherry Picking) - Supervisor UI Support	Genesys Cloud User 1, Genesys Cloud User 2, Genesys Cloud User 3	
3.6	Analytics & Reporting	Export: Scheduled Performance View Reports	Genesys Cloud User 1, Genesys Cloud User 2, Genesys Cloud User 3	
3.6	Analytics & Reporting	Export Enhancements: Totals, All Media, Delimiter, Exclude Empty Rows	Genesys Cloud User 1	
3.6	Analytics & Reporting	New: Scheduled Callback View with Export	Genesys Cloud User 1	

3.6	Artificial Intelligence	Operational Bot Reporting (API)	Genesys Cloud User 1, Genesys Cloud User 2, Genesys Cloud User 3	
3.6	Artificial Intelligence	GPE - Adobe Launch Extension Catalog - GPE Snippet	Genesys Cloud User 2, Genesys Cloud User 3	
3.6	Artificial Intelligence	Architect Dialog Engine Bot Flows	Genesys Cloud User 1, Genesys Cloud User 2, Genesys Cloud User 3	
3.6	Artificial Intelligence	GPE - Frequency Capping on Web Action Offers	Genesys Cloud 1 Digital Upgrade 1, Genesys Cloud 1 Digital Upgrade 2, Genesys Cloud 2 Digital Upgrade 1, Genesys Cloud User 2, Genesys Cloud User 3	
3.6	Artificial Intelligence	GPE - Rename Genesys Predictive Engagement Only	No Restriction by User or Required User to Access	
3.6	Digital	Increase Max Wait Time in Flows	Genesys Cloud User 2, Genesys Cloud User 3	
3.6	Digital	External contacts: Bulk API to create, retrieve, update and delete specific contacts and orgs	No Restriction by User or Required User to Access	
3.6	Inbound	CUSTOMER COMMIT - Create new endpoint to adjust priority of interactions in queue	Genesys Cloud 1 Digital Upgrade 1, Genesys Cloud 1 Digital Upgrade 2, Genesys Cloud 2, Digital Upgrade 1, Genesys Cloud User 1, Genesys Cloud User 2, Genesys Cloud User 3	
3.6	Open Platform	Asia Pacific (Mumbai) Region Deployment	No Restriction by User or Required User to Access	
3.6	Open Platform	Asia Pacific (Mumbai) Region Deployment	No Restriction by User or Required User to Access	
3.6	Open Platform	Developer Center Relaunch	No Restriction by User or Required User to Access	
3.6	Open Platform	AppFoundry – Family IDs	No Restriction by User or Required User to Access	
3.6	Open Platform	Document and publish information on Cookies	No Restriction by User or Required User to Access	
3.6	Open Platform	Pre-built integrations for SCIM user management- Okta	No Restriction by User or Required User to Access	
3.6	Open Platform	CLI for admin users	No Restriction by User or Required User to Access	
3.6	Open Platform	Restore Deleted OAuth Clients	No Restriction by User or Required User to Access	

3.6	Self-Service & Automation	Architect - Get External Contacts (Voice)	Genesys Cloud User 1, Genesys Cloud User 2, Genesys Cloud User 3	
3.6	Unified Communications & Collaboration	Phase 1 (Android) - Telephony Enhancements for Mobile including improved call flow, native phone functionality, & mobile WebRTC PoC for Business Users (see notes in description field re: phases)	No Restriction by User or Required User Access to	
3.6	Unified Communications & Collaboration	Zoom Phone Integration	Communicate	
3.6	Unified Communications & Collaboration	Collaborate Chat Message Retention Policy	No Restriction by User or Required User Access to	
3.6	Unified Communications & Collaboration	Phase 1 (iOS) - Telephony Enhancements for Mobile including improved call flow, native phone functionality, & mobile WebRTC PoC for Business Users (see notes in description field re: phases)	No Restriction by User or Required User Access to	
3.6	Unified Communications & Collaboration	Full support for Microsoft Edge (Chromium)	No Restriction by User or Required User Access to	
3.6	Unified Communications & Collaboration	Cross Region support for Lambda Data Action invocations	Genesys Cloud 1 Digital Upgrade 1, Genesys Cloud 1 Digital Upgrade 2, Genesys Cloud 2 Digital Upgrade 1, Genesys Cloud User 1, Genesys Cloud User 2, Genesys Cloud User 3	
3.6	Voice	Stability: Searchable SIP Signaling Repository	No Restriction by User or Required User Access to	
3.6	Voice	DID Improvements for Easy Maintenance - Phase2	No Restriction by User or Required User Access to	
3.6	Workforce Engagement	Move Evaluations and Surveys to Right Panel	Genesys Cloud 1 WEM Upgrade 2, Genesys Cloud 2 WEM Upgrade 1, Genesys Cloud User 2, Genesys Cloud User 3	
3.6	Workforce Engagement	Sentiment Analysis (Spanish) Tagging and Scoring	Genesys Cloud User 3	
3.6	Workforce Engagement	Acoustic Analysis - Backend Detection and Measurement	Genesys Cloud User 3	

3.6	Workforce Engagement	Increase concurrent Screen Recordings beyond the 500 limit	Genesys Cloud 1 WEM Upgrade 2, Genesys Cloud 2 WEM Upgrade 1, Genesys Cloud User 2, Genesys Cloud User 3	
3.6	Workforce Engagement	Record ACD Agent Consult Calls	Genesys Cloud 1 WEM Upgrade 2, Genesys Cloud 2 WEM Upgrade 1, Genesys Cloud User 1, Genesys Cloud User 2, Genesys Cloud User 3	
3.6	Workforce Engagement	Analytics Interactions View: Content Search UI	Genesys Cloud User 3	
3.6	Workforce Engagement	Leaderboards Tab	Genesys Cloud User 3	
3.6	Workforce Engagement	Scorecard Tab	Genesys Cloud User 3	
3.6	Workforce Engagement	Agent Activity	Genesys Cloud User 3	
3.6	Workforce Engagement	Tracking Agent Attrition Reason	Genesys Cloud User 1, Genesys Cloud User 2, Genesys Cloud User 3	
3.6	Workforce Engagement	Generation of Performance Points	Genesys Cloud User 3	
3.6	Workforce Engagement	Gamification Objectives Definition	Genesys Cloud User 3	
3.6	Workforce Engagement	WFM Forecasting: Historical Trends and Validation	Genesys Cloud 1 WEM Upgrade 2, Genesys Cloud 2 WEM Upgrade 1, Genesys Cloud User 3	
3.6	Workforce Engagement	WFM Forecasting: Historical Volume and AHT data import (Genesys Cloud & Hybrid)	Genesys Cloud 1 WEM Upgrade 2, Genesys Cloud 2 WEM Upgrade 1, Genesys Cloud User 3	
3.6	Workforce Engagement	Display Indicator for Agent Comments on Evaluation	Genesys Cloud 1 WEM Upgrade 2, Genesys Cloud 2 WEM Upgrade 1, Genesys Cloud User 2, Genesys Cloud User 3	
3.6		Transcription and Player Synchronization	Genesys Cloud User 3	
3.6	Workforce Engagement	Support Transcription of Recordings (i.e. for On Premise Edge)	Genesys Cloud User 3	
3.6	Workforce Engagement	Topic Manager and Topic Spotting (one Active Program per Org)	Genesys Cloud User 3	
3.6	Workforce Engagement	Tabbed View of Coaching Appointment	No Restriction by User or Required User to Access	
3.6	Workforce Engagement	Genesys Tempo mobile app - Push Notifications	Genesys Cloud 1 WEM Upgrade 2, Genesys Cloud 2 WEM Upgrade 1, Genesys Cloud User 2, Genesys Cloud User 3	

3.6	Workforce Engagement	Schedule Coaching with Optimal Time Slots from WFM	No Restriction by User or Required Access to	
3.6	Workforce Engagement	Support for South African English (en-ZA), Spain Spanish (es-ES), German (de-DE) and Indian English (en-IN) Transcription	Genesys Cloud User 3	
3.6	Workforce Engagement	Analytics Aggregate API Endpoint for Customer Sentiment (Digital Interactions)	Genesys Cloud User 3	
3.6	Workforce Engagement	Support for France French (fr-FR), Canadian French (fr-CA), Italian (it-IT) and Brazilian Portuguese (pt-BR) Transcription	Genesys Cloud User 3	
3.6	Workforce Engagement	Work plan Constraint Validation Enhancements	Genesys Cloud 1 WEM Upgrade 2, Genesys Cloud 2 WEM Upgrade 1, Genesys Cloud User 3	
3.6	Workforce Engagement	Add undo/redo keyboard shortcuts in Work Plans	Genesys Cloud User 3	
3.6	Workforce Engagement	Content Search API: Add Sentiment (Voice)	Genesys Cloud User 3	

The minimum basic hardware and software requirements is as below

Hardware: Host Server requirements

- 8 GB Ram
- At least 8 dedicated CPU Cores
- Hard Disk to support Virtual VM of at least 200GB

Hardware: Host Server requirements

- Servers to be deployed at the 2 main sites, ie, Centurion and Tshwane House/Sammy Marks being the sites where the main telephone lines, and networks data lines,
- The Call RTP stream must be held locally and the SIP signal traverses via the internet link to the cloud.
- The servers must be deployed in pairs to provide for redundancy.
- Server must be running on at least Windows Server 2012 R2 (non-Core) with the most recent applicable version of Hyper-V available and used in the market
- A separate Windows Server 2012 R2 license key for VM
- The following must be installed on the host server:
- PCE-VM-Installer-Hyper-V_Server2012R2.exe
- Virtual Edge image (~6 GB compressed .vhd)
- Virtual Edge Installer (~70 KB compressed .exe)
- Virtual edge pairing token (text file .json)

- A minimum of at least 1 network adapter is required as the minimum spec.
- A dedicated physical host server will have to be provided and used, no other software can be used on this server.
- 8 dedicated cores will have to be provided to ensure optimum audio quality is provided.
- Up to 500 concurrent calls must be accommodated at least – should during deployment it be found that more calls than this is handled
- The N+1 model will be used to determine the final solution deployed here based on the number of concurrent calls as above.

3.7 Audit Functionality to be done on this tender, for the Cellular, Telephone services used by Council and its resultant accounts as well as the Water & Electricity Accounts (Council Consumers Consumption Accounts)

The CoT uses roughly 13,000 cellular services of which 10,165 cellular services are provided by Messrs Vodacom on the following account numbers, B0070164 – 3,304, G0010951 – 3,933. NA092089 – 281, C000783 – 117. Of the remaining cellular services, 95 Voice cellular services are provided by Messrs MTN to Council, with the rest being provided either by Messrs Cell C and Telkom, the latter providing all of the political cellular services to all political role players, councilors and support staff.

These accounts are paid centrally from ICT Budget and are thus managed. However ICT (Council) does not have the trained inhouse expertise or access to the GSM and Fixed line networks, search engines or accounting system to interactively monitor the live monthly accounts on a live environment.

The services of a specialist audit service provider is thus requested as this part of this tender, who will be able to regularly (Daily/Weekly/Monthly) audit all mentioned accounts and identify all possible savings (Recurrent/Short Term/Once Off) and excess charged accounts that would lead to rebates by the different service providers.

The remuneration to this service provider doing the monthly audit will be on risk basis whereby payment is only made on identified savings. No set monthly payment will be made to the service provider appointed for these audits. Including a set monthly payment in the payment model to be entered into between Council and tenderer will lead to immediate cancellation of said tenderers submission to Council.

A % portion of the identified savings will be held back by Council as its saving whilst the Service Provider to be appointed will be entitled to keep the rest of the identified saving back as remuneration for itself. You are now requested to stipulate which portion of the saving you propose will be allocated to Council and which portion will be payable to yourself. Council will keep _____% of the saving whilst the Services provider will keep _____% of the saving of 100% thereof.

Given that this tender is a quite encompassing tender with a number of relevant and peripheral sections contained in it, in the past it was normally provided as part of a larger section of this tender. This part of the tender can be awarded either as part of such a larger service part of this tender or can be awarded to a smaller service provider whose area of expertise this is.

3.8 Other Conditions and Considerations

3.8.1 Quality Assurance

The successful tenderer shall have a quality insurance program to ensure the quality of both product and service.

3.8.2 Environmental

Suppliers shall make recommendations concerning earthing, lighting protection, environmental conditions (ie air conditioning) and other environmental requirements.

3.8.3 Technical Documentation

A detailed network topology/architecture for the above should be proposed and a properly labelled layout (showing, for example, clearly the used and free ports on the switch) of the network design should be handed over to the Client by the successful bidder during commissioning.

Supplier should provide a technical document for each building to the CoT:

- Configuration of the equipment (router, L3 switch)
- A layout of the system with proper labelling
- Troubleshooting procedures
- Complete technical details along with make, model number, complete specification, pamphlets, literature of the systems highlighting the special features must be supplied along with the bid.

All final-handover documentation (at completion of the project) shall be electronically either in word or acrobat format. Drawings to be in Visio format.

3.8.4 Expansion Protocols

Any expansion, ie, where new equipment is deployed or configuration changes, requires that the successful vendor will be responsible to update all diagrams/drawings applicable to the relevant environment. All changes and expansions must be managed in accordance with Council's existing Change Control processes and procedures in line with ITIL best practice. All new projects must be deployed adhering to these principles.

3.8.5 Third Party Network Management Tools

Where applicable, it will be required that certified personnel be deployed on site to manage and maintain all deployed systems and tools. Reporting must be made available either at set times during the month, and also for any ad hoc requests. All information on the systems are confidential and must at all times be routed through the correct channels and protocols.

3.8.6 Product Range

The CoT has a range of products for its Voice and Data switching equipment needs, and proposed solution, must be able to enhance the existing infrastructure with seamless implementation of new equipment and the maintenance of any new equipment installed to the specifications and levels as determined by CoT, to tender.

3.8.7 Current Equipment

The successful bidder would also need to have certified on-site engineers able to maintain and enhance the current infrastructure. The prospective bidders also need to be well versed in installing additional services like video streaming solutions, radio links and other technologies as needed by CoT from time to time.

3.8.8 Materials And Workmanship

Materials and workmanship to be of the highest quality

3.8.8.1 Delivery

New equipment must be delivered within 6 (six) consecutive weeks from date on the official CoT order to the CoT's stores. The Contractor shall bear all risks relating to the goods until provisional acceptance^{28c} at destination. Once delivery is ready, the CoT appointed Project Liaison must be notified and the equipment will then be inspected at the delivery premises.

The supplies shall be packaged so as to prevent their damage or deterioration in transit to their destination. Packaging must be as per accepted international standards for air/surface transportation taking into account the climatic conditions prevailing in South Africa at time of delivery. The packaging shall be disposed by the contractor. Each delivery shall include all necessary documents as specified in the technical specifications (operating and maintenance manuals, drawings, material, conformity or test certificates and certificates etc). The CoT order nr and installation site must be clearly marked on the packaging.

The necessary documents shall include an inventory list of items delivered indicating the serial numbers of the goods provided. All operating and maintenance manuals shall be in English. Each delivery must be accompanied by a statement drawn up by the Contractor. Each package shall be clearly marked in accordance with the order number and equipment it contains. Delivery shall be deemed to have been made when there is written evidence available to both Parties that delivery of the supplies has taken place in accordance with the terms of the contract.

3.8.8.2 Spare Parts

The bidders must have spares and stockholding at their own premises and not in a bonded warehouse or distribution channel warehouse, proof of this must be supplied.

3.8.8.3 Warranty

The Contractor shall warrant that the supplies are new, unused, of the most recent models and incorporate all recent improvements in design and materials, unless otherwise provided in the contract. The Contractor shall further warrant that all supplies shall have no defect arising from design, materials or workmanship, except insofar as the design or materials are required by the specifications, or from any act or omission, that may develop under use of the supplies in the conditions obtaining in the country of the Contracting Authority.

The Contractor shall be responsible for making good any defect in, or damage to, any part of the supplies which may appear or occur during the warranty period and which:

- Results from the use of defective materials, faulty workmanship or design of the Contractor; or
- Results from any act or omission of the Contractor during the warranty period; or
- Appears in the course of an inspection made by CoT.

If any such defect appears or such damage occurs during the warranty period, the Contracting Authority or the Project Manager shall notify the Contractor. If the Contractor fails to remedy a defect or damage within the time limit stipulated in the notification, the Contracting Authority may:

- Remedy the defect or the damage itself, or employ someone else to carry out the work at the Contractor's risk and cost, in which case the costs incurred by the Contracting Authority shall be deducted from monies due to or guarantees held against the Contractor or from both;
- Or, terminate the contract.

The on-site comprehensive warranty shall be for a minimum period of **one year** after commissioning of the equipment. During the warranty period, the call back time of the supplier for any problem will be in accordance to the SLA stipulations. The supplier should provide a replacement equipment to cater for any contingency. Warranty shall include free maintenance of the whole equipment supplied including free replacement of parts. The defects, if any shall be attended to on immediate basis.

3.8.8.4 Loan Equipment

Should damages occur to equipment due to circumstances not covered under warranty for example lightning strikes, the following will apply:

- Contractor will replace equipment as stated under the warranty.

- Contractor will investigate and hand in a report to verify the equipment failure and cause.
- If repairable, a quote must be given for said repairs. CoT will either supply an order for the repairing of the equipment or for new equipment depending on the repair costs.
- If non-repairable, CoT will supply an order for new equipment based on the prices in this document.
- The equipment provided under the warranty will therefore become loan equipment until the repaired or new equipment is installed and commissioned.

3.8.8.4 Pre-Delivery Inspection

CoT's Project Liaison shall have the right to inspect or to test the items to confirm their conformity to the ordered specifications. The supplier shall provide all reasonable facilities and assistance to the inspector at no charge to CoT. In case any inspected or tested goods fail to conform to the specifications, CoT may reject them and supplier shall either replace the rejected goods or make all alterations necessary to meet specification required free of cost to CoT.

3.8.8.6 Verification Process

The CoT Project Liaison shall, during the progress of the delivery of the supplies and before the supplies are taken over, have the power to order or decide:

- the removal from the place of acceptance, within such time or times as may be specified in the order, of any supplies which, in the opinion of the Project Manager, are not in accordance with the contract;
- their replacement with proper and suitable supplies;
- the removal and proper re-installation, notwithstanding any previous test thereof or interim payment therefor, of any installation which in respect of materials, workmanship or design for which the Contractor is responsible, is not, in the opinion of the Project Liaison, in accordance with the contract;
- that any work done or goods supplied or materials used by the Contractor is or are not in accordance with the contract, or that the supplies or any portion thereof do not fulfil the requirements of the contract.

The Contractor shall, with all speed and at his own expense, make good the defects so specified. If the Contractor does not comply with such order, the Contracting Authority shall be entitled to employ other persons to carry out the orders and all expenses consequent thereon or incidental thereto shall be deducted by the Contracting Authority from any monies due or which may become due to the Contractor.

Supplies which are not of the required quality shall be rejected. A special mark may be applied to the rejected supplies. This shall not be such as to alter them or affect their commercial value. Rejected supplies shall be removed by the Contractor from the place of acceptance, if the Project Manager so requires, within a period which the Project Manager shall specify, failing which they shall be removed as of right at the expense and risk of the Contractor. Any works incorporating rejected materials shall be rejected.

3.8.8.7 Final Inspection

Final inspection will take place at the location(s) of delivery. The inspection will test the completed installations and integration and the proper operation confirming the technical validity of the equipment and documents with the design specification documents and quality standards prescribed. This final inspection will be the basis for provisional acceptance. A letter will be sent to the contractor at least one week before the final inspection will take place.

3.8.8.8 Administrative

The Contractor shall comply with administrative orders given by the Contract Manager (Relevant Director in Council). Where the Contractor considers that the requirement of an administrative order goes beyond the scope of the contract, he shall, on pain of breach of contract, notify the Contract Manager (Relevant Director in Council) thereof, giving his reasons, within 30 days of receipt of the order. Execution of the administrative order shall not be suspended because of this notice.

3.8.8.9 Implementation Methodology/Programme

The Contractor shall submit a program of implementation of the contract for the approval of the Project Manager. The program shall contain at least the following:

- The order in which the Contractor proposes to perform the contract including design, manufacture, delivery to place of receipt, installation, testing and commissioning.
- Detailed schedule of all activities and sub activities, allowing weekly and monthly reports to be extracted.
- Job description for every activity or milestone.
- Define delivery contents and time.
- Define final delivery and final operating time.
- The deadlines for submission and approval of the drawings;
- A general description of the methods which the Contractor proposes to adopt for executing the contract; and
- Such further details and information as the Project Manager may reasonably require.

No material alteration to the program shall be made without the approval of the Project Manager. If, however, the progress of the implementation of the contract does not conform to the program, the Project Manager may instruct the Contractor to revise the program and submit the revised program for approval.

Approved drawings, documents, samples and models shall be signed or otherwise identified by the Project Manager and may only be departed from on the Project Manager's instructions. The approval of the drawings, documents, samples or models by the Project Manager shall not relieve the Contractor from any of his obligations under the contract.

3.8.8.10 Model and Serial

All equipment should have a solidly fixed metallic type (or similar) approved label, approx. size 75 X35 mm, model and serial number. The contractor must keep a detailed order book tracking the following:

- Requisition Nr
- Order Nr
- Quote Nr
- The different assets, description and worth
- Serial nr matched to an Asset Nr
- Place deployed
- Any other relevant information.

3.8.8.11 Electricity

Nominal voltage in South-Africa is 220/230V single phase. The quality and stability of the supplied current may undergo fluctuations of more than $\pm 10\%$. All supplied hardware must operate on a 220 V ± 20 V, 50 Hz ± 0.5 Hz, power supply and be suitable for direct connection to the standard power outlets in South Africa.

3.8.8.12 Final Acceptance

Upon expiry of the warranty period or, where there is more than one such period, upon expiry of the latest period, and when all defects or damage have been rectified, the Project Manager shall issue the Contractor a final acceptance certificate, with a copy to the Contracting Authority, stating the date on which the Contractor completed his obligations under the contract to the Project Manager's satisfaction. The final acceptance certificate shall be issued by the Project Manager within 30 days of the expiry of the warranty period or as soon as any repairs ordered have been completed to the satisfaction of the Project Manager.

The contract shall not be considered to have been performed in full until the final acceptance certificate has been signed or is deemed to have been signed by the Project Manager.

Notwithstanding the issue of the final acceptance certificate, the Contractor and the Contracting Authority shall remain liable for the fulfilment of any obligation incurred under the contract prior to the issue of the final acceptance certificate which remains unperformed at the time that final acceptance certificate is issued. The nature and extent of any such obligation shall be determined by reference to the provisions of the contract.

3.8.8.13 Inspection and Testing

The Contractor shall ensure that the supplies are delivered to the place of acceptance in time to allow the Project Manager to proceed with acceptance of the supplies.

The Project Manager shall be entitled, from time to time, to inspect, examine, measure and test the components, materials and workmanship, and check the progress of preparation, fabrication or manufacture of anything being prepared, fabricated or manufactured for delivery under the contract, in order to establish whether the components, materials and workmanship are of the requisite quality and quantity. This shall take place at the place of manufacture, fabrication, preparation or at the place of acceptance.

For the purposes of such tests and inspections, the Contractor shall:

- provide the Project Manager, temporarily and free of charge, with such assistance, test samples or parts, machines, equipment, tools, labour, materials, drawings and production data as are normally required for inspection and testing;
- agree, with the Project Manager, the time and place for tests;
- give the Project Manager access at all reasonable times to the place where the tests are to be carried out.

If the Project Manager is not present on the date agreed for tests, the Contractor may, unless otherwise instructed by the Project Manager, proceed with the tests, which shall be deemed to have been made in the Project Manager's presence. The Contractor shall immediately send duly certified copies of the test results to the Project Manager, who shall, if he has not attended the test, be bound by the test results.

When components and materials have passed the above-mentioned tests, the Project Manager shall notify the Contractor or endorse the Contractor's certificate to that effect.

If the Project Manager and the Contractor disagree on the test results, each shall state his views to the other within 15 days of such disagreement. The Project Manager or the Contractor may require such

tests to be repeated on the same terms and conditions or, if either Party so requests, by an expert selected by common consent. All test reports shall be submitted to the Project Manager, who shall communicate the results of these tests without delay to the Contractor. The results of retesting shall be conclusive. The cost of retesting shall be borne by the Party whose views are proved wrong by the retesting.

In the performance of their duties, the Project Manager and any person authorized by him shall not disclose to unauthorized persons information concerning the undertaking's methods of manufacture and operation obtained through inspection and testing.

3.8.8.14 Suspension

The Project Manager may, by administrative order, at any time, instruct the Contractor to suspend:

- the manufacture of the supplies; or
- the delivery of supplies to the place of acceptance at the time specified for delivery in the implementation programme or, if no time specified, at the time appropriate for it to be delivered; or
- the installation of the supplies which have been delivered to the place of acceptance.

The Contractor shall, during suspension, protect and secure the supplies affected at the Contractor's warehouse or elsewhere, against any deterioration, loss or damage to the extent possible and as instructed by the Project Manager, even if supplies have been delivered to the place of acceptance in accordance with the contract but their installation has been suspended by the Project Manager.

The Contractor shall not be paid any additional expenses if the suspension is:

- necessary by reason of abnormal climatic or other environmental conditions at the place of acceptance
- necessary owing to some default of the Contractor
- necessary for the safety or the proper execution of the contract or any part thereof insofar as such necessity does not arise from any act or default by the Project Manager or the Contracting Authority.

If the period of suspension exceeds 180 days, and the suspension is not due to the Contractor's default, the Contractor may, by notice to the Project Manager, request to proceed with the supplies within 30 days, or terminate the contract.

PART 4: OPERATE AND MAINTAIN THE EXISTING ALCATEL/HUAWEI NETWORK

Part 4: Operate and Maintain the existing Alcatel/Huawei network

4.1 Scope

This section, **Maintenance of the Current Corporate Voice and Data Network**, describes maintenance of the current network. This is a service-oriented approach ie personnel will be contracted from the attached price list.

4.2 Resources

The resources will be responsible for maintenance of the current network and it therefore excluded any new equipment that will be bought under this contract. However, the contractor will also be responsible for the monitoring of the whole network and should any new switches be down, this must be reported to the relevant party for action.

The following resources be provided (refer Section 2):

- 2 x Data switch experts
- 2 x Voice switch experts
- 1 x Operational Manager
- 2 x Junior Technicians

If CoT deem further resources to be necessary, they will be contracted from the price list.

Resources are expected to monitor the network and to respond to any network related problems. They will report directly to the Deputy Director of the applicable section and will have to comply to any ad-hoc requests and service responses ie they are seen as an extension of the applicable section.

4.3 Hardware Related Failures

The maintenance contractor will not be responsible for providing hardware under this section. Hardware related failures can be categorized:

- Hardware failure for new equipment procured under this contract: The failure must reported to the responsible party. Responsible party to follow procedures as set out in Section 2.
- Hardware failure for equipment still under warranty/SLA from previous tender: The failure must reported to the responsible party.
- Hardware failure for equipment not covered by SLA/Warranty: The failure must reported to the responsible party whom in turn need to submit a quotation for replacement equipment (under this contract Section 3).

4.4 Network/Voice Monitoring

4.4.1 Types and Description of Monitoring

The following are normal types of monitoring:

Server Performance

The items being monitored would include such things as CPU usage, server load, disk utilization, memory usage, and entries in selected log files. This monitoring can provide advance warning of impending system problems if the alert thresholds are set properly.

SNMP Monitoring

Almost every piece of equipment in a company network can be monitored via SNMP polling. This methodology uses device specific management information blocks (MIBs) to obtain additional information about a device's health. This information is collected at regular polling intervals. SNMP enabled devices can also be programmed to send SNMP trap information to message handlers in real time

Application Monitoring

Monitor the actual health and well-being of applications. An application can be active but performing so slowly that customers or employees can't use it. For example, this type of monitoring might be used to determine how fast server based applications respond to employees.

Bandwidth Monitoring

It provides a way to monitor usage and optimize the capacity of circuits, identify bottlenecks etcetera.

Agent Based Monitoring

This is a requirement for IT Managers who are serious about operating system and applications monitoring. It is unlikely that 99% uptime can be reached without employing this type of technology. A monitoring software agent would usually operate with a Smart Plug In (SPI) or Knowledge Module (KM) that was designed to monitor specific operating systems and applications such as IIS and SQL.

4.4.2 Network/Voice Monitoring as a Service (QOS)

The tenderers must price network monitoring as a service ie the CoT do not own the software, but are rather charged a monthly amount. This will entail:

- Providing all software and or hardware related to network management. Hardware to include the servers – ie turn-key solution.
- Providing all updates and patches related to network management software
- Displaying the software in the CoT based NOC (Network Operations Centre)
- Providing detailed reports and actions based on the reporting received from the tools.
- Provide for the auditing of all infrastructure and services obtained and rented from any external service providers as well as any service accounts emanating from the rental of these services. Of which the Service provider can bill a % of the saving as a cost to Council. No upfront retainer will be paid here for this service.

4.4.3 Network/Voice Monitoring Purchasing of Software

The tenderer prices the individual software components based on the newest pricing detail. However, CoT is entitled to free version upgrades and patches during the contractual period. The software must be displayed in the NOC and detailed reports and actions must be provided on the reporting received from the tools. Servers will be provided by the CoT, however requirements for the servers to be provided by the vendor. Software to support virtualized environment. This will be as per the provided pricing schedules to this tender.

4.5 Service Provider (SP) Account Auditing, ie, Telkom, Cellular service accounts, etc.

Council uses several different operational accounts provided by different service providers in this market, of which their services culminate in account services, for services provided, being submitted to Council for payment monthly. These accounts are provided by these external service providers to Council and has to be paid lest the accounts be suspended.

Council does not have access to these SP's account systems and also does not have the expertise or knowledge as to how to do trouble shooting searches with regards to the items provided for on said accounts. Thus, to date Council have over time appointed subcontractors through its Voice and Data systems service provider audit these accounts for all aspects of services, mistakes and problems that could result in savings to council.

This SP/Contractor would then on an ongoing basis audit all accounts as identified by ICT to the view of identifying cost saving measures, implement said measures and continue to monitor lest the service providers make mistakes to their own advantage. This being the norm. The service is entirely on a risk basis as the SP/Subcontractor would only be paid on a % of the saving realized, it being a once off saving or a continuous saving that will manifest for the duration of the contract.

Remuneration for any identified and implemented saving, would be on a 40% (Service Provider) & 60% (Council) of which 40% of the identified saving (Monthly & Once off saving) being paid to the service provider here. Proof of these savings must be always submitted with the SP's invoicing. Should an implemented saving not directly reflect on the new months invoice as a (-), the value of the account prior to the implementation of the saving measure, will be taken as the point of departure from whence every new month's saving will be calculated.

The subcontractors to be used must have access to the service accounts search engines and accounting systems to be able to do these searches and implement these saving measures. Proof hereof must be provided. The service accounts to be audited here, can be expanded on by ICT/Council based on new needs as discovered.

4.6 Sniffing

Should the network behave erratic or slow problems are experienced etc, then CoT will request the maintenance contractor to bring in a sniffing expert to determine the cause and to rectify if possible. Sniffing requirements is discussed in Section 2.

4.7 Security

The maintenance contractor must ensure that network security remains intact and must therefore also monitor the network for intrusions and other malicious activity.

4.8 Alcatel Product Range

As mentioned the City has a substantial investment in the current Alcatel Product Range as used in the Corporate network and the successful bidder needs to operate and maintain these. The list of devices is for the data network is as below:

Device Type	Total Number of Devices
OAW-4324	1
OAW-4450	3
OAW-6000	1
OS10K	4
OS6250-8M	8
OS6400-48	1
OS6400-P24	9
OS6400-U24	2
OS6450-P10	10
OS6450-P24	12
OS6450-P48	10
OS6600-P24	50
OS6602-24	35
OS6602-48	20
OS6624	50
OS6648	56
OS6850-24	1
OS6850-24L	3
OS6850-24X	1

OS6850-P24	61
OS6850-P48	16
OS6850-P48L	23
OS6850-U24X	6
OS6850E-P24	49
OS6850E-P24X	8
OS6850E-P48	19
OS6850E-P48X	151
OS6850E-U24X	3
OS6860-P24	3
OS6860-P48	3
OS6860E-P24	47
OS6860E-P48	151
OS6860E-U28	3
OS6865-P16X	10
OS6900-X20	21
OS6900-X40	1
OS6900-X72	4
OS7700	4
OS7800	5
OS9700	4
OS9800	6
	875

MPLS switches:

Device Type	Total Number of Devices
7210 SAS-M	5
7210 SAS-T	11
7705 SAR-8	1

7750 SR-7	5
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Firewalls:

Device Type	Total Number of Devices
Fortigate 3000D	6
Fortigate 3950B	1
Fortigate 200D	6
Fortigate 200E	6
FortiAnalyzer 1000E	1

Software

- Alcatel Omnivista 2500
- Alcatel Omnivista 3600
- Alcatel Omnivista 8770
- Nokia Service Aware Manager
- Clearpass

The voice network:

The network consists of 6 x Alcatel Lucent OmniPcx Enterprise nodes driving a hybrid digital, analog, IP and SIP solution consisting of:

31 x act28 user shelves

- 34 x voice hub user shelves
- 8 x common platform user shelves
- With 10 482 users

Alcatel phone models deployed would primarily be:

- 8018 ± 60%
- 8028 ± 10%
- 8038 ± 10%
- Old model analogue and digital phones ± 20%

**SECTION 5: COMPLIANCY OF ANY NEW
EQUIPMENT & SOLUTION WITH REGARDS
TO THE CURRENT DEPLOYED NETWORK
SOLUTION**

Local Area Network and Wireless Local Area Network

Generic Requirements

The Switching port-folio should provide a solution for access through to Core and Data Centre. They must support the same operating system on all switches in the portfolio, providing a consistent look and feel when configuring access functionality. The whole switch Access Point portfolios must be fully manageable; on the switches every single CLI command can be performed through SNMP. Also, the Web interface is fully implemented; with this GUI everything that is configurable through CLI can be configured through the Web GUI.

Management		
Description	Compliance	Notes
<p>The Network Management System, shall :</p> <ul style="list-style-type: none"> Proactively report lifecycle and obsolescence management of the entire network Infrastructure through an active connection to the main equipment vendor via the cloud. Be a Single converged solution for wired and wireless networks. Be a Simple and cost-effective solution for provisioning, monitoring and troubleshooting Be a Wireless Network Management System 	C/PC/NC	
<p>Wired and Wireless device management is a critical requirement of the network. It shall be highly available, secure, provide location services, and allow application integration to the client.</p>	C/PC/NC	
<p>The system architecture shall have simplified configuration, monitoring and reporting of network services/devices. To help enable IT staff to efficiently design, deploy, maintain, monitor their network infrastructure.</p>	C/PC/NC	
<p>The management application shall allow multiple staff members to manage, monitor, and troubleshoot the network. Capabilities such as policy and template creation shall be included to simplify operation. Integration with location services for ease of locating clients, rogue Access Points, and wireless location tags is required. A single management application that can help enable deployment and management of wired and wireless devices, Access Points, location services, security settings, client troubleshooting, and client monitoring.</p>	C/PC/NC	
<p>The Network Management System (NMS) shall provide detailed application analytics information based on Layer 7 application fingerprinting and deep packet inspection (DPI) classification capabilities of network devices for both Ethernet LAN switches and WLAN Access Points. Detailed application usage (e.g. Facebook, Youtube, Bittorrent, etc...) shall be</p>	C/PC/NC	

reported, and the NMS shall enforce unified (LAN and WLAN) QoS policies.		
The Network Management System (NMS) shall be able to read and analyze standards based sFlow information from network devices and display graphical analytics based on top network consumers (users, switches, ports, applications). The properly plan IT operations, the NMS shall further provide predictive analysis where it reports expected future network behavior in light of historic analyzed data.	C/PC/NC	
The Network Management System (NMS) shall integrate with various server virtualization hypervisor platforms to provide virtual machine and appliance visibility, locating virtual machine ports, and support features like VM motion.	C/PC/NC	
Shall provide converged user, access and identity management across wired and wireless networks.	C/PC/NC	
Shall support network troubleshooting by giving IT complete visibility into connectivity, regardless of device, network or location.	C/PC/NC	
Shall allow maintaining and managing of the end-to-end network infrastructure from a unified platform including RF management, user access visibility, reporting, and troubleshooting along with wired lifecycle functions such as discovery, inventory, configuration and image management, automated deployment, compliance reporting, integrated best practices, and reporting.	C/PC/NC	
The design feature shall allow assess, planning, and configurations required to roll out new network services and technologies. Shall facilitate monitoring of key network resources, devices, and attributes.	C/PC/NC	
Shall allow scheduling for the rollout and implementation of network changes. Changes may include software image updates, or support for user-initiated ad hoc changes and compliance updates.	C/PC/NC	
To operate, predefined dashboards shall provide status monitoring on the overall health of the network and troubleshooting. The system alarms and alerts shall have the ability to respond automatically by taking further action such as trigger an email exchange.	C/PC/NC	
Shall provide wide variety of predefined reports of the network including detailed inventory, configuration, compliance, audit, capacity, end-of-sale, security vulnerabilities etc.	C/PC/NC	
Network administrators shall have a single solution for wired and wireless management, policy provisioning and auditing, network optimization using inputs from advance tools,	C/PC/NC	

troubleshooting, device tracking, security monitoring, and wireless LAN systems management.		
Shall have "heat maps", coverage hole detection capabilities and Voice Audit and Planning Mode tools, administrators shall be able to quickly determine if coverage in an area is suitable for Voice over Wi-Fi applications and/or provide accurate location.	C/PC/NC	
Shall support the industry-standard SNMP protocol	C/PC/NC	
Shall support dedicated Infrastructure appliance or on a VMware server.	C/PC/NC	
Shall support web browser.	C/PC/NC	
Shall support backup and restore.	C/PC/NC	
Management access through authenticated and authorized local database, or through RADIUS or TACACS. User groups shall be defined to allow administrative rights to specific tasks (i.e., monitor only clients, ability to configure controllers, and many other combinations of administrative attributes).	C/PC/NC	
Shall allow virtual domain consists of a set of devices and/or maps and restricts a user's view to information relevant to these devices and maps. In addition, through the use of the virtual domain's filters, users shall be able to configure, view alarms, and generate reports for only their assigned part of the network.	C/PC/NC	
Shall support TACACS and RADIUS authentication along with SSO and Local Authentication.	C/PC/NC	
To ensure continued operation in case of failure, the architecture shall provide a high availability or failover framework.	C/PC/NC	
Shall have the IoT focus dashboard widgets to facilitate the operational management for faster time to decision	C/PC/NC	
Shall support TACACS and RADIUS authentication along with SSO and Local Authentication.	C/PC/NC	

Access Switch 1 Gig Uplinks

Description	Compliance	Notes
The switch shall have 24 or 48 Gigabit Ethernet ports configuration, with or without Power over Ethernet (PoE).	C/PC/NC	
The switch shall have 4 x 1Gbps SFP uplink ports.	C/PC/NC	
The switch shall support Time Domain Reflectometry (TDR).	C/PC/NC	

The switch shall support automated assignment of QoS and Security based on MAC address (range) or IP address (range), preferably using the concept of configurable Network Profiles holding QoS and Security parameters, and which are dynamically assigned.	C/PC/NC	
The switch shall support an auto-configuration process (DHCP, TFTP/FTP) when deployed in a remote location.	C/PC/NC	
Up to four switches, 1RU per node and interconnected with SPF+ interfaces in a loop topology, may be logically merged as a single logical chassis behaving as a single equipment at management, forwarding and control planes.	C/PC/NC	
The switch shall be stackable with up to four switches.	C/PC/NC	
The switch shall support Power over Ethernet standards PoE (802.3af) and PoE+ (802.3at).	C/PC/NC	
The 24-port PoE switch shall have a PoE budget no less than 380W.	C/PC/NC	
The 48-port PoE switch shall have a PoE budget no less than 780W.	C/PC/NC	
The switch shall support advanced layer-2+ features with basic layer-3 routing for both IPv4 and IPv6.	C/PC/NC	
Shall support IEEE 802.az (Energy Efficient Ethernet) for lower TCO.	C/PC/NC	
IEEE 802.1D (STP)	C/PC/NC	
IEEE 802.1p (CoS)	C/PC/NC	
IEEE 802.1Q (VLANs)	C/PC/NC	
IEEE 802.1s (MSTP)	C/PC/NC	
IEEE 802.1w (RSTP)	C/PC/NC	
IEEE 802.1X (Port Based Network Access Protocol)	C/PC/NC	
IEEE 802.3i (10Base-T)	C/PC/NC	
IEEE 802.3u (Fast Ethernet)	C/PC/NC	
IEEE 802.3x (Flow Control)	C/PC/NC	
IEEE 802.3z (Gigabit Ethernet)	C/PC/NC	
IEEE 802.3ab (1000Base-T)	C/PC/NC	
IEEE 802.3ac (VLAN Tagging)	C/PC/NC	

IEEE 802.3ad (Link Aggregation)	C/PC/NC	
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Access Switch 10 Gig Uplinks

Description	Compliance	Notes
24-port and 48-port, PoE and non-PoE with fixed small form factor pluggable (SFP+) 10G interfaces	C/PC/NC	
Support for 10 GigE stacking or 20 GigE stacking	C/PC/NC	
Support for IEEE 802.1AE MACSec encryption	C/PC/NC	
Internal modular AC redundant power supplies	C/PC/NC	
AOS field-proven software with management through web interface (WebView), command line interface (CLI), and Simple Network Management Protocol (SNMP)	C/PC/NC	
MACSec encryption to secure the network edge: 1G/2.5G user and 10G up-link ports	C/PC/NC	
Flexible device and user authentication with (IEEE 802.1x/MAC/captive portal) with Host Integrity Check (HIC) enforcement	C/PC/NC	
Enables deployment of comprehensive and secure BYoD services in enterprise networks such as guest management, device on-boarding, device posturing, application management and dynamic change of authentication (CoA).	C/PC/NC	
Advanced Quality of Service (QoS) and Access Control Lists (ACLs) for traffic control, including an embedded denial of service (DoS) engine to filter out unwanted traffic attacks	C/PC/NC	
Extensive support of user-oriented features such as learned port security (LPS), port mapping, Dynamic Host Configuration Protocol (DHCP) binding tables and User Network Profile (UNP)	C/PC/NC	
Advanced layer-2+ features with basic layer-3 routing(RIP&OSPF) for both IPv4 and IPv6+	C/PC/NC	
Triple speed (10/100/1G/2.5G) user interfaces and fiber interfaces (SFPs) supporting 1000Base-X or 10GBase-X optical transceivers	C/PC/NC	

10 G uplinks	C/PC/NC	
Wire-rate switching and routing performance	C/PC/NC	
High availability with virtual chassis concept, redundant stacking links, primary/secondary unit failover, hot-swappable power options and configuration rollback	C/PC/NC	
Enhanced Voice over IP (VoIP) and video performance with policy-based QoS	C/PC/NC	
Future-ready support for multimedia applications with wire-rate multicast	C/PC/NC	
Airgroup™ Network Services for Bonjour speaking devices provides consistent experience over wireless and wired networks	C/PC/NC	
IEEE 802.3af, IEEE 802.3at and IEEE802.3bt PoE support for IP phones, wireless LAN (WLAN) access points and video cameras	C/PC/NC	
Switch capacity with all 1G/10G/20G ports (all ports, full duplex) 24 port (132 Gb/s) 48 ports (180 Gb/s)	C/PC/NC	
Should support MultiGigabit interfaces (2.5 or 5 G).	C/PC/NC	
24-port and 48-port, PoE and non-PoE with fixed small form factor pluggable (SFP+) 10G interfaces	C/PC/NC	
Support for 10 GigE stacking or 20 GigE stacking	C/PC/NC	
Support for IEEE 802.1AE MACSec encryption	C/PC/NC	

Aggregation Switch

Description	Compliance	Notes
24-port and 48-port, PoE and non-PoE with fixed small form factor pluggable (SFP+) and QSFP 10G/25Gig/40Gig and 100Gig interfaces	C/PC/NC	
Support for 42 GB/s or 84 GB/s aggregate STACKING	C/PC/NC	
Support for IEEE 802.1AE MACSec encryption	C/PC/NC	
Internal modular AC redundant power supplies	C/PC/NC	

AOS field-proven software with management through web interface (WebView), command line interface (CLI), and Simple Network Management Protocol (SNMP)	C/PC/NC	
MACSec encryption to secure the network edge: On all up-link ports	C/PC/NC	
Flexible device and user authentication with (IEEE 802.1x/MAC/captive portal) with Host Integrity Check (HIC) enforcement	C/PC/NC	
Enables deployment of comprehensive and secure BYoD services in enterprise networks such as guest management, device on-boarding, device posturing, application management and dynamic change of authentication (CoA).	C/PC/NC	
Advanced Quality of Service (QoS) and Access Control Lists (ACLs) for traffic control, including an embedded denial of service (DoS) engine to filter out unwanted traffic attacks	C/PC/NC	
Extensive support of user-oriented features such as learned port security (LPS), port mapping, Dynamic Host Configuration Protocol (DHCP) binding tables and User Network Profile (UNP)	C/PC/NC	
Advanced layer-2+ features with advance layer-3 routing Multiple VRF <ul style="list-style-type: none"> • Static routing • Routing Information Protocol (RIP)v1 and v2 • Open Shortest Path First (OSPF) v2 with Graceful Restart • Intermediate System to Intermediate System (IS-IS) with Graceful Restart • Border Gateway Protocol (BGP) v4 with Graceful Restart • Generic Routing Encapsulation (GRE) and IP/IP tunneling • Virtual Router Redundancy Protocol (VRRPv2) 	C/PC/NC	
Triple speed (10/100/1G/2.5G/5G) user interfaces and fiber interfaces (SFPs) supporting 1000Base-X, 10GBase-X, QSFP+ optical transceivers	C/PC/NC	
10 G,25G,40G and 100G uplinks	C/PC/NC	
Wire-rate switching and routing performance	C/PC/NC	
High availability with virtual chassis concept, redundant stacking links, primary/secondary unit failover, hot-swappable power options and configuration rollback	C/PC/NC	
Enhanced Voice over IP (VoIP) and video performance with policy-based QoS	C/PC/NC	
Future-ready support for multimedia applications with wire-rate multicast	C/PC/NC	
Airgroup™ Network Services for Bonjour speaking devices provides consistent experience over wireless and wired networks	C/PC/NC	

IEEE 802.3af, IEEE 802.3at and IEEE802.3bt PoE support for IP phones, wireless LAN (WLAN) access points and video cameras	C/PC/NC	
Switch capacity up to 1,020 Tb/s	C/PC/NC	
Application monitoring and enforcement	C/PC/NC	
Extensive security features for network access control (NAC), policy enforcement and attack containment	C/PC/NC	
Shortest path bridging (SPB-M) for bridging and routed services	C/PC/NC	
<ul style="list-style-type: none"> • Advanced guest management capabilities • Device on-boarding and automated IEEE 802.1x provisioning • Device posture/health check and fingerprinting • Application management 	C/PC/NC	

Core Switch

Description	Compliance	Notes
From 2.16 Tbps to 6,4 Tbps of bandwidth in a 1 RU form factor	C/PC/NC	
Shall support different models that can integrate into one virtual chassis 48 fixed 1/10-Gbps SFP+ ports,32 fixed 100 Gbps Ports and 24 Port fixed 1/10Gig ports	C/PC/NC	
Shall support 10Gig,25Gig,40Gig and 100Gig Port combinations in one virtual chassis	C/PC/NC	
Shall support up to 72 SFP+ ports by splitting each available QSFP28 ports into 4 x 10G/25 SFP+ ports.	C/PC/NC	
Latency of less than or equal to 650 nanoseconds	C/PC/NC	
Front-to-back or back-to-front airflow configurations	C/PC/NC	
1+1 redundant hot-swappable power supplies	C/PC/NC	
Shall allow upgrade to entire operating system without impacting data forwarding for a lossless fabric environment	C/PC/NC	
Shall have cut-through switching on all the ports	C/PC/NC	
Shall support, with multiple node virtualization, a mix-and-match architecture with various switch models providing a virtual chassis with flexible port models of 1/10/25/40/100G fiber or 1G/10G copper connectivity.	C/PC/NC	
Shall support a virtual chassis architecture of up to 6 switches for future scalability.	C/PC/NC	

Shall support Shortest Path Bridging (SPB) protocol for network service virtualization.	C/PC/NC	
Shall allow Link aggregation w/ loop free active-active topology w/o STP.	C/PC/NC	
Shall support equal-cost multipath packet forwarding	C/PC/NC	
Shall support virtualization	C/PC/NC	
Shall support link aggregation of up to 16 links	C/PC/NC	
Shall support Link Aggregation Control Protocol (LACP): IEEE 802.3ad	C/PC/NC	
Shall allow link aggregation with loop free active-active topology without STP	C/PC/NC	
Shall run Layer-3 routing protocols	C/PC/NC	
The switch operating system source code shall undergo independent verification and validation by a third-party company specializing in software and cyber security to ensure total operating system hardening.	C/PC/NC	
The switch operating system distribution shall support multiple operating system copies each with different diversified software mapping to prevent exploitation.	C/PC/NC	
Shall support the following industry standards: IEEE 802.1D: Spanning Tree Protocol, IEEE 802.1p: CoS prioritization, IEEE 802.1Q: VLAN tagging, IEEE 802.1Qaz: Enhanced transmission selection, IEEE 802.1Qbb: Per-priority Pause, IEEE 802.1s: Multiple VLAN instances of Spanning Tree Protocol, IEEE 802.1w: Rapid reconfiguration of Spanning Tree Protocol, IEEE 802.3: Ethernet, IEEE 802.3ad: LACP with fast timers, IEEE 802.3ae: 10 Gigabit Ethernet, RMON, IEEE 1588-2008: Precision Time Protocol (Boundary Clock)	C/PC/NC	
Shall allow Scalable integrated security service into network fabric.	C/PC/NC	
802.3X Ethernet PAUSE auto-negotiation enhancements	C/PC/NC	
BGP,OSPF,Virtual Router Redundancy Protocol (VRRP)	C/PC/NC	
VLAN-tagged Layer 3 logical interfaces	C/PC/NC	
BPDU protection for spanning-tree protocols	C/PC/NC	
Loop protection for spanning-tree protocols	C/PC/NC	
Root protection for spanning-tree protocols	C/PC/NC	

Spanning-Tree (All variants)	C/PC/NC	
Private VLANs	C/PC/NC	
Q-in-Q Tunneling & VLAN Translation	C/PC/NC	
Layer 2 Tunneling Protocol	C/PC/NC	
Reflective relay (IEEE 802.1bg)	C/PC/NC	
Bidirectional Forwarding Detection (BFD)	C/PC/NC	
Intermediate System-to-Intermediate System (IS-IS)	C/PC/NC	
Routing Information Protocol versions 1 and 2 (RIPv1 and RIPv2)	C/PC/NC	
Virtual router routing instances for multicast protocols	C/PC/NC	
Protocol Independent Multicast sparse mode (PIM SM)	C/PC/NC	
Remote port mirroring	C/PC/NC	
sFlow monitoring technology	C/PC/NC	
Simple Network Management Protocol version 3 (SNMPv3)	C/PC/NC	
Link fault propagation	C/PC/NC	
DHCP snooping	C/PC/NC	
Resilient hardware system architecture.	C/PC/NC	
VXLAN snooping for dynamic real-time multi-tenant visibility and SLA policy enforcement	C/PC/NC	
Integrated overlay (VXLAN) and underlay internetworking automated with OpenStack neutron plug-in	C/PC/NC	
Intelligent policy control through OpenFlow 1.3.1/1.0.	C/PC/NC	
Hardware virtual routing and forwarding (VRF) support for VRF-lite and IP Virtual Private Network (IP VPN) SPB for bridging and routed services, Multiple VLAN Registration Protocol (MVRP) and dynamic Virtual Network Profiles (VNP).	C/PC/NC	
Zero-touch provisioning and network automation with out-of-the-box plug-and-play Auto-Fabric for automatic protocol and topology discovery	C/PC/NC	

Unified virtual chassis with support for up to 6 switches.	C/PC/NC	
Flexible and programmable Layer 2, Layer 3, ACL, QoS network virtualization function abstracted into a single virtual routing and bridging instance	C/PC/NC	
embedded scripting capabilities supporting Python and Bash programming.	C/PC/NC	
Fully programmable RESTful web services interface with XML and JSON support. The API enables access to Command Line Interface (CLI) and individual management information base (MIB) objects.	C/PC/NC	
Powerful WebView Graphical Web Interface through HTTP and HTTPS over IPv4/IPv6	C/PC/NC	
Full configuration and reporting using Simple Network Management Protocol (SNMP) v1/2/3 to facilitate third-party network management over IPv4/IPv6	C/PC/NC	
Multiple microcode image support with fallback recovery	C/PC/NC	
sFlow v5 and Remote Network Monitoring (RMON)	C/PC/NC	
Dynamic Host Configuration Protocol (DHCP) relay	C/PC/NC	
Built-in CPU protection against malicious attacks	C/PC/NC	
Dynamic Virtual Network Profiles (vNP)	C/PC/NC	
Multiple VRF	C/PC/NC	
Static routing with route labeling	C/PC/NC	
Routing Information Protocol (RIP) v1 and v2	C/PC/NC	
Open Shortest Path First (OSPF) v2 with graceful restart	C/PC/NC	
Intermediate System to Intermediate System (IS-IS) with graceful restart	C/PC/NC	
Border Gateway Protocol (BGP) v4 with graceful restart	C/PC/NC	
Generic Routing Encapsulation(GRE) and IP/IP tunneling	C/PC/NC	
Virtual Router Redundancy Protocol (VRRPv2)	C/PC/NC	
DHCP relay (including generic UDP relay)	C/PC/NC	

USB port	C/PC/NC	
Out-of-band Ethernet port	C/PC/NC	
Shall support the technology of multiple switch virtualization which consists of multiple interconnected switches becoming a single node at control, forwarding, and management planes. The resulting virtual chassis shall have a single IP address and MAC address for the management and data planes, and shall support link aggregation (802.3ad) with ports spread across different switches for full redundancy and load balancing.	C/PC/NC	

WLAN

Solution & Architecture Overview		
Description	Compliance	Notes
1. The wireless LAN solution shall be based on IEEE 802.11 and shall be WFA certified for Data and Voice.	C/PC/NC	
2. The wireless LAN solution shall propose a distributed control function (no centralized controller) with inherent support for redundancy, elimination of traffic bottlenecks and lowered latency.	C/PC/NC	
3. The wireless LAN solution shall rely on a distributed data plane.	C/PC/NC	
<p>4. The wireless LAN solution shall come in two flavors allowing three deployment types:</p> <ul style="list-style-type: none"> ▪ “small deployment” for a mono-site deployment with Access Points spread over a single management VLAN and operating in a common RF environment ▪ “large deployment” for a multi-site deployment with Access Points spread over multiple management VLANs, and that may operate in a different RF environment ▪ “Cloud deployment” for any deployment (single or multi-site) with Centralized Management in the cloud. <p>For all deployment types, the solution shall offer advanced features like Intrusion Detection/Prevention or a Captive Portal to manage guests’ connections without additional third-party components.</p>	C/PC/NC	
5. The wireless LAN solution shall propose a centralized management function, irrespective of the deployment model (“small” or “large”) as described previously [4].	C/PC/NC	

6. The wireless LAN solution shall scale up to 4096 Access Points for the “large deployment” model [4], 255 Access Points for the “small deployment” model [4] and thousands of users while guarantee ease of deployment and expansion (to be described).	C/PC/NC	
7. The “small deployment” option previously described [4] shall not require any license fee.	C/PC/NC	
8. The “large deployment” option previously described [4] shall rely on a licensing model that is as simple as possible, with one license per AP including all functions (basic or advanced) handled by the AP.	C/PC/NC	
9. The “small deployment” (255 APs) option shall allow an easy migration to a “large deployment” (4096 APs) when needed.	C/PC/NC	
10. The wireless LAN solution shall have been designed with scalability in mind in order to allow the 4096 APs limit to be extended in the future (to be described) <i>without requiring new equipment or deployment design change</i> .	C/PC/NC	
11. For a “small deployment” scenario as described previously [4], the wireless LAN solution shall propose built-in DHCP, DNS and NAT capabilities.	C/PC/NC	
12. The WLAN solution shall allow to connect two distant sites over a wireless point-to-point link.	C/PC/NC	
13. The WLAN solution shall allow to connect multiple distant sites over wireless. (Mesh Network)	C/PC/NC	
14. The WLAN solution shall allow easier deployment of Mesh Networks.	C/PC/NC	
15. The WLAN solution shall support IPv6 for wireless clients.	C/PC/NC	
16. The WLAN solution shall support L2GRE tunneling with a highly flexible architecture.	C/PC/NC	
17. The WLAN solution shall support RAP functionality, allowing an AP to secure the traffic sent over an untrusted network like the Internet. Should use the latest security standards like WireGuard.	C/PC/NC	

Access Control, Authentication and Encryption

Description	Compliance	Notes
15. The wireless LAN solution shall support MAC based authentication.	C/PC/NC	

16. The wireless LAN solution shall support 802.1x based authentication.	C/PC/NC	
17. At least for a “large deployment” scenario as described previously [4], the WLAN solution shall include a built-in RADIUS server for 802.1x and MAC authentication that shall not be proposed as a separate product.	C/PC/NC	
18. The built-in RADIUS server as described previously ([17]) shall be able to interface with an external authentication server (Radius, LDAP, Active Directory): Free Radius, Microsoft NPS Radius Server, Microsoft AD, OpenLDAP...	C/PC/NC	
19. The built-in RADIUS server as described previously [17] shall support at least following EAP types: EAP-MD5, EAP-TLS, EAP-TTLS, EAP-PEAP, EAP-PEAP-MSCHAPv2, EAP-GTC.	C/PC/NC	
20. At least for a “large deployment” scenario as described previously [4], the WLAN solution shall include a built-in RADIUS server for 802.1x and MAC authentication that shall not be proposed as a separate product.	C/PC/NC	
21. The built-in RADIUS server as described previously ([20]) shall be able to interface with an external authentication server (Radius, LDAP, Active Directory): FreeRadius, Microsoft NPS Radius Server, Microsoft AD, OpenLDAP...	C/PC/NC	
22. The built-in RADIUS server as described previously [20] shall support following EAP types: EAP-MD5, EAP-TLS, EAP-AKA, EAP-PEAP, EAP-FAST, EAP-SIM, EAP-TTLS, EAP-GTC.	C/PC/NC	
23. At least for a “large deployment” scenario as described previously [4], the wireless LAN solution shall have the ability to utilize RADIUS attributes to assign each authenticated user/device to a specific ROLE. A role defines a VLAN and enforces security and QoS through the use of role-based ACLs and QoS policies that can be directly integrated with the roles defined within existing authentication servers.	C/PC/NC	
24. At least for a “large deployment” scenario as described previously [4], the wireless LAN solution shall include and handle a flexible and adaptive RADIUS attributes dictionary allowing to add an IETF or any vendor specific RADIUS attribute.	C/PC/NC	
25. If the built-in RADIUS server as described previously ([20]) shall interface with an external RADIUS server, then it shall be able to interface with multiple and distinct RADIUS servers depending on specific access conditions (SSID name, Access Point IP address, identity of the connecting user...)	C/PC/NC	
26. The wireless LAN solution shall support following link layer encryption standards: WPA2_AES, WPA2_TKIP, WPA_AES,	C/PC/NC	

WPA_TKIP, DYNAMIC_WEP, WPA_PSK_AES, WPA_PSK_TKIP, WPA_PSK_AES_TKIP, WPA2_PSK_AES, WPA2_PSK_TKIP, WPA3_PSK_SAE_AES, WPA3_SAE_AES.		
27. The wireless LAN solution shall support the latest WPA3 encryption standard.	C/PC/NC	
28. The wireless LAN solution shall support following 802.1x supplicants: Windows 7, 10, MAC OS, IOS, Android, Chromebook...	C/PC/NC	
29. The wireless LAN solution shall support time-based policy access to a SSID.	C/PC/NC	
30. Irrespective of the deployment model ("small" or "large") as described previously [4], the wireless LAN solution shall propose a "Guest" management solution based on an embedded and built-in Captive Portal providing web based authentication for guests and visitors.	C/PC/NC	
31. The Guests Captive Portal included in the wireless LAN solution shall allow a customizable look & feel.	C/PC/NC	
32. The Guest management solution shall allow, at least, following authentication methods: <ul style="list-style-type: none"> • Username & Password • Access Code • Simple Term & Condition acceptance 	C/PC/NC	
33. A least for a "large deployment" scenario as described previously [4], the Guest management solution shall allow guests to authenticate using their favorite social network account (supported social networks shall be listed).	C/PC/NC	
34. Irrespective of the deployment model ("small" or "large") as described previously [4], the wireless LAN solution shall offer the possibility to build a walled garden environment (with configured domain names) for guest users before they authenticate.	C/PC/NC	
35. The Guest management solution shall allow non-IT staff (e.g., a receptionist) to create temporary guest accounts.	C/PC/NC	
36. A least for a "large deployment" scenario as described previously [4], the WLAN solution shall allow guest self-registration and employee sponsored access.	C/PC/NC	
37. The WLAN solution shall allow guests accounts bulk provisioning by importing a file containing guest accounts information and shall propose a template import file.	C/PC/NC	

38. A least for a “large deployment” scenario as described previously [4], the WLAN solution shall allow to create batch of guests accounts just by specifying a guest prefix and a number of accounts to be created.	C/PC/NC	
39. A least for a “large deployment” scenario as described previously [4], the WLAN solution shall allow to define networking SLAs (security, QoS...) to be applied to guests network connections.	C/PC/NC	
40. A least for a “large deployment” scenario as described previously [4], the WLAN solution shall allow to define and apply “data quotas” to guests to limit access based on total traffic consumed.	C/PC/NC	
41. A least for a “large deployment” scenario as described previously [4], the WLAN solution shall allow guests SMS notification.	C/PC/NC	
42. Irrespective of the deployment model (“small” or “large”) as described previously [4], the wireless LAN solution shall offer the possibility to interface with a third-party external Captive Portal for guests authentication, without necessarily forcing the traffic to through any server or appliance.	C/PC/NC	
43. A least for a “large deployment” scenario as described previously [4], the WLAN solution shall implement strict guests traffic isolation.	C/PC/NC	
44. For a “small deployment” scenario as described previously [4], the Guest management solution shall not require any license fee.	C/PC/NC	
45. For a “large deployment” scenario as described previously [4], the Guest management solution shall allow setting a validity period for an authenticated device, in order to avoid entering credentials each time a guest access the network.	C/PC/NC	
46. A least for a “large deployment” scenario as described previously [4], the WLAN solution shall implement strict guests traffic isolation.	C/PC/NC	
47. The WLAN solution shall allow data retention on user sessions when providing Guest Wi-Fi.	C/PC/NC	
48. In the framework of a “large deployment” scenario as described previously [4], the WLAN solution shall support BYOD and be able to provide device on-boarding that is as simple as possible and without requiring additional third-party components.	C/PC/NC	
49. The on-boarding process of employee devices shall be based on employee corporate accounts.	C/PC/NC	

50. The BYOD application shall allow setting the validity period for the device, and the maximum number of devices per account.	C/PC/NC	
51. The licensing model of the BYOD application shall be based on the number of on-boarded devices.	C/PC/NC	
52. The WLAN solution shall support DSSSS to allow the use of different Pre-Shared Keys (PSK) in the same SSID at the same time	C/PC/NC	
53. The WLAN solution shall support the WIFI4EU initiative from the EU. That includes support for Hotspot 2.0 (Passpoint Wi-Fi Alliance certification program)	C/PC/NC	
54. The WLAN solution shall support the EDUROAM authentication hierarchy for Universities and Research Centers	C/PC/NC	

RF Management

Description	Compliance	Notes
55. The WLAN solution shall allow automatic and/or manual RF management (channel and power).	C/PC/NC	
56. The WLAN solution shall support Short Guard Interval.	C/PC/NC	
57. The WLAN solution shall be smart enough to guide a new client to the optimal band/channel (2.4GHz/5GHz) considering, at a given time, both the number of associated clients on each band, and the medium utilization.	C/PC/NC	
58. If no band/channel (2.4GHz/5GHz) is overloaded (high medium utilization) or crowded (high client count), an AP shall by default guide a new client to the 5GHz band.	C/PC/NC	
59. Even if the 5GHz band is not overloaded but is crowded (high client count), an AP shall guide a new client to the 2.4GHz band.	C/PC/NC	
60. If a band/channel (2.4GHz/5GHz) is overloaded (high medium utilization) and even if it is not crowded, an AP shall guide a new client to the less loaded band/channel.	C/PC/NC	
61. If all bands/channels (2.4GHz/5GHz) are overloaded (high medium utilization) and no band/channel is crowded, an AP shall guide a new client to the 5GHz band.	C/PC/NC	
62. If all bands/channels (2.4GHz/5GHz) are overloaded (high medium utilization) and the 5GHz is crowded, an AP shall guide a new client to the 2.4GHz band.	C/PC/NC	

63. When a new client discovers multiple APs to associate to, the new client shall be guided to the AP that has the fewest associated clients, thus allowing smart/dynamic load balancing.	C/PC/NC	
64. The WLAN solution shall force clients to the 5GHz only when there are dual band capable.	C/PC/NC	
65. The WLAN solution shall deny connection to an AP when the signal of the client becomes too weak and disconnect a client to force it to roam when the signal becomes too weak.	C/PC/NC	
66. The WLAN solution shall support the IEEE 802.11v and 802.11k standards to facilitate network guided roaming.	C/PC/NC	
67. The WLAN solution shall support data rate control to encourage clients to roam at higher rates.	C/PC/NC	
68. The WLAN solution shall propose APs that can scan the air in order to provide interfering/rogue APs and wireless attacks detection and shall not rely on dedicated scanning equipment.	C/PC/NC	
69. The scanning function of the APs shall not impact active voice or video calls (SIP and H.323).	C/PC/NC	
70. At least for the 5GHz band, the WLAN solution shall allow to define the list of channels which can participate in dynamic configuration.	C/PC/NC	
71. The WLAN solution shall allow to define a range of transmit power per band (min & max) even if power settings are configured for automatic and dynamic assignments.	C/PC/NC	
72. The WLAN solution shall propose Access Points which can all be configured and deployed in a dedicated scanning mode.	C/PC/NC	
73. The WLAN solution shall propose Access Points with wireless packet capture capabilities.	C/PC/NC	
74. The WLAN solution shall make it simple to review the roaming history for a given client device.	C/PC/NC	
75. The WLAN solution shall allow long interval background scanning.	C/PC/NC	

Intrusion Detection and Prevention

Description	Compliance	Notes
76. The WLAN solution have wIDS/wIPS capabilities with no additional and dedicated equipment nor additional license.	C/PC/NC	

77. The WLAN solution shall be able to identify Interfering APs.	C/PC/NC	
78. The WLAN solution shall be able to identify and contain Rogue APs.	C/PC/NC	
79. The WLAN solution shall allow the definition of flexible policies to classify an AP as a Rogue AP.	C/PC/NC	
80. A least for a “large deployment” scenario as described previously [4], the WLAN solution shall allow the definition of flexible AP attacks detection policies.	C/PC/NC	
81. A least for a “large deployment” scenario as described previously [4], the WLAN solution shall allow the definition of flexible client attacks detection policies.	C/PC/NC	
82. A least for a “large deployment” scenario as described previously [4], the WLAN solution shall be able to blacklist a WLAN client, either manually or automatically after a client attack has been detected.	C/PC/NC	
83. A least for a “large deployment” scenario as described previously [4], the WLAN solution shall allow to configure a blacklist duration.	C/PC/NC	
84. A least for a “large deployment” scenario as described previously [4], the WLAN solution shall allow to configure an authentication failure times threshold.	C/PC/NC	

Quality of Service

Description	Compliance	Notes
85. At least for a “large deployment” scenario as described previously [4], the WLAN solution shall offer WLAN Access Points that shall support fine-tuned Quality of Service (QoS) allowing following actions based on the identity of the connecting user: - ACL based (source/destination IP address and TCP/UDP ports) permit/deny decision - QoS priority marking and queuing	C/PC/NC	
86. The wireless LAN solution shall comply with the 802.11e WMM standard and shall allow for custom QoS tag (802.1p/DSCP) to WMM queue mapping.	C/PC/NC	
87. A least for a “large deployment” scenario as described previously [4], the WLAN solution shall have traffic Deep Packet Inspection (DPI) capabilities allowing an administrator to take control of applications (even if they all run on top of the HTTP or HTTPs protocols), including not only blocking applications, but also allowing to prioritize and rate-limit applications.	C/PC/NC	

88. The wireless LAN solution shall be able to define and guarantee bandwidth based on the SSID. At least for a “large deployment” scenario as described previously [4], it shall also be to define and guarantee bandwidth based on the user/device role.	C/PC/NC	
89. At least for a “large deployment” scenario as described previously [4], the WLAN solution shall allow to set the maximum number of clients per band/radio and per AP for a specific SSID.	C/PC/NC	
90. The wireless LAN solution shall propose broadcast traffic optimization mechanisms (including Broadcast filtering and Broadcast/Multicast Key rotation).	C/PC/NC	
91. Leveraging its IGMP snooping capabilities, the wireless LAN solution shall be able to optimize multicast traffic by converting multicast traffic to unicast traffic.	C/PC/NC	
92. At least for a “large deployment” scenario as described previously [4], Multicast optimization shall stop on high load.	C/PC/NC	
93. The wireless LAN solution shall propose the WMM Automatic Power Save delivery (APSD) feature to allow clients conserve battery life.	C/PC/NC	
94. The wireless LAN solution shall by default identify Voice and Video (SIP and H323) calls and provide appropriate treatment.	C/PC/NC	

Mobility

Description	Compliance	Notes
95. The WLAN solution shall support Layer 2 roaming capabilities across APs with no special client-side software required.	C/PC/NC	
96. At least for a “large deployment” scenario as described previously [4], the WLAN solution shall support Layer 3 roaming across APs with no special client-side software required.	C/PC/NC	
97. The WLAN solution shall support both <i>Opportunistic Key Caching (802.11k)</i> .	C/PC/NC	
98. The WLAN solution shall comply with the 802.11k Radio Resource Management standard.	C/PC/NC	
99. The WLAN solution shall comply with the 802.11v BSS Transition Management standard.	C/PC/NC	

Wireless LAN Services

Description	Compliance	Notes
100. The solution shall provide BYOD Zeroconf services for mDNS	C/PC/NC	
Management		
Description	Compliance	Notes
101. The wireless LAN solution shall propose a centralized management function based on an embedded and secure WEB GUI, irrespective of the deployment model (“small” or “large”) as described previously [4].		
102. In addition to a centralized management function, all Access Points of the wireless LAN solution shall propose a dedicated web interface to monitor and configure a single AP in the global infrastructure, irrespective of the deployment model (“small” or “large”) as described previously [4].	C/PC/NC	
103. If the centralized management function requires the deployment of a dedicated application, this one shall be in the form of a Virtual Appliance that can be installed on top of any of following hypervisors: VMware ESXi, Microsoft HyperV and Oracle VirtualBox.	C/PC/NC	
104. At least for a “large deployment” scenario as described previously [4], the centralized management function shall be able to handle wired equipment (switches) management for a “unified management” approach.	C/PC/NC	
105. The WLAN solution shall be able to automatically discover new APs added to the network.	C/PC/NC	
106. At least for a “large deployment” scenario as described previously [4], the centralized management function shall allow to display the physical topology of the network, including wireless links between APs.	C/PC/NC	
107. The centralized management function shall allow per equipment configuration and software backup and restore, and bulk backup and restore	C/PC/NC	
108. The centralized management function shall allow access to all WIPS/WIDS features.	C/PC/NC	
109. At least for a “large deployment” scenario as described previously [4], the centralized management function shall offer, based on an application signature file, insight at application layer (e.g. facebook.com, youtube.com, salesforce.com...) even if the applications run on top of the	C/PC/NC	

HTTP or HTTPS protocols. It shall also allow control of those applications.		
110. At least for a “large deployment” scenario as described previously [4], the centralized management function shall allow to display the Wi-Fi coverage quality within a given area (“Heat Map”).	C/PC/NC	
111. At least for a “large deployment” scenario as described previously [4], the centralized management function shall allow, before deployment, to determine optimal placement of Access Points (APs) in a location (RF Planning).	C/PC/NC	
112. At least for a “large deployment” scenario as described previously [4], the centralized management function shall be collocated with the Guest and BYOD management applications.	C/PC/NC	

Indoor Access Point – Basic

Description	Compliance	Notes
The WLAN solution shall propose an 802.11ax MU-MIMO indoor tetra-radio AP Access Point (2,4GHz, 5GHZ, Full Band Scanning dedicated Radio and Bluetooth/Zigbee): “Error! Reference source not found.”	C/PC/NC	
The “Basic” Access Point shall offer native BLE5.1/Zigbee radio support.	C/PC/NC	
The “Basic” Access Point shall support up to 32 SSIDs (16 per radio).	C/PC/NC	
The “Basic” Access Point shall offer up to 1,2Gbps throughput on the 5Ghz band and up to 573Mbps throughput on the 2.4GHz band.	C/PC/NC	
The “Basic” Access Point shall support up to 512 clients.	C/PC/NC	
The “Basic” Access Point shall have two 1Gb Ethernet ports, which may be aggregated as a single logical link (LACP).	C/PC/NC	
The “Basic” Access Point shall have one 1Gb Ethernet port, for LAN connectivity or “downlink”.	C/PC/NC	
The “Basic” Access Point shall propose L7 Application recognition (DPI) capabilities providing a real-time classification of flows at the application level.	C/PC/NC	

The "Basic" Access Point shall support 802.3af/at PoE with 19.1W maximum consumption.	C/PC/NC	
The MTBF for the "Basic" Access Point shall be at least 978,601 h (111.71 years).	C/PC/NC	
The "Basic" Access Point shall propose a Factory reset button.	C/PC/NC	
The "Basic" Access Point shall propose a console port.	C/PC/NC	
The "Basic" Access Point must have a dedicated radio for scanning the whole WLAN spectrum (2,4GHz and 5GHZ) for detecting security and RF anomalies.	C/PC/NC	
The "Basic" Access Point shall support 802.3af/at PoE with 19.1W maximum consumption.		

Indoor Access Point-Mid-Range

Description	Compliance	Notes
The WLAN solution shall propose an 802.11ax MU-MIMO indoor tetra-radio AP Access Point (2,4GHz, 5GHZ, Full Band Scanning dedicated Radio and Bluetooth/Zigbee): "Medium Density".	C/PC/NC	
The "Medium Density" Access Point shall have integrated omnidirectional antennas or be equipped with external antennas.	C/PC/NC	
The "Medium Density" Access Point shall offer native BLE5.1/Zigbee radio support.	C/PC/NC	
The "Medium Density" Access Point shall support up to 32 SSIDs (16 per radio).	C/PC/NC	
The "Medium Density" Access Point shall offer up to 2,4Gbps throughput on the 5Ghz band (low and high bands) and up to 573Mbps throughput on the 2.4GHz band.	C/PC/NC	
The "Medium Density" Access Point shall support up to 1024 clients.	C/PC/NC	
The "Medium Density" Access Point shall have one 1Gb Ethernet port and one 2.5Gb Ethernet (IEEE 802.3bz Multi-rate Gigabit Ethernet), which may be aggregated as a single logical link (LACP)	C/PC/NC	
The "Medium Density" Access Point shall propose L7 Application recognition (DPI) capabilities providing a real-time classification of flows at the application level.	C/PC/NC	

The "Medium Density" Access Point shall support 802.3af/at PoE with 24.8W maximum consumption.	C/PC/NC	
The MTBF for the "Medium Density" Access Point shall be at least 1,104,490 h (126.08 years).	C/PC/NC	
The "Medium Density" Access Point shall propose a Factory reset button.	C/PC/NC	
The "Medium Density" Access Point shall propose a console port.	C/PC/NC	
The "Medium Density" Access Point must have a dedicated radio for scanning the whole WLAN spectrum (2,4GHZ and 5GHZ) for detecting security and RF anomalies.		

Indoor Access Point- High Range

Description	Compliance	Notes
The "High Density" Access Point shall propose an 802.11ax MU-MIMO indoor AP WITH five built-in radios, three radios 2.4Ghz/5Ghz Low/5Ghz High Density band serving High Density Wi-Fi clients, one full band radio dedicated for scanning, which can inherently improve network security and Wi-Fi quality, and an integrated Bluetooth/Zigbee radio	C/PC/NC	
The "High Density" Access Point shall have integrated omnidirectional antennas or be equipped with external antennas.	C/PC/NC	
The "High Density" Access Point shall offer native BLE5.1/Zigbee radio support.	C/PC/NC	
The "High Density" Access Point shall support up to 48 SSIDs (16 per radio).	C/PC/NC	
The "High Density" Access Point shall offer up to 9.6Gbps throughput on the 5Ghz band (low and High Density bands) and up to 1.2Gbps throughput on the 2.4GHz band.	C/PC/NC	
The "High Density" Access Point shall support up to 1536 clients.	C/PC/NC	
The "High Density" Access Point shall have 2x multi-Gigabit 1/2.5/5/10 Gig autosensing(RJ-45) ports, Eth0-Eth1, Power over Ethernet (PoE) 802.3bt compliant 1x USB 3.0 Type A (5V, 500mA)	C/PC/NC	
The "High Density" Access Point shall propose L7 Application recognition (DPI) capabilities providing a real-time classification of flows at the application level.	C/PC/NC	
The "High Density" Access Point shall support 802.3af/at/bt PoE with 45W maximum consumption.	C/PC/NC	

The MTBF for the “High Density” Access Point shall be at least 572,332h (65.33 years).	C/PC/NC	
The “High Density” Access Point shall propose a Factory reset button.	C/PC/NC	
The “High Density” Access Point shall propose a console port.	C/PC/NC	
The “High Density” Access Point must have a dedicated radio for scanning the whole WLAN spectrum (2,4GHZ and 5GHZ) for detecting security and RF anomalies.	C/PC/NC	

Outdoor Access Point

Description	Compliance	Notes
The WLAN solution shall propose a 802.11ax MU-MIMO outdoor ruggedized tetra-radio AP Access Point (2,4GHZ, 5GHZ, Full Band Scanning dedicated Radio and Bluetooth/Zigbee). “Outdoor”	C/PC/NC	
The “Outdoor” Access Point shall have integrated omnidirectional antennas, integrated sectorial antennas, or be equipped with external antennas.	C/PC/NC	
The “Outdoor” Access Point shall support up to 32 SSIDs (16 per radio).	C/PC/NC	
The “Outdoor” Access Point shall offer up to 2.4Gbps throughput on the 5Ghz band and up to 573Mbps throughput on the 2.4GHZ band.	C/PC/NC	
The “Outdoor” Access Point shall support up to 1024 clients.	C/PC/NC	
The “Outdoor” Access Point shall have one (1) 10/100/1000/2500MBaseT Ethernet port UPLINK port, 802.3at/bt compliant.	C/PC/NC	
The “Outdoor” Access Point shall have one (1) 10/100/1000MBaseT Ethernet port DOWNLINK, 802.3at compliant, with PoE PSE output so that an end device can be directly connected and powered from the AP, for example an Outdoor CCTV camera.	C/PC/NC	
The “Outdoor” Access Point shall have one (1) SFP port for connecting optical fiber transceivers or GPON SFP-ONT.	C/PC/NC	
The “Outdoor” Access Point shall propose L7 Application recognition (DPI) capabilities providing a real-time classification of flows at the application level.	C/PC/NC	
The “Outdoor” Access Point shall be IP66/67 certified.	C/PC/NC	

The "Outdoor" Access Point shall support persistent moisture and precipitation, and high and low temperatures: -40°C to 65°C.	C/PC/NC	
The "Outdoor" Access Point shall support 802.3af/at PoE with 64W maximum consumption, when powering a PSE device with 802.3at	C/PC/NC	
The MTBF for the "Outdoor" Access Point shall be at least 1,003,257h (114.5 Years).	C/PC/NC	
The "Outdoor" Access Point shall propose a Factory reset button.	C/PC/NC	
The "Outdoor" Access Point must have a dedicated radio for scanning the whole WLAN spectrum (2,4GHz and 5GHZ) for detecting security and RF anomalies.	C/PC/NC	

Asset Tracking Chapter

Tool Management

Description	Compliance	Notes
The Asset Tracking solution, must support the following features as minimum	C/PC/NC	
Sign-in/sign-up to asset tracking access	C/PC/NC	
User profile management (Role)	C/PC/NC	
Create and modify a site, buildings and floors	C/PC/NC	
Geo-referencing a site	C/PC/NC	
Asset management and configuration	C/PC/NC	
Asset category management	C/PC/NC	
Web-based Asset provisioning tool	C/PC/NC	
Web-based Asset search tool, based on Asset category and Asset Name	C/PC/NC	
See the assets on a map and filter on all categories defined	C/PC/NC	
Gateway configuration	C/PC/NC	
Tags management and configuration	C/PC/NC	

Asset Provisioning

Description	Compliance	Notes
Configuration and parameterization of the tags to a material or a person	C/PC/NC	
Each device can be associated with an image, a category and personalized parameters	C/PC/NC	
Reassigning tags to new equipment/people	C/PC/NC	
Asset Provisioning via Web Access.	C/PC/NC	
Asset Provisioning via an App tool, running in a smartphone	C/PC/NC	

Asset Search

Description	Compliance	Notes
Search and location of material, people in real time	C/PC/NC	
Search per category of equipment	C/PC/NC	
Search per category of person	C/PC/NC	

Analytics

Description	Compliance	Notes
Analytics Dashboard	C/PC/NC	
History of location coordinates, equipment/people.	C/PC/NC	
Data related to the use of Geo Notification in each area.	C/PC/NC	

Geo-notification

Description	Compliance	Notes
Geo-Fence and Geo-fence Notification	C/PC/NC	
Web-Application and email geo-fence notification	C/PC/NC	

Tags

Description	Compliance	Notes
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The Asset Tracking solution, must support the inclusion of the following Tags:	C/PC/NC	
Asset tag with Accelerometer	C/PC/NC	
Equipment tag with Wristband support	C/PC/NC	
Card shaped tag, to attach to a user (ex: doctor/Nurse) badge	C/PC/NC	
Small wristband tag, to attach to a user (ex: patient)	C/PC/NC	
Asset tag with a configurable button	C/PC/NC	

Gateways

Description	Compliance	Notes
Explain what models of Gateways and APs, are supported in the Asset Tracking solution For the Gateways	C/PC/NC	
The Gateways, must have the capacity to receive the signals from the tags, and send the information by wireless or an attached RJ45 port	C/PC/NC	
The gateways must be compatible with any Wi-Fi WLAN in the market, and be a Wi-Fi client of them	C/PC/NC	
The gateways must support PoE	C/PC/NC	
The gateways must support a local power supply in alternative	C/PC/NC	

[Telephone System:](#)

Description	Comply (Y/N)	Tenderer comment
The property PBX solution should be highly available, resilient, and potential for additional facilities		
This system will operate 24/24, 365 days per year. It should be designed to make it easy for maintenance and the upgrades without service interruption		
In case of failure of one of the PBX components, the PBX system should continue to operate via a redundant service		
The IP telephony system should comply to the IETF, IEEE, CEPT and ITU-T recommendations, and with the country rules		
The voice system should be based on the following standards: <ul style="list-style-type: none"> - IETF: SIP capable - Proprietary 		
The offered solution should allow interoperability between H.323 equipment with any legacy devices (digital, analogue, DECT, public and privates lines) and SIP devices		
SIP compliance: The SIP minimum version should be compliant to: <ul style="list-style-type: none"> - Proxy SIP - SIP Registry - SIP gateway - SIP applications 		
The Tenderer will point out the session ports (TCP or UDP) used by the applications and subscribers		
Connection « direct mode » <ul style="list-style-type: none"> - G711 Fallback orT38 faxes - Direct RTP 		
The offered conversation system should allow additional services such as: <ul style="list-style-type: none"> - Call Center - FMC (fixe-mobile-convergence) and BYOD - Subscribers' mobility (DECT/ IP-DECT or VoWLAN) - Voice messaging - Call recording - Call log - Unified Communications (UC) - Alarms to fix or mobiles subscribers 		

General PBX Requirements:

Description	Comply (Y/N)	Tenderer comment
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The property PBX solution should be highly available, resilient, and potential for additional facilities.		
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Public network requirements:

Description	Comply (Y/N)	Tenderer comment
SIP Trunking from several providers, with overflow, for outgoing		
ISDN E1 support		
ISDN T0 support		
Analogue Trunk support		
DDI		
CLI, adopted to SIP Trunk Provider, in Multi SIP Trunk provider scenario		

Voice Features:

Description	Comply (Y/N)	Tenderer comment
<p>Account Codes:</p> <p>Allow for the input of either validated (pre-programmed in PBX) or non-validated account codes to place long distance calls. Codes shall be a minimum of 4 and a maximum of 12 Digits. This feature must be enabled by a class of service separate from all other classes of service. CDR must include the account code in addition to the station number from which the call was made (insert description of the -locations in the CDR output where the account code and station number will appear).</p>		
<p>User can also assign a project number to an incoming call:</p> <p>The system manager is also able to configure a phone with a forced project code. In this case, for every external call the user must dial the project code to set up the call. During a consultation call the project account code for the new external call maybe change.</p> <p>During an automatic callback on busy trunk group, the project account code is automatically stored. On callback, the user does not have to dial the code again.</p>		
<p>Alarm Condition: major and minor. The system shall provide six severity levels with visual (colors) and numerical display:</p> <ul style="list-style-type: none"> - Critical - Major - Minor - Warning - Indeterminate <p>Clear (related a former alarm that has been corrected)</p>		

<p>The total number of alarms/levels is indicated at the bottom of the list, for the item selected in the tree.</p> <p>The maximum number of alarms stored can be configured by the manager. (Default = 1,000 alarms). The oldest alarms are automatically overwritten.</p>		
<p>Alternate Answer Position:</p> <p>In addition to the attendant console, it shall be possible for any station to answer incoming calls.</p>		
<p>Area/Office Code Restriction:</p> <p>The system has the capability for single digit, multiple digits, or area code/country code toll restriction, depending on completion of calls.</p>		
<p>Attendant multiple camp-on:</p> <p>This feature is used when the attendant console routes an external call to an internal phone. During the ringing phase, the attendant can monitor the call using the camp-on soft key. Pressing this soft key will display calls that remain unanswered (internal and external numbers). Then, the attendant can decide to:</p> <ul style="list-style-type: none"> Cancel the selected station Re-select a new station Switch back and forth between calls Send a message to the station Release the call 		
<p>Attendant Trunk Selection with Supervision</p> <p>This function indicates the external line status (free, busy, on hold, or ringing). The supervision key can also be used to intercept an incoming call on the trunk line. When the trunk line is in idle state, pressing the icon supervision key seizes the trunk line.</p>		
<p>Controlled Private calls: With the controlled private call feature, a company can track and charge back for personal outgoing employee calls. The user is defined by the following items (if the user has a phone):</p> <ul style="list-style-type: none"> One directory number (virtual or real) One PIN One call class of service restriction for private calls <p>The user can make a private call according to the following rules:</p> <ul style="list-style-type: none"> Only from the user' own phone From any authorized phone in the sub network From a few selected phones (linked with 256 connection classes of service) <p>The Communication Server shall control the PIN code and ensure that two employees cannot have the same PIN.</p>		

Such private calls can be forwarded to internal (including network) or external numbers. Automatic Call back - No Answer: An internal call reaching an unanswered station shall have the ability to activate a Call back code: When the unanswered station is placed off-hook and then on-hook the system shall then attempt to connect the original party		
Automatic Route Selection: see least cost routing below.		
Automatic Station Release: Provides automatic release of stations where handsets are left off-hook for a pre-determined length of time.		
Call pickup group: The PBX must support a minimum of thirty (30) digital/analog stations in a pick group.		
Rerouting Calls on Ringing: When a phone is called, the called party can forward (transparent to the caller) this call to another phone during the ringing period. Dialing the number or name of the addressee's phone activates the service on single-line phones. On multi-line phones, a soft key is pressed prior to the number of the addressee. If an attendant call, rerouting call on ringing cannot be activated.		
All incoming calls (DID or Internal) that are extended to a station that is busy will route to that station's voice mail if the forward busy is programmed as voice mail		
When the voice mail is inoperable, external incoming calls should return to the operator consoles after a pre-determined number of rings (in seconds).		
Calling Name ID: The multi-line station display provides a visual display of the called party name when connected to a station.		
Calling Number Display: The multi-line station users shall be presented with the number and name (if available) of the calling party's station before answering.		
Called Party Status: The multi-line station display provides a visual indication of the called party status (i.e., Busy, forwarded)		
Class of Service: Specify number of classes available. The console shall be able to change a station's class of service. These classes of service shall include but not be limited to: Out of service Intercom line Internal extensions only Local calls on Local calls and domestic long distance only Unrestricted		

In any case all extension shall be able to call the operator without restriction		
Conference calls: Provide the capability for six (6) party conference calls and the ability to drop one (1) or more of the parties during the conference call and add one (1) or more parties during the same conference call. Data privacy:		
Music on Hold: System will be equipped with an audio input port for music to callers who have been put on hold or in a camped-on position either by the operator or station user. This feature shall be configurable by station. For example, callers put on hold to reservations will get music. Callers to other departments will not.		
Power Failure Restart: After a power failure, system automatically restarts. No station database information, including extension numbers, classes of service, system speed call numbers, etc. can be lost		
Power Failure Transfer: If batteries become spent, this feature provides automatic ringing of and direct access to a pre-designated number 0 Central Office lines at a predetermined number of single line phones on a one-to-one basis during the failure. At least twenty-eight lines will be so transferred during a complete failure Private Line Termination: It shall be possible to terminate a Central Office line on a specific instrument or instruments. Such line need not be terminated on all instruments.		

Facilities Requirements:

Description	Comply (Y/N)	Tenderer comment
The PBX will be able to support the following ETSI or ANSI facility features: Capable of supporting a variety call route types including incoming, DID, Direct E1, 2-way trunks within E1 circuits, ISDN PRI or BRI connectivity and Analogue Trunks		
Able to support dynamically allocated incoming toll-free calls on both-way E1 circuits, routing the toll-free calls to specific extensions or ACD groups separate from incoming calls to other numbers		
Supports distant end completed call signaling (answer supervision) over E1 or T0 and ISDN services and outputs CDR only when distant end completed call signaling is received over those trunks.		
Supports answer supervision on local switched trunks and output CDR only when such signaling is received over those trunks provided the local central office provides that information to the switch.		
Supports call by call allocation through the Integrated Services Digital Network (ISDN) Primary Rate Interface (PRI) connection.		
Progress tones: At a minimum, the following progress tones shall be available: dial tone, busy tone, ring back tone		

Support shall be either by card difference, software changes or both		
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Station Set Features:

Description	Comply (Y/N)	Tenderer comment
Add-On Conference: allows a station user to add a third party to an existing two-party conversation.		
Answer Hold: Working in association with an incoming call or camped-on call, the station user, upon hearing the appropriate camp-on or call waiting tone, will flash the switch hook on the station instrument. The ongoing call is placed on hold and a connection to the waiting call is Immediate.		
Alphanumeric Display: for all electronic sets with digital display.		
Automatic call distribution: for all phones in the reservations department, as well as key groups.		
Automatic Privacy: Upon answering any line the automatic privacy feature shall be invoked. This feature shall prevent any other telephone instrument from gaining access to that line while a conversation is in progress.		
Call Forwarding - Busy: Calls to a busy station hunt to a second station, a message centre, or an operator. It must be possible for this destination to be different from the call forward no answer destination.		
Call Forwarding - No Answer: Calls automatically reroute to the attendant or programmed secondary station when a given station does not answer within a prescribed time. It must be possible for this destination to be different from the call forward busy destination.		
Call Forwarding - Station Programmable: Station user can program any extension number to which to route all Incoming calls. This feature takes precedence over call forward no answer feature.		
Call Forwarding - All: Forwards calls to a particular extension overriding any busy, no-answer, or station-programmed setting.		
Call Forward destinations may be internal extensions or off-site numbers, with appropriate classes of service.		
Call Park: A called party can place a call in the "park" state on a designated terminal number until it is retrieved. When placed in "park" the caller shall hear music if such is configured. If the "parked" call is not retrieved within 60 seconds, the call should re-ring the attendant. A five-lamp line status indicator shall display the status of each parked number at the attendant console. A park number may be accessed from either an internal station calls or a DID call		
Call Pickup: A station user can answer a call at any other station by use of a code number and the extension number of the ringing station.		

Pickup - Grouping a station user may answer a call at a station with a pre-defined group by use of a code number.		
<p>Call to a hunt group: A hunt group may be called by dialing a specific directory number, which is different from the individual directory number of the phones belonging to the group. A group member may receive both group and personal calls. The selection of a free phone in the group may be performed in three different ways:</p> <ul style="list-style-type: none"> • Serial hunt or fixed distribution: starting systematically from the headphone of the group • Circular hunt or cyclical distribution: if the last phone called in the group has the position n, the search for a free phone begins at the phone with the position n +1 • Parallel distribution: all phones ring simultaneously 		
A queue can be defined for each group. When all the group's phones are busy, the call is camped on the ringing tone or on a specific waiting message. The queue size is defined by a ratio of the active group's phones; this ratio can reach 100%. After handling a call, a group phone will be called only after a fixed time period. Management defines this as wrap-up time. A phone can exit from its group via a special prefix. In this state, it can still receive personal calls. The user can return to the group at any time by dialing a prefix or pressing the specific soft key. A phone may only belong to one group		
Call Waiting: Assigned on a Class of Service per station basis and working in conjunction with attendant or station camp-on facilities, this shall permit a station to receive a second call.		
Calling Number Name Display: As part of a multi-line telephone, a display will indicate the incoming call status as well as the extension number and/or name of the caller or called party. Allow to display second incoming call on hunt line.		
Conference: three and six party		
Consultation Hold: Allows the station user to put the original call on hold, establish a second call, without using key equipment		
Do Not Disturb: This feature shall be provided either through a do not disturb-button on each instrument or a programmable feature code.		
Executive COS: Assigned to a given station, feature denies any other station or attendant the ability to use various overriding features or apply tones associated with call waiting to that busy line. When the Executive busy on a call there must be no interruptions, like intrusion or tones		
Extension to Extension dialing: Each extension shall have the ability to dial any other extension without the aid of PBX operators.		
Certain extensions must be prevented from making calls to other extensions		
Flexible Station-Controlled Conference: A station-initiated conference facility which allows non-preselected internal stations to be added to a		

conference situation as well as adding outside trunk circuits. This is accomplished by dialing each desired party individually in sequence.		
Fully Restricted Stations: Through class of service, selected station lines are denied the ability to place or receive any but internal station-to-station calls.		
Howler Alert: When a station instrument is off-hook without dialing after a predetermined time interval, the system will provide a howler tone to indicate that the phone is off-hook. While the phone is in this state and an external user calls the station, the caller will be connected to the operator.		
Hunting: Allows internal or external calls to a busy or no-answer station to be re-directed to a free station within the hunt group. The call searches for the free station in a pre-determined manner.		
Indication of Clear to Station: A short burst of tone is transmitted to the busy station to indicate another call is waiting. The party to whom the busy station is talking does not hear the tone.		
Individual Transfer Intercom service: Multi-line instruments may be connected in pairs or larger groups by private talk paths. Dial or button signaling is provided. Key groups: for various departments with more than three phones		
Last Number Redial		
Loud Ringing Option: Allows for the connection of an external loud signaling device to be connected to an electronic multi-line telephone.		
Message Waiting Indication: must be visual. Must be available on all guest and administrative sets as per station review. All set types must be able to be activated by command from voice mail system.		
Off-Premises Extensions: The PBX is capable of extending system station line circuits to industry standard instruments at off-premise locations.		
Protection against Barge-in: Station users may prevent interruption of their call by any tone or signal, by the attendant or others using a code		
Speed Calling: Users may dial telephone numbers by use of a code that is programmed as either system wide or personal.		
Speed Calling by Name: For sets with a keypad the call can be made by typing a name and select		

Attendant Console Features:

Description	Comply (Y/N)	Tenderer comment
Alarms: catastrophic and major alarms requiring immediate action to maintain service shall appear on the attendant console or an associated display. Alphanumeric Display for Attendant Position: A visual display		

using numeric and alphabetic characters indicating the trunk or line to which the attendant is connected. Other information such as intercept details, class of service and call type should also be displayed.		
Attendant Conference: Allows the attendant to establish a conference call between a set number of inside or outside parties		
Attendant Numerical Call Waiting Display: A special display located on the console giving an indication of the number of calls waiting for attendant processing.		
Attendant Transfer - All Calls: Ability for the attendant to transfer any call that appears at the console position (internal, incoming to any non-busy extension in the system		
Automatic Recall: Automatically alerts the attendant after a prescribed period to a camped-on or unanswered call completed through the console. This enables the attendant to give a status report to the outside calling party. These calls will queue in order of presentation, as well as being placed first in the overall queue.		
Bad Line Reporting		
Busy Override: Allows attendant entry into an existing busy connection, providing a warning tone to the parties to indicate third-party entry		
Busy Verification of Stations and Trunks: Permits positive verification that a given circuit is busy, idle, or out of order.		
Call Splitting: Allows the attendant to speak privately with the source and destination parties, and to alternate between them without connecting them by use of special control keys		
Camp On: An incoming call that an attendant attempt to complete on a busy line within the system is placed in a special waiting mode until the desired station becomes idle. The called station is then automatically rung and connected to the incoming call upon answer.		
Cancellations: Attendant may cancel at any time on either a system wide or individual basis such station activation features as call forwarding or do not disturb.		
Console Answering Priorities: The priority with which calls are presented to the console can be programmed.		
Attendant can provide a line to an extension that do not have to rights to make a call. This is allowed for a single call only. The user can afterwards request a line again		
Direct Trunk Access, for testing		
Message Waiting: In the event the PMS system interface is down, messages waiting control should be done through the console		
Night Service: The attendant shall be able to transfer selected trunks to a specified telephone or console whenever regular consoles are not in use.		

Supervisory Console: In a multi-console system, one console can be programmed to have control over the others or have access to certain features which are denied to the other consoles.		
System Changes: The attendant, through the console, may restrict local and long-distance calls, change extension numbers, assign direct inward dial service, change station forwarding, and change COS assignments		
Trunk Group Status: The attendant receives a visual indication when all trunks in a given group are busy.		
Type of Call Display: Provides a visual display of the type of call reaching the attendant console.		
Volume Control - Console: Allows variable control of electronic audible signals at the attendant console. An on or off switch is not acceptable		
Realtime notification icons to show the status of users and call the user by selecting, click on		

Automatic Call Distribution ACD:

Description	Comply (Y/N)	Tenderer comment
<p>The ACD must accept trunk and tie line calls from a variety of locations and process them by their originating point. These lines may include but are not restricted to:</p> <ul style="list-style-type: none"> Toll-free lines, Direct central office trunks, Tie line appearances, Extension lines from both in-house and remote PBX systems and IP routing 		
The system will provide outgoing call forwarding or call diversion to other locations during hours when the reservations department is closed.		
<p>ACD Display Feature: Logged-on agents see on their display telephones, the number of calls queued and trunk text. Each time an agent answers a call change in the call queue are reflected on the display.</p> <ul style="list-style-type: none"> - ACD: Number of ACD calls processed in the processing group - Private: Number of private calls processed in the processing group - On wait: Number of calls waiting in the processing group 		
<p>Agent Activation: An agent joins a group through use of Logon key and (optionally) an agent ID code. If ID codes are used performance can be tracked by agent. Agent ID codes are assigned from the ACD Supervisor console. An ID can be used by only one agent. Logoff removes the agent from the group. Indicate the maximum number of agent IDs. Agent Outbound Calling: ability to restrict agent to intra system calls, local calls or limited long distance.</p>		

Automatic Number Identification: Display the Automatic Number Identifier (ANI) on agent and supervisor telephones if the ANI is sent to the PBX		
<p>Call Activity Display: Display real-time and, at a minimum display:</p> <ul style="list-style-type: none"> • The number of calls waiting, • The number of calls abandoned within the last fifteen (15) minutes, • The total number of incoming calls within the last fifteen (15) minutes, • Non-active agents by agent • Average talk time per call by agent. 		
Call Direction: Ability to direct calls to certain agents, and prioritize calls to specific numbers to specific agents, i.e., more experienced agents ret more calls, automatically direct a specific DID call to a specific agent.		
Call overflow: Overflow calls between agent and operator consoles, showing the number of the agent		
Disconnect: When the agent finishes a call, a specified key is pressed to disconnect. Position is then ready to accept another call.		
Forced Answer: Calls are connected automatically. The telephone will not ring, and agent does not have to press any key to answer. A tone will be provided to alert the agent when a call is presented.		
Group Size: Must be able to support a minimum often (10) agents in each ACD group		
Help: By pressing a designated key at any time an agent can reach supervisor for assistance. This places all on hold and automatically dials supervisor.		
Manual Answer: Phone rings and agent presses a specified key to answer		
Record: When pressed this key activates a recording machine. .		
Recorded Announcements: Must be able to direct a different sound source and/or at least three (3) different announcements to each ACD group simultaneously.		
<p>Reports:</p> <ul style="list-style-type: none"> • Whether placed in a queue or not, show the number of calls directed to group, • The number of calls abandoned by quarter-hour, • Average speed of answer, • Average wait time before answer, • Average talk time per call by group and agent, • Average post call processing (Wrap up) by group and agent, • Average calls handled in quarter-hour segments by individual agents, • Total number of calls processed by group and by individual agents, • Total incoming calls and CCS by trunk/extension by hour 		

<ul style="list-style-type: none"> Number of calls answered within x period of time (e.g., Twenty (20) seconds). 		
ACD reports can be programmed to print automatically daily. Reports shall also be available on demand and at any time as elected by the Property. Reports from all ACD groups must be able to be configured to print on a single printer. A print report to file application will be reviewed if available		
Transfer - Agent to agent: within queue to an agent in a busy condition		
Transfer - Outside Line: ability to transfer a call to an outside line. If available, this must be restricted on a set-by-set basis.		
Unavailable: Pressing a -designated key will prevent additional ACD calls from being presented to position.		

Announcements: There should be four types:

Description	Comply (Y/N)	Tenderer comment
Greeting: notifies caller that call has been recognized but cannot be answered immediately. The call is placed in a queue.		
Night: callers reach an ACD when all agents logged off. After callers hear the announcement, the call is disconnected.		
Delay: encourages callers to continue holding until call can be serviced. A call is taken from the call queue to hear the delay message and then returned to its original place in queue		
Overflow: in lieu of or in combination with an overflow answering (station or another ACD group) calls are routed to an overflow point when the queue exceeds maximum number of calls. Each group can have its own announcements or groups can share. Announcement lengths can vary for groups, but all announcements within a group must be the same length. Permissible ranges are 0-255 seconds.		
All announcements are broadcast, allowing many callers to get the same announcement simultaneously which requires only a single announcement source per announcement.		
Automatic Answer: The system automatically answers incoming calls with an announcement if all agents are busy.		
Call Queue: When all agents are busy additional incoming calls are answered with the greeting announcement and placed in a queue in order of arrival. While in queue, calls can be provided with Music-on-Hold. Calls are processed using FIFO. When the number of calls in a queue exceeds the maximum, calls can be routed to other answering positions for handling.		

Call Queue Full: If the queue contains the maximum number of calls allowed, the call will not receive the greeting announcement but is routed directly to the overflow point.		
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Supervisor Features:

Description	Comply (Y/N)	Tenderer comment
Break in: Pressing a designated key while listening to a busy tone or while monitoring an agent/customer conversation sounds the break in tone and a three-way conversation is established.		
Observe: key allowing supervisor to listen in on call without notification.		
Barge-in with being heard by the calling party: supervisor can speak with the agent without informing the calling party.		
Permanent monitoring: proceed to a silent listening or a barge-in		

Video Conferencing:

The primary purpose of video conferencing is to improve communications between people. To this end, video conferencing should serve to:

- Increase the quality and effectiveness of long-distance collaboration including the ability explain complex issues, share ideas, resolve problems, and take more immediate action.
- Provide more efficient access to key decision makers and domain experts across the organisation.
- Improve the ability to hold regular management meetings.
- Improve the ability to broadcast senior management briefings (both live and recorded).
- Reduce the amount and cost of unnecessary business travel between the shopping centres and head office.
- Reduce the amount and cost of lost productivity – particularly on the part of senior management.

Description	Comply (Y/N)	Tenderer comment
User can make a video conference call with 120 participants		
Join from Desk phone, PC, Smart phone, or external users can join by Browser (HTTPS)		
Users can connect via Application or Internet browser		
Video, Audio, Instant Messaging, File and Screen sharing		
One-on-one recoding of video call from PC, including Screen sharing recording		
Invitations sent through user application or email		
External parties can join without installing an application or the need of a license, with 'click-to-join' in the invite		

Instant meetings or scheduled		
Calendar invites via Outlook or Google		
Video codec (VP8) or similar with 720p at 30 fps, H264 also supported		
Participants can be added during the conference		
During conference list of participants visible		
Organizer can Mute or un-mute participants		
Active speaker indication, minimum four simultaneous speakers		
Promote a participant to Organizer role		
Enable Screen sharing rights to a participant during a conference		

Mobility (Unified Communications)

- Mobility on Private and Public network
- One account for all devices; multi-devices
- The user can decide where to take his audio or video call. Desk phone, PC or Smart phone
- Whether the user is on the WIFI network or outside on 4/5G, without VPN
- This is additional functionality not covered by technologies such as DECT, IP-DECT and VoWLAN

Description	Comply (Y/N)	Tenderer comment
One account with multiple devices <ul style="list-style-type: none"> - PBX Deskphone - Smartphone - Tablet - PC 		
Integration with PBX and PBX features such as: <ul style="list-style-type: none"> - Search the PBX phonebook - Click to call to extension users - Call log - Manage call routing of desk phone, smartphone, tablet, and PC - Transfer - 3 Party Conference - VoIP calling - Make and receive external incoming and outgoing calls through the PBX from the Private or Public network - Hold and retrieve call - Redial - Divert call to Voicemail - PBX Voicemail - Broker call - Send DTMF 		

- Voicemail		
User can make and receive audio calls with the Smart phone while on the 4/5G Network outside the company and transfer the call to another user on the PBX		
User can answer an audio call made to the Desk phone from the Smart phone while on the 4/5G Network outside the company and transfer the call to another user on the PBX		
User can make a video call to another user from Desk phone, PC, Tablet or Smart phone		
User can make a video conference call with 30 participants		

Unified Communication and Collaboration

- Refer to section on Mobility (UC) and Video conferencing, also included
- Instant creation of a group, and addition and deletion of members by the user
- Use case collaboration between Citizens, Government Staff, Guests and Politicians

Description	Comply (Y/N)	Tenderer comment
Video, Audio, Instant Messaging, File and Screen sharing		
Promote another user to group organizer		
Presence status display of team members		
Invites sent by email, SMS, Google contacts		
Share company information/ news to all employees and external people		
Collaboration between employees and external parties		
Instant Messaging Group messaging Copy messages Share geo-locations from Smart phones with GPS capabilities Send messages by email Remove messages Use of emoticons and animated GIFs Spell check Record and send voice messages		

CPaaS (Communication Platform as a Service)

- Digital transformation, integration with Government platforms
- People tracking and Asset's tracking
- Connecting the communication platform with Government processes
- Connecting the staff, external Government services, citizens, guests, and politicians, etc.

Description	Comply (Y/N)	Tenderer comment
API to share via Web interface administrative documents: <ul style="list-style-type: none"> - Users log onto the Web Portal and has access to documents for download - Uploading of documents 		
API to access Web Portal, which offers: <ul style="list-style-type: none"> - IM, web audio and callback - Chat bot 		
Appointment application: <ul style="list-style-type: none"> - To remind a person of an appointment - Via Web page, Smart phone, or Tablet 		
Chatbot application: <ul style="list-style-type: none"> - Via Web Portal 		
SDK for Teleconsultation		
Pathfinding application on BYOD. Self-guided navigation tool. Find equipment and assets		
Self-service application on BYOD, during visits.		
Video call between people via BYOD		
Asset tracking: <ul style="list-style-type: none"> - Physical location tracking - Alarm when assets leave pre-configured areas 		
Remote specialist consultations		
Virtual Waiting room		

Notification Services

- Notification solution with various applications integrating with the PBX and UC platform
- In the case of an emergency, people must be notified by multiple media options
- Connecting the communication platform (PBX) with a Notification Service platform

Description	Comply (Y/N)	Tenderer comment
Loudspeaker broadcast on Desk phones triggered by alarms, such as a fire alarm		
Nurse call to multiple destinations, including smart applications and PBX phones, as well as nurse calendar checking		
ESPA/ TAP, broad spectrum protocols support		

Camera integration and movement detection alarms			
Wander detection with alarm to security with location services (map location) - Map of building and grounds			
Alarm escalation via SMS, if nurse not acknowledging alarm			
Alarms to security team through smart applications on mobile devices			
Video call between people and family or helpers via BYOD			
Input and output from and to: - Email - Social media, such as Twitter and Facebook - ESPA/TAP - Dry contacts - Smartphones/ tablets - Web interface - IP phones - WIFI handsets			
Graphical location services/ display of building map and floorplans To identify the location of the notification trigger			

Management System

- Easy to use comprehensive management solution to manage the PBX system with devices
- System monitoring

Description	Comply (Y/N)	Tenderer comment
PBX management system - Mass deployment		
Graphical display		
Topology view of PBX system and devices		
PBX Alarm notification by email, SNMP		
VoIP auditing of PBX calls and Performance Monitoring		
APIs for integration with Microsoft Active Directory - Users added on company database automatically added on PBX		
LDAP Company Directory integration for 'Dial-by-name'		
System maintenance: scheduled backups of the PBX system		

The web client provides an easy access to the company directory, with the possibility to update the information, a personal address book and "Click to call"			
Users can place a call by clicking on the displayed phone number from the Directory via the web client			
Automatic reports sent via email			
More than 10 concurrent Administration client logins			

Security:

Telephones:

Description	Comply (Y/N)	Tenderer comment
NAC: <ul style="list-style-type: none"> - 802.1.x - EAP-MD5 - EAP-TLS 		
ARP spoofing protection		
DOS attack protection		
Signalling Encryption: <ul style="list-style-type: none"> - TLS 1.2 - With Authentication - Certificate based authentication, SHA_2 signed 		
Media Encryption: <ul style="list-style-type: none"> - SRTP 		

Communication Server (PBX):

Description	Comply (Y/N)	Tenderer comment
Traffic filtering: <ul style="list-style-type: none"> - Trusted hosts - TCP Wrapper 		
Encryption: <ul style="list-style-type: none"> - SSHv2 access - TLS1.2 for secure HTTP session (web based management) - 		
Authentication <ul style="list-style-type: none"> - Local authentication database (password policy enforcement) 		

- External authentication protocols supported (RADIUS & LDAP/LDAPs)			
OS Hardening			
Defence against DOS attacks			
TFTP files integrity check			
Anti-MAC spoofing			

Management System:

Description	Comply (Y/N)	Tenderer comment
Access to server: - Hard Client with IPSec - Web Client via HTTPS		
Password policy enforcement: - Minimum length - Aging - Historic not allowed - Blocking		
External Radius authentication		
Client rights: - Different accounts with different right to manage PBX - Client and Administrator profiles		
SMTP		
LDAPS: - Integration with PBX - Integration with External AD		
PKI (Public Key Infrastructure): - Certificate creation		

Redundancy:

Description	Comply (Y/N)	Tenderer comment
PBX Redundancy: - Active Standby servers - IP phones stays in communication with switch-over - Dual LAN ports for network redundancy		
Media Redundancy - Dual LAN ports for network redundancy		
Remote sites:		

- Full services of phones and lines when network break with Central system			
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Telephone devices:

- Common criteria:
- All Desk phone terminals must have the following capabilities:

Description	Comply (Y/N)	Tenderer comment
1GB network interface		
1GB PC port. PC behind phone		
Headset capabilities - Either USB, 3.5mm jack, RJ9 or Bluetooth		
Support Wideband audio		
POE		
Security. See security compliance for terminals in previous section		
Screen		
Programmable function keys		

Executive phones:

- Can also be used as a conference room device
- Or Video Doorcam device with Door opening capabilities

Description	Comply (Y/N)	Tenderer comment
Support Video		
Built-In camera or without camera		
Touch screen 7"		
Color screen		
Bluetooth for handset or headset		
eHD Audio and Loudspeaker		
HDMI port for external screen		
Alphabetic keyboard		
Support Android applications		
Access to 'YouTube' videos		
Video Doorcam receive with Door open capability		

Executive phones2:

Description	Comply (Y/N)	Tenderer comment
Touch screen 5"		
Color screen		
Bluetooth for handset or headset		
eHD Audio and Loudspeaker		
Alphabetic keyboard		
Add-on keys, additional keys		
Hot desking		

Executive phones3:

Description	Comply (Y/N)	Tenderer comment
Color screen		
Bluetooth for handset or headset		
eHD Audio and Loudspeaker		
Alphabetic keyboard		
Add-on keys, additional keys		
Hot desking		

Intermediate phones1:

Description	Comply (Y/N)	Tenderer comment
eHD Audio and Loudspeaker		
Alphabetic keyboard		
Hot desking		

Entry level phones1:

Description	Comply (Y/N)	Tenderer comment
See Section about 'Common criteria'		
Hot desking		

Soft Phone:

Description	Comply (Y/N)	Tenderer comment
Windows and MAC PC based		
Smartphone Android and iOS		
Tablet Android and iOS		
Same capabilities as Executive phone3		

VoWLAN phone Entry level:

Description	Comply (Y/N)	Tenderer comment
Unified Communication device		
Backlit		
Handsfree speaker		
Talk time 15 hours		
PBX Directory integration		
PBX features		
Backlit/ Color screen		
Radio		
Programmable keys		
Multi device of Desk phone		

Reliability: Ingress Protection IP44			
802.11a/b/g radio			
802.11e QOS and WMM			

VoWLAN phone advance level:

Description	Comply (Y/N)	Tenderer comment
Unified Communication device		
Backlit		
Handsfree speaker		
Talk time 15 hours		
PBX Directory integration		
PBX features		
Backlit/ Color screen		
Radio		
Programmable keys		
Multi device of Desk phone		
Reliability: Ingress Protection IP44		
802.11a/b/g radio		
802.11e QOS and WMM		
Push-to-talk		
Alarm button		
Color screen		
Vibrate mode		

Emergency Services:

Description	Comply (Y/N)	Tenderer comment
Emergency Instant Message to employees on Smartphones, Tablets and PC's		
Multiple levels of emergency priorities		
Different colors		
Acknowledgement of message		
Audible loud alert when message arrives at above devices		
Unlicensed or free application can send an alert		
Dispatch Emergency Console to put internal and external parties in conference		
60 Party conference option on console		
Select calls by clicking on icons		
Access to LDAP		
Integration with Control Centre Applications, such as SCADA		
Multiple operators		
Call prioritizations		
Web interface		
On hold Music		
200 Ports per console, with unlimited calls in queue		
Audio Broadcast on Desk phones and mobile phones		
Notify people in charge (for example safety team and PSAP) to join a conference to Save time and provide a coordinated response		
Multiple triggers to start a notification action: schedule, DID caller number, HTTP request (get or post), text message.		
API input/output triggers for connected notification scenarios		
Mass broadcasting: IP multicast on IP phones		
At least 120 calls in parallel		

SECTION 6: HEALTH AND SAFETY CONSIDERATIONS

Section 6: Health and Safety Considerations

(Relevant to all parts of the specification)

INTRODUCTION

The City of Tshwane requires a high standard of safe work performance from all employees and expects that the standard be maintained by the contractor within the Municipality's jurisdictional area or on its premises.

Irrespective of human considerations, the maintaining of these health and safety rules shall be the execution of the prescribed legal requirements. These rules are not to hinder the contractor in rendering services or indemnify the contractor from any legal responsibility to ensure healthy and safe work circumstances.

The City of Tshwane shall assist the contractor in any practical considerations to accommodate the healthy and safe execution of work and therefore require co-operation in the execution of these safety rules.

OCCUPATIONAL HEALTH AND SAFETY AGREEMENT

OCCUPATIONAL HEALTH AND SAFETY AGREEMENT

FOR CONTRACT WORK IN THE CITY OF TSHWANE

This agreement is mandatory for all contractors appointed by the City of Tshwane (COT) or any other institution that do work for or on behalf of CoT (or any other institution in the area Jurisdiction of Tshwane).

This agreement is between:

THE CONTRACTOR:

Herein represented by
.....

in his capacity as
.....

Being duly authorized hereto hereinafter referred to as "contractor".

Compensation Commissioner Number.....

(Attach a copy of the Registration Certificate to this agreement)

Company : Name.....

Registration Number.....

CEO : Name.....

ID Number.....

Physical Address.....

.....

And the

CITY OF TSHWANE

(Hereinafter referred to as “the Council”)

1 Definitions

- 1.1 **CONTRACTOR** - Means the “Contractor” as defined in the “Principal Contract” annexed hereto in his capacity as mandatory.
- 1.2 **MANDATORY** - Includes an agent, contractor or subcontractor for work to be done or service rendered, but without derogating from his status in his own right as an employer of people or user of equipment, machinery, tools or materials.
- 1.3 **THE PRINCIPAL CONTRACT** - Means the contract annexed hereto as annexure “A”.
- 1.4 **COUNCIL** -Means the City of Tshwane Metropolitan Municipality.
- 1.5 **RISK CONTROL OFFICER** - A person appointed in writing by Council.
- 1.6 Any definitions contained in any Statute hereinafter mentioned shall have the meaning allocated to it by the specific statute.

2 Objective

- 2.1 Whereas Council and the Contractor have entered into a contract for service (work) as fully indicated in the “Principle Contract” and whereas the “Contractor” agreed to indemnify Council against the risks stated hereunder whether foreseeable or not, and, whereas it is agreed between the parties that it is of cardinal importance to safeguard both Council and the Contractor’s obligation in terms of relevant legislation as well as to extend the obligation as a company and/or legal person and/or person as an entity concerned with health, safety and the environment.
- 2.2 These rules are applicable to all contractors performing work for Council within the jurisdictional area of the Council and on any premises which are owned, rented or developed by the Council.
- 2.3 The Council acts though those officials or persons who are generally or specifically charge with the responsibility, in terms of legislation, as well as any other official or person who is generally or specifically charged with the control and supervision of the project.

IT IS HEREBY AGREED AS FOLLOWS:

3 Indemnities

- 3.1 The “Contractor” hereby indemnifies the “Council” against any loss in respect of all claims, proceeding, damages, costs and expenses arising out of any claim or proceeding pertaining to the non compliance by the “Contractor” of any statutory requirements and/or requirements regarding the following Acts in particular pertaining to the provisions of:
- 1.1.1 The Occupational Health and Safety Act 85 of 1993 (as amended).
 - 1.1.2 The Health Act 63 of 1977.
 - 1.1.3 Road Traffic Act 29 of 1989 (as amended).
 - 1.1.4 Environment Conservation Act 73 of 1989.

- 1.1.5 The National Water Act 36 of 1998.
- 1.1.6 The Criminal Procedure Act 51 of 1977.
- 1.1.7 The Explosives Act 26 of 1956.
- 1.1.8 The Arms and Ammunition Act 75 of 1969.
- 1.1.9 Compensation for Occupational Injuries and Diseases Act 130 of 1993.
- 1.1.10 The Labour Relations Act 66 of 1995.
- 1.1.11 Construction Industry Development Regulations Act 38 of 2000.
- 1.1.12 The Unemployment Insurance Act 30 of 1966 (as amended).
- 1.1.13 The Basic Conditions of Employment Act 75 of 1997 (as amended).
- 1.1.14 Standards Act 29 of 1993.
- 1.1.15 Any statutory provisions in any act and/or any law or bylaw of any local government and/or any published official standard incorporated into any statute or bylaw relating to the completion of the work set out in the "Principal Contract".
- 1.1.16 Any other health and safety standard prescribed by the "Council".

3.2 The "Contractor" shall ensure that he familiarizes himself with the requirements of the above legislation and that he, his employees and any subcontractor will comply to all the statutory provisions contained in them.

3.3 The "Contractor" shall indemnify the "Council" in respect of any physical loss or damage to any plant, equipment or other property belonging to the "Contractor" or for which he is responsible and he hereby indemnifies the "Council" against any loss in respect of all claims, proceedings, damages, costs and expenses consequent upon the loss of or damage to any plant, equipment or other property belonging to, or which is the responsibility of, any subcontractor, agent or employee of the subcontractor.

3.9 The "Contractor" shall and hereby indemnifies the "Council" against any liability, loss, claim or proceedings whatsoever, whether arising in common law or by statute, consequent on personal injuries to or the loss of health or death of any person whatsoever arising out of or in the course of or caused by the execution of the "Principal Contract".

3.5 The "Contractor" shall and hereby indemnifies the "Council" against any liability, loss, claim or proceedings consequent on loss of or damage to any movable or immovable property arising out of or in the course of or caused by the execution of the "Principal Contract" and due to any act or omission of the "Contractor", his agents, servants or subcontractors.

4 Insurance

1.1 The "Contractor" shall insure and shall remain insured in respect of public liability and common law liability until the completion of the "Principal Contract" and/or whilst the "Contractor" and/or his subcontractor and/or his employees are present on the "Council" premises, whichever period is the longest. The public liability and common law liability policies shall contain clauses indemnifying the "Council" against risks arising out of the execution of the "Principal Contract". The provisions of this clause shall in no way limit the liabilities assumed by the "Contractor" or the indemnities given by him in terms of this³⁴ agreement.

1.2 The abovementioned insurance shall include:

- 1.2.1 Insurance covering the "Contractor's" liability to any employees, his own or subcontractors, whose earnings are in excess of earning as defined in the Compensation for Occupational Injuries and Diseases Act, 130 of 1993;
- 1.2.2 Any other insurance cover that will adequately make provision for any losses and/or claims arising from his and/or his subcontractors' employees acts and/or omissions on the "Council" premises.
- 1.2.3 The "Contractor" shall provide the "Council" with proof in the form of a written statement from the insurance company concerned that the insurances required by the "Principal Contract" have been effected.

4.3 CLAIM DOCUMENTATION

The Project Manager must obtain all relevant information from the Contractor/Sub-contractor and complete the Contractor Claim Form, included in this report as Annexure B that is available on the Intranet. The project number must be stated on the Contractor Claim Form.

The Project Manager must submit with the Contractor Claim Form a detailed cost sheet indicating the estimate of the loss or damage.

Any misrepresentation, mis-description or non-disclosure of material facts, at the option of the insurers, can result in claims submitted being declared null and void.

4.4 AUTHORIZATION OF CLAIM FORMS

It is imperative that a formally delegated official or his nominee of the Employer should authorize the Contractor Claim forms as proof of the appropriate authorization, verification and approval of claims submitted. The Strategic Executive Director must provide an authorization letter to the Section: Insurance and Risk Management stating the names and the specimen signatures of the delegated official or his nominee within 30 (thirty) days from approval of this report by Council. Should the delegated official or his nominee not sign the relevant claim form, the claim will be repudiated as this may lead to inappropriate independent verification of the validity of claims, thereby increasing the risk of insurance fraud and consequent reputation damage to the Employer.

4.5 CONTRACTOR TO PAY DEDUCTIBLES

Any claim in terms of the insurance affected by the Employer shall be subject to the Contractor being responsible for the payment of the amount stated in the Annexure to the Policies as being the deductible (first amount payable or Excess) as defined in the Certificate of Insurance issued by the Employer's insurer in terms of the Policy.

4.6 SETTLEMENT OF CLAIMS

All incidents reported to the Section: Insurance and Risk Management in respect of an occurrence, which is likely to give rise to a claim will be forwarded to the Employer's insurer who will take the necessary actions for the settlement of any such claims.

The Contractor shall negotiate for the settlement of claims with the Employer or the Employer's insurer through the Section: Insurance and Risk Management. The Employer's Chief Financial Officer will authorize all settlements of claims. The

Contractor will also sign the Agreement of Loss document issued by the Insurer in order to settle the claims.

Should action for the settlement of any such claim to the satisfaction of the Project Manager not be taken by the Contractor/sub-contractor within 30 (thirty) days after receipt of such claim by the Contractor/sub-contractor, the Employer or the Employer's insurer may settle any such claim, after giving the Contractor notice of its intention to do so; provided that no such claim shall be settled by the Employer or the Employer's insurer without first consulting the Contractor/sub-contractor.

The foregoing provisions of this Sub-Clause shall apply mutatis mutandis to any such claim received by the Contractor directly.

It is distinctly understood that should the Employer or the Employer's insurer not settle any such claim at the earliest opportunity, it shall in no way prejudice the Employer or the Employer's insurer's rights to recover from the Contractor nor shall the Contractor raise any such defence against the Employer or the Employer's insurer.

Any moneys which become payable as a result of a claim under the insurance effected by the Employer shall be paid to the Employer after deduction of the deductible amount (first amount payable or Excess), who shall pay such amount to the Contractor or to the party rectifying, repairing or reinstalling or who has suffered the loss or damage, but this shall in no way affect the Contractor's obligations in terms of the Contract.

The Contractor and Sub-contractor shall be free to effect and maintain at their own cost any additional insurance which the Contractor/Sub-contractor deem necessary to cover damage, loss or injury not insured in terms of the insurance effected by the Employer's insurer. The cost of the additional insurance will be for the account of the Contractor/Sub-contractor.

4.7 CONTRACTOR TO INSURE

The Contractor/Sub-contractor must obtain for the duration of the contract until the issuing of the Defects Certificate or the end of the Maintenance Period, the following insurance policies in the name of the Contractor (including all Subcontractors whether nominated or otherwise) at an insurance company within 14 (fourteen) days of the notification of acceptance of the tender and must pay all premiums and supply proof thereof to the relevant Project Manager 30 (thirty) days before the inception of the contract, that the policies have been taken out and that all premiums have been paid: All Risk Insurance cover with regard to all Plant and Materials and Equipment owned, leased or hired by the Contractor that are used in the execution of the contract for the full replacement value thereof.

Motor Vehicle and Passenger Liability Insurance cover indicating the registration numbers of the vehicles owned, leased or hired by the Contractor that are used in the execution of the contract to the amount of at least R10-million per claim with the number of claims unlimited.

SASRIA cover for motor vehicles and Plant and Materials and Equipment owned, leased or hired by the Contractor that are used in the execution of the contract for the full replacement value thereof.

In respect of Plant and Materials and Equipment and Motor Vehicles brought onto the Site by or on behalf of Subcontractors, the Contractor shall be deemed to have complied with the provisions of this Sub-Clause by ensuring that such Subcontractors have similarly insured such Plant and Materials and Equipment and Motor Vehicles.

Without limiting the Contractor's obligation in terms of the Contract, the Contractor will effect and maintain for the duration of the contract period until the issuing of the Defects Certificate or the end of the Maintenance Period insurance against all accidents or misfortunes including accidental loss of or damage to tangible property (except the Works, Plant and Materials and Equipment) and liability for accidental death of or bodily injury to or illness or disease contracted by any person (not an employee of the Contractor) occurring during the Period of Insurance and arising out of or in connection with the performance of the Insured Contract at the Contract Site as defined in the Schedule at any insurance company or under the policy effected by the Employer within 30 (thirty) days before the inception of the contract. The minimum limit of indemnity for any one event is R5-million and the number of claims will be unlimited.

4.8 INSURANCE PREMIUM PAYABLE

The Contractor will be liable for the payment of the insurance premium as calculated by the Employer's insurer within 14 (fourteen) days before the inception of the contract to the Section: Insurance and Risk Management, should the Contractor take out the Public Liability Insurance cover in terms of the insurance policy of Sub-Clause 1(e) of this Clause.

Proof must also be submitted that the Contractor complies with the conditions of the following legislation:

Compensation for Occupational Injuries and diseases, 1993.

- Unemployment Insurance Act, 1996.
- The Contractor shall in respect of the Site of the contract works appoint in writing a competent person to meet the requirements of the Health and Safety Act, No 85 of 1993 as amended.

The Project Manager involved must furnish the required insurance documentation, by 30 (thirty) days before the inception of the contract, to the Section: Insurance and Risk Management.

5 Performance Safe Working Practice

- 5.1 The "Council" requires a high standard of safe work performance from all employees and expects that the standard be maintained by the "Contractor" within the "Council's" jurisdictional area or on its premises.
- 5.2 Irrespective of human considerations, the maintaining of these health and safety rules shall be the execution of the prescribed legal requirements. These rules are not to hinder the "Contractor" in rendering services or indemnify the "Contractor" from any legal responsibility to ensure healthy and safe work circumstances.
- 5.3 The "Council" shall assist the "Contractor" in any practical considerations to accommodate the healthy and safe execution of work and therefore require co-operation in the execution of these safety rules.

6 Lock out Procedure

- 6.1 When power or air driven machines or equipment, electrical apparatus or pipe lines are examined, repaired, adjusted, cleaned, lubricated or serviced in any other way than normal servicing, then all isolating switches, -levers, valves or appliances must be put in the “off” or “closed” position and locked.
- 6.2 Should more than one team work on a machine, then each person in control of a team, must put a separate lock on the switch, **lever, valve or appliance**.

7 CRANES, VEHICLES AND HOISTING

- 7.1 For each crane or hoisting equipment used, the “Contractor” must submit a valid and recent test certificate or other form of the last examination of the machine or equipment, to the “Council”.
- 7.2 Only trained personnel with written permission and where determined by Law, with a valid driver’s license, may be allowed to operate any electrical diesel or petrol driver overhead crane, hydraulic or electrical hoisting equipment, self driven forklift, tractor or any other crane or vehicle. No employee of the “Contractor” may perform any overhead work or work on an overhead crane or hoisting equipment or work near cranes or crane rail, before:
 - an agreement was concluded with the “Council”.
 - Approval has been obtained from the “Council” to perform the work.
 - All applicable danger – and warning symbolic signs are put into position, or exemption, if applied for, is in operation.
- 7.3 The “Contractor” shall be wholly responsible for any loss or damage to cranes, hoisting equipment, plant, machines or equipment brought onto the work site by the “Contractor”

8 Machine Valances, Protection and Fending

- 8.1 No machine valances, protection or fencing may be removed from machines, manholes, etc without the written permission of “Council” if applicable exemption procedures were not appropriated.

9 Scaffold, Ladders, Tools and Equipment

- 9.1 No equipment or appliance belonging to “Council” may be used without written permission from “Council”.
- 9.2 Unless prior arranged, “Contractors” must bring sufficient tools and equipment to the site to finish the contract, including offices and storerooms. The mentioned equipment remains the responsibility of the “Contractor” with respect to loss, damage and theft.
- 9.3 In exceptional cases, where tools and equipment belonging to “Council” are used to finish the contract, the said equipment and tools are used on own risk and the “Contractor” indemnifies “Council” from any claims that may arise. The said indemnity must be in writing, as well as information regarding the loan period, identification and condition of tools and equipment. The “Contractor” is responsible for the returning of said tools and equipment in the same condition or better. The “Contractor” is responsible to “Council” for any damage or excessive wear of such tools or equipment and material.

10 excavations

- 10.1 Before any excavations commence, written permission must be obtained from “Council” to confirm the location of existing electrical cables, water pipes, etc.
- 10.2 All excavations and obstructions in floor, tar and dirt surfaces must be fenced effectively and safeguarded between sundown and sunup with a sufficient amount of red/yellow warning lights and symbolic signs.
- 10.3 The surrounding area must be kept clean, safe and tidy during excavation. Excess material may not obstruct unnecessarily.
- 10.4 If any property is in danger during excavation, it must be supported and the proposed support work must be submitted to the Department of Labour (OHS) and “Council” for approval.
- 10.5 Written permission must be obtained from “Council” to grant admittance to restricted areas as well as areas where dangerous or poisonous gases are present.
- 10.6 That all excavations be done in accordance with the stipulations of the Occupational Health and Safety Act.

11 First Aid

- 11.1 The “Contractor” must provide and maintain a first aid box equipped according to legal requirement where more than (5) five persons are employed. The first aid box must be in the care of a person with a competency certificate from one of the following organizations:
- (i) SA Red Cross Association;
 - (ii) St John’s Ambulance;
 - (iii) SA First Aid League; or
 - (iv) A person or organization approved by the Chief inspector for this purpose.

- 11.2 A visible notice must be put up on any work premises with the name of the person responsible for first aid. In an emergency "Council's" Ambulance / Fire Department or emergency services may be contacted at (012) 310 6200.

12 Flammable Liquids

- 12.1 The "Contractor" shall be held responsible for the necessary precautionary fire prevention measures. No smoking signs must be put up where applicable. The "Contractor's" employees must be informed of "Council's" fire prevention measures and evacuation procedures.

13 Compensation by Contractor

- 13.1 The "Contractor" shall be held responsible for all loss of and damage to property, the death or injury of persons, the resultant loss or damage suffered as well as all law suits, claims, costs, charges, fines and expenses due to negligence, violation of statutory liability or neglect of the "Contractor" or the "Contractor's" employees.

14 Transgression of Rules and Misbehavior

- 14.1 The "Contractor" is warned that any act(s) leading to damage or loss of employees of the "Contractor" or the "Council" shall not be tolerated. The "Council" may (without any reason) demand that any employee of the "Contractor" be withdrawn from the principal "Contract" or site.

15 Incident Reporting

- 15.1 All incidents referred to in Section 24 of the Occupational Health and Safety Act and other incidents shall be reported, by the "Contractor", to the Department of Labor, as well as to the "Council" and should such an incident take place outside normal working hours, on a Saturday, Sunday or Public holiday to Capital Park Power Management at telephone no. 324-3495 or 339-9027. The "Council" shall further be provided with a written report relating to any incident.
- 15.2 The "Council" will obtain an interest in the issue of any formal inquiry conducted in terms of the Occupational Health and Safety Act in any incident involving the "Contractor" and/or his employees and/or his subcontractors.
- 15.3 The "Contractor" undertakes to report to "Council" anything deemed to be unhealthy and/or unsafe and that he undertakes to verse his employees and/or subcontractors in this regard.
- 15.4 In the event of an occurrence, which is likely to give rise to a claim under the insurance policy affected by the Employer, the Contractor/Sub-contractors and Project Manager will adhere to the following procedures:

In addition to any statutory obligations and/or requirements contained in the General Conditions of Contract, the Contractor shall notify the Employer and the Project Manager of every occurrence within 48 (forty-eight) hours giving the circumstances, nature and an estimate of the loss or damage.

The Project Manager will be responsible to complete and submit the relevant claim documentation for each incident within 30 (thirty) days after the incident occurred to the Section: Insurance and Risk Management. Should the incident be reported by the Project Manager more than 30 (thirty) days after the incident occurred to the Section: Insurance and Risk Management, the claim will only be considered if the claim documentation is accompanied by a letter from the relevant Strategic Executive Director motivating the reason(s) for the late reporting of the incident, but the Project Manager must take note the Insurer might repudiate the loss if it is found that the insurers rights have been compromised as a result of the late reporting.

The following documentation must be included with the claim documentation:

Photos of damages caused or suffered as proof or substantiation of the claims.

In the event of Insured Property being damaged during the Contract Works beyond economical repair, the property must be safeguarded and be handed over to the Employer's insurer for salvage.

The Section: Insurance and Risk Management will inform the Employer's insurer of the incident. The Contractor/Subcontractor shall afford all reasonable access to the Site to the Employer, the Project Manager, the Employer's insurers and/or representatives for the purpose of assessment of any loss or damage.

15.5 REPORTING OF CATASTROPHIC INCIDENTS

In the event of an occurrence, which is likely to give rise to a claim, under the insurance policy effected by the Employer, with an estimated loss or damage of more than R250 000,00, the Contractor and the Project Manager will adhere to the following procedures:

In addition to any statutory obligations and/or requirements contained in the General Conditions of Contract, the Contractor shall notify the Employer and the Project Manager of every occurrence within 24 (twenty-four) hours giving the circumstances, nature and an estimate of the loss or damage.

The Project Manager must notify the Section: Insurance and Risk Management on the same day that the Contractor/Sub-contractor has notified the Project Manager of the incident.

The Section: Insurance and Risk Management will notify the Employer's insurer of the incident. The Contractor/Sub-contractor shall afford all reasonable access to the Site to the Employer, the Project Manager, the Employer's insurers and/or representatives for the purpose of assessment of any loss or damage.

The Project Manager will be responsible to complete and submit the relevant claim documentation for each incident within 30 (thirty) days after the incident occurred to the Section: Insurance and Risk Management. Should the incident be reported by the Project Manager more than 30 (thirty) days after the incident occurred to the Section: Insurance and Risk Management, the claim will only be considered if the claim documentation is accompanied by a letter from the relevant Strategic Executive Director motivating the reason(s) for the late reporting of the incident.

Should the relevant claim documentation not be submitted within 30 (thirty) days, the claim will be repudiated.

15.6 REPORTING OF CRIME RELATED INCIDENTS

All crime related incidents, losses or shortages irrespective of the value, must be reported within 24 (twenty-four) hours by the person who was involved or who has discovered the incident to the nearest South African Police Services (SAPS) station. The name of the Police Station, Investigation Officer and the Case number must be obtained and stated on the Contractor Claim Form. Should the incident not be reported to the SAPS, then the claim will be repudiated.

16 Liaison and Supervision

16.1 The "Contractor" hereby undertakes to liaise on a regular basis with the designated Risk Control Officer and "Council" representative regarding any hazards or incidents that may be identified or encountered during the performance of the "Principal Contract".

17 Service Interruption

17.1 Should any work done by the "Contractor" cause a possible interruption, written permission must be obtained from "Council", before such work commences. The "Contractor" may not switch on or off any compressed air, steam, oxygen, vacuum supply or electrical supply without written permission from the "Council".

18 Confidentiality

- 18.1 The "Contractor" and his employees shall regard all data, documentation and information of the contract and related documentation as confidential.
- 18.2 Lost documentation/plans or related documentation shall immediately be reported in writing to the "Council".
- 18.3 The "Contractor" shall not put up any advertisements or billboard at the site without permission.
- 18.4 The "Contractor" shall not take photographs of the contract site or part thereof or any work process or part thereof, without written permission from the "Council", or have photographs taken, published or let it be published.

19 Contract Site Preservation

- 19.1 Employees of the “Contractor” shall not be allowed entrance to the site unless a valid identity document, issued by “Council”, is displayed. The mentioned documents shall only be valid for a limited period, where after it must be renewed.

20 Completion of Work

- 20.1 The “Contractor” or his employees shall not leave the contract site before the “Council” is satisfied that the contract is completed according to the requirements and standards set out in the contract and that the working site is left in a satisfactory and safe condition.

21 Liquor, Drugs, Dangerous Weapons and Firearms

- 21.1 The “Contractor” shall ensure that no liquor, drugs, dangerous weapons or firearms be brought onto the premises.

22 Searches

- 22.1 The “Contractor” and any person engaged in the contract work may at any time be searched by “Council” appointed security personnel and all packages, suitcases, etc. must be presented to the access control point for examination prior to them being brought onto the property or leaving the property.

23 General Conditions

- 23.1 Notwithstanding anything to the contrary in this agreement, it is hereby specifically determined that the “Contractor-“

23.1.1 shall have acquainted himself and be conversant with the contents of all statutory provisions applicable to the health and safety of workers and other persons on the site including the execution of the work, and in particular the conditions contained in the Occupational Health and Safety Act, 1993 (Act 85/1993), and the regulations promulgated in terms thereof, and shall comply therewith meticulously and in all aspects and/or take care that it is complied with;

23.1.2 shall be obliged to immediately execute all instructions given to him by an authorized representative of “Council” in order to ensure and uphold the implementation and enforcement of the provisions referred to in sub-paragraph 1, to the satisfaction of the said representative;

23.1.3 shall indemnify the “Council” against any or all liability which may be incurred by the “Council” as a result of the omission of the “Contractor”, his employees, sub-contractors and/or representatives to comply with the provisions referred to in sub-paragraph 1, or to ensure that it shall be complied with;

23.1.4 shall undertake to pay upon demand any and/or all legal costs and other expenses which “Council” may have incurred as a consequence of any criminal charges or other proceedings pending against, or involving the “Council” as a result of the contravention or non-compliance by the “Contractor”, his

employees, sub-contractors and/or representative of any of the statutory provisions referred to in sub-paragraph 1.

23.1.5 Should the “Contractor” neglect to immediately execute any health and safety written orders issued to him, or to his employee in charge of the works, in terms of the stipulations of sub-paragraph 2, the “Council” shall be entitled to suspend the execution of the works and take the necessary steps to execute or have such order executed. Under these circumstances the contractor shall be obliged to pay “Council”, upon demand, all costs and expenses incurred by “Council”, in order to execute or have the said orders executed.

23.1.6 Should the abovementioned steps not establish a healthy and safe work environment the “Council” will be entitled to terminate the contract without incurring any further costs or claims from the contractor.

24 “Contractor” Identification Board

24.1 The “Contractor” shall provide on any work premises a temporary identification board containing at all worksites the following information:

- Company name
- On behalf of which division/department the work is being done
- The contact number and name of the person representing the “Contractor”
- The contact number and name of the person representing “Council”

24.2 The specifications of the identification board shall be as follows:

- Size: 900mm x 900mm
- Material: The board must be constructed of aluminium or similar strength material.
- Letter size: Letters must be at least 70mm in height.

24.3 The identification board must be displayed in a conspicuous manner at the worksite of the contractor for the duration of the work performed.

25 Acknowledgement

25.1 The “Contractor” hereby acknowledges that he has read and received a copy of the “Principal Contract” and agrees to be bound by and undertakes to observe all the terms and conditions of the “Principal Contract”. This appointment is made in terms of Section 37(2) of the Occupational Health and Safety Act, 85 of 1993.

26 Exceptions and Omissions

Remarks

The undersigned, who warrants that he / she is duly authorised to do so on behalf of the enterprise, confirms that the contents of this schedule are within my personal knowledge and are to the best of my belief both true and correct.

Person Authorized to sign Tender:

FULL NAME (BLOCK LETTERS):

SIGNATURE:

DATE:

THE CONTRACTOR

SIGNED AT ON THIS DAY OF

WITNESSES:

.....

THE CONTRACTOR

1.

2.

THE COUNCIL

SIGNED AT ON THIS DAY OF

WITNESSES:

.....
.....

1.

THE COUNCIL

2.

INDEMNITY CERTIFICATE

Contractor :

Employer :

Contract :

I/we _____ Hereafter
the "Contractor"

"Contractor" hereby indemnifies the City of Tshwane against any claim of whatever sort which may arise directly or indirectly from the execution by me/us of the above-mentioned contract and which may be instituted against "Council", as well as of any loss or damage which the "Council" suffers or expenditure the "Council" incurs to prevent responsibility for such claim, loss or damage, whatever the cause of such claim may be or whatever loss or damage the "Council" suffers.

THUS done and signed at on this
..... day of

..... 20....

WITNESSES:

- 1.
.....

CONTRACTOR

2.
.....

COUNCIL

ACKNOWLEDGEMENT CERTIFICATE

Iin my capacity
as.....

Duly authorized
hereto.....representing

..... Contractors,
acknowledge receipt of a copy of the City of Tshwane’s safety manual for contractors
and the under mentioned person as my supervisor regarding all works and services
which must be executed by the Contractor. The appointment is done in terms of the
Occupational Health and Safety Act, 1993 (Act 85/1993).

SIGNED AT ON
20....

I..... Accept the abovementioned appointment, and
declare that I am familiar with the contents of the City of Tshwane’s Substructure’s
Safety Manual for contractors.

CASUALTIES REGISTRATION NUMBER

SIGNED AT ON
20....

SIGNATURE.....

WITNESSES: 1

2.

A copy of this certificate shall be submitted to the "Council" before any work commences.

**PART 7: REFERENCES TO THE SCOPE OF
WORKS IN TERMS OF THE OCCUPATIONAL
HEALTH AND SAFETY ACT AND
REGULATIONS: HEALTH AND SAFETY**

REFERENCES TO THE SCOPE OF WORKS IN TERMS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS: HEALTH AND SAFETY

1. INTRODUCTION

Health and Safety Specifications is a documentation of all the health and safety requirements pertaining to the construction works so as to ensure health and safety of affected persons.

The Health and Safety Specifications are prepared to discharge The Employer's responsibilities in terms of the Occupational Health and Safety Act, Act No. 85 of 1993 (OSHACT) and the attendant regulations. The most noteworthy of these regulations are the Construction Regulations (GNR 1010 of 18 July 2003), the General Administrative Regulations (GNR 929 of 25 June 2003) and the General Safety Regulations (GNR 1031 of 30 May 1986 and subsequent amendments).

2. DEFINITIONS

Apart from the definitions set out in the OHSACT and the accompanying Regulations, the following definitions apply:

The Employer: City of Tshwane Metropolitan Municipality. The Employer is seen as the Client, for whom construction work is performed.

Engineer: A competent person appointed by the employer to design, supervise and monitor construction on their behalf.

Site: The area in the possession of the Contractor for the construction of the works. Where there is no demarcated boundary it will include all adjacent areas, which are reasonably required for the activities for the Contractor, and approved for such use by the Engineer.

3. DESCRIPTION OF WORKS

Refer to Part C8 Section C7 (page 1), in the Tender Document, for a detailed description of the works.

4. SPECIAL WARNINGS

Apart from the normal risks associated with the works, attention is drawn to the following elements that pose additional health and safety risks:

Dolomitic conditions exist on site;

Gas will be encountered in sewer lines;

Working adjacent to/within roads; and

Live services (i.e. Eskom, Telkom, gas/petrol, rail, water, sanitation and

Contractors are to include the above mentioned in the risk assessment (refer to **Section 6.3**).

5. OHS RESPONSIBILITIES

In terms of Regulation 4 of the Construction Regulations the **Client** (i.e. The Employer) is responsible for *inter alia* the following:

Preparing a documented **Health and Safety Specification** for the construction work, and provide any principal contractor who is making a bid or appointed to perform construction work for the client with the same;

Taking reasonable steps to ensure that each principal contractor's **health and safety plan** is implemented and maintained on the construction site: Provided that the steps taken shall include periodic audits at intervals mutually agreed upon between the client and principal contractor, but at least once every month;

Ensuring that potential principal contractors submitting tenders, have made provision for the cost of health and safety measures during the construction process;

Discussing and negotiating with the principal contractor the contents of the health and safety plan and thereafter finally approve the health and safety plan for implementation; and ensuring that a copy of the principal contractor's health and safety plan is available on request to an employee, inspector or contractor.

A client may appoint an agent in writing to act as his or her representative and where such an appointment is made, the responsibilities as are imposed by the Construction Regulations upon a client, shall as far as reasonably practicable apply to the agent so appointed.

5.2 The Contractor(s) Responsibilities

In terms of Regulation 5 of the Construction Regulations the **Principal Contractor** and **Contractor** are responsible for *inter alia* the following:

Providing and demonstrating to the client a suitable and sufficiently documented health and safety plan, based on the client's documented health and safety specifications contemplated in Regulation 4 (1) (a), which shall be applied from the date of commencement of and for the duration of the construction work.

Contractors who are making a bid for construction work are required to make provision for the cost of health and safety requirements set out in these specifications and in the OHSACT and accompanying Regulations. In addition, the aforesaid Contractors shall submit a declaration indicating that they have the necessary competencies and resources to carry out the work safely.

Note that compliance to these Health and Safety Specifications does not absolve the Contractor to comply with the minimum legal requirements in terms of the OHSACT, Construction Regulations or any other applicable Regulations or amendments thereto.

6. GENERAL HEALTH AND SAFETY PROVISIONS

This section of the document provides the general health and safety requirements imposed on the Contractor for the construction work to be performed. Note that although these provisions do not provide an all-inclusive interpretation and repetition of the applicable sections of the OHSACT and accompanying Regulations, the Contractor is obligated to comply with the aforementioned legislation in full.

6.1 Appointments

The following appointments (where applicable), as required by the Occupational Health and Safety Act, General Safety Regulations and Construction Regulations, will be made in³⁶ writing by the Contractor:

- Safety Officer (Regulation 6);
- Safety Representative (OHS Act 17);
- First Aid Attendant (General safety regulations 3)
- Construction Supervisor (Regulation 6);
- Risk assessment (Regulation 7);
- Fall protection (Regulation 8);
- Structures (Regulation 9);
- Formwork and support work (Regulation 10);
- Excavation work (Regulation 11);
- Demolition work (Regulation 12);
- Tunnelling (Regulation 13);
- Scaffolding work (Regulation 14);
- Suspended platform operations (Regulation 15);
- Boatswain chairs (Regulation 16);
- Material Hoists (Regulation 17);
- Batch plant operations (Regulation 18);
- Explosive powered tools (Regulation 19)
- Cranes (Regulation 20);
- Construction vehicle and mobile plant (Regulation 21(1));
- Electrical installation and machinery on construction site (Regulation 22);
- Use of temporary storage of flammable liquids on construction site (Regulation 23);
- Water environments (Regulation 24):
- Housekeeping on construction sites (Regulation 25)
- Stacking and storage on construction sites (Regulation 26);
- Fire precautions on construction sites (Regulation 27); and
- Construction welfare facilities (Regulation 28).

The Contractor shall ensure that the employees appointed in the above positions are competent. An organogram with the candidates to be appointed in the above positions must be included in the Health and Safety Plan and submitted to the employer.

All persons appointed in the above-mentioned positions must complete a register for each appointment. Details for the frequency of completion of each register are included in **Table 1** below.

Table 1: Register Frequency

Supervisor	Completion Frequency	Reporting Medium
Safety Officer	On-going	Monthly Safety Report
H&S Representative	Monthly	Register

Risk Assessor	On-going	Continuous R.A. form
Fall Protection Supervisor	Daily	Register
Formwork and Support work Supervisor	Daily	Register
Excavation Supervisor	Daily	Register
Demolition Supervisor	Daily	Register
Tunnelling Supervisor	Daily	Register
Scaffolding Supervisor	Daily	Register
Portable Electrical Equipment Inspector	Daily	Register
Explosive Powered Tool Inspector	Daily	Register
Construction Vehicle and Mobile Plant Inspector	Daily	Register
Ladder Inspector	Monthly	Register
Hand tool inspector	Weekly	Register
Fire Equipment Inspector	Monthly	Register
First Aid Attendant	Weekly	Inventory Register
Stacking and storage supervisor	On-going	Register
Ablution Facilities (Safety Officer)	Weekly	Register
Welding supervisor	Daily	Register

All registers must be kept in the Health and Safety file on site.

6.2 Notification of Commencement of Construction Work

(Construction Regulations, Regulation 3)

The Contractor shall prior to carrying out the construction work notify the Provincial Director of the Department of Labour in writing if the following work is involved:

- the demolition of structures and dismantling of fixed plant of height of 3,0 m or more;
- the use of explosives;
- construction work that will exceed 30 days or 300 person-days;
- excavation work deeper than 1,0 m; or
- working at a height greater than 3,0 m above ground or landings.

The notification must be done in the form of the pro forma included as **Annexure A** to these specifications.

The address details of the provincial director are as follows:

The Provincial Director: Gauteng South

Department of Labour

P.O. Box 4560

JOHANNESBURG

2000

A copy of the notification form must be kept on site, available for inspection by inspectors, The Employer, The Employer's Agent or employees.

6.3 Risk Assessment

(Construction Regulations, Regulation 7)

The Contractor shall before the commencement of any construction work and during construction work, cause a risk assessment to be performed by a competent person (appointed in writing). The risk assessment shall form part of the health and safety plan to be applied on the site and shall include at least—

- (a) the identification of the risks and hazards to which persons may be exposed to;
- (b) the analysis and evaluation of the risks and hazards identified;
- (c) a documented plan of safe work procedures to mitigate, reduce or control the risks and hazards that have been identified;
- (d) a monitoring plan; and
- (e) a review plan.

In order to ensure compliance with the Construction Regulations the Contractor will be required to undertake three forms of risk assessments, namely:

1) Baseline risk assessment:

Before the undertaking of construction work the Contractor is required to undertake a risk assessment. The baseline risk assessment will be included in the Health and Safety Plan. The baseline risk assessment must include any risk or hazard that people, vehicle, machinery and facilities may be exposed too during construction. Mitigation measures for the identified risks must be defined during the assessment. The baseline risk assessment and mitigation measures must be periodically reviewed during the construction work to ensure that it remains relevant.

2) Issue based risk assessments:

If methods and procedures are varied during the construction period, the Contractor will be required to undertake a separate risk assessment. Examples of when a separate risk assessment will be undertaken are as follows:

- New machinery is brought onto site,
- Incidents or near misses occur,
- Designs or layouts are amended, or
- Type of work changes.

3) Continuous risk assessment:

In order to maintain a safe and risk free environment continuous risk assessments must be undertaken. This may be in the form of regular audits, general risk awareness and risk assessments prior to the commencement of work.

After all risks have been identified, the Contractor is required to analyse the risks identified by determining the risk probability, severity and frequency. This is done by using the risk matrix, as shown in **Figure 1**.

		Severity					
		6	4	2	0		
Probability	6	18	16	14	12	Frequency	6
	4	16	12	10	8		4
	2	10	8	6	4		2
	0	6	4	2	0		0

A		B		C		D	
Probability an accident may occur		Severity		Hazard Frequency		Risk Score / Criticality	
6	Inevitable	6	Fatal and Permanent Dis.	6	Arises every shift	14 to 18	High Risk
4	Probable	4	DLTI (50 000 - 499 999)	4	Arises every week	8 to 13	Medium Risk
2	Highly improbable	2	Medical Case (10 000 - 49	2	Arises every month	0 to 7	Low risk
0	No injury / loss	0	First Aid Case	0	Arises every year		

Figure 1: Risk Matrix and Scoring System

The Contractor may use an alternative risk matrix provided that it is approved as part of the Health and Safety Plan.

The person or group of people appointed to undertake the risk assessment must be competent. This means that the person must have the knowledge, training, experience and qualifications specific to the work or task being performed.

Site specific risks:

As a minimum, the following site-specific risks must be taken into account when undertaking the risk assessment;

The occurrence of pipe jacking along sections of the pipeline. At minimum the following risks need to be taken into account:

- Work in confined space,
- Gas detection,
- Ventilation,
- Possible collapsing of tunnel,
- Fire, etc

This is seen as a tunnelling activity and the Contractor must comply with the Tunnelling Regulations under the Mine Health and Safety Act, 1996 (Act 29 of 1996).

During trench excavation (Construction Regulations, regulation 11), take into account whether shoring, bracing or sloping of trench walls will be required. Include associated risks when working in or around deep trenches. The contractor must provide detailed information regarding the methods to be used for the safeguarding of excavations as well as the area surrounding such excavations.

Backfilling and compaction of trenches, this includes the preparation of bedding. Ensure all persons operating machinery are adequately trained. Proof of training of persons operating equipment to be kept on site.

Risks associated with the laying of metal pipes and welding of pipes. Be aware that during welding gas is released and in confined space this has the potential to ignite. Welding also generates an intense heat which can result in employees suffering from heat stress or heat stroke.

Be aware of all existing live services that may cross the path of the pipeline. Not all these existing services may be known or plotted on the layout map.

Associated risks working next to/within roads.

Risks related to working in residential and commercial areas.

Security risks.

Any other risks associated with the project.

Ensure that safe work and emergency procedures are prepared for all identified risks.

6.4 Sub-contractors

(Construction Regulations, Regulation 5)

In accordance with Regulation 5 (3), a Principal Contractor shall undertake *inter alia* the following with regard to sub-contractors:

- (a) Provide any contractor who is making a bid or appointed to perform construction work for the principal contractor, with the relevant sections of the Health and Safety Specifications contemplated in Regulation 4 (1) (a);
- (b) Take reasonable steps to ensure that each contractor's health and safety plan contemplated in subregulation (4) is implemented and maintained on the construction site: Provided that the steps taken shall include periodic audits at intervals mutually agreed upon between the principal contractor and contractor(s), but at least once every month;
- (c) Stop any contractor from executing construction work, which is not in accordance with, the principal contractor's and/or contractor's health and safety plan for the site or which poses a threat to the health and safety of persons;
- (d) Ensure that every contractor is registered and in good standing with the compensation fund or with a licensed compensation insurer prior to work commencing on site; and

- (e) Ensure that potential contractors submitting tenders have made provision for the cost of health and safety measures during the construction process.

6.5 Copy of OHSACT

(General Administrative Regulations, Regulation 4)

Each employer with 5 or more employees shall have a copy of the OHSACT and relevant Regulations and Basic Employment Act, which will be made readily available for perusal by the employees.

6.6 Personal Safety Equipment and Facilities

(General Safety Regulations, Regulation 2)

For those situations or conditions which cannot be prevented or safeguarded, the Contractor shall take steps to reduce the risk as much as is practicable, and shall provide free of charge and maintain in a good and clean condition such safety equipment and facilities as may be necessary to ensure that any person exposed to any such condition or situation at a workplace or in the course of his employment or on premises where machinery is used is rendered safe.

6.7 First aid, emergency equipment and procedures

(General Safety Regulations, Regulation 2)

In case of injury or emergency, the Contractor shall take all reasonable steps that are necessary under the circumstances, to ensure that persons at work receive prompt first aid treatment.

The Contractor shall, in the instance where more than five employees are employed at the site, provide a first aid box or boxes at or near the workplace, which shall be available and accessible.

The first aid box shall contain suitable first aid equipment, which includes at least the equipment listed in the Annexure of the General Safety Regulations.

Where more than 10 employees are employed at the site, the Contractor shall take steps to ensure that for every group of up to 50 employees at the site; at least one person is readily available during normal working hours, which is in possession of a valid certificate of competency in first aid.

6.8 Work in Elevated Positions

(General Safety Regulations, Regulation 6)

Work in an elevated position shall only take place if it is performed safely from a ladder or scaffolding, or from a position where such person has been made as safe as if he were working from scaffolding.

6.9 Letter of Good Standing

(Construction Regulations, Regulation 4(g))

The Contractor shall provide a letter of good standing with the compensation fund or with a licensed compensation insurer to The Employer, prior to work commencing on site.

6.10 Excavation Work

(Construction Regulations, Regulation 11)

The Contractor shall ensure that all excavation work is carried out in a safe manner, and to this end will undertake the necessary steps to ensure inspection, stabilisation, identification of existing services, and provision of access is adequately catered for. The excavation supervisor will inspect excavations:

- daily (prior to each shift);
- after every blasting operation;
- after an unexpected fall of ground;
- after substantial damage to supports; and
- after rain,

and will complete the excavation register, as contained in **Annexure B**.

The Contractor shall cause every excavation that is accessible to the public or which is adjacent to public roads or thoroughfares, or whereby the safety of persons may be endangered, to be adequately protected by a barrier or fence of at least one metre in height and as close to the excavation as is practicable. In addition, these excavations shall be provided with clearly visible boundary indicators at night.

The Contractor shall erect warning signs next to an excavation within which persons are working or carrying out inspections or tests.

6.11 Construction Vehicles and Mobile Plant

(Construction Regulations, Regulation 21)

The Contractor shall ensure that all construction vehicles and mobile plants are kept, used, maintained and inspected as required by Regulation 21 of the Construction Regulations, so as to protect the health and safety of the Contractor's employees and the public, and to ensure proper care of the plant and vehicles.

Moreover, in accordance with Regulation 21 (2) of the Construction Regulations, the following shall apply:

“(2) A contractor shall furthermore ensure that:

no person rides or be required or permitted to ride on any construction vehicle or mobile plant otherwise than in a safe place provided thereon for that purpose;”

To ensure such a “safe place” for the transport of employees the following must be provided:

Proper seating for employees and protection from the elements;

Barricading to create a safe barrier between employees and material when they are transported on the same vehicle; and

Proper means to secure material on the back of the vehicle especially when material and persons are transported together.

It is advised that Contractors:

1. identify the shortcomings of construction vehicles in use and ensure compliance to the requirements of the regulations as soon as is reasonably practicable;
2. ensure that new vehicles purchased for use as construction vehicles comply with the requirements or have the necessary alterations made before commissioning of the vehicles; and
3. ensure that all vehicles leased for the purpose of performing construction work and the transport of employees comply with the requirements of the said regulations.

6.12 Water Environments

(Construction Regulations, Regulation 24)

The Contractor shall ensure that where construction work is done over or in close proximity to water, provision is made for —

- (a) preventing workers from falling into water; and
the rescuing of workers in danger of drowning.

Where a worker is exposed to the risk of drowning by falling into the water, the Contractor shall ensure that a lifejacket is provided to and worn by the worker.

6.13 Stacking and storage on construction sites

(Construction Regulations, Regulation 26)

The Contractor shall ensure that adequate, demarcated storage areas are provided. In addition, these areas shall be kept neat and under control.

6.14 Occupational Health and Safety Signage

(General Safety Regulations as amended)

The Contractor shall ensure that the necessary signage is displayed, as is required by the OHSACT and the accompanying Regulations. The signage shall be placed at all entrances to the site and at strategic points on the site.

6.15 Health and Safety File

(Construction Regulations, Regulation 5 (7) & (8))

The Contractor shall ensure that a health and safety file, which shall include all documentation required in terms of the provisions of the OHSACT and the accompanying Regulations, is opened and kept on site and made available to an inspector, The Employer, The Employer's Agent or Principal Contractor upon request.

At minimum, the following must be included in the Health and Safety file;

- Health and Safety Plan,
- Proof of notification of the Department of Labour,

- Letter of good standing from the compensation insurer,
- Appointment letters,
- First aider's certificate,
- Proof of training,
- Risk Assessments,
- Registers,
- Proof of induction,
- PPE records,
- Method Statements,
- Construction designs and alterations, and
- Specifications of materials used.

The Contractor shall hand over a consolidated Health & Safety File to The Employer on completion of the construction work.

6.16 Induction and Training

(Construction Regulations, Regulation 7)

The Contractor shall ensure that all employees are informed, instructed and trained by a competent person regarding any hazard and the related work procedures before any work commences, and thereafter at such times as may be determined in the risk assessment. Further, the Contractor shall ensure that all sub-contractors are informed regarding the hazards, before work commences.

The Contractor shall not allow any employee to enter the site unless that employee has undergone health and safety induction training pertaining to the hazards prevalent on the site at the time of entry.

The Contractor shall ensure that all visitors to the site undergo health and safety instruction pertaining to the hazards prevalent on the site and shall be provided with the necessary personal protective equipment: Provided that where visits are made only to the site office which is not in direct contact with the construction work activities, those health and safety instructions and the provision of personal protective equipment may not apply.

6.17 Reporting of Incidents and Occupational Diseases

(General Administrative Regulations, Regulation 8 & 9)

The Contractor shall ensure that, where necessary, accidents and incidents are reported to the Department of Labour. This must be done by completing Annexure 1 of the General Administrative Regulations (2003).

The Contractor must investigate all incidents and a formal incident investigation report must be submitted to The Employer within 7 working days of the incident occurring. The Employer has the right to request an external investigation into the incident.

6.18 Lifting equipment

(Driven Machinery Regulations, Regulation 18)

The Contractor shall ensure that lifting machines and lifting tackles are used in accordance with Regulation 18 of the Driven Machinery Regulations.

The Contractor shall ensure that all lifting equipment and tackle is clearly marked, indicating the safe working load of the equipment. Lifting tackle shall be registered in a system and signed off on a daily basis by a competent person after inspection of the equipment.

6.19 Emergency Plan

Prior to commencement on site, the Contractor shall submit a detailed Emergency Procedure for approval by The Employer. The Emergency Procedure shall account for the potential emergency situations that may occur on site.

The purpose of the Emergency Procedure includes:

- To generate, enforce and give effect to rules or guidelines that protect human health and property;
- To provide for efficient reaction to emergency situations; and
- To designate key personnel to participate in the emergency procedure.

The Emergency Procedure shall include a list of emergency telephone numbers (Fire Department, Ambulance, Police, Hospital, Services, etc.), which is kept and clearly displayed at the site.

6.20 Monthly Health and Safety Compliance Audit

The Contractor and the Health and Safety file must be made available for monthly auditing by the client or client's Safety Agent. This is to ensure that the approved Health and Safety Plan is being implemented and maintained.

6.21 Monthly Report and Site meeting

The Contractor will use the monthly site meeting as a platform to report on all Health and Safety Issues. The Contractor will ensure that the most senior manager attends all Health and Safety Meetings with the Client. During the monthly site meeting, the Contractor will submit a monthly safety report as shown in **Annexure C**.

7.1 ANNEXURE A: REGULATION 3 OF THE CONSTRUCTION REGULATIONS, 2003

OCCUPATIONAL HEALTH AND SAFETY ACT, 1993

NOTIFICATION OF CONSTRUCTION WORK

1. (a) Name and postal address of principal contractor:
.....
.....
- (b) Name and telephone numbers of principal contractor's contact person:
.....
.....

2. Principal contractor's compensation registration number:
.....

3. (a) Name and postal address of client:
.....
.....
- (b) Name and telephone number of client's contact person or agent:
.....
.....

4. (a) Name and postal address of designer(s) for the project:
.....
.....

(b) Name and telephone number of designer's contact person:

.....
.....

5. Name and telephone number of principal contractor's construction supervisor on site appointed in terms of Regulations 6 (1):

.....

6. Name/s of principal contractor's subordinate supervisors on site appointed in terms of Regulation 6 (2):

.....

7. Exact physical address of the construction site or site office:

.....

8. Nature of the construction work:

.....
.....
.....

9. Expected Commencement Date:

10. Expected Completion Date:

11. Estimated maximum number of persons on the construction site:

.....

12. Planned number of contractors on the construction site accountable to principal contractor:

.....

13. Name(s) of contractors already chosen:

.....
.....
.....

.....
Principal Contractor

.....
Date

.....
Client

.....
Date

THIS DOCUMENT IS TO BE FORWARDED TO THE OFFICE OF THE DEPARTMENT OF LABOUR
PRIOR TO COMMENCEMENT OF WORK ON SITE.

ALL PRINCIPAL CONTRACTORS THAT QUALIFY TO NOTIFY MUST DO SO EVEN IF ANOTHER
PRINCIPAL CONTRACTOR ON THE SAME SITE HAD DONE SO PRIOR TO THE
COMMENCEMENT OF WORK

7.2 ANNEXURE B: EXCAVATION REGISTER

7.3 ANNEXURE C: MONTHLY SAFETY REPORT

INJURIES

State whether any injuries occurred during the last month. If an injury did occur, state the severity and how injury occurred. Provide a method statement detailing how the accident/injury will be prevented in the future.

NEAR MISSES

State whether any near misses occurred during the last month. If a near miss did occur, provide a method statement of how this will be avoided in the future.

INDUCTION STATUS

Give status of induction for all employees.

STATUS OF PERSONAL PROTECTIVE EQUIPMENT (PPE)

State whether all employees have received PPE and whether the employees using the PPE as required.

NEWLY IDENTIFIED RISKS

Provide details of any new risks on site and provide safe work procedures for these newly identified risks.

APPOINTED PERSONS

Status of appointments: Are all appointed persons giving the appropriate time and attention to the job for which they have been appointed?

STATUS OF REGISTERS

Are all registers being completed as required?

FINDINGS FROM LAST AUDIT AND WAY FORWARD

Provide details of the last audit by the Client or Agent and give details of how these issues will be addressed.

EMPLOYEES

Discuss any comments or requests regarding Health and Safety raised by the employees.

OTHER

Discuss any other issues regarding Health and Safety.

.....

SIGNATURE

.....

DATE

7.4 ANNEXURE D: OHS HAZARD IDENTIFICATION AND RISK ASSESSMENT

The management of the OHS Programme is aimed at eliminating risks from the system and where that is impossible minimizing risk. The main safety hazards have been identified as follows:

- Opening manholes and other equipment
- Getting into manholes and other openings
- Climbing out of manholes and other openings
- Closing manholes and other access points
- Working in or close to roads or walkways
- Working with high pressure water, gas, etc
- Driving on public roads
- Button spiders and snakes in manholes and other access points
- Gasses in lines and other work stations

The undersigned, who warrants that he / she is duly authorised to do so on behalf of the enterprise, confirms that the contents of this schedule are within my personal knowledge and are to the best of my belief both true and correct.

Person Authorized to sign Tender:

FULL NAME (BLOCK LETTERS):

SIGNATURE:

DATE:

PART 8:
HEALTH AND SAFETY PLAN

Part 8: Health and safety plan

FALL PROTECTION

In addition to the requirements of this regulation (CR 8) the following shall apply:

- The fall protection plan is to be prepared by a competent person. This competent person must sign the fall protection plan.
- Contents of the fall protection plan must cover all the requirements as stated in sub regulation CR 8.
- The fall protection plan is to be handed to the agent/engineer/City of Tshwane before work commences.
- The level of supervision is to be stated in the fall protection plan.
- Medical certificates, work near edges, presence of dew, dangerous walking areas etc should be addressed in the fall protection plan.

REGISTERS

- Examples of the registers listed below must be provided in the Health and Safety Plan.
- All registers must be available at the site offices at all times for inspection by the agent.
- The list of registers to be kept is by no means exhaustive and the H&S Plan should list all the registers that are applicable and at what frequency they are going to be maintained.

ACTIVITY	FREQUENCY	FORMAT
Form work / Support work	Daily, prior to any shift	
Excavation Work	Daily, prior to any shift, after rain or blasting or after unexpected fall of ground	
Material Hoist	Daily	
Explosive Powered Tools	Daily Before Use	
Crane(s) Logbook	As per DMR 18	
Construction Vehicles and Mobile Plant	Daily	
Temporary Electrical Installation	Weekly	
Stacking	Weekly	
Fire Extinguishers	Bi – Monthly	
Ablution Facilities	Weekly	
Ladders	Weekly	
Incident Register in terms of GAR 9	As Required	Annex 1 of GAR
Fall Protection Equipment	Daily	
Portable electrical tools	Weekly	
Suspended Platforms	Daily	
Fire fighting equipment	Monthly	

GENERAL REQUIREMENTS

• *Personal Protective Equipment/Clothing*

The procedures for issuing and control over PPE shall be indicated in the Health and Safety Plan, as well as the enforcement for the wearing thereof.

• *Hired Plant*

The responsibility for the safe condition and use of all hired plant shall be that of the contractor.

• **Transport of Employees**

Transport of employees shall be carried out in terms of the National Road Ordinances and the OHS Act - Construction Regulations.

The Health and Safety Plan shall detail the arrangements and methods of the transportation of workers.

• **Signs**

The Principal Contractor shall indicate in his Health and Safety Plan the arrangements regarding the posting of danger signs.

• **Certificates of fitness**

The Principal Contractor shall include in his H&S Plan copies of medical fitness certificates for the following:

- **Crane Operators**
- **Construction vehicles and Mobile plant operators**
- **Any other medical certificates that might be applicable in terms of the other regulations governing health & safety of construction personnel such as HCS regulations and Noise induced hearing loss etc.**

WORK PERMIT

- A work permit is required for all work to be done by contractors or any person on electrical machinery or in live chambers and prohibited areas at any point of the power system.
- An authorized person will issue all permits for equipment/machinery on which switching/connections must be done. The permits of all equipment/machinery for which the Electricity Division is responsible will be requested by the person wanting to do the work; request can be made via Project Manager City of Tshwane and optioned at Capital Park power system control.
- After the work has been completed, the work permit must be returned to an authorized person or the Control Officer

CLEARANCES

- 400-3 500 V Person to live equipment 300 mm
- 11 000 V Person to live equipment 600 mm
- 33 000 V Person to live equipment 900 mm
- 66 000 V Person to live equipment 1,2 m
- 88 000 V Person to live equipment 1,5 m
- 132 000 V Person to live equipment 2,3 m
- 165 000 V Person to live equipment 3,3 m
- 220 000 V Person to live equipment 3,8 m
- 275 000 V Person to live equipment 4,2 m
- 380 000 V Person to live equipment 4,5 m

INCIDENT REPORTING

All incidents occurred while the contractor is doing work must be reported to City of Tshwane Project Manager. 391

PART 9:
SERVICE LEVEL AGREEMENT (SLA)
APPLICABLE TO PART 3 AND 4 OF THIS
TENDER SUBMISSION

Memorandum of Agreement entered into by and
between:

City of Tshwane Metropolitan Municipality

Herein represented by in his capacity as Municipal Manager and duly
authorised thereto in terms of a Council Resolution dated, a copy of which is
attached hereto as Annexure "A".

(Hereinafter referred to as the City of Tshwane ("CoT"))

and

.....

Herein represented by in his/her capacity as..... and
duly authorised thereto in terms of a resolution dated, a copy of which is
attached hereto as Annexure "B".
(Hereinafter referred to as The Contractor)

SERVICE LEVEL AGREEMENT

1. Background

1.1 This document comprises the SLA with the successful contractor.

2. Commercial Details

2.1 The contractor will take overall responsibility of the network infrastructure:

- the day-to-day maintenance and support of the network including all types of networking equipment inclusive of Cisco, Alcatel, 3 Com etc. This shall include first line support and therefore include activities such as:
 - determining whether the fault is electrical related and escalation thereof
 - determining whether the fault is fiber related and escalation thereof
 - fault tracing equipment and reconfiguring thereof
 - providing reports on faulty equipment
 - replacing power supplies where applicable
 - realigning radio antennas
- The delivery, installation, configuration of network equipment related to Projects and or programs.

3. Onsite Resources And Support Hours

3.1 It is crucial that the contractor provide CoT with the best trained, qualified human resource base with service related experience directly applicable to the services and systems deployed in Council.

3.2 It must be noted that the staff must be available at all times to CoT and that the contractor is not allowed to utilize the staff for other purposes unless pre-approved. Should staff not be available, suitable pre-approved replacement staff must be provided.

3.3 The resource skills must be on site during the hours 7:30 to 16:00 (official CoT working hours).

3.4 **Standby:** At least one team must be on standby after hours and over weekends. A monthly roster must be provided with the name and contact detail of the persons on standby.

- 3.5 **Support for after hours, weekends and public holidays:** Such support will be based on the response times in accordance with the applicable SLA as well as on the core network.
- 3.6 All resources to report directly to the **[Deputy Director ICT Network Engineering, wrt Data Switching Infrastructure & Deputy Director Telecommunication Services, wrt Voice Switching Infrastructure]** or appointed representative.
- 3.7 All personnel to adhere to the communication protocol. The communication protocol is as follows:
- Project managers\installation and maintenance teams\all other onsite resources of the contractor to interact with project managers of the CoT.
 - All reports on SLA issues to be reported directly to the **[Deputy Director ICT Network Engineering, wrt Data Switching Infrastructure & Deputy Director Telecommunication Services, wrt Voice Switching Infrastructure]** or approved representative.
 - All Departmental requests for equipment/services to be referred to the **[Deputy Director ICT Network Engineering, wrt Data Switching Infrastructure & Deputy Director Telecommunication Services, wrt Voice Switching Infrastructure]** or approved representative.

4. **Escalation Procedure**

- 4.1 If faults are not cleared or no response is received, the following person at Senior Management can be contacted to escalate the call:

Name:

Tel nr:

5. **Support**

The daily management of the systems and deployed infrastructure base is critical and must be done in such a way that no functions or functionality of the deployed infrastructure base is impacted. The contractor will provide on-going monitoring, installation and maintenance and support of CoT network Infrastructure.

6. **Advisory Service:**

The Contractor to provide an advisory service iro new development trends that have to be planned for. The Contractor to assist in alternative solutions when budget is not available for the suggested implementation.

7. **Additional Services**

- The Contractor to play a supporting role to CoT personnel including the service desk and third party contractors (UTP or PC Support contractors etc) when requested to do so.
- **Spares:** The Contractor will endeavor to keep adequate spares for the CoT network and will release spares when an official purchase order is received. The spares in question refer to emergency repairs.

8. **General:**

- 8.1 Normally an automated call is generated by the Service Desk System. However CoT will provide a call reference number for all maintenance/installation related services. The Contractor need to acknowledge receipt of the call, and must also close the call after attending to it. In situations where no call nr is available, the contractor can log such call at the service desk for reference.
- 8.2 CoT project managers/coordinators will liaise with the Contractor's Project Manager(s) on all projects at least 1 week in advance of the project start date.
- 8.3 The Contractor to Liaise with the relevant Council personnel iro all insurance claims on the deployed old equipment.
- 8.4 The contractor must have insurance against lightning and surge damage for all new equipment deployed to site. New equipment damaged by lightning and/or surges must be replaced free of charge and the necessary steps must be taken to prevent such damage in future (for example installing a proper grounding system, by utilizing power surge plugs etc).
- 8.5 The Contractor must manage the account and any on-site resources in a professional manner in line with City of Tshwane corporate policy.
- 8.6 Change Control (When required): Proper change control must be adhered to and no changes can be made unless prior approval has been obtained. All changes and expansions must be managed in accordance with Council's existing Change Control processes and procedures in line with ITIL best practice. All new projects must be deployed adhering to these principles. Asset relocation must be done if an asset is moved via change control. Any expansion, ie where new equipment is deployed or configuration changes, requires that The Contractor must update all diagrams/drawings applicable to the environment.

9. **Meetings/Interaction:**

The Contractor must attend meetings, site scoping and high level meetings with relevant officials directly involved in this service in Council. The Contractor to hold and minute two weekly meetings with the relevant people in Tshwane to discuss any request and network related issues.

The Contractor to be involved in internal marketing as might be necessary from time-to-time.

10. **Reporting:**

Reports will be required from time to time and must be provided free of charge on for^{39c} example emergency situations, major events, monthly maintenance reports etcetera.

It will be required of the successful contractor/vendor to provide monthly reports. Reporting to be relevant to service maintenance/management and projects/programs.

The following reporting is required and must be given on a monthly basis:

- Status of all maintenance calls including quotes issued, orders received (with date and order number), date call completed etcetera
- Project Summary listing all projects and their respective status
- Any other reports required by CoT, and as listed in the contract.

11. Confidentiality:

The Contractor is not allowed to discuss the network with third parties or to link third parties with the CoT network. A Non-Disclosure Agreement will be entered into by both parties. The Contractor may not share any information about the operations of CoT with any parties outside this agreement unless CoT gave written consent.

12. Service Level Agreement

The table below outlines the details pertaining to the service required and the penalties related to non-conformance.

Service Class Definition					
Type	Definition	Mean Time to Respond [Severity]	Mean Time to Resolve	Service Window	Penalty
Maintenance	Major Business impact: Any service that is completely down and has a critical impact on business services. Includes core sites.	Immediate to 30 minutes [1]	Immediate to 3 hours	24 x 7 support	R 200-00 per hour for late completion to a maximum of R 5000-00 per incident.
	Moderate business impact. Any fault or outage that is causing COT or any of his external parties' degradation of performance.	Immediate to 1 hour [2]	Immediate to 8 hours	24 x 7 support	R 150-00 per hour for late completion to a maximum of R 5000-00 per incident.
	Minor business impact. Change requests. Low or no impact on business services.	Immediate to 8 hours [3]	Immediate to 24 hours	Normal Working Hours Monday To Friday 7:30-16:00	R 100-00 per hour for late completion to a maximum of R 5000-00 per incident.
	All other related maintenance activities as per flow chart [NORMAL MAINTENANCE RELATED PROCESSES TO BE DONE BY CONTRACTOR]	N/A	As indicated on the flow chart.	Normal Working Hours Monday To Friday 7:30-16:00	R 100-00 per hour for late completion to a maximum of R 5000-00 per activity.
Projects	All project related activities as per flow chart [NORMAL PROJECT RELATED PROCESSES TO BE DONE BY CONTRACTOR]	N/A	The individual activities and their associated time frames are listed on the flow chart. Penalties will apply to all of these activities.	Normal Working Hours Monday To Friday 7:30-16:00	0.05% of the project value per day of late completion to a maximum of R 10 000-00 per project.
Programmes	All programme related activities as per flow chart [NORMAL PROJECT RELATED PROCESSES TO BE DONE BY CONTRACTOR]	N/A	The individual activities and their associated time frames are listed on the flow chart. Penalties will apply to all of these activities.	Normal Working Hours Monday To Friday 7:30-16:00	0.05% of the programme value per day of late completion to a maximum of R 20 000-00 per programme.

Note: The contractor can negotiate the time frames of projects/programmes with CoT before the start of the project/programme to take the size into consideration – for example a six storey building will be easier to implement than a 20 storey building.

Each incident/project/call is managed and tracked throughout its service lifecycle by the Service Desk and measured; exceptions are: where calls are serviced outside of the contracted Service Level. These are to be reported on at month end, to identify failure to meet specific service level. Also note that projects/programs are measured under the SLA for projects.

Core Site List (please note the list will be amended to accommodate future sites):

- Centurion
- Sammy Marks
- Soshanguve
- HB Phillips
- CD Wet
- Atteridgeville Mini Munitoria
- Mamelodi Mini Munitoria
- Iscor Club
- PDS
- Bosman Fire Station
- Waltloo
- Akasia HQ
- Premos
- Capital Park
- Noordvaal
- Saambou
- Sanlam Plaza
- Old Raadsal
- FPM
- Bosman 9
- Temba CC
- Standard Bank
- Tshwane House
- Middestad Building
- SITA Centurion

13. Training

13.1 Skills transfers will be done via work sessions and on-site training.

14. Occupational Health And Safety Act

14.1 The successful tenderer will be required to comply with the requirements of the Occupational Health and Safety Act, Act 85 of 1993 and regulations as amended.

15. Maintenance Check List

Maintenance schedule checklists need to be handed in on a monthly basis. Below is a sample version of a maintenance check list. Once the contractor is appointed, the best maintenance practices must be provided by the OEM and will be incorporated into the checklist

Redundancy	Period	Concluded
Network diagrams must be updated to reflect the latest topology and interconnecting links.	Check monthly/or when new site is added 3	
Links connecting critical dual-attached devices such as a PABX must not be connected to the same switch.	Check monthly 3	
Ensure redundancy for Data Centre: Centurion, TDK, Sammy Marks	Check weekly	
Inconsistent and Non-Optimal Network Configurations/Routing		
OSPF authentication implemented.	Check monthly 3	
Route redistribution needs to be configured properly.	Check monthly 3	
Switches need to be properly placed into groups/areas for easier manageability.	Check monthly 3	
Disable OSPF on switches with no backbone links or where only one link exist	Check monthly 3	
Switch Configurations		
Switch running in correct mode (from running)	Check monthly 3	
Save running configurations	Check monthly 3	
Synchronize the configuration between the running directory and the certified directory	Check monthly 3	
Synchronize the flash file system between the primary and the secondary CMM	Check monthly 3	
Only approved local user accounts	Check monthly 3	
The following password rules must be adhered to: <ul style="list-style-type: none"> • passwords should be at least eight characters in length; • characters in the password should not be repeated more than three times; • passwords should include both uppercase and lowercase characters; • passwords should include numbers; • passwords should include punctuation characters; • passwords should not include the username; • passwords should not include the devices name, make or model; • passwords should not be based on dictionary words. 	Check monthly 3	
All passwords stored in a secure encrypted form	Check monthly 3	
Delete old users for security reasons	Check monthly 3	
Enable LLDP for visibility to all other devices	Check monthly 3	
Set NTP server for correct time synchronization	Check monthly 3	
Configure switches correctly to interface with Omnivista	Check monthly 3	
Maintain Flash File System and Actual Switch Configuration	Check monthly 3	
Backup configs via Omnivista	Check monthly 3	
Standardize and clean-up switch configurations	Check monthly 3	
The Spanning Tree protocol on all of the older switches must be changed from STP to RSTP.	Check monthly 3	
Set correct Spanning Tree priorities on core Switches	Check monthly 3	
Disable Spanning Tree on Backbone and enable OSPF	Check monthly 3	39€

Port mirroring needs to be disabled on all switches and only used when required.	Check monthly	3	
sFlow configurations need to be checked and fine-tuned so as not to abuse the available bandwidth.	Check monthly	3	
IP Helper delay set to 0 seconds	Check monthly	3	
Switches should be checked for superfluous users and these need to be deleted when discovered.	Check monthly	3	
HTTPS, SFTP and SSH is the only allowed access methods.	Check monthly	3	
Connection or session time-out must be configured for 10 minutes.	Check monthly	3	
Banner statement for Routers presented for all forms of login whether remote or local, where possible: "UNAUTHORIZED ACCESS TO THIS NETWORK DEVICE IS PROHIBITED."	Check monthly	3	
Use standardized SNMP community strings. Default strings, such as public or private must be removed. SNMP must be configured to use the most secure version of the protocol allowed for by the combination of the device and management systems.	Check monthly	3	
Report security related events	Daily		
Router Configurations			
Only approved local user accounts	Check monthly	3	
The following password rules must be adhered to: <ul style="list-style-type: none"> • passwords should be at least eight characters in length; • characters in the password should not be repeated more than three times; • passwords should include both uppercase and lowercase characters; • passwords should include numbers; • passwords should include punctuation characters; • passwords should not include the username; • passwords should not include the devices name, make or model; • passwords should not be based on dictionary words. 	Check monthly	3	
All passwords stored in a secure encrypted form	Check monthly	3	
NTP configured to a corporate standard source	Check monthly	3	
All routing updates shall be done using secure routing updates.	Check monthly	3	
Disable following services where applicable - IP directed broadcasts	Check monthly	3	
Disable following services where applicable - TCP small services	Check monthly	3	
Disable following services where applicable - UDP small services	Check monthly	3	
Disable following services where applicable - Telnet, FTP, and HTTP services. All web services running on router. If required to maintain the router then it should only be enabled when maintenance is occurring. All access controls should be enabled.	Check monthly	3	
Disable following services where applicable - Auto-configuration	Check monthly	3	
Disable following services where applicable - Cisco discovery protocol on Internet connected interfaces	Check monthly	3	
Disable unless business justification is provided - Cisco discovery protocol and other discovery protocols	Check monthly	3	
Disable unless business justification is provided - Dynamic trunking	Check monthly	3	
Disable unless business justification is provided - Scripting environments, such as the TCL shell	Check monthly	3	39c

HTTPS, SFTP and SSH is the only allowed access methods.	Check monthly	3	
Connection or session time-out must be configured for 10 minutes.	Check monthly	3	
Banner statement for Routers presented for all forms of login whether remote or local, where possible: "UNAUTHORIZED ACCESS TO THIS NETWORK DEVICE IS PROHIBITED."	Check monthly	3	
Use standardized SNMP community strings. Default strings, such as public or private must be removed. SNMP must be configured to use the most secure version of the protocol allowed for by the combination of the device and management systems.	Check monthly	3	
Report security related events	Daily		
Support			
Reporting on equipment out of ALE Support	Check monthly	6	
Switches/Routers on newest firmware	Check monthly	6	
Wireless			
Wireless controllers to report to Air Manager	Check monthly	6	
Cleanup SSID	Check monthly	6	
Configure Wireless Controller into a redundant configuration	Check monthly	6	
The software needs to be upgraded to the latest version	Check monthly	6	
MPLS			
MPLS Diagrams updated	Check monthly	6	
Newest firmware loaded	Check monthly	6	
Omnivista			
Omnivista on newest version	Check monthly	6	
Any high utilization reports	Check weekly		
Switch Power Supply Failures	Check weekly		
Fan Failures	Check weekly		
Omnivista - Remove old SNMP stations	Check monthly	3	
Omnivista - Remove old SNMP community maps	Check monthly	3	
Omnivista - Set correct SNMP station	Check monthly	3	
Omnivista - Set correct SNMP community maps	Check monthly	3	
Omnivista - Set SNMP trap filters	Check monthly	3	
Omnivista - Check reporting from switches to Network Management System	Check monthly/or when new site is added	3	
Clean Switches			
Blow dust from switch: Dusty Environments	Check monthly	6	
Blow dust from switch: General	Check yearly		

Month:
Signature:
Date:

MBD1

**PART A
INVITATION TO BID**

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE CITY OF TSHWANE MUNICIPALITY					
BID NUMBER:	GICT 02 2022/23	CLOSING DATE:	13 July 2022	CLOSING TIME:	10:00
DESCRIPTION	TENDER FOR THE INSTALLATION AND MAINTENANCE OF FIBRE AND UTP NETWORK POINTS, AS AND WHEN REQUIRED, FOR A PERIOD OF THREE (3) YEARS				
THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FILL IN AND SIGN A WRITTEN CONTRACT FORM (MBD7).					

BID RESPONSE DOCUMENTS MAY BE DEPOSITED
IN THE BID BOX SITUATED AT (*STREET
ADDRESS*)

Tshwane House					
Supply Chain Management					
320 Madiba Street					
Pretoria CBD					
0002					
SUPPLIER INFORMATION					
NAME OF BIDDER					
POSTAL ADDRESS					
STREET ADDRESS					
TELEPHONE NUMBER	CODE		NUMBER		
CELLPHONE NUMBER					
FACSIMILE NUMBER	CODE		NUMBER		
E-MAIL ADDRESS					
VAT REGISTRATION NUMBER					
TAX COMPLIANCE STATUS	TCS PIN:		OR	CSD No:	
B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE [TICK APPLICABLE BOX]	<input type="checkbox"/> Yes <input type="checkbox"/> No		B-BBEE STATUS LEVEL SWORN AFFIDAVIT		<input type="checkbox"/> Yes <input type="checkbox"/> No

[A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE/ SWORN AFFIDAVIT (FOR EMES & QSEs) MUST BE SUBMITTED IN ORDER TO QUALIFY FOR PREFERENCE POINTS FOR B-BBEE]

ARE YOU THE ACCREDITED REPRESENTATIVE IN SOUTH AFRICA FOR THE GOODS /SERVICES /WORKS OFFERED?	<input type="checkbox"/> Yes <input type="checkbox"/> No [IF YES ENCLOSE PROOF]	ARE YOU A FOREIGN BASED SUPPLIER FOR THE GOODS /SERVICES /WORKS OFFERED?	<input type="checkbox"/> Yes <input type="checkbox"/> No [IF YES, ANSWER PART B:3]
TOTAL NUMBER OF ITEMS OFFERED		TOTAL BID PRICE	R
SIGNATURE OF BIDDER	DATE	
CAPACITY UNDER WHICH THIS BID IS SIGNED			
BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO:		TECHNICAL INFORMATION MAY BE DIRECTED TO:	
DEPARTMENT	Supply Chain Management	DEPARTMENT	Shared Service Group: information , communication and Technology
CONTACT PERSON	Relebogile Malatswane	CONTACT PERSON	LeRoy Olivier
TELEPHONE NUMBER	(012) 358 2735	TELEPHONE NUMBER	(012) 358 4994
EMAIL ADDRESS	RelebogileM@tshwane.gov.za	EMAIL ADDRESS	leroyo@tshwane.gov.za

**PART B
TERMS AND CONDITIONS FOR BIDDING**

1. BID SUBMISSION	
1.1	BIDS MUST BE DELIVERED BY THE STIPULATED TIME TO THE CORRECT ADDRESS. LATE BIDS WILL NOT BE ACCEPTED FOR CONSIDERATION.
1.2	ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS PROVIDED–(NOT TO BE RE-TYPED) OR ONLINE
1.3	THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT, THE GENERAL CONDITIONS OF CONTRACT (GCC) AND, IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT.
2. TAX COMPLIANCE REQUIREMENTS	
2.1	BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIGATIONS.
2.2	BIDDERS ARE REQUIRED TO SUBMIT THEIR UNIQUE PERSONAL IDENTIFICATION NUMBER (PIN) ISSUED BY SARS TO ENABLE THE ORGAN OF STATE TO VIEW THE TAXPAYER'S PROFILE AND TAX STATUS.
2.3	APPLICATION FOR THE TAX COMPLIANCE STATUS (TCS) CERTIFICATE OR PIN MAY ALSO BE MADE VIA E-FILING. IN ORDER TO USE THIS PROVISION, TAXPAYERS WILL NEED TO REGISTER WITH SARS AS E-FILERS THROUGH THE WEBSITE WWW.SARS.GOV.ZA.
2.4	FOREIGN SUPPLIERS MUST COMPLETE THE PRE-AWARD QUESTIONNAIRE IN PART B:3.
2.5	BIDDERS MAY ALSO SUBMIT A PRINTED TCS CERTIFICATE TOGETHER WITH THE BID.
2.6	IN BIDS WHERE CONSORTIA / JOINT VENTURES / SUB-CONTRACTORS ARE INVOLVED, EACH PARTY MUST SUBMIT A SEPARATE TCS CERTIFICATE / PIN / CSD NUMBER.
2.7	WHERE NO TCS IS AVAILABLE BUT THE BIDDER IS REGISTERED ON THE CENTRAL SUPPLIER DATABASE (CSD), A CSD NUMBER MUST BE PROVIDED.
3. QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS	
3.1	IS THE ENTITY A RESIDENT OF THE REPUBLIC OF SOUTH AFRICA (RSA)? YES <input type="checkbox"/> NO <input type="checkbox"/>
3.2	DOES THE ENTITY HAVE A BRANCH IN THE RSA? YES <input type="checkbox"/> NO <input type="checkbox"/>
3.3	DOES THE ENTITY HAVE A PERMANENT ESTABLISHMENT IN THE RSA? YES <input type="checkbox"/> NO <input type="checkbox"/>
3.4	DOES THE ENTITY HAVE ANY SOURCE OF INCOME IN THE RSA? YES <input type="checkbox"/> NO <input type="checkbox"/>
3.5	IS THE ENTITY LIABLE IN THE RSA FOR ANY FORM OF TAXATION? YES <input type="checkbox"/> NO <input type="checkbox"/>
<p>IF THE ANSWER IS "NO" TO ALL OF THE ABOVE, THEN IT IS NOT A REQUIREMENT TO REGISTER FOR A TAX COMPLIANCE STATUS SYSTEM PIN CODE FROM THE SOUTH AFRICAN REVENUE SERVICE (SARS) AND IF NOT REGISTER AS PER 2.3 ABOVE.</p>	

NB: FAILURE TO PROVIDE ANY OF THE ABOVE PARTICULARS MAY RENDER THE BID INVALID. NO BIDS WILL BE CONSIDERED FROM PERSONS IN THE SERVICE OF THE STATE.

SIGNATURE OF BIDDER:

CAPACITY UNDER WHICH THIS BID IS SIGNED:

DATE:

PRICING SCHEDULE: FIRM PRICES (PURCHASES)

NOTE: ONLY FIRM PRICES WILL BE ACCEPTED. NON-FIRM PRICES (INCLUDING PRICES SUBJECT TO RATES OF EXCHANGE VARIATIONS) WILL NOT BE CONSIDERED

IN CASES WHERE DIFFERENT DELIVERY POINTS INFLUENCE THE PRICING, A SEPARATE PRICING SCHEDULE MUST BE SUBMITTED FOR EACH DELIVERY POINT

Name of Bidder.....	Bid Number
Closing Time	Closing Date

OFFER TO BE VALID FOR DAYS FROM THE CLOSING DATE OF BID.

ITEM NO.	QUANTITY	DESCRIPTION	BID PRICE IN RSA CURRENCY **(ALL APPLICABLE TAXES INCLUDED)
----------	----------	-------------	--

- Required by:
- At:
- Brand and Model
- Country of Origin
- Does the offer comply with the specification(s)? *YES/NO
- 11. If not to specification, indicate deviation(s)

- 12. Period required for delivery

 *Delivery: Firm/Not firm
- 13. Delivery basis

Note: All delivery costs must be included in the bid price, for delivery at the prescribed destination.

** "all applicable taxes" includes value- added tax, pay as you earn, income tax, unemployment insurance fund contributions and skills development levies.

* Delete if not applicable

PRICING SCHEDULE: NON-FIRM PRICES (PURCHASES)

NOTE: PRICE ADJUSTMENTS WILL BE ALLOWED AT THE PERIODS AND TIMES SPECIFIED IN THE BIDDING DOCUMENTS.

IN CASES WHERE DIFFERENT DELIVERY POINTS INFLUENCE THE PRICING, A SEPARATE PRICING SCHEDULE MUST BE SUBMITTED FOR EACH DELIVERY POINT

Name of Bidder	Bid number
Closing Time	Closing Date

OFFER TO BE VALID FOR 90 DAYS FROM THE CLOSING DATE OF BID.

ITEM NO.	QUANTITY	DESCRIPTION	BID PRICE IN RSA CURRENCY **(ALL APPLICABLE TAXES INCLUDED)
----------	----------	-------------	--

- Required by:
 - At:
 - Brand and model
 - Country of origin
 - Does the offer comply with the specification(s)? *YES/NO
 - If not to specification, indicate deviation(s)
 - Period required for delivery
 - Delivery: *Firm/Not firm
- ** "all applicable taxes" includes value-added tax, pay as you earn, income tax, unemployment insurance fund contributions and skills development levies.
- * Delete if not applicable

PRICE ADJUSTMENTS

A. NON-FIRM PRICES SUBJECT TO ESCALATION

1. IN CASES OF PERIOD CONTRACTS, NON FIRM PRICES WILL BE ADJUSTED (LOADED) WITH THE ASSESSED CONTRACT PRICE ADJUSTMENTS IMPLICIT IN NON FIRM PRICES WHEN CALCULATING THE COMPARATIVE PRICES
2. IN THIS CATEGORY PRICE ESCALATIONS WILL ONLY BE CONSIDERED IN TERMS OF THE FOLLOWING FORMULA:

$$Pa = (1 - V)Pt \left(D1 \frac{R1t}{R1o} + D2 \frac{R2t}{R2o} + D3 \frac{R3t}{R3o} + D4 \frac{R4t}{R4o} \right) + VPt$$

Where:

- Pa = The new escalated price to be calculated.
- (1-V) Pt = 85% of the original bid price. **Note that Pt must always be the original bid price and not an escalated price.**
- D1, D2.. = Each factor of the bid price eg. labour, transport, clothing, footwear, etc. The total of the various factors D1,D2...etc. must add up to 100%.
- R1t, R2t..... = Index figure obtained from new index (depends on the number of factors used).
- R1o, R2o = Index figure at time of bidding.
- VPt = 15% of the original bid price. This portion of the bid price remains firm i.e. it is not subject to any price escalations.

3. The following index/indices must be used to calculate your bid price:

Index..... Dated..... Index..... Dated..... Index..... Dated.....
 Index..... Dated..... Index..... Dated..... Index..... Dated.....

4. FURNISH A BREAKDOWN OF YOUR PRICE IN TERMS OF ABOVE-MENTIONED FORMULA. THE TOTAL OF THE VARIOUS FACTORS MUST ADD UP TO 100%.

FACTOR (D1, D2 etc. eg. Labour, transport etc.)	PERCENTAGE OF BID PRICE

B. PRICES SUBJECT TO RATE OF EXCHANGE VARIATIONS

1. Please furnish full particulars of your financial institution, state the currencies used in the conversion of the prices of the items to South African currency, which portion of the price is subject to rate of exchange variations and the amounts remitted abroad.

PARTICULARS OF FINANCIAL INSTITUTION	ITEM NO	PRICE	CURRENCY	RATE	PORTION OF PRICE SUBJECT TO ROE	AMOUNT IN FOREIGN CURRENCY REMITTED ABROAD
				ZAR=		
				ZAR=		
				ZAR=		
				ZAR=		
				ZAR=		
				ZAR=		

2. Adjustments for rate of exchange variations during the contract period will be calculated by using the average monthly exchange rates as issued by your commercial bank for the periods indicated hereunder: (Proof from bank required)

AVERAGE MONTHLY EXCHANGE RATES FOR THE PERIOD:	DATE DOCUMENTATION MUST BE SUBMITTED TO THIS OFFICE	DATE FROM WHICH NEW CALCULATED PRICES WILL BECOME EFFECTIVE	DATE UNTIL WHICH NEW CALCULATED PRICE WILL BE EFFECTIVE

ADJUSTMENT PERIODS	DATE FROM WHICH NEW CALCULATED PRICES WILL BECOME EFFECTIVE
1 st Adjustment	After 12 calendar months
2 nd Adjustment	After 24 calendar months

NB: Unless prior approval has been obtained from Supply Chain Management, no adjustment in contract prices will be made

DECLARATION OF INTEREST

1. No bid will be accepted from persons in the service of the state¹.
2. Any person, having a kinship with persons in the service of the state, including a blood relationship, may make an offer or offers in terms of this invitation to bid. In view of possible allegations of favouritism, should the resulting bid, or part thereof, be awarded to persons connected with or related to persons in service of the state, it is required that the bidder or their authorised representative declare their position in relation to the evaluating/adjudicating authority.
3. **In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.**
 - 3.1 Full Name of bidder or his or her representative:
 - 3.2 Identity Number:
 - 3.3 Position occupied in the Company (director, trustee, hareholder²)
 - 3.4 Company Registration Number:
 - 3.5 Tax Reference Number:
 - 3.6 VAT Registration Number:
 - 3.7 The names of all directors / trustees / shareholders members, their individual identity numbers and state employee numbers must be indicated in paragraph 4 below.
 - 3.8 Are you presently in the service of the state? **YES / NO**
 - 3.8.1 If yes, furnish particulars.
.....

¹ MSCM Regulations: “in the service of the state” means to be –

- (a) a member of –
 - (i) any municipal council;
 - (ii) any provincial legislature; or
 - (iii) the national Assembly or the national Council of provinces;
- (b) a member of the board of directors of any municipal entity;
- (c) an official of any municipality or municipal entity;
- (d) an employee of any national or provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act No.1 of 1999);
- (e) a member of the accounting authority of any national or provincial public entity; or
- (f) an employee of Parliament or a provincial legislature.

² Shareholder” means a person who owns shares in the company and is actively involved in the management of the company or business and exercises control over the company.

3.9 Have you been in the service of the state for the past twelve months? **YES/NO**

3.9.1 If yes, furnish particulars.

.....

3.10 Do you have any relationship (family, friend, other) with persons in the service of the state and who may be involved with the evaluation and or adjudication of this bid? **YES / NO**

3.10.1 If yes, furnish particulars.

.....

3.11 Are you, aware of any relationship (family, friend, other) between any other bidder and any persons in the service of the state who may be involved with the evaluation and or adjudication of this bid? **YES / NO**

3.11.1 If yes, furnish particulars.

.....

3.12 Are any of the company's directors, trustees, managers, principle shareholders or stakeholders in service of the state? **YES / NO**

3.12.1 If yes, furnish particulars.

.....

3.13 Are any spouse, child or parent of the company's directors trustees, managers, principle shareholders or stakeholders in service of the state? **YES / NO**

3.13.1 If yes, furnish particulars.

.....

3.14 Do you or any of the directors, trustees, managers, principle shareholders, or stakeholders of this company have any interest in any other related companies or business whether or not they are bidding for this contract. **YES / NO**

3.14.1 If yes, furnish particulars:

.....

4. Full details of directors / trustees / members / shareholders.

Full Name	Identity Number	State Employee Number

.....

Signature

.....

Date

.....

Capacity

.....

Name of Bidder

DECLARATION FOR PROCUREMENT ABOVE R10 MILLION (ALL APPLICABLE TAXES INCLUDED)

For all procurement expected to exceed R10 million (all applicable taxes included), bidders must complete the following questionnaire:

1 Are you by law required to prepare annual financial statements for auditing? ***YES / NO**

1.1 If yes, submit audited annual financial statements for the past three years or since the date of establishment if established during the past three years.

.....
.....

2 Do you have any outstanding undisputed commitments for municipal services towards any municipality for more than three months or any other service provider in respect of which payment is overdue for more than 30 days? ***YES / NO**

2.1 If no, this serves to certify that the bidder has no undisputed commitments for municipal services towards any municipality for more than three months or other service provider in respect of which payment is overdue for more than 30 days. ***YES / NO**

2.2 If yes, provide particulars.

.....
.....
.....
.....

3 Has any contract been awarded to you by an organ of state during the past five years, including particulars of any material non-compliance or dispute concerning the execution of such contract? ***YES / NO**

3.1 If yes, furnish particulars

.....
.....

4.1 Will any portion of goods or services be sourced from outside ***YES / NO**

the Republic, and, if so, what portion and whether any portion of payment from the municipality / municipal entity is expected to be transferred out of the Republic?

4.1 If yes, furnish particulars

.....
.....

CERTIFICATION

**I, THE UNDERSIGNED (NAME)
CERTIFY THAT THE INFORMATION FURNISHED ON THIS DECLARATION FORM
IS CORRECT. I ACCEPT THAT THE STATE MAY ACT AGAINST ME SHOULD THIS
DECLARATION PROVE TO BE FALSE.**

.....
Signature

.....
Date

.....
Position

.....
Name of Bidder

PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT 2000

This preference form must form part of all bids invited. It contains general information and serves as a claim form for preference points for Broad-Based Black Economic Empowerment (B-BBEE) Status Level of Contribution

NB: BEFORE COMPLETING THIS FORM, BIDDERS MUST STUDY THE GENERAL CONDITIONS, DEFINITIONS AND DIRECTIVES APPLICABLE IN RESPECT OF B-BBEE, AS PRESCRIBED IN THE PREFERENTIAL PROCUREMENT REGULATIONS, 2017.

• **GENERAL CONDITIONS**

1.1 The following preference point systems are applicable to all bids:

- the 80/20 system for requirements with a Rand value of up to R50 000 000 (all applicable taxes included); and
- the 90/10 system for requirements with a Rand value above R50 000 000 (all applicable taxes included).

1.2 The value of this bid is estimated **to exceed** R50 000 000 (all applicable taxes included) and therefore the **90/10** preference point system shall be applicable.

1.3 Preference points for this bid shall be awarded for:

- (a) Price; and
- (b) B-BBEE Status Level of Contribution.

1.4 The maximum points for this bid are allocated as follows:

	POINTS
PRICE	90
B-BBEE STATUS LEVEL OF CONTRIBUTION	10
Total points for Price and B-BBEE must not exceed	100

1.5 Failure on the part of a bidder to submit a B-BBEE Verification Certificate from a Verification Agency accredited by the South African Accreditation System (SANAS), or a Registered Auditor approved by the Independent Regulatory Board of Auditors (IRBA) or a sworn affidavit confirming annual turnover and level of black ownership in case of an EME and QSE together with the bid, will be interpreted to mean that preference points for B-BBEE status level of contribution are not claimed.

1.6 The purchaser reserves the right to require of a bidder, either before a bid is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the purchaser.

2. DEFINITIONS

- (a) **“all applicable taxes”** includes value-added tax, pay as you earn, income tax, unemployment insurance fund contributions and skills development levies;
- (b) **“B-BBEE”** means broad-based black economic empowerment as defined in section 1 of the Broad-Based Black Economic Empowerment Act;
- (c) **“B-BBEE status level of contributor”** means the B-BBEE status received by a measured entity based on its overall performance using the relevant scorecard contained in the Codes of Good Practice on Black Economic Empowerment, issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act;
- (d) **“bid”** means a written offer in a prescribed or stipulated form in response to an invitation by an organ of state for the provision of services, works or goods, through price quotations, advertised competitive bidding processes or proposals;
- (e) **“Broad-Based Black Economic Empowerment Act”** means the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003) as amended by Act No 46 of 2013;
- (f) **“comparative price”** means the price after the factors of a non-firm price and all unconditional discounts that can be utilized have been taken into consideration;
- (g) **“consortium or joint venture”** means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract;
- (h) **“contract”** means the agreement that results from the acceptance of a bid by an organ of state;
- (i) **“EME”** means an Exempted Micro Enterprise as defines by Codes of Good Practice issued in terms of section 9 (1) of the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);
- (j) **“Firm price”** means the price that is only subject to adjustments in accordance with the actual increase or decrease resulting from the change, imposition, or abolition of customs or excise duty and any other duty, levy, or tax, which, in terms of the law or regulation, is binding on the contractor and demonstrably has an influence on the price of any supplies, or the rendering costs of any service, for the execution of the contract;
- (k) **“functionality”** means the measurement according to predetermined norms, as set out in the bid documents, of a service or commodity that is designed to be practical and useful, working or operating, taking into⁴¹⁷

account, among other factors, the quality, reliability, viability and durability of a service and the technical capacity and ability of a bidder;

- (l) **“non-firm prices”** means all prices other than “firm” prices;
- (m) **“person”** includes a juristic person;
- (n) **“QSE”** means a Qualifying Small Enterprise as defined by Codes of Good Practice issued in terms of section 9 (1) of the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);
- (o) **“rand value”** means the total estimated value of a contract in South African currency, calculated at the time of bid invitations, and includes all applicable taxes and excise duties;
- (p) **“sub-contract”** means the primary contractor’s assigning, leasing, making out work to, or employing, another person to support such primary contractor in the execution of part of a project in terms of the contract;
- (q) **“total revenue”** bears the same meaning assigned to this expression in the Codes of Good Practice on Black Economic Empowerment, issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act and promulgated in the *Government Gazette* on 9 February 2007;
- (r) **“trust”** means the arrangement through which the property of one person is made over or bequeathed to a trustee to administer such property for the benefit of another person; and
- (s) **“trustee”** means any person, including the founder of a trust, to whom property is bequeathed in order for such property to be administered for the benefit of another person.

3. ADJUDICATION USING A POINT SYSTEM

- 3.1 The bidder obtaining the highest number of total points will be awarded the contract.
- 3.2 Preference points shall be calculated after prices have been brought to a comparative basis taking into account all factors of non-firm prices and all unconditional discounts;.
- 3.3 Points scored must be rounded off to the nearest 2 decimal places.
- 3.4 In the event that two or more bids have scored equal total points, the successful bid must be the one scoring the highest number of preference points for B-BBEE.
- 3.5 However, when functionality is part of the evaluation process and two or more bids have scored equal points including equal preference points for B-BBEE,⁴¹⁸ the successful bid must be the one scoring the highest score for functionality.

3.6 Should two or more bids be equal in all respects, the award shall be decided by the drawing of lots.

4. POINTS AWARDED FOR PRICE

4.1 THE 80/20 OR 90/10 PREFERENCE POINT SYSTEMS

A maximum of 80 or 90 points is allocated for price on the following basis:

$$P_s = 80 \left(1 - \frac{P_t - P_{\min}}{P_{\min}} \right) \quad \text{or} \quad P_s = 90 \left(1 - \frac{P_t - P_{\min}}{P_{\min}} \right)$$

Where

Ps = Points scored for comparative price of bid under consideration
 Pt = Comparative price of bid under consideration
 Pmin = Comparative price of lowest acceptable bid

5. POINTS AWARDED FOR B-BBEE STATUS LEVEL OF CONTRIBUTION

5.1 In terms of Regulation 5(2) and 6(2) of the Preferential Procurement Regulations, preference points must be awarded to a bidder for attaining the B-BBEE status level of contribution in accordance with the table below:

B-BBEE Status Level of Contributor	Number of points (90/10 system)	Number of points (80/20 system)
1	10	20
2	9	18
3	6	14
4	5	12
5	4	8
6	3	6
7	2	4
8	1	2
Non-compliant contributor	0	0

5.2 A bidder who qualifies as an EME in terms of the B-BBEE Act must submit a sworn affidavit confirming Annual Total Revenue and Level of Black Ownership.

5.3 A Bidder other than EME or QSE must submit their original and valid B-BBEE status level verification certificate or a certified copy thereof, substantiating their B-BBEE rating issued by a Registered Auditor approved by IRBA or a Verification Agency accredited by SANAS.

- 5.4 A trust, consortium or joint venture, will qualify for points for their B-BBEE status level as a legal entity, provided that the entity submits their B-BBEE status level certificate.
- 5.5 A trust, consortium or joint venture will qualify for points for their B-BBEE status level as an unincorporated entity, provided that the entity submits their consolidated B-BBEE scorecard as if they were a group structure and that such a consolidated B-BBEE scorecard is prepared for every separate bid.
- 5.6 Tertiary Institutions and Public Entities will be required to submit their B-BBEE status level certificates in terms of the specialized scorecard contained in the B-BBEE Codes of Good Practice.
- 5.7 A person will not be awarded points for B-BBEE status level if it is indicated in the bid documents that such a bidder intends sub-contracting more than 25% of the value of the contract to any other enterprise that does not qualify for at least the points that such a bidder qualifies for, unless the intended sub-contractor is an EME that has the capability and ability to execute the sub-contract.
- 5.8 A person awarded a contract may not sub-contract more than 25% of the value of the contract to any other enterprise that does not have an equal or higher B-BBEE status level than the person concerned, unless the contract is sub-contracted to an EME that has the capability and ability to execute the sub-contract.

6. BID DECLARATION

6.1 Bidders who claim points in respect of B-BBEE Status Level of Contribution must complete the following:

7. B-BBEE STATUS LEVEL OF CONTRIBUTION CLAIMED IN TERMS OF PARAGRAPHS 1.4 AND 5.1

7.1 B-BBEE Status Level of Contribution: = (maximum of 10 or 20 points)

(Points claimed in respect of paragraph 7.1 must be in accordance with the table reflected in paragraph 5.1 and must be substantiated by means of a B-BBEE certificate issued by a Verification Agency accredited by SANAS or a Registered Auditor approved by IRBA or a sworn affidavit.

8. SUB-CONTRACTING

8.1 Will any portion of the contract be sub-contracted?

(Tick applicable box)

YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
-----	--------------------------	----	--------------------------

8.1.1. If yes, indicate:

i) What percentage of the contract will be subcontracted%

- ii) The name of the sub-contractor
- iii) The B-BBEE status level of the sub-contractor
- iv) Whether the sub-contractor is an EME.

(Tick applicable box)

YES		NO	
-----	--	----	--

9. DECLARATION WITH REGARD TO COMPANY/FIRM

9.1 Name of company/firm:

9.2 VAT number:

9.3 Company registration number:

9.4 TYPE OF COMPANY/ FIRM

- Partnership/Joint Venture / Consortium
 - One person business/sole propriety
 - Close corporation
 - Company
 - (Pty) Limited
- [TICK APPLICABLE BOX]

9.5 DESCRIBE PRINCIPAL BUSINESS ACTIVITIES

.....

.....

.....

.....

9.6 COMPANY CLASSIFICATION

- Manufacturer
 - Supplier
 - Professional service provider
 - Other service providers, e.g. transporter, etc.
- [TICK APPLICABLE BOX]

9.7 MUNICIPAL INFORMATION

Municipality where business is situated:

Registered Account Number:

Stand Number:

9.8 Total number of years the company/firm has been in business

9.9 I/we, the undersigned, who is / are duly authorised to do so on behalf of the company/firm, certify that the points claimed, based on the B-BBE status level of contribution indicated in paragraph 7 of the foregoing certificate, qualifies the company/ firm for the preference(s) shown and I / we acknowledge that:

- i) The information furnished is true and correct;
- ii) The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form;
- iii) In the event of a contract being awarded as a result of points claimed as shown in paragraph 7, the contractor may be required to furnish documentary proof to the satisfaction of the purchaser that the claims are correct;
- iv) If the B-BBEE status level of contribution has been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the purchaser may, in addition to any other remedy it may have –
 - (a) disqualify the person from the bidding process;
 - (b) recover costs, losses or damages it has incurred or suffered as a result of that person's conduct;
 - (c) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation;
 - (d) restrict the bidder or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, from obtaining business from any organ of state for a period not exceeding 10 years, after the *audi alteram partem* (hear the other side) rule has been applied; and
 - (e) forward the matter for criminal prosecution.

WITNESSES	
1.
2.

.....	
SIGNATURE(S) OF BIDDERS(S)	
DATE
ADDRESS:

CONTRACT FORM: RENDERING OF SERVICES

THIS FORM MUST BE FILLED IN DUPLICATE BY BOTH THE SERVICE PROVIDER (PART 1) AND THE PURCHASER (PART 2). BOTH FORMS MUST BE SIGNED IN THE ORIGINAL SO THAT THE SERVICE PROVIDER AND THE PURCHASER WOULD BE IN POSSESSION OF ORIGINALLY SIGNED CONTRACTS FOR THEIR RESPECTIVE RECORDS.

PART 1 (TO BE FILLED IN BY THE SERVICE PROVIDER)

1. I hereby undertake to render services described in the attached bidding documents to (name of the institution)..... in accordance with the requirements and task directives / proposals specifications stipulated in Bid Number **GICT 02 2022/23** at the price/s quoted. My offer/s remain binding upon me and open for acceptance by the Purchaser during the validity period indicated and calculated from the closing date of the bid.
2. The following documents shall be deemed to form and be read and construed as part of this agreement:
 - Bidding documents, *viz*
 - Invitation to bid;
 - Tax clearance certificate;
 - Pricing schedule(s);
 - Filled in task directive/proposal;
 - Preference claims for Broad Based Black Economic Empowerment Status Level of Contribution in terms of the Preferential Procurement Policy Framework Act 2000
 - Declaration of interest;
 - Declaration of Bidder's past SCM practices;
 - Certificate of Independent Bid Determination;
 - Special Conditions of Contract;
 - (ii) General Conditions of Contract; and
 - (iii) Other (specify)
3. I confirm that I have satisfied myself as to the correctness and validity of my bid; that the price(s) and rate(s) quoted cover all the services specified in the bidding documents; that the price(s) and rate(s) cover all my obligations and I accept that any mistakes regarding price(s) and rate(s) and calculations will be at my own risk.
4. I accept full responsibility for the proper execution and fulfilment of all obligations and conditions devolving on me under this agreement as the principal liable for the due fulfillment of this contract.

- 5. I declare that I have no participation in any collusive practices with any bidder or any other person regarding this or any other bid.
- 6. I confirm that I am duly authorised to sign this contract.

NAME (PRINT)

CAPACITY

SIGNATURE

NAME OF FIRM

DATE

WITNESSES	
•
•
DATE:

CONTRACT FORM: RENDERING OF SERVICES

PART 2 (TO BE FILLED IN BY THE PURCHASER)

1. I..... in my capacity as accept your bid under reference number dated..... for the rendering of services indicated hereunder and/or further specified in the annexure(s).
2. An official order indicating service delivery instructions is forthcoming.
3. I undertake to make payment for the services rendered in accordance with the terms and conditions of the contract, within 30 (thirty) days after receipt of an invoice.

DESCRIPTION OF SERVICE	PRICE (ALL APPLICABLE TAXES INCLUDED)	COMPLETION DATE	B-BBEE STATUS LEVEL OF CONTRIBUTION	MINIMUM THRESHOLD FOR LOCAL PRODUCTION AND CONTENT (if applicable)

4. I confirm that I am duly authorised to sign this contract.

SIGNED AT ON

NAME (PRINT)

SIGNATURE

OFFICIAL STAMP

WITNESSES

-
-

DECLARATION OF BIDDER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES

- 1 This Municipal Bidding Document must form part of all bids invited.
- 2 It serves as a declaration to be used by municipalities and municipal entities in ensuring that when goods and services are being procured, all reasonable steps are taken to combat the abuse of the supply chain management system.
- 3 The bid of any bidder may be rejected if that bidder, or any of its directors have:
 - a. abused the municipality's / municipal entity's supply chain management system or committed any improper conduct in relation to such system;
 - b. been convicted for fraud or corruption during the past five years;
 - c. willfully neglected, reneged on or failed to comply with any government, municipal or other public sector contract during the past five years; or
 - d. been listed in the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004).
- 4 **In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.**

Item	Question	Yes	No
4.1	<p>Is the bidder or any of its directors listed on the National Treasury's Database of Restricted Suppliers as companies or persons prohibited from doing business with the public sector?</p> <p>(Companies or persons who are listed on this Database were informed in writing of this restriction by the Accounting Officer/Authority of the institution that imposed the restriction after the <i>audi alteram partem</i> rule was applied).</p> <p>The Database of Restricted Suppliers now resides on the National Treasury's website(www.treasury.gov.za) and can be accessed by clicking on its link at the bottom of the home page.</p>	<p>Yes</p> <input type="checkbox"/>	<p>No</p> <input type="checkbox"/>
4.1.1	If so, furnish particulars:		
4.2	<p>Is the bidder or any of its directors listed on the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004)?</p> <p>The Register for Tender Defaulters can be accessed on the National Treasury's website (www.treasury.gov.za) by clicking on its link at the bottom of the home page.</p>	<p>Yes</p> <input type="checkbox"/>	<p>No</p> <input type="checkbox"/>

4.2.1	If so, furnish particulars:		
4.3	Was the bidder or any of its directors convicted by a court of law (including a court of law outside the Republic of South Africa) for fraud or corruption during the past five years?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.3.1	If so, furnish particulars:		
4.4	Does the bidder or any of its directors owe any municipal rates and taxes or municipal charges to the municipality / municipal entity, or to any other municipality / municipal entity, that is in arrears for more than three months?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.4.1	If so, furnish particulars:		
4.5	Was any contract between the bidder and the municipality / municipal entity or any other organ of state terminated during the past five years on account of failure to perform on or comply with the contract?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.7.1	If so, furnish particulars:		

CERTIFICATION

**I, THE UNDERSIGNED (FULL NAME)
CERTIFY THAT THE INFORMATION FURNISHED ON THIS DECLARATION FORM
TRUE AND CORRECT.**

**I ACCEPT THAT, IN ADDITION TO CANCELLATION OF A CONTRACT, ACTION
MAY BE TAKEN AGAINST ME SHOULD THIS DECLARATION PROVE TO BE
FALSE.**

.....
Signature

.....
Date

CERTIFICATE OF INDEPENDENT BID DETERMINATION

- 1 This Municipal Bidding Document (MBD) must form part of all bids¹ invited.
- 2 Section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, prohibits an agreement between, or concerted practice by, firms, or a decision by an association of firms, if it is between parties in a horizontal relationship and if it involves collusive bidding (or bid rigging).² Collusive bidding is a *pe se* prohibition meaning that it cannot be justified under any grounds.
- 3 Municipal Supply Regulation 38 (1) prescribes that a supply chain management policy must provide measures for the combating of abuse of the supply chain management system, and must enable the accounting officer, among others, to:
 - a. take all reasonable steps to prevent such abuse;
 - b. reject the bid of any bidder if that bidder or any of its directors has abused the supply chain management system of the municipality or municipal entity or has committed any improper conduct in relation to such system; and
 - c. cancel a contract awarded to a person if the person committed any corrupt or fraudulent act during the bidding process or the execution of the contract.
- 4 This MBD serves as a certificate of declaration that would be used by institutions to ensure that, when bids are considered, reasonable steps are taken to prevent any form of bid-rigging.
- 5 In order to give effect to the above, the attached Certificate of Bid Determination (MBD 9) must be completed and submitted with the bid:

¹ Includes price quotations, advertised competitive bids, limited bids and proposals.

² Bid rigging (or collusive bidding) occurs when businesses, that would otherwise be expected to compete, secretly conspire to raise prices or lower the quality of goods and / or services for purchasers who wish to acquire goods and / or services through a bidding process. Bid rigging is, therefore, an agreement between competitors not to compete.

CERTIFICATE OF INDEPENDENT BID DETERMINATION

I, the undersigned, in submitting the accompanying bid: **GICT 02 2022/23**

TENDER TO PROVIDE, OPERATE AND MAINTAIN THE ICT CORPORATE NETWORK EQUIPMENT AND THE EXPANSION OF THE EXISTING CORPORATE NETWORK AS AND WHEN FOR A PERIOD OF THREE (3) YEARS

(Bid Number and Description)

in response to the invitation for the bid made by:

CITY OF TSHWANE MUNICIPALITY

do hereby make the following statements that I certify to be true and complete in every respect:

I certify, on behalf of: _____ that:
(Name of Bidder)

1. I have read and I understand the contents of this Certificate;
2. I understand that the accompanying bid will be disqualified if this Certificate is found not to be true and complete in every respect;
3. I am authorized by the bidder to sign this Certificate, and to submit the accompanying bid, on behalf of the bidder;
4. Each person whose signature appears on the accompanying bid has been authorized by the bidder to determine the terms of, and to sign, the bid, on behalf of the bidder;
5. For the purposes of this Certificate and the accompanying bid, I understand that the word "competitor" shall include any individual or organization, other than the bidder, whether or not affiliated with the bidder, who:
 - (a) has been requested to submit a bid in response to this bid invitation;
 - (b) could potentially submit a bid in response to this bid invitation, based on their qualifications, abilities or experience; and
 - (c) provides the same goods and services as the bidder and/or is in the same line of business as the bidder
6. The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However communication between partners in a joint venture or consortium³ will not be construed as collusive bidding.

³ Joint venture or consortium means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract.

THE NATIONAL TREASURY

Republic of South Africa



GOVERNMENT PROCUREMENT

GENERAL CONDITIONS OF CONTRACT

July 2010

GOVERNMENT PROCUREMENT

GENERAL CONDITIONS OF CONTRACT

July 2010

NOTES

The purpose of this document is to:

- Draw special attention to certain general conditions applicable to government bids, contracts and orders; and
- To ensure that clients be familiar with regard to the rights and obligations of all parties involved in doing business with government.

In this document words in the singular also mean in the plural and vice versa and words in the masculine also mean in the feminine and neuter.

- The General Conditions of Contract will form part of all bid documents and may not be amended.
- Special Conditions of Contract (SCC) relevant to a specific bid, should be compiled separately for every bid (if applicable) and will supplement the General Conditions of Contract. Whenever there is a conflict, the provisions in the SCC shall prevail.

TABLE OF CLAUSES

- Definitions
- Application
- General
- Standards
- Use of contract documents and information; inspection
- Patent rights
- Performance security
- Inspections, tests and analysis
- Packing
- Delivery and documents
- Insurance
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- Contract amendments
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- Termination for default
- Dumping and countervailing duties
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- Termination for insolvency
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- Governing language
- Applicable law
- Notices
- Taxes and duties
- National Industrial Participation Programme (NIPP)
- Prohibition of restrictive practices

General Conditions of Contract

1. Definitions

1. The following terms shall be interpreted as indicated:
 - 1.1 “Closing time” means the date and hour specified in the bidding documents for the receipt of bids.
 - 1.2 “Contract” means the written agreement entered into between the purchaser and the supplier, as recorded in the contract form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.
 - 1.3 “Contract price” means the price payable to the supplier under the contract for the full and proper performance of his contractual obligations.
 - 1.4 “Corrupt practice” means the offering, giving, receiving, or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution.
 - 1.5 "Countervailing duties" are imposed in cases where an enterprise abroad is subsidized by its government and encouraged to market its products internationally.
 - 1.6 “Country of origin” means the place where the goods were mined, grown or produced or from which the services are supplied. Goods are produced when, through manufacturing, processing or substantial and major assembly of components, a commercially recognized new product results that is substantially different in basic characteristics or in purpose or utility from its components.
 - 1.7 “Day” means calendar day.
 - 1.8 “Delivery” means delivery in compliance of the conditions of the contract or order.
 - 1.9 “Delivery ex stock” means immediate delivery directly from stock actually on hand.
 - 1.10 “Delivery into consignees store or to his site” means delivered and unloaded in the specified store or depot or on the specified site in compliance with the conditions of the contract or order, the supplier bearing all risks and charges involved until the supplies are so delivered and a valid receipt is obtained.
 - 1.11 "Dumping" occurs when a private enterprise abroad market its goods on own initiative in the RSA at lower prices than that of the country of origin and which have the potential to harm the local industries in the RSA.
 - 1.12 ”Force majeure” means an event beyond the control of the supplier and not involving the supplier’s fault or negligence and not foreseeable. Such events may include, but is not restricted to, acts of the purchaser in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes.
 - 1.13 “Fraudulent practice” means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of any bidder, and includes collusive practice among bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the bidder of the benefits of free and open competition.

- 1.14 “GCC” means the General Conditions of Contract.
- 1.15 “Goods” means all of the equipment, machinery, and/or other materials that the supplier is required to supply to the purchaser under the contract.
- 1.16 “Imported content” means that portion of the bidding price represented by the cost of components, parts or materials which have been or are still to be imported (whether by the supplier or his subcontractors) and which costs are inclusive of the costs abroad, plus freight and other direct importation costs such as landing costs, dock dues, import duty, sales duty or other similar tax or duty at the South African place of entry as well as transportation and handling charges to the factory in the Republic where the supplies covered by the bid will be manufactured.
- 1.17 “Local content” means that portion of the bidding price which is not included in the imported content provided that local manufacture does take place.
- 1.18 “Manufacture” means the production of products in a factory using labour, materials, components and machinery and includes other related value-adding activities.
- 1.19 “Order” means an official written order issued for the supply of goods or works or the rendering of a service.
- 1.20 “Project site,” where applicable, means the place indicated in bidding documents.
- 1.21 “Purchaser” means the organization purchasing the goods.
- 1.22 “Republic” means the Republic of South Africa.
- 1.23 “SCC” means the Special Conditions of Contract.
- 1.24 “Services” means those functional services ancillary to the supply of the goods, such as transportation and any other incidental services, such as installation, commissioning, provision of technical assistance, training, catering, gardening, security, maintenance and other such obligations of the supplier covered under the contract.
- 1.25 “Written” or “in writing” means handwritten in ink or any form of electronic or mechanical writing.

1. Application

- 2.1 These general conditions are applicable to all bids, contracts and orders including bids for functional and professional services, sales, hiring, letting and the granting or acquiring of rights, but excluding immovable property, unless otherwise indicated in the bidding documents.
- 2.2 Where applicable, special conditions of contract are also laid down to cover specific supplies, services or works.
- 2.3 Where such special conditions of contract are in conflict with these general conditions, the special conditions shall apply.

3. General

- 3.1 Unless otherwise indicated in the bidding documents, the purchaser shall not be liable for any expense incurred in the preparation and submission of a bid.
Where applicable a non-refundable fee for documents may be charged.

- 3.2 With certain exceptions, invitations to bid are only published in the Government Tender Bulletin. The Government Tender Bulletin may be obtained directly from the Government Printer, Private Bag X85, Pretoria 0001, or accessed electronically from www.treasury.gov.za
- 4. Standards**
- 4.1 The goods supplied shall conform to the standards mentioned in the bidding documents and specifications.
- 5. Use of contract documents and information inspection.**
- 5.1 The supplier shall not, without the purchaser's prior written consent, disclose the contract, or any provision thereof, or any specification, plan, drawing, pattern, sample, or information furnished by or on behalf of the purchaser in connection therewith, to any person other than a person employed by the supplier in the performance of the contract. Disclosure to any such employed person shall be made in confidence and shall extend only so far as may be necessary for purposes of such performance.
- 5.2 The supplier shall not, without the purchaser's prior written consent, make use of any document or information mentioned in GCC clause 5.1 except for purposes of performing the contract.
- 5.3 Any document, other than the contract itself mentioned in GCC clause 5.1 shall remain the property of the purchaser and shall be returned (all copies) to the purchaser on completion of the supplier's performance under the contract if so required by the purchaser.
- 5.4 The supplier shall permit the purchaser to inspect the supplier's records relating to the performance of the supplier and to have them audited by auditors appointed by the purchaser, if so required by the purchaser.
- 6. Patent rights**
- 6.1 The supplier shall indemnify the purchaser against all third-party claims of infringement of patent, trademark, or industrial design rights arising from use of the goods or any part thereof by the purchaser.
- 7. Performance security**
- 7.1 Within thirty (30) days of receipt of the notification of contract award, the successful bidder shall furnish to the purchaser the performance security of the amount specified in SCC.
- 7.2 The proceeds of the performance security shall be payable to the purchaser as compensation for any loss resulting from the supplier's failure to complete his obligations under the contract.
- 7.3 The performance security shall be denominated in the currency of the contract, or in a freely convertible currency acceptable to the purchaser and shall be in one of the following forms:
- (a) a bank guarantee or an irrevocable letter of credit issued by a reputable bank located in the purchaser's country or abroad, acceptable to the purchaser, in the form provided in the bidding documents or another form acceptable to the purchaser; or
 - (b) a cashier's or certified cheque
- 7.4 The performance security will be discharged by the purchaser and returned to the supplier not later than thirty (30) days following the date of completion of the supplier's performance obligations under the contract, including any warranty obligations, unless otherwise specified in SCC.
- 8. Inspections, tests and analyses**
- 8.1 All pre-bidding testing will be for the account of the bidder.

- 8.2 If it is a bid condition that supplies to be produced or services to be rendered should at any stage during production or execution or on completion be subject to inspection, the premises of the bidder or contractor shall be open, at all reasonable hours, for inspection by a representative of the Department or an organization acting on behalf of the Department.
- 8.3 If there are no inspection requirements indicated in the bidding documents and no mention is made in the contract, but during the contract period it is decided that inspections shall be carried out, the purchaser shall itself make the necessary arrangements, including payment arrangements with the testing authority concerned.
- 8.4 If the inspections, tests and analyses referred to in clauses 8.2 and 8.3 show the supplies to be in accordance with the contract requirements, the cost of the inspections, tests and analyses shall be defrayed by the purchaser.
- 8.5 Where the supplies or services referred to in clauses 8.2 and 8.3 do not comply with the contract requirements, irrespective of whether such supplies or services are accepted or not, the cost in connection with these inspections, tests or analyses shall be defrayed by the supplier.
- 8.6 Supplies and services which are referred to in clauses 8.2 and 8.3 and which do not comply with the contract requirements may be rejected.
- 8.7 Any contract supplies may on or after delivery be inspected, tested or analyzed and may be rejected if found not to comply with the requirements of the contract. Such rejected supplies shall be held at the cost and risk of the supplier who shall, when called upon, remove them immediately at his own cost and forthwith substitute them with supplies which do comply with the requirements of the contract. Failing such removal the rejected supplies shall be returned at the suppliers cost and risk. Should the supplier fail to provide the substitute supplies forthwith, the purchaser may, without giving the supplier further opportunity to substitute the rejected supplies, purchase such supplies as may be necessary at the expense of the supplier.
- 8.8 The provisions of clauses 8.4 to 8.7 shall not prejudice the right of the purchaser to cancel the contract on account of a breach of the conditions thereof, or to act in terms of Clause 23 of GCC.

9. Packing

- 9.1 The supplier shall provide such packing of the goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in the contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit, and open storage. Packing, case size and weights shall take into consideration, where appropriate, the remoteness of the goods' final destination and the absence of heavy handling facilities at all points in transit.
- 9.2 The packing, marking, and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the contract, including additional requirements, if any, specified in SCC, and in any subsequent instructions ordered by the purchaser.

10. Delivery and documents

- 10.1 Delivery of the goods shall be made by the supplier in accordance with the terms specified in the contract. The details of shipping and/or other documents to be furnished by the supplier are specified in SCC.
- 10.2 Documents to be submitted by the supplier are specified in SCC.

- 11. Insurance** 11.1 The goods supplied under the contract shall be fully insured in a freely convertible currency against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery in the manner specified in the SCC.
- 12. Transportation** 12.1 Should a price other than an all-inclusive delivered price be required, this shall be specified in the SCC.
- 13. Incidental services, services** 13.1 The supplier may be required to provide any or all of the following services, including additional services, if any, specified in SCC:
- (a) performance or supervision of on-site assembly and/or commissioning of the supplied goods;
 - (b) furnishing of tools required for assembly and/or maintenance of the supplied goods;
 - (c) furnishing of a detailed operations and maintenance manual for each appropriate unit of the supplied goods;
 - (d) performance or supervision or maintenance and/or repair of the supplied goods, for a period of time agreed by the parties, provided that this service shall not relieve the supplier of any warranty obligations under this contract; and
 - (e) training of the purchaser's personnel, at the supplier's plant and/or on-site, in assembly, start-up, operation, maintenance, and/or repair of the supplied goods.
- 13.2 Prices charged by the supplier for incidental services, if not included in the contract price for the goods, shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the supplier for similar services.
- 14. Spare parts** 14.1 As specified in SCC, the supplier may be required to provide any or all of the following materials, notifications, and information pertaining to spare parts manufactured or distributed by the supplier:
- (a) such spare parts as the purchaser may elect to purchase from the supplier, provided that this election shall not relieve the supplier of any warranty obligations under the contract; and
 - (b) in the event of termination of production of the spare parts:
 - (i) Advance notification to the purchaser of the pending termination, in sufficient time to permit the purchaser to procure needed requirements; and
 - (ii) following such termination, furnishing at no cost to the purchaser, the blueprints, drawings, and specifications of the spare parts, if requested.
- 15. Warranty** 15.1 The supplier warrants that the goods supplied under the contract are new, unused, of the most recent or current models, and that they incorporate all recent improvements in design and materials unless provided otherwise in the contract. The supplier further warrants that all goods supplied under this contract shall have no defect, arising from design, materials, or workmanship (except when the design and/or material is required by the purchaser's specifications) or from any act or omission of the supplier, that may develop under normal use of the supplied goods in the conditions prevailing in the country of final destination.
- 15.2 This warranty shall remain valid for twelve (12) months after the goods, or any portion thereof as the case may be, have been delivered to and accepted at the

final destination indicated in the contract, or for eighteen (18) months after the date of shipment from the port or place of loading in the source country, whichever period concludes earlier, unless specified otherwise in SCC.

- 15.3 The purchaser shall promptly notify the supplier in writing of any claims arising under this warranty.
- 15.4 Upon receipt of such notice, the supplier shall, within the period specified in SCC and with all reasonable speed, repair or replace the defective goods or parts thereof, without costs to the purchaser.
- 15.5 If the supplier, having been notified, fails to remedy the defect(s) within the period specified in SCC, the purchaser may proceed to take such remedial action as may be necessary, at the supplier's risk and expense and without prejudice to any other rights which the purchaser may have against the supplier under the contract.
- 16. Payment**
- 16.1 The method and conditions of payment to be made to the supplier under this contract shall be specified in SCC.
- 16.2 The supplier shall furnish the purchaser with an invoice accompanied by a copy of the delivery note and upon fulfillment of other obligations stipulated in the contract.
- 16.3 Payments shall be made promptly by the purchaser, but in no case later than thirty (30) days after submission of an invoice or claim by the supplier.
- 16.4 Payment will be made in Rand unless otherwise stipulated in SCC.
- 17. Prices**
- 17.1 Prices charged by the supplier for goods delivered and services performed under the contract shall not vary from the prices quoted by the supplier in his bid, with the exception of any price adjustments authorized in SCC or in the purchaser's request for bid validity extension, as the case may be.
- 18. Contract**
- 18.1 No variation in or modification of the terms of the contract shall be made **amendments** except by written amendment signed by the parties concerned.
- 19. Assignment**
- 19.1 The supplier shall not assign, in whole or in part, its obligations to perform under the contract, except with the purchaser's prior written consent.
- 20. Subcontracts**
- 20.1 The supplier shall notify the purchaser in writing of all subcontracts awarded under this contracts if not already specified in the bid. Such notification, in the original bid or later, shall not relieve the supplier from any liability or obligation under the contract.
- 21. Delays in the supplier's performance**
- 21.1 Delivery of the goods and performance of services shall be made by the supplier in accordance with the time schedule prescribed by the purchaser in the contract.
- 21.2 If at any time during performance of the contract, the supplier or its subcontractor(s) should encounter conditions impeding timely delivery of the goods and performance of services, the supplier shall promptly notify the purchaser in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the supplier's notice, the purchaser shall evaluate the situation and may at his discretion extend the supplier's time for performance, with or without the imposition of penalties, in which case the extension shall be ratified by the parties by amendment of contract.

- 21.3 No provision in a contract shall be deemed to prohibit the obtaining of supplies or services from a national department, provincial department, or a local authority.
- 21.4 The right is reserved to procure outside of the contract small quantities or to have minor essential services executed if an emergency arises, the supplier's point of supply is not situated at or near the place where the supplies are required, or the supplier's services are not readily available.
- 21.5 Except as provided under GCC Clause 25, a delay by the supplier in the performance of its delivery obligations shall render the supplier liable to the imposition of penalties, pursuant to GCC Clause 22, unless an extension of time is agreed upon pursuant to GCC Clause 21.2 without the application of penalties.
- 21.6 Upon any delay beyond the delivery period in the case of a supplies contract, the purchaser shall, without canceling the contract, be entitled to purchase supplies of a similar quality and up to the same quantity in substitution of the goods not supplied in conformity with the contract and to return any goods delivered later at the supplier's expense and risk, or to cancel the contract and buy such goods as may be required to complete the contract and without prejudice to his other rights, be entitled to claim damages from the supplier.

22. Penalties

- 22.1 Subject to GCC Clause 25, if the supplier fails to deliver any or all of the goods or to perform the services within the period(s) specified in the contract, the purchaser shall, without prejudice to its other remedies under the contract, deduct from the contract price, as a penalty, a sum calculated on the delivered price of the delayed goods or unperformed services using the current prime interest rate calculated for each day of the delay until actual delivery or performance. The purchaser may also consider termination of the contract pursuant to GCC Clause 23.

23. Termination for default

- 23.1 The purchaser, without prejudice to any other remedy for breach of contract, by written notice of default sent to the supplier, may terminate this contract in whole or in part:
 - (a) if the supplier fails to deliver any or all of the goods within the period(s) specified in the contract, or within any extension thereof granted by the purchaser pursuant to GCC Clause 21.2;
 - (b) if the Supplier fails to perform any other obligation(s) under the contract; or
 - (c) if the supplier, in the judgment of the purchaser, has engaged in corrupt or fraudulent practices in competing for or in executing the contract.
- 23.2 In the event the purchaser terminates the contract in whole or in part, the purchaser may procure, upon such terms and in such manner as it deems appropriate, goods, works or services similar to those undelivered, and the supplier shall be liable to the purchaser for any excess costs for such similar goods, works or services. However, the supplier shall continue performance of the contract to the extent not terminated.
- 23.3 Where the purchaser terminates the contract in whole or in part, the purchaser may decide to impose a restriction penalty on the supplier by prohibiting such supplier from doing business with the public sector for a period not exceeding 10 years.
- 23.4 If a purchaser intends imposing a restriction on a supplier or any person associated with the supplier, the supplier will be allowed a time period of not more than fourteen (14) days to provide reasons why the envisaged restriction should not be imposed. Should the supplier fail to respond within the stipulated

fourteen (14) days the purchaser may regard the intended penalty as not objected against and may impose it on the supplier.

23.5 Any restriction imposed on any person by the Accounting Officer / Authority will, at the discretion of the Accounting Officer / Authority, also be applicable to any other enterprise or any partner, manager, director or other person who wholly or partly exercises or exercised or may exercise control over the enterprise of the first-mentioned person, and with which enterprise or person the first-mentioned person, is or was in the opinion of the Accounting Officer / Authority actively associated.

23.6 If a restriction is imposed, the purchaser must, within five (5) working days of such imposition, furnish the National Treasury, with the following information:

- (i) the name and address of the supplier and / or person restricted by the purchaser;
- (ii) the date of commencement of the restriction
- (iii) the period of restriction; and
- (iv) the reasons for the restriction.

These details will be loaded in the National Treasury's central database of suppliers or persons prohibited from doing business with the public sector.

23.7 If a court of law convicts a person of an offence as contemplated in sections 12 or 13 of the Prevention and Combating of Corrupt Activities Act, No. 12 of 2004, the court may also rule that such person's name be endorsed on the Register for Tender Defaulters. When a person's name has been endorsed on the Register, the person will be prohibited from doing business with the public sector for a period not less than five years and not more than 10 years. The National Treasury is empowered to determine the period of restriction and each case will be dealt with on its own merits. According to section 32 of the Act the Register must be open to the public. The Register can be perused on the National Treasury website.

24. Anti-dumping and countervailing duties and rights

24.1 When, after the date of bid, provisional payments are required, or antidumping or countervailing duties are imposed, or the amount of a provisional payment or anti-dumping or countervailing right is increased in respect of any dumped or subsidized import, the State is not liable for any amount so required or imposed, or for the amount of any such increase. When, after the said date, such a provisional payment is no longer required or any such anti-dumping or countervailing right is abolished, or where the amount of such provisional payment or any such right is reduced, any such favourable difference shall on demand be paid forthwith by the contractor to the State or the State may deduct such amounts from moneys (if any) which may otherwise be due to the contractor in regard to supplies or services which he delivered or rendered, or is to deliver or render in terms of the contract or any other contract or any other amount which may be due to him

25. Force Majeure

25.1 Notwithstanding the provisions of GCC Clauses 22 and 23, the supplier shall not be liable for forfeiture of its performance security, damages, or termination for default if and to the extent that his delay in performance or other failure to perform his obligations under the contract is the result of an event of force majeure.

25.2 If a force majeure situation arises, the supplier shall promptly notify the purchaser in writing of such condition and the cause thereof. Unless otherwise directed by the purchaser in writing, the supplier shall continue to perform its obligations under the contract as far as is reasonably practical, and shall seek all

		reasonable alternative means for performance not prevented by the force majeure event.
26. Termination for insolvency	26.1	The purchaser may at any time terminate the contract by giving written notice to the supplier if the supplier becomes bankrupt or otherwise insolvent. In this event, termination will be without compensation to the supplier, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the purchaser.
27. Settlement of Disputes	27.1	If any dispute or difference of any kind whatsoever arises between the purchaser and the supplier in connection with or arising out of the contract, the parties shall make every effort to resolve amicably such dispute or difference by mutual consultation.
	27.2	If, after thirty (30) days, the parties have failed to resolve their dispute or difference by such mutual consultation, then either the purchaser or the supplier may give notice to the other party of his intention to commence with mediation. No mediation in respect of this matter may be commenced unless such notice is given to the other party.
	27.3	Should it not be possible to settle a dispute by means of mediation, it may be settled in a South African court of law.
	27.4	Mediation proceedings shall be conducted in accordance with the rules of procedure specified in the SCC.
	27.5	Notwithstanding any reference to mediation and/or court proceedings herein, <ul style="list-style-type: none"> (a) the parties shall continue to perform their respective obligations under the contract unless they otherwise agree; and (b) the purchaser shall pay the supplier any monies due the supplier.
28. Limitation of liability	28.1	Except in cases of criminal negligence or willful misconduct, and in the case of infringement pursuant to Clause 6; <p>the supplier shall not be liable to the purchaser, whether in contract, tort, or otherwise, for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the supplier to pay penalties and/or damages to the purchaser; and</p> <p>the aggregate liability of the supplier to the purchaser, whether under the contract, in tort or otherwise, shall not exceed the total contract price, provided that this limitation shall not apply to the cost of repairing or replacing defective equipment.</p>
29. Governing language	29.1	The contract shall be written in English. All correspondence and other documents pertaining to the contract that is exchanged by the parties shall also be written in English.
30. Applicable law	30.1	The contract shall be interpreted in accordance with South African laws, unless otherwise specified in SCC.
31. Notices	31.1	Every written acceptance of a bid shall be posted to the supplier concerned by registered or certified mail and any other notice to him shall be posted by ordinary mail to the address furnished in his bid or to the address notified later by him in writing and such posting shall be deemed to be proper service of such notice

- 31.2 The time mentioned in the contract documents for performing any act after such aforesaid notice has been given, shall be reckoned from the date of posting of such notice.
- 32. Taxes and duties**
- 32.1 A foreign supplier shall be entirely responsible for all taxes, stamp duties, license fees, and other such levies imposed outside the purchaser's country.
- 32.2 A local supplier shall be entirely responsible for all taxes, duties, license fees, etc., incurred until delivery of the contracted goods to the purchaser.
- 32.3 No contract shall be concluded with any bidder whose tax matters are not in order. Prior to the award of a bid the Department must be in possession of a tax clearance certificate, submitted by the bidder. This certificate must be an original issued by the South African Revenue Services.
- 33. National Industrial Participation (NIP) Programme**
- 33.1 The NIP Programme administered by the Department of Trade and Industry shall be applicable to all contracts that are subject to the NIP obligation
- 34. Prohibition of Restrictive practices**
- 34.1 In terms of section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, an agreement between, or concerted practice by, firms, or a decision by an association of firms, is prohibited if it is between parties in a horizontal relationship and if a bidder (s) is / are or a contractor(s) was / were involved in collusive bidding (or bid rigging).
- 34.2 If a bidder(s) or contractor(s), based on reasonable grounds or evidence obtained by the purchaser, has / have engaged in the restrictive practice referred to above, the purchaser may refer the matter to the Competition Commission for investigation and possible imposition of administrative penalties as contemplated in the Competition Act No. 89 of 1998.
- 34.3 If a bidder(s) or contractor(s), has / have been found guilty by the Competition Commission of the restrictive practice referred to above, the purchaser may, in addition and without prejudice to any other remedy provided for, invalidate the bid(s) for such item(s) offered, and / or terminate the contract in whole or part, and / or restrict the bidder(s) or contractor(s) from conducting business with the public sector for a period not exceeding ten (10) years and / or claim damages from the bidder(s) or contractor(s) concerned.

SERVICE LEVEL AGREEMENT

entered into between

THE CITY OF TSHWANE METROPOLITAN MUNICIPALITY

(Hereafter referred to as the “City”)

Herein Represented by the **City Manager/ Acting City Manager**

(Duly authorised hereto)

AND

Name of Company)

Registration Number:

(Hereinafter referred to as the “Service Provider”)

Herein Represented by:

In his/her capacity as:

(Duly authorised hereto)

SERVICE LEVEL AGREEMENT

entered into between

THE CITY OF TSHWANE METROPOLITAN MUNICIPALITY

a municipality as described in section 2 of the Local Government: Municipal Systems Act, 2000 and as contemplated in section 155 of the Constitution of the Republic of South Africa, 1996 as a category A municipality, or the Assignee, if applicable, herein represented by the City Manager/ Acting City Manager, duly authorised thereto under and by virtue of a

resolution passed on 26 January 2012, and who by his/ her signature hereto warrants that he/ she is properly authorised to sign this Agreement.

(Herein referred to as the “**CITY**”)

AND

(Name of Company)

Registration Number: _____

Herein represented by _____, in his/ her capacity as _____ duly authorised thereto under and by virtue of a resolution of the Board passed on _____, a copy of which is annexed as Annexure “**A**”, and who by his signature hereto warrants that he/ she is properly authorised to sign this Agreement

(Herein referred to as the “**SERVICE PROVIDER**”)

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RECORDAL:

WHEREAS the City requires horticultural maintenance of various developed and semi-developed sites in the seven Regions in the City of Tshwane as-and-when required for a three year period;

AND WHEREAS the City wishes to appoint the Service Provider;

AND WHEREAS the Service Provider wishes to provide such Services;

AND WHEREAS the Service Provider has indicated that it has the necessary expertise, skills and capabilities to provide the Service;

NOW THEREFORE the Parties have agreed to enter into this Agreement, in terms of which the Service Provider shall provide the Services in the Service Areas and/or Delivery Area and provide maintenance and support thereof, to the City in accordance with the terms and subject to the conditions of this Agreement:

- **DEFINITIONS**

Unless otherwise expressly stated, or the context otherwise requires, the words and expressions listed below shall, when used in this Agreement, including this introduction, bear the meanings ascribed to them:

- **“Agreement”** means this service level agreement and shall include any annexures and/or schedules and/or attachments and/or appendices and/or any addenda hereto or incorporated herein by reference, as amended from time to time;
- **“Business Day”** means any day from Monday to Friday excluding Public Holidays as defined in the Public Holidays Act 36 of 1994 (“Public Holidays Act”) as amended from time to time;
- **“Business Week”** means five consecutive Business Days, excluding Public Holidays as defined in the Public Holidays Act;
- **“City”** means the City of Tshwane Metropolitan Municipality, a metropolitan municipality established in terms of section 12 of the Local Government: Municipal Structures Act 117 of 1998;
- **“Contact Persons”** means persons identified by the Parties as persons who are responsible for the execution of the Agreement and whose names are set out in clause 28 and who can be substituted in writing from time to time;
- **“Contract Price”** shall mean the amount reflected as the Contract Price in clause below,
- **“Contract Period”** means the Contract Period as reflected in the Project Scope,
- **“Effective Date”** means the date on the Appointment Letter to be issued by the City;
- **“Intellectual Property”** means Patents, Designs, Know-How, Copyright and Trade Marks and all rights having equivalent or similar effect which may exist anywhere in the world, introduced and required by either Party to give effect to their obligations under this Agreement, owned in whole or in part by, or licensed to either Party prior to the Commencement Date or developed after the Commencement Date, and includes all further additions and

improvements to the Intellectual Property, otherwise pursuant to this Agreement;

- **“Month” means a calendar month;**
- **“Parties” means City and Service Provider and “Party” means either of them as the context requires;**
- **“Services” means services to be provided by the Service Provider to the City as detailed in clause 8 below;**
 - **“Service Provider” means**

(Name of Company),
a company duly incorporated in accordance with the company laws of the Republic of South Africa with company registration number:

;
- **“Signature Date” means the date of signature of this Agreement by the Party signing last;**
- **“Subcontract” means any contract or Agreement or proposed contract between the Service Provider and any third party whereby**

that third party agrees to provide to the Service Provider the Services or any part thereof;

- **“Subcontractor” means the third party with whom the Service Provider enters into a Subcontract;**
- **“Tax Invoice” means the document as required by section 20 of the Value Added Tax Act 89 of 1991, as amended from time to time; and**
- **“VAT” means Value Added Tax as defined in terms of the Value Added Tax Act of 1991.**
- **INTERPRETATION**
 - **Headings and sub-headings are inserted for information purposes only and shall not be used in the interpretation of this Agreement.**
 - **Unless the context clearly indicates a contrary intention, any word connoting:**
 - any singular shall be deemed to include a reference to the plural and vice versa;
 - any one gender shall be deemed to include a reference to the other two genders; and
 - a natural person shall be deemed to include a reference to a legal or juristic person.
 - **The expiry or termination of this Agreement shall not affect provisions of this Agreement which expressly provide that they will operate after any such expiry or termination of this Agreement. Provisions of necessity shall continue to have been effective after such expiry or termination of this Agreement, notwithstanding that the clauses themselves do not expressly provide for this.**
 - **The rule of interpretation that a written Agreement shall be interpreted against the Party responsible for the drafting or preparation of that Agreement shall not apply.**
 - **Where figures are referred to in numerals and in words and there is any conflict between the two, the words shall prevail.**
 - **Any reference to any legislation is a reference to such legislation as at the Signature Date and as amended or re-enacted, from time to time.**
 - **If any provision in a definition is a substantive provision conferring any rights or imposing any obligations on any Party, then**

notwithstanding that, it is only in this interpretation clause, effect shall be given to it as if it were a substantive provision in this Agreement.

- **APPOINTMENT**

The City hereby appoints the Service Provider, who accepts such appointment, to provide the Services in accordance with the terms and subject to the conditions of this Agreement..

- **PURPOSE OF THE AGREEMENT**

- **The Purpose of this Agreement is to:**

- formalise and regulate the working relationship between the Parties;
- set out the roles and responsibilities of the Parties; and
- define process and procedures to be followed by the Parties.

- **RELATIONSHIP**

Nothing in this Agreement shall constitute, or be deemed to constitute a partnership or joint venture between the Parties. Furthermore the Service Provider acknowledges and agrees that its status under this Agreement is that of an independent Service Provider and its status shall in no way be deemed to be that of an agent or employee of the City, for any purpose whatsoever, and the Service Provider shall have no authority or power to bind the City or to contract in the name of the City, or create a liability against the City in any way or for any purpose.

- **DURATION**

This Agreement shall commence on the Effective Date, and shall subsist for a period of 3 (three) years, unless terminated earlier pursuant to clause 25 below.

- **CONTACT PERSON**

- **The work to be performed by the Service Provider hereunder will be supervised by the City's Contact Person.**
- **The Parties shall notify each other, in writing from time to time, of the details of their nominated Contact Person.**
- **The Contact Persons shall liaise and update each other on the progress of the Services rendered and shall endeavour to resolve and remedy any problems or disputes that may arise in relation to the Services.**
- **Either Party may substitute a Contact Person at its discretion provided that each Party shall give the other Party reasonable**

notice of such substitution and will provide replacement employees of equivalent ability.

- **Without derogating from the foregoing, should either Party replace a Contact Person for any reason whatsoever, it shall ensure, to the greatest extent possible in the circumstances, that the suitable period of hand-over and overlap takes place, at its cost, between the new and the encumbered Contact Person.**

- **PROJECT SCOPE OF GENERAL SERVICES**

The Service Provider shall, for the duration of this Agreement, provide the Services as specified in the Project Scope, set out in the tender document.

- **PRICE AND PAYMENT**

- **The City shall pay to the Service Provider the Contract Price as per the items in the Appointment Letter to be issued by the City.**
- **All payments under this Agreement shall be made by electronic fund transfer or other forms of payment as the Parties may agree from time to time, upon receipt of valid and undisputed Tax Invoices and month-end statements together with the supporting documentation from the Service Provider, once the undisputed Tax Invoices or such portion of the Tax Invoices which are undisputed become due and payable.**
- **All amounts and other sums payable in terms of this Agreement and Schedules hereto will be stipulated exclusive of VAT, unless expressly stated otherwise.**
- **Unless otherwise provided in the Schedules, valid Tax Invoices shall be submitted together with a month-end statement. Payment against such month-end statement shall be made by The City within 30 (thirty) days after the date of receipt by The City of the Service Provider's statement together with the relevant valid and undisputed Tax Invoice(s) and supporting documentation, but in any event not later than 90 (ninety) days of receipt of such statement.**
- **There shall be no interest levied on a Tax Invoice that is in dispute between the Parties.**
- **The City shall pay the amount reflected on a Tax Invoice once the City's Contact Person has verified that the Services set out in a**

schedule have been rendered and the Tax Invoice amount has been approved by the City.

- **All Tax Invoices shall be addressed to the City' Contact Person.**
- **All payments shall be transferred, by the City to the Service Provider electronically into the Service Provider's bank account, the details of which are set out below:**

Bank: _____

Account type: _____

Account No: _____

Branch No: _____

Failure to comply with the clauses above may result in late payment of the total amount of an invoice by the Service Provider to the City. The City shall not be liable for any costs or damages suffered by the Service Provider as a result of such late payment.

- **SERVICE LEVELS**

- **The Service Provider recognises that the City has entered into this Agreement relying specifically on the Service Provider's representations regarding service levels including, *inter alia*:**
 - capacity allocations in accordance with the Service to be provided; and
 - all work to be performed and Services rendered under this Agreement shall comply with industry norms and best practice acceptable within the Services industry and shall be executed by the Service Provider to the total satisfaction of the City.
- **The Service Provider shall provide suitably qualified and trained employees to provide the Services to the City in terms of this Agreement, and shall allocate, in its discretion employee resources in accordance with the technical skill and knowledge required, provided that any exercise of such discretion by the Service Provider shall not negatively impact on the provision of the Services by the Service Provider to the City, and shall allocate**

employees with the technical skill and knowledge onsite at the City at all times during normal working hours, if the City so requires.

- **Amongst others, the Service Provider shall comply with and provide the Services as set out in Clause 8 above.**

- **WITHHOLDING OF PERFORMANCE**

The Service Provider may not under any circumstances, including, without limitation, non-payment by the City, withhold any Services from The City during the currency of this Agreement, unless it validly terminates this Agreement in terms of clause 25 below.

- **PENALTY**

- **Should the Service Provider fail to comply with its obligations in terms of this Agreement, the City may:**
 - exercise its rights in terms of clause 24 below; alternatively
 - impose a penalty on the Service Provider as stated hereunder in clause 12.4 below.
- **An election of any of the above by the City shall not mean that the City has waived any other rights which the City might have in law.**
- **Should the City elect to impose a penalty on the Service Provider, the City shall provide the Service Provider with a written notice requiring the Service Provider to remedy the default within 7 (seven) days from the date of delivery of the notice.**
- **Should the Service Provider fail to remedy the default within 7 (seven) days after receiving the notice, then the City shall be entitled, without prejudice to any alternative or additional right of action or remedy available to the City and without further notice, impose a penalty, which penalty shall be a deduction of 10% of the monthly Contract Price for the Contract Period; and for the avoidance of doubt, the penalty amount shall be 10% of the monies**

due for payment to the Service Provider monthly in terms of clause above.

- **Should there be a dispute as to whether the failure to deliver was caused by the City or was the Service Provider's fault such dispute shall be dealt with in accordance to clause 26 below.**
- **ACCESS**
 - **The City shall allow the Service Provider reasonable access to its premises, provided that:**
 - access is related to the Services to be provided by the Service Provider; and
 - the Service Provider adheres to all rules, regulations and instructions applicable at the City's premises.
 - **The Service Provider is required to notify the City monthly of employees who are to provide Services at the Service Areas and/or Delivery Areas.**
 - **The City shall grant the Service Provider and/or its employees, referred in clause above, access to its premises to perform its obligations in terms of this Agreement.**
 - **The Service Provider and its employees shall at all time when entering the premises and/or Service Areas and/or Delivery Areas of the City comply with all rules, laws, regulations and policies of the City.**
- **INSPECTION**
 - **The City may at any time inspect the Service levels of the Service Provider in terms of this Agreement.**
 - **If the City is, at any time, dissatisfied with the service levels then the Service Provider shall, within 7 (seven) days, notify the Service Provider in writing of the failure or default.**
 - **The Service Provider shall immediately upon receipt of written demand by the City, remedy such failure or default, within 7 (seven) Business Days from the date of receipt of the notice, free of charge.**
 - **Should the Service Provider fail to remedy the failure or default referred to above then the City shall have the right to impose**

penalties as provided for in clause 12 above or invoke the provisions of clauses and/or clause below.

- To enable the City to determine whether the Services rendered in terms of this Agreement are being complied with the Service Provider shall:
 - *provide the City with such information as it may reasonably require;*
 - *allow the City to inspect and take copies of any records of the Service Provider relating to the Services, including all hardware, software, data, information, visuals, procedures, event logs, transaction logs, audit trails, books, records, contracts and correspondence;*
 - *allow the City or its authorised representatives to conduct interviews with any of the Service Provider's employees, subject to reasonable notice being given to the Service Provider.*
- **Service Provider to Provide Reasonable Assistance**
- Where any information is required for inspection in terms of this clause and the information is kept in a computer, the Service Provider shall give the City reasonable assistance required to facilitate inspection and obtain copies of the information in a visible and legible form or to inspect and check the operation of any computer and any associated apparatus or material that is or has been in use in connection with the keeping of the information.
- Any information required to be provided to the City pursuant to this clause 14 shall be provided by the Service Provider, as the case may be in such form (including a form otherwise than in writing) as the City may reasonably specify.
- The cost of any inspection contemplated in terms of this clause 14 shall be for the account of the City unless any material irregularity or failure on the part of the Service Provider is determined by the City in the course of such inspection.
- **The inspection contemplated in this Agreement will be conducted:**
 - during normal business hours; and
 - save where the circumstances justify it, on reasonable notice to the Service Provider; with the minimum interference in the provision of the Services and the Service Provider's other operations.

- **SERVICE PROVIDER’S WARRANTIES AND INDEMNITIES**

- **Service Warranties**

- The Service Provider warrants that in relation to each Service provided in terms of this Agreement:
 - *it has full capacity and authority to enter into and perform this Agreement, and that this Agreement is executed by duly authorised representatives of the Service Provider;*
 - *it possesses or has access to the requisite knowledge, skill and experience to provide the Services in an expert manner;*
 - *it will discharge its obligations under this Agreement and any annexure, appendix or Schedule hereto with all due skill, care and diligence;*
 - *all work performed and Services rendered under this Agreement shall comply with prevailing practice, standards and specifications within the industry;*
 - *it will be solely responsible for the payment of remuneration and associated benefits, if any, of its Personnel and for withholding and remitting income tax for its Personnel in conformance with any applicable laws and regulations;*
 - *the use or possession by the City of any Materials will not subject the City to any claim for infringement of any Intellectual Property Rights of any third party;*
 - *with promptness and diligence and in a skilful manner and in accordance with the practices and professional standards of operations while performing Services or similar to the Services;*
 - *which Services will in all aspects comply with industry norms and best practice to the satisfaction of the City with regard to materials and workmanship;*
 - *using and adopting any standards, processes and procedures required under this Agreement;*

- *warranting that it shall employ suitably qualified and trained employees to provide the Services and/or Goods to the City and it shall allocate employees in accordance with the technical skill and knowledge required;*
- *free from any defects in material and workmanship;*
- *maintaining and causing to be maintained the highest standard of workmanship and care in undertaking the Services ;*
- *maintaining and caused to be maintained the highest standard of care and diligence in providing the Services, maintenance and support; and*
- *ensuring that all applicable laws are observed;*

- **Indemnity**

- The Service Provider hereby indemnifies the City against any claim which may be brought against the City by the Service Provider’s personnel or a third party arising from the execution of this Agreement alternatively which arises against the City as a result of the Service Provider’s breach of any of the provisions of this Agreement, provided that the City shall notify the Service Provider in writing within a reasonable time, and in any event not less than 14 (fourteen) Business days of the City becoming aware of any such claim to enable the Service Provider to take steps to contest it and shall provide the Service Provider with such reasonable assistance as may be necessary to enable the Service Provider to defend the claim to the extent only that it is in a position to render such assistance. The Service Provider may, within 5 (five) Business Days of receipt of written notice from the City aforesaid, elect in writing to contest such a claim in the name of the City and shall be entitled to control the proceedings in regard thereto, provided that the Service Provider indemnifies the City against all and any costs (including attorney and own client costs) which may be incurred by or awarded against the City as a consequence of the defence of the claim.

- **THE SERVICE PROVIDER’S PERSONNEL**

- **Liability for Criminal Acts of Employees**

The Service Provider shall be liable to the City for any loss that the City or any third party may suffer as a result of any theft, fraud or other criminal act of any employee of the Service Provider which arises within the course and scope of such employees’ employment with the Service Provider.

- **Character of Employees**

- Due to the confidential nature of certain aspects of the Services and the position of trust which the Service Provider's employees will fulfil, the Service Provider hereby undertakes to use its best commercial endeavours to ensure that it only assigns to the City employees who are fit and proper persons and who display the highest standards of personal integrity and honesty and who have not, to their knowledge, being convicted of any crime.
- The Service Provider shall, at its own cost, conduct all reasonable background checks into members of its employees prior to utilizing same to provide the Services in terms of this Agreement.
- **The City shall conduct all reasonable background checks into the Service Provider's employees from time to time, where it deems it necessary to do so.**
- **STATUTORY AND EMPLOYMENT ISSUES**
 - **The Service Provider shall comply with all employment legislation**
 - The Service Provider warrants that it has full knowledge of all relevant statutory, collective and other stipulations applicable to the relationship with its personnel and its relationship with the City. This includes, but is not limited to, the Labour Relations Act, the Basic Conditions of Employment Act, 1977, the Employment Equity Act, 1998 and any other applicable employment legislation currently in force.
 - The Service Provider warrants further that it is not and will not in future be in contravention of any of the provisions of any such legislation and in the event of such contravention, the Service Provider shall immediately take all steps to remedy such contravention. If the City advises the Service Provider of any contravention of such legislation in writing, the Service Provider shall, within 10 (ten) days after receipt of such notice, take all steps necessary to remedy such contravention and shall keep the City informed regarding the steps taken and the implementation and the result thereof.
 - **No employment**

The Service Provider warrants that none of its personnel shall be regarded as employees of the City. The Service Provider shall assist to defend and bear all costs in the event that the City is required to defend a claim, whether civil or employment related, instituted against it by the Service Provider's personnel should the City defend the matter, the Service Provider hereby indemnifies the City against all and any costs (including attorney and own client costs) which may be incurred by or awarded against the City as a consequence of the defence of the claim.

- **Occupational Health and Safety Act, 1993**

The Service Provider shall be responsible for ensuring compliance with all the provisions of the Occupational Health and Safety Act, 1993 and it indemnifies the City against any claim which may arise in respect of such Act by its personnel against the City.

- **SUB-CONTRACTING**

- **The Service Provider may not Subcontract the whole of or any portion of the Services in terms of this Agreement to any third party without the prior written consent of the City.**
- **In the event the Service Provider wishes to Subcontract the whole of or any portion of the Services in terms of this Agreement, it shall apply to the City in writing for consent to do so.**
- **In its application, the Service Provider shall give the name of the Subcontractor, the Subcontractor's obligations, the proposed date of commencement of the Subcontract which shall include the fees payable to the Subcontractor, and a report of the background security check on the Subcontractor's suitability, financial and otherwise.**
- **The City may, in its sole and absolute discretion refuse consent to Subcontract. In the event the City approves the Subcontracting of the whole of or any portion of the Services in terms of this Agreement, then:**
 - the Service Provider shall ensure that the Subcontractor's B-BBEE level is equal or better than that of the Service Provider, their price is competitive and they have the capacity to provide the Service;
 - such Subcontracting shall not absolve the Service Provider from responsibility for achieving the Service Levels or complying with its obligations in terms of this Agreement and the Service Provider hereby indemnifies and holds the City harmless against any loss, harm or damage which the City may suffer as a result of such Subcontracting;
 - the Service Provider shall at all times remain the sole point of contact for the City in respect of the acquisition of Services by the City; and
 - no such Subcontracting shall have any effect on the Contract Price and charges payable by the City to the Service Provider in terms of this Agreement.

- **CONFIDENTIALITY**

- **The Service Provider acknowledge that all information relating to the City confidential business and technical information, data, documents or other information necessary or useful for the carrying on by the City of its business which shall include, but shall**

not be limited to operating procedures, quality control procedures, approximate operation personnel requirements, descriptions and trade names and trademarks, know how, techniques, technology, information relating to clients, customers, suppliers, relevant authorities, copyright, trade secrets and all goodwill relating to the business and any other intellectual property rights, technical data and documents in whole or in part, used by the City in respect of its business; (“Confidential Information”), shall remain confidential and shall not be made known unless the City has given written consent to do so.

- **The information provided by the City in the context of this Agreement is Confidential Information and the Service Provider shall take all reasonable measures to keep the information confidential and will only use the information for the purpose for which it was provided.**
- **The Service Provider undertakes to not disclose any such Confidential Information. However, there will be no obligation of confidentiality or restriction on use where:**
 - the information is publicly available, or becomes publicly available otherwise than by action of the receiving Party; or
 - the information was already known to the receiving Party (as evidenced by its written records) prior to its receipt under this or any previous agreement between the Parties or their affiliates; or
 - The information was received from a third Party not in breach of an obligation of confidentiality.
- **INTELLECTUAL PROPERTY RIGHTS**
 - **All Intellectual Property Rights of the Service Provider and/or third party vest in the Service Provider and/or third party, as appropriate.**
 - **All rights in the City name and logo remain the absolute property of the City.**
 - **The Service Provider warrants that no aspect of the Services provided in terms thereof will infringe any Patent, Design, Copyright, Trade Mark or trade secret or other proprietary right of any third party.**
 - **The Service Provider shall promptly notify the City, in writing, of any infringement or apparent or threatened infringement or any circumstances which may potentially give rise to an infringement,**

or any actions, claims or demands in relation to any Intellectual Property Rights.

- **In the event the City becomes aware of any such infringement, the Service Provider shall, at its cost, defend the City against any claim that the Services infringe any such third party Intellectual Property Rights, provided that the City gives notice to the Service Provider of such claim and the Service Provider controls the defence thereof. The Service Provider further indemnifies the City against, and undertakes that it will pay all costs, damages and attorney fees, if any, finally awarded against the City in any action which is attributable to such claim and will reimburse the City with all costs reasonably incurred by the City in connection with any such action.**
- **Should any claim be made against the City by any third party in terms of clause above, the City shall give the Service Provider written notice thereof within 3 (three) days of becoming aware of such claim to enable the Service Provider to take steps to contest it.**
- **Should any third party succeed in its claim for the infringement of any third party proprietary rights, the Service Provider shall, at its discretion and within 30 (thirty) days of the Services having been found to infringe, at its own cost:**
 - obtain for the City the right to continue using the subject of infringement or the parts thereof which constitute the infringement; or
 - replace the subject of infringement or the parts thereof which constitute the infringement with another product or service which does not infringe and which is materially similar to the subject of infringement; or
 - alter the subject of infringement in such a way as to render it non-infringing while still in all respects operating in substantially the same manner as the subject of infringement; or
 - withdraw the subject of infringement.
- **FORCE MAJEURE**
 - **For the purposes hereof, Force Majeure shall mean civil strife, riots, insurrection, sabotage, national emergency, acts of war of public enemy, rationing of supplies, flood, storm, fire or any other like forces of nature beyond the reasonable control of the party claiming Force Majeure and comprehended in the terms thereof.**
 - **If Force Majeure causes delays in or failure or partial failure of performance by a Party of all or any of its obligations hereunder,**

this Agreement shall be suspended for the period agreed in writing between the Parties.

- **In the event of circumstances arising which the other Party believes that it constitutes a Force Majeure (“the Affected Party”) then such Affected Party shall send, within 5 (five) days from the interrupting circumstances, a written notice of the interrupting circumstances specifying the nature and date of commencement of the interrupting event to the other Party. The Parties shall agree, in writing, to suspend the implementation of this Agreement for a specific period (“Agreed Period”).**
- **In the event that both Parties reasonably believe that the Affected Party shall be unable to continue to perform its obligations after the Agreed Period, then either Party shall be entitled to terminate this Agreement without further notice to the other Party.**
- **The Party whose performance is interrupted by the interrupting circumstances shall be entitled, provided that such party shall have given notice to that effect with a written notice of the interrupting circumstances as provided above, to extend the period of this Agreement by a period equal to the time that its performance is so prevented.**

- **CESSION**

The Service Provider shall not be entitled to cede or assign or transfer in any other way and/or alienate its rights and obligations in terms of this Agreement without the prior written consent of the City.

- **CHANGE OF CONTROL / CIRCUMSTANCE**

- **The Service Provider shall notify the City, in writing, of any change in the Service Provider’s shareholding or membership or any change in the Service Provider’s subsidiary companies or holding or its affiliates (such change shall be considered a material change in the constitution and identity of the Service Provider. The City may terminate this Agreement upon becoming aware of such material change.**
- **The Parties agree that should there be a change as envisaged in clause above, the Service Provider will no longer exist and a new third party/entity shall have been constituted. In this regard, such third party shall not be entitled to inherit any of the Service Provider’s rights and obligations in terms of this Agreement, which will only be transferred to the new entity in writing by the City following the City’s satisfaction and approval in writing of such new entity.**
- **The Service Provider shall further notify the City of any material changes or circumstance which might have led the City to appoint**

the Service Provider to Provide the Goods and/or Services. In the event that any material change or circumstance occurs and the Service Provider fails to inform the City of such a change or circumstance, the Service Provider shall be deemed to have breached a material term of this Agreement and the City shall be entitled to cancel the Agreement on 1 (one) month's prior notice.

- **BREACH**

- **Subject to clause 23.3 above, should either Party commit a breach of any term of this Agreement (“the Defaulting Party”) then the affected party (“Aggrieved Party”) shall be entitled to inform the Defaulting Party in writing to remedy such failure or default within 5 (five) Business Days and should the Defaulting Party fail to remedy the breach within 5 (five) Business Days after receipt of the notice the so Aggrieved Party shall be entitled, without prejudice to any of its rights under this Agreement or law to:**

- immediately terminate this Agreement without giving written notice and claim damages (which shall include legal costs on an attorney/client scale); or
- request specific performance and claim damages (which shall include legal costs on an attorney/client scale); or
- impose penalties as provided for in clause 12 above.

- **EARLY TERMINATION**

The City shall have the right to terminate this Agreement by giving 30 (thirty) days' notice in writing to the Service Provider of its intention to terminate the Agreement.

- **DISPUTES**

- **Save for clause 24 above or any other clause in this Agreement which provides for its own remedy, should any dispute arise between the Parties in respect of or pursuant to this Agreement,**

including, without limiting the generality of the foregoing, any dispute relating to:

- the interpretation of the Agreement;
 - the performance of any of the terms of the Agreement;
 - any of the parties' rights and obligations;
 - any procedure to be followed;
 - the termination or cancellation or breach of this Agreement; or
 - the rectification or repudiation of this Agreement; then any Party may give the other Party written notice of such dispute, in which event the provisions below shall apply.
- **Within 7 (seven) days of the declaration of such dispute, the Parties representatives or their nominated persons shall meet in the spirit of goodwill and endeavour to resolve the dispute, failing which (and without prejudice to any other alternative dispute resolution to which the Parties may agree, either prior to or concurrently with arbitration) the provisions of this clause above shall apply.**
 - **If the Parties are unable to resolve the dispute within 14 (fourteen) days of the notice of the dispute (or such longer period as they may have agreed to in writing), then either Party may, on written notice to the other Party, require that the dispute be submitted to and**

decided by arbitration, in terms of the Arbitration Act, 42 of 1965 of South Africa (“the Arbitration Act”).

- **The arbitration shall be held under the provisions of the Arbitration Act provided that the arbitration shall be:**
 - at any place which the Parties agree, in writing, to be mutually convenient; and
 - in accordance with such formalities and/or procedures as may be settled by the arbitrator and may be held in an informal and summary manner, on the basis that it shall not be necessary to observe or carry out the usual formalities of procedure, pleadings and/or discovery or respect rules of evidence.
 - **If the arbitration is:**
 - a legal matter, then the arbitrator shall be a practicing advocate or a practicing attorney of not less than 10 (ten) years' standing;
 - an accounting matter, then the arbitrator shall be a practicing chartered accountant of not less than 10 (ten) years' standing; and
 - any other matter, then the arbitrator shall be any independent person agreed upon between the Parties.
- **Should the Parties fail to agree on an arbitrator within 14 (fourteen) days after the arbitration has been demanded, then the arbitrator shall be nominated at the request of either of the Parties, by the president for the time being of the Law Society of the Northern Provinces.**
- **Should the Parties fail to agree whether the dispute is of a legal, accounting or other nature within 7 (seven) days after the**

arbitration has been demanded, then it shall be deemed to be a dispute of a legal nature.

- **The arbitrator may:**
 - investigate or cause to be investigated any matter, fact or thing which he considers necessary or desirable in connection with the dispute and for that purpose, shall have the widest powers of investigating all documents and records of any Party having a bearing on the dispute;
 - interview and question under oath the parties or any of their representatives;
 - decide the dispute according to what he considers just and equitable in the circumstances; and
 - make such award, including an award for specific performance, damages or otherwise, as he in his discretion may deem fit and appropriate. The arbitration shall be held as quickly as possible after it is requested, with a view to it being completed within thirty (30) days after it has been so requested.
- **The arbitrator's decision and award shall be in writing with reasons and shall be final and binding upon the Parties.**
- **The arbitrator's award may, on application by either Party to a court of competent jurisdiction and after due notice is given to the other Party, be made an order of court.**
- **Notwithstanding the provisions of clauses 26.1, 26.2, 26.3, 26.4, 26.5, 26.6 and 26.7 above, in the event of either Party having a claim against the other Party for a liquidated amount or an amount which arises from a liquid document, or for an interdict or other urgent relief, then the other Party having such a claim shall be entitled to institute action therefore in a court of law rather than in terms of the above clauses, notwithstanding the fact that the other Party may dispute the claim.**
- **The provisions of this clause 26 are severable from the rest of this Agreement and shall remain in effect even where this Agreement is terminated or cancelled for any reason.**
- **LAWS AND JURISDICTION**
 - **This Agreement shall be governed by and interpreted according to the Law of the Republic of South Africa.**
 - **Each Party submits to the exclusive jurisdiction of the South African courts in respect of any matter arising from or in connection with this Agreement including its termination. Each**

Party further consents to the jurisdiction of the High Court of South Africa (North Gauteng High Court (Pretoria)).

- **NOTICES AND COMMUNICATIONS**

- **The Parties choose as their respective *domicilium citandi et executandi* (hereinafter referred to as the “*domicilium*”) and for the delivery of any notices arising out of the Agreement or its termination or cancellation, whether in respect of court process, notices or other documents or communications of whatsoever nature (including the exercise of any option), the address set out below:**

- **THE CITY:**

Office of the City Manager
Tshwane House
2nd Floor, Block D
320 Madiba Street
Pretoria, 0001
P O Box 440
Pretoria, 0001
Fax: 086 214 9544
Email: citymanager@tshwane.gov.za
[Telephone: 012 358 4901/4](tel:01235849014)

- **THE SERVICE PROVIDER:**

Street Address: _____

Postal Address: _____

Attention: _____

Cell phone: _____

Telephone: _____

Fax: _____

Email: _____

- **Each Party shall be entitled from time to time, by written notice to the other Party, to vary its *domicilium* to any other address which is not a Post Office Box or a Poste Restante.**
- **Any notice given and any payment made by any Party to another Party (hereinafter referred to as “the addressee”) which:**
 - is delivered by hand during normal business hours of the addressee at the addressee’s *domicilium*, shall be deemed, until the contrary is proved by the addressee, to have been received by the addressee at the time of delivery;
 - is posted by prepaid registered post to the addressee at the addressee’s *domicilium* shall be deemed, until the contrary is proved by the addressee, to have been received on the 7th (seventh) day after the date of posting; or
 - is sent by email or facsimile machine shall be deemed, until the contrary is proven by the addressee, to have been received within 1 (one) hour of transmission where it is transmitted during business hours of the receiving instrument and at noon on the following business day (excluding Saturdays) where it is transmitted outside such business hours.
- **Any notice or communication required or permitted in terms of this Agreement shall be valid and effective only if in Writing but it shall be competent to give notice by facsimile.**
- **Notwithstanding anything to the contrary in this Agreement a notice or communication actually received by one Party shall be an**

adequate notice or communication notwithstanding that it was not sent to or delivered at the chosen *domicilium citandi et executandi*.

- **GENERAL AND MISCELLANEOUS**

- **SOLE RECORD OF AGREEMENT**

This Agreement constitutes the sole record of the Agreement between the Parties with regard to the subject matter hereof. No Party shall be bound by any express or implied term, representation, warranty, promise or the like not recorded herein.

- **NO AMENDMENT EXCEPT IN WRITING**

No addition to, variation of, or agreed cancellation of, this Agreement shall be of any force or effect unless in writing and signed by or on behalf of the Parties. Any alleged waiver of this requirement must itself be reduced to writing and signed by the relevant Party to be of any effect.

- **WAIVERS**

No relaxation or indulgence which any Party may grant to any other shall constitute a waiver of the rights of that Party and shall not preclude that party from exercising any rights which may have arisen in the past or which might arise in future.

- **SURVIVAL OF OBLIGATIONS**

Any provision of this Agreement which contemplates performance or observance subsequent to any termination or expiration of this Agreement shall survive any termination or expiration of this Agreement and continue in full force and effect.

- **APPROVALS AND CONSENTS**

An approval or consent given by a Party under this Agreement shall only be valid if in writing and shall not relieve the other Party from responsibility for complying with the requirements of this Agreement nor shall it be construed as a waiver of any rights under this Agreement except as and to the extent otherwise expressly provided in such approval or consent, or elsewhere in this Agreement. Any alleged waiver of the requirement that the approval or consent must be in writing must itself be reduced to writing and signed by the relevant Party to be of any effect.

- **EXECUTION**

- **This Agreement may be executed in several counterparts, which shall each be deemed an original, but all of which shall constitute**

one and the same instrument. A facsimile shall constitute a valid counterpart for all purposes hereunder.

- The signatories to this Agreement by their signature warrant their authority to enter into this Agreement and the capacity of their principal, if signing in a representative capacity, to enter into this Agreement.

Signed at _____ on this ____ day of _____ 20____

Witnesses

1.
2.

City Manager/ Acting City Manager for and on behalf of the City of Tshwane Metropolitan Municipality, and duly authorised thereto.

Signed at _____ on this ____ day of _____ 20____

Witnesses

1.
2.

In his capacity as

for and on behalf of: (Name of Company)
_____,

and duly authorised thereto.

ANNEXURE "A"

RESOLUTION OF THE BOARD

Resolution by the Board of Directors of _____
made at a meeting held at _____ on _____ 20____.

NOTED: THAT _____ (Company Name)

intends to enter into an Agreement with the City of Tshwane Metropolitan Municipality in terms of which _____ (Company Name) shall provide General Maintenance of all the Cemeteries and Crematorium terrain in all seven Regions as and when required for a three-year period.

on the terms and subject to the conditions, for the duration of this Agreement, provide the Services as specified in the Project Scope, set out in the tender document.

RESOLVED:

THAT _____ (Name of Company), approves and enters into the Agreement on the terms and subject to the conditions of the Agreement to which this resolution is attached.

THAT _____,

in his/her capacity as a _____,

of _____ (Name of Company), be and is hereby authorised to negotiate, settle and sign the Agreement attached hereto, and to sign all documentation and do all things necessary to give effect to the aforesaid resolutions on behalf of _____ (Name of Company).

Read and Confirmed

Chairman/Company Secretary