

# APPENDIX B



## IT INFRASTRUCTURE INFORMATION

- Servers, Server Functions, Applications and Storage
- Network Devices and Diagrams
- Computers, Laptops, Printers, Scanners , and MFP
- IP Telephony
- Other Third Party / Custom Developed In-House Software

## **Servers, Server Functions, and Applications**

### **Overview**

City of Mbombela servers are either standalone or VM guest systems in a VMware Cluster. All VMGuest systems and data are stored in an IBM San. The Standalone systems are hosted on the server with the data stored either locally or in a SAN. Server access and IP traffic is monitored over various VLAN's via the Cisco ASA Firewall.

### **Servers**

1 x VM cluster  
3 x VM Host  
ESXI 6, 7, 8  
50 x VM Servers

VCentre  
Windows server 2012, 2016, 2019  
SQL server 2022

### **Storage**

The storage systems currently in use at City of Mbombela.

- 1 x IBM TS4300 Tape Library
- 1 x IBM Flash 5035

All the above is connected via 2 x x EMC DS\_6610B/EMC Connectrix 6610 Fibre switches.

**PLEASE NOTE THAT THE MUNICIPALITY IS BUSY WITH IMPLEMENTING M365 AND WILL MOVE MOST OF ITS APPLICATIONS, DATABASES AND OTHER SYSTEMS TO THE CLOUD WITH FOCUS ON AZURE PLATFORM AND TO ITS WEBSITE PLATFORM AND DMZ.**

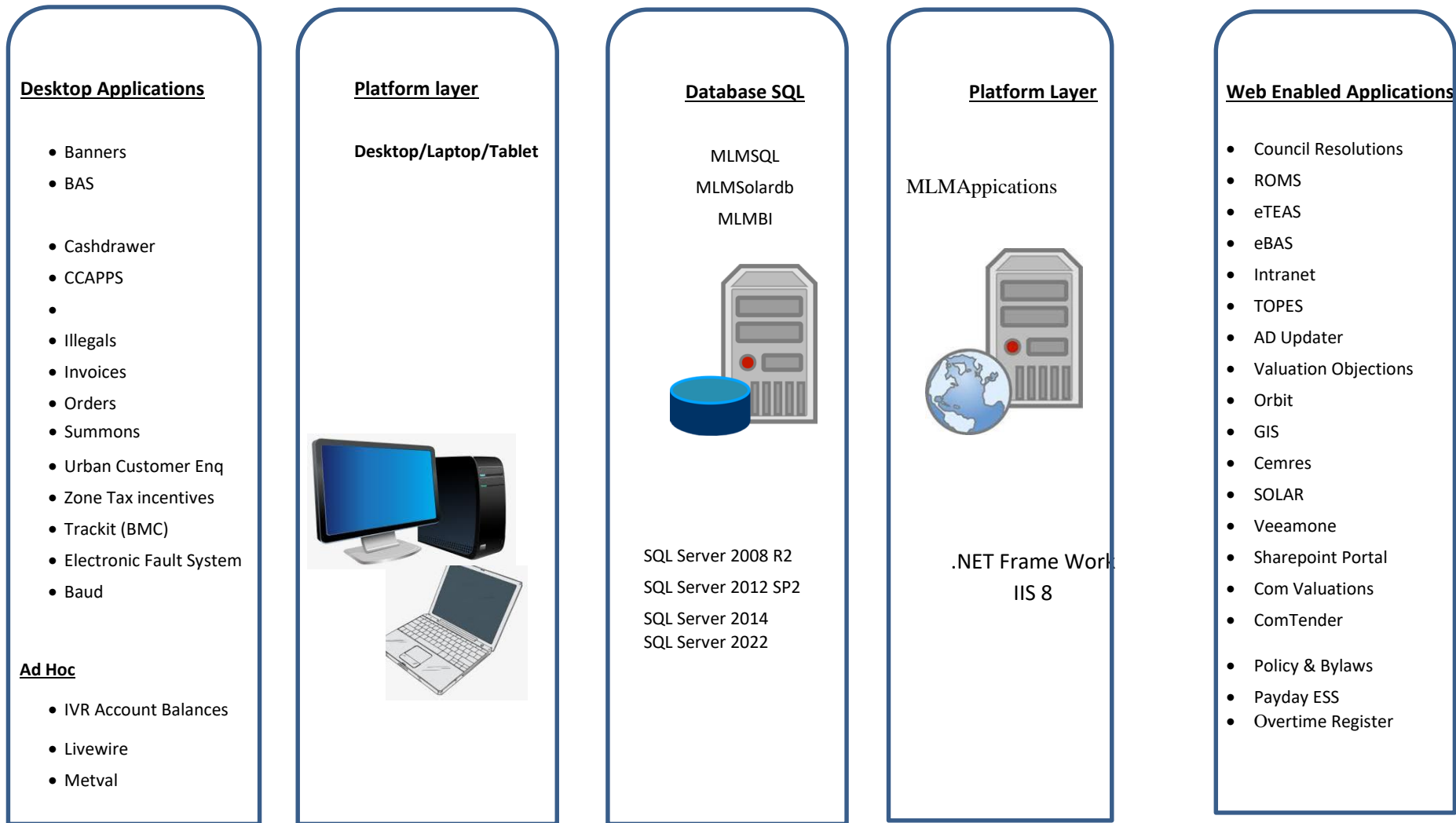
**List of Utilised Operating Systems and Applications**

- Microsoft Windows server 2008, 2012, 2012R2, 2016, 2019
- Redhat Linux 6.3 Enterprise Edition
- VMWare ESXi 8
- Microsoft SQL server 2008, 2012, 2014, 2022
- Veeam backup and Replication 13
- Exchange Server 2013
- ArcGis-ArcSDE 10.3
- WSUS
- Symantec Endpoint Protection Manager V 14.X
- Suprima Prepaid Electricity
- Cash Drawer Receipt System
- Venus Financial System
- Solar Financial System
- Orbit Document Management System
- PayDay
- Onsoft TrackIT Helpdesk System
- Cognos Series 7
- Cognos transformer
- SNetterm
- Microfocus(Sentinel)
- Secure Login
- TCS
- Cisco Unified Communications
- Business Integrator
- Land Use Management System
- Magic Budget tool
- Sebata
- BAUD
- Livewire
- Valuations
- MangageEngine

**Web Application Server Systems – Intranet and website**

- Intranet
- eTEAS
- eBAS
- Overtime Register
- ARC IMS
- J2EE
- Microsoft SharePoint Enterprise 2013
- Microsoft sharepoint online
- Exchange online
- Wordpress with Elementor

**Application Architecture**



## Network, Network Devices, Diagrams

### Network

The City of Mbombela network is divided into broadcast domains (VLAN's) which join together at the computer room in the Mbombela Civic centre. The network connects not only the civic centre, but also other remote sites within Mbombela and outlying areas such as White River, Kanyamaze, Matsulu, Hazyview, Kabokweni, and Umjindi. Remote connectivity is provided by Telkom ME lines and Wireless point to point links.

The network carries data and voice.

Internal network security is provided by a Cisco Identity Services Engine which in conjunction with the edge switches enables network access control.

A centrally managed WiFi network is deployed within the Civic Centre and expands to other centres within Mbombela and other outlying areas.

### Deployed Network Devices

#### Switches

Cisco WS-C2960-24PC-L	1
Cisco WS-C2960C-12PC-L	6
Cisco WS-C2960S-24PS-L	15
Cisco WS-C2960S-48FPS-L	4
Cisco WS-C2960X-24FPS	1
Cisco WS-C2960X-24PS-L	23
Cisco WS-C3560-12PC-S	1
Cisco WS-C3560-24PS	1
Cisco WS-C3560-48PS	1
Cisco WS-C3560-8PC	1
Cisco WS-C3560V2-48PS	1
Cisco WS-C3560X-24P	1
Cisco WS-C3560X-24P-L	1
Cisco WS-C3560X-48P	2
Cisco WS-C2960X-48FPS	1
Cisco WS-C2960X-48FPS-L	26
Cisco WS-C3560G-24PS-S	1
Cisco WS-C3560V2-48PS-S	1
Cisco WS-C3650X-24PS	3
Cisco WS-C3560-8PC-S	1
Cisco WS-C3650-24PS	3

#### Routers

Cisco ISR 4321/K9	4
Cisco 2911/K9	1
Cisco ISR4221/K9	2
Cisco ISR4331/K9	3

#### WiFi

Cisco AIR-CAP2602I-E-K9	20
Cisco AIR-CAP2702I-E-K9	6
Cisco 5500 Wireless Controller	2

**Wireless Bridges**

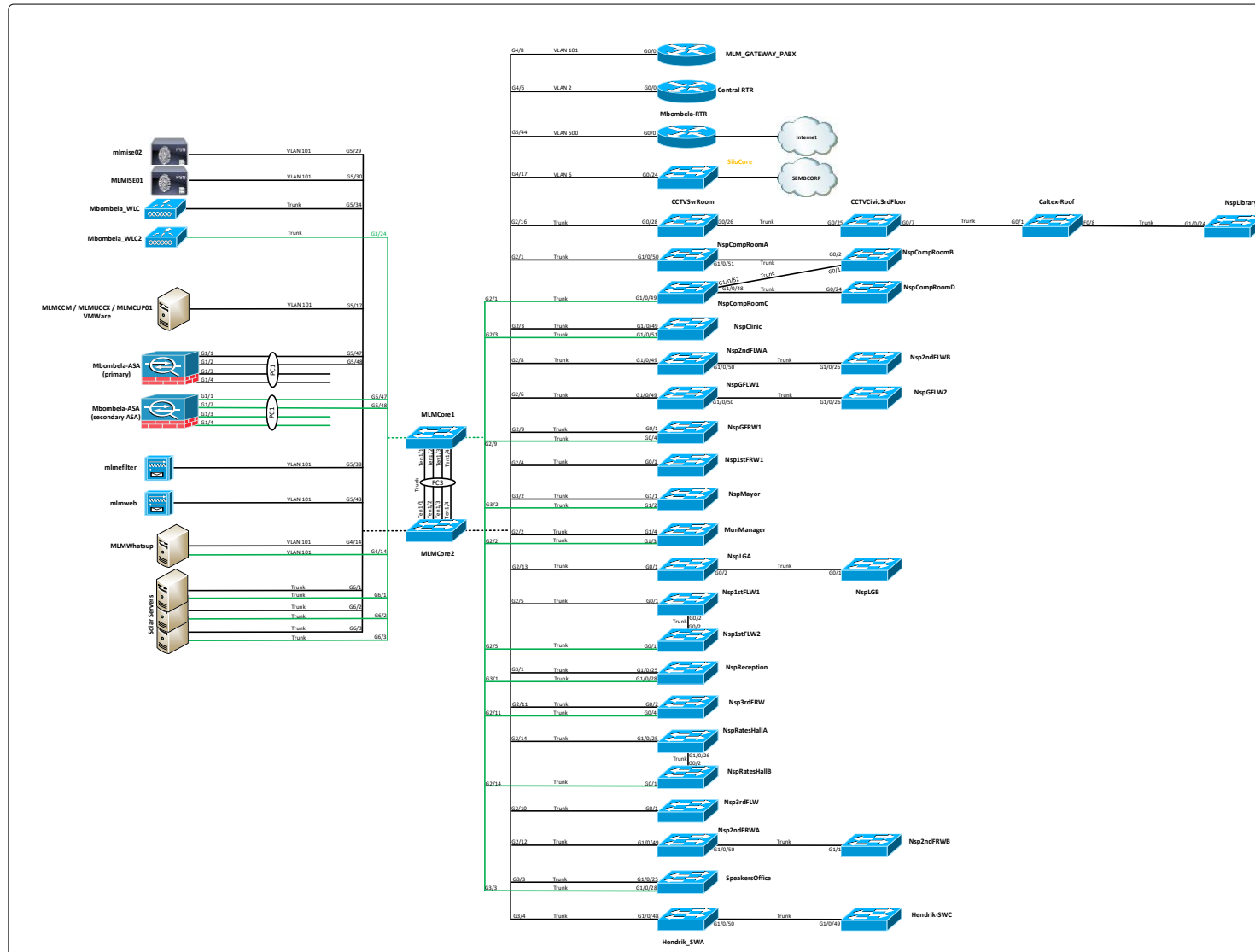
Proxim QB81XX	88
Cambium Networks PIP 450I	4
SAIE	6
Cambium P13 C110	6
Cambium Net	2

**Firewall And Security Devices**

Cisco ASA Firewall	2
Cisco Identity Security Engine	2
Cisco Email Security Appliance	1
Cisco Web Security Appliance	1

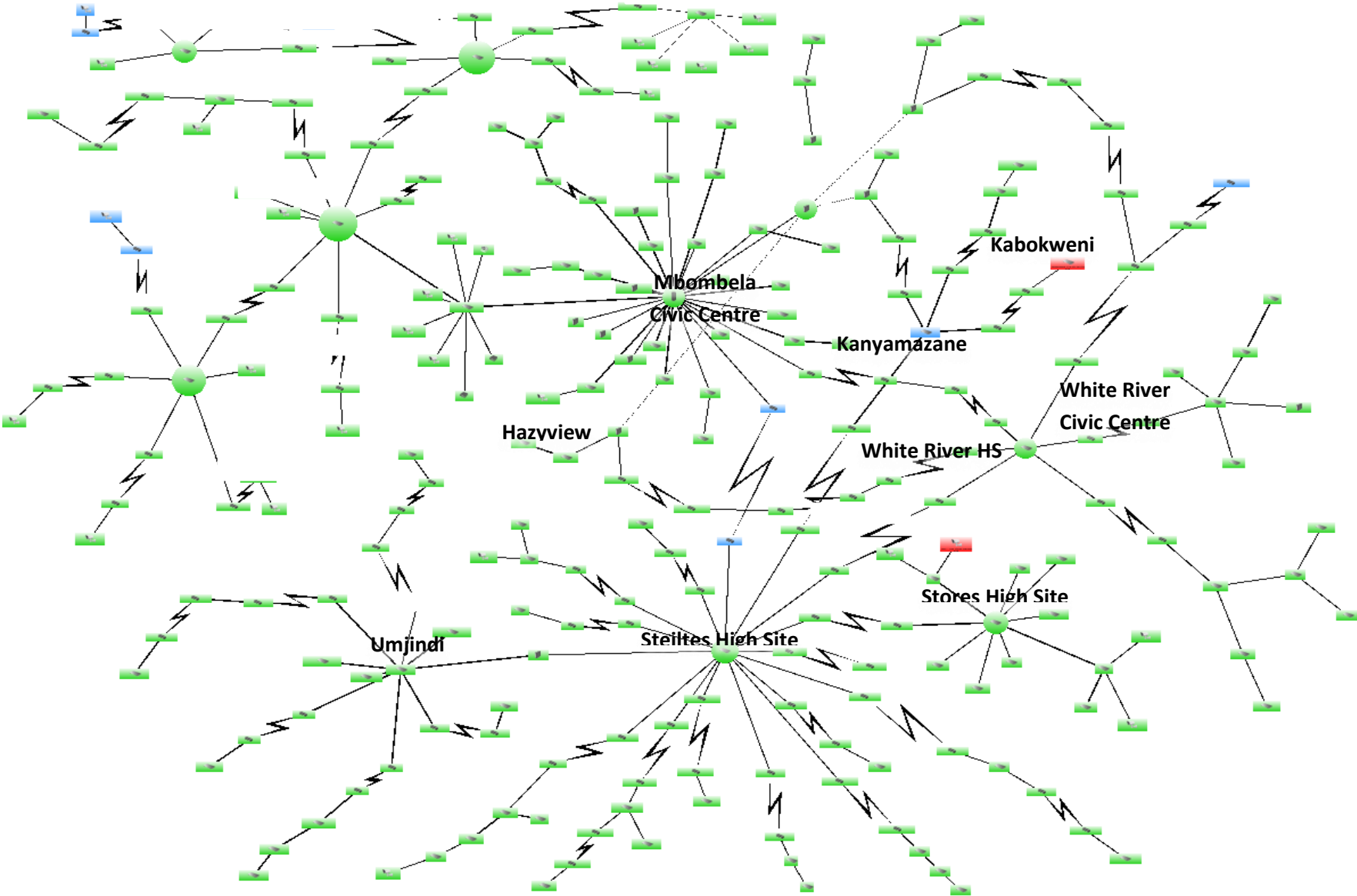
**IT MUST NOTED THAT THE SERVICE PROVIDER WILL BE RESPONSIBLE TO CONFIGURE, INSTALL AND MANAGE OTHER EQUIPMENT AND SYSTEMS THAT MAY BE INDUCED INTO THE ENVIRONMENT DURING THE COURSE OF THE TENDER AT NO ADDITIONAL COST.**

Civic Centre LAN Diagram





LAN/WAN DIAGRAM



**Computers, Laptops, Tablets, Printers, Scanners, Multifunction Devices**

City of Mbombela is, at present, using various brands of desktop computers, AIO, laptops, hybrid tablets. The main brands being Lenovo. The operating systems installed on the devices are MS Windows 10/11. Various printers, scanners, and MFP devices are being used.

- Desktop Computers, Laptops/ Tablets: 798
- Printers: 181
- Multifunction Devices: 144

**IP Telephony**

City of Mbombela is currently using Cisco equipment for the IP telephony system with links to all sites in Nelspruit and White River. Cisco service routers provide the communications to Telkom and between sites. The system is managed via a redundant pair of cisco call managers. City of Mbombela also runs a cisco managed call centre.

**Deployed IP Telephony Devices**

- Cisco 43xx and ISR 4 Series Services Routers: 2
- Cisco Call Manager : 2
- Cisco Call Centre : 1
- Cisco IP phones : 720

## Other Third Party / Custom Developed In-House Software

System Name	Short Description	Original Technology Used	Current DB Version
Banners System	Fir the registering of temporarily advertisements and the availability with different sections in City of Mbombela.	SQL Server 2005 and VB 6	SQL SERVER 2022
BAS - building Plans Approval System	Also Known as BAS. For capturing all building plans submitted within the City of Mbombela Region and handles the circulation of the plans for comments and revision to different departments. Handles the workflow around all Building plans submitted cycles. As set out according to STATS SA.	SQL Server 2005 and VB 6 and an Enquiring section developed in ASP.NET (VB)	SQL SERVER 2022
Clearance Certificate Applications System	A register containing all the Clearance Certificates with the relative comments thereof	SQL Server 2005 and VB 6	SQL SERVER 2022
Overtime System	Overtime system to capture all the overtime worked within City of City of Mbombela	SQL Server 2005 and VB 6	SQL SERVER 2022 Visual Studio. NET 2019
iLLegals Systems	Register of all Legal and summons notices given to offenders of illegal buildings according to the building regulations act	SQL Server 2005 and VB 6	SQL SERVER 2022
Invoices System	Capture all Invoices into a register for the Financial Department	SQL Server 2005 and VB 6	SQL SERVER 2022
Orders System	Capture all orders into a register for the Financial Department	SQL Server 2005 and VB 6	SQL SERVER 2022
ROMS - Reporting of meters system	Reporting of Meters system.	SQL Server 2005 and ASP.NET	SQL SERVER 2022
Summons Register	To capture all summons for legal purposes	SQL Server 2005 and VB 6	SQL SERVER 2022
OnlineTEAS	(Town planning Electronic Approval System) Capturing of all application with the Urban and rural department for example Building Line relaxation, Sub Divisions, Consolidations , Amendment Schemes, EIA, Business License, Liquor License, Ord 20 of 1986 Certificates, Special Consent, Proposed Amendment of SDF, Section 92 CERTIFICATES, Township Establishments, etc. In total 50 Application Types	SQL Server 2005 and VB 6 and an Enquiring section developed in ASP.NET (VB)	SQL SERVER 2022 Visual Studio .NET 2017
TOPES	This is for the Traffic Officers Performance and Evaluation System	SQL Server 2005 and ASP.NET	SQL SERVER 2022
City of Mbombela Service Desk	Call centre system for Urban and Rural management	SQL Server 2005 and VB 6	SQL SERVER 2022
Urban Customer Enquiry	Enquiry system for the public	SQL Server 2005 and VB 6	SQL SERVER 2022
Urban Zone Tax Incentive System	To capture the application for Tax incentives for business' within a specific zone in City of Mbombela	SQL Server 2005 and VB 6	SQL SERVER 2022
Valuation Objections and Appeals	A register to capture the valuation objections as well as the appeals for the new valuations for City of Mbombela	SQL Server 2005 and ASP.NET	SQL SERVER 2022
City of Mbombela Assets	Database with the assets within City of Mbombela	NA	

IT SERVICES TENDER

ByLaws and Policy Management Systems		SharePoint	
Requisition Management System		SharePoint	

**COMPULSORY: ONLY BIDDERS WHO WILL BE ABLE IMPLEMENT, OPERATIONALISE, SUPPORT, MAINTAIN ALL IT SYSTEMS AND SERVICES THROUGHOUT IT'S IT LIFECYCLE, THAT IS REQUIRED IN A MUNICIPAL ENVIRONMENT SPECIFICALLY IN THE CITY OF MBOMBELA, MUST TENDER FOR THIS BID.**

**THIS SHALL INCLUDE ALL ABOVE AND ANY OTHER DEVICES INCLUDING, NEW EQUIPMENT, SYSTEMS AND SERVICES THAT WILL BE DEPLOYED DURING THIS CONTRACT PERIOD AT NO ADDITIONAL COST. IT IS THE DUTY OF THE BIDDER TO FAMILIARISE THEMSELVES AND DO SITE VISITS BEFORE BIDDING, THE SUCCESSFUL BIDDER WILL BE RESPONSIBLE FOR SUPPORT AND MAINTENANCE ON ALL IT EQUIPMENT IN THE MUNICIPALITY.**