



CLUSTER

Human Settlements, Transport and Engineering

UNIT

eThekweni Transport Authority

DEPARTMENT

eThekweni Transport Authority

PROCUREMENT DOCUMENT

GOODS / SERVICES

Documents are to be obtained, free of charge, in electronic format, from the [National Treasury's eTenders website](#) or the [eThekweni Municipality's website](#).

Tender No: 1T-19865

Title: Design, Supply, Implementation, Warranty and Support of an Automatic Fare Collection System for the eThekweni Public Transport Service

CLARIFICATION MEETING AND QUERIES

Clarification Meeting: [A Compulsory Clarification Meeting will be held at on Wed 10 May 2023 at 10h00](#)

Queries can be addressed to: [eMail queries to be emailed on or before 24 May 2023 and consolidated questions and answers to be uploaded on 31 May 2023](#)

General / Contractual: [Michelle Pearton michelle.pearton@durban.gov.za](mailto:Michelle.Pearton@durban.gov.za)

Technical: [Suben Govender Suben.govender@durban.gov.za](mailto:Suben.Govender@durban.gov.za)

DELIVERY OF TENDERS

Sealed Tenders, addressed to the City Manager and marked with the Tender Number, are to be placed in the Tender Box **Choose an item.** (and not any other municipal department), no later than:

Closing Date: Friday, 30 June 2023

Time: 11:00am

FACSIMILE, eMAIL or POSTED TENDERS WILL NOT BE ACCEPTED

Issued by:

ETHEKWINI MUNICIPALITY

Deputy Head: [eThekweni Transport Authority](#)

Issued: April 2023

Document Version: 24/02/2023

NAME OF TENDERER:

Tender Price: R

VAT Registered: YES / NO
(circle applicable)

PROCUREMENT DOCUMENT (Goods / Services)

INDEX

| Section | Page |
|---|-------------|
| 1) General Information | 2 |
| 2) Conditions of Tender (Goods / Services: July 2016) | 4 |
| 3) Special / Additional Conditions of Tender | 10 |
| 4) Returnable Tender Documents | 14 |
| 5) General Conditions of Contract (NT Circular 52: July 2010) | 31 |
| 6) Special / Additional Conditions of Contract | 38 |
| 7) Scope and Specification of Required Supply / Services | 44 |
| a) Scope of Supply / Services | |
| b) Specifications | |
| c) Drawings (if applicable) | |
| 8) Bill of Quantities / Schedule of Rates/Activities | 110 |
| 9) Official Tender Form | 123 |
| 10) Annexures (if applicable) | |

SECTION 1: GENERAL INFORMATION

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| YOU ARE HEREBY INVITED TO TENDER FOR REQUIREMENTS OF THE ETHEKWINI MUNICIPALITY |
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TENDER No.: 1T-19865

DESCRIPTION: **Design, Supply, Implementation, Warranty and Support of an Automatic Fare Collection System for the eThekwini Public Transport Service**

CLOSING DATE / TIME: Friday, 30 June 2023 at 11:00am

All tenders must be submitted on official tender documentation issued (in electronic format) by the eThekwini Municipality from:

- the National Treasury's eTenders website (<https://www.etenders.gov.za/>), or
- the eThekwini Municipality's website (<https://www.durban.gov.za/pages/business/procurement>).

Electronically downloaded documentation should be printed by the tenderer.

Tenderers are required to be registered on the **National Treasury Central Supplier Database** (CSD) as a service provider. In the case of a Joint Venture, this requirement will apply individually to each party in the Joint Venture.

Registration on the **eThekwini Municipality's Database** can be done via website: <https://ethekwinivendor.durban.gov.za/>

Tenderers should ensure that tenders are delivered timeously to the correct address as stated in the Conditions of Tender. If a tender is late, it will not be accepted for consideration.

The Municipality will consider a tender submitted in response to this request for tender to be an offer from your company to perform the supply on the basis of that tender. Accordingly, please review the attached General and Special Terms and Conditions which will form the basis for any supply arrangement entered into between the Municipality and your company.

The Municipality is seeking tenders from potential suppliers only and makes no representation or promise in relation to procuring work from a supplier or suppliers. The Municipality will not be responsible for any costs associated with preparing and submitting a tender.

The Municipality does not bind itself to accept the lowest or any tender. It reserves the right to accept the whole or any part of a tender to place orders. Bidders shall not bind the Municipality to any minimum quantity per order. The successful Tenderer (s) shall be bound to provide any quantities stipulated in the specification.

The successful tenderer will be required to fill in and sign a written Contract Form (MBD 7).

NB: NO TENDER WILL BE CONSIDERED FROM PERSONS IN THE SERVICE OF THE STATE
(as defined in Regulation 44 of the Local Government: Municipal Supply Chain Management Regulations).

**THE FOLLOWING PARTICULARS MUST BE FURNISHED
(Failure to do so may result in your tender being disqualified)**

Name of Tenderer:

Postal Address:

Street Address:

E-Mail Address:

Telephone Number:

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Circle Applicable

Is your entity registered on the **eThekweni Municipality's supplier database?** YES / NO

• **If YES insert** your PR Number: **PR**

Is your entity registered on the **National Treasury Central Supplier Database (CSD)?** YES / NO

• **If YES, insert** your MAAA Number: **MAAA**

Insert a SARS Tax Compliance Status PIN

Is your entity VAT registered? YES / NO

• **If YES insert** Vat Registration Number:

Has a **Declaration of Municipal Fees** been submitted? YES / NO

Has a **Declaration of Interest** (MBD 4) been submitted? YES / NO

Has a **Declaration for Procurement Above R10 Million** (MBD 5) been submitted? YES / NO

Has a **Preference Points Claim** (MBD 6.1) been submitted? YES / NO

Has a **Declaration of Bidder's Past SCM Practices** (MBD 8) been submitted? YES / NO

Has a **Certificate of Independent Bid Determination** (MBD 9) been submitted? YES / NO

Are you the accredited representative in South Africa for the goods / services / works offered? **If YES, enclose proof** at the back of the tender submission. YES / NO

Signature of Tenderer: Date:

Name / Surname: (in block capitals)

Capacity under which this tender is signed:

SECTION 2 : CONDITIONS OF TENDER – (Goods / Services : June 2019)

INDEX

1. **DEFINITIONS**
2. **CONDITIONS OF TENDER & CONTRACT**
3. **TENDER INFORMATION**
 - (1) General
 - (2) Obtaining Tender Documents
 - (3) Queries Relating to this Tender
 - (4) Briefing Session (Clarification Meeting)
 - (5) Closing Date and Delivery of Tender Submissions
 - (6) Tender Validity and Withdrawal of Tenders
4. **RETURNABLE SCHEDULES, FORMS, CERTIFICATES**
 - (1) Authority of Signatory
 - (2) Tax Compliance Status PIN / Tax Clearance Certificate
 - (3) Declaration of Municipal Fees
 - (4) Health and Safety
 - (5) Municipal Bidding Documents
 - (a) MBD 4: Declaration of Interest
 - (b) MBD 5: Declaration for Procurement Above R10 Million
 - (c) MDB 6.1: Preference Points Claim
 - (d) MBD 8: Declaration of Bidder's Past Supply Chain Management Practices
 - (e) MBD 9: Certificate of Independent Bid Determination
 - (5) Official Tender Form
 - (6) Additional Schedules, Forms, or Certificates
5. **INFORMATION TO BE SUPPLIED RE SUB-CONTRACTORS**
6. **SAMPLES**
7. **MANUFACTURERS**
8. **CLARIFICATION**
9. **PRICING**
10. **ESTIMATED QUANTITIES**
11. **DELIVERY, RISK, PACKAGES, ETC**
12. **RATES OF EXCHANGE**
13. **IMPORT PERMITS**
14. **EVALUATION PROCESS**
15. **BRIBERY AND COMMUNICATION WITH COUNCILLORS / OFFICIALS**
16. **NEGOTIATIONS WITH PREFERRED TENDERERS**
17. **CANCELLATION OF TENDER PROCESS**
18. **ACCEPTANCE OF TENDER**
19. **PAYMENT and FACTORING**
20. **APPEAL PROCESS**

SPECIAL / ADDITIONAL CONDITIONS OF TENDER

STANDARD CONDITIONS OF TENDER (Goods / Services)

1. DEFINITIONS

General:

- (1) Defined words / phrases are printed in *Italic font*.
- (2) Definitions apply to the singular as well as the plural.
- (3) Any reference to the masculine gender shall be taken to include the feminine and any reference to the feminine gender shall be taken to include the masculine.
- (4) The words "bid" and "tender", and "bidder" and "tenderer" can be used interchangeably.
- (5) All definitions as defined in the ***General Conditions of Contract*** are applicable to these ***Standard Conditions of Tender***. These definitions include:
 - "Closing time"
 - "Contract"
 - "Contract Price"
 - "Corrupt practice"
 - "Countervailing duties"
 - "Country of origin"
 - "Day"
 - "Delivery"
 - "Delivery ex stock"
 - "Delivery into consignees store or to his site"
 - "Dumping"
 - "Force majeure"
 - "Fraudulent practice"
 - "GCC"
 - "Goods"
 - "Imported content"
 - "Local content"
 - "Manufacture"
 - "Order"
 - "Project site"
 - "Purchaser"
 - "Republic"
 - "SCC"
 - "Services"
 - "Supplier"
 - "Tort"
 - "Turnkey"
 - "Written" or "in writing"
- (6) **Bid or Tender:** The offer submitted in respect of an invitation to submit such an offer.
- (7) **Bidder or Tenderer:** An entity (company, close corporation, partnership, joint venture, sole proprietor) which submits a *bid/tender*.
- (8) **Municipality:** The eThekweni Municipality, as represented by the duly authorised delegate, official or committee.
- (9) **SCT:** Special Conditions of Tender (found in Section 3).
- (10) **Week:** A period of seven (7) consecutive *days*.
- (11) **Material Deviation:** A material deviation or qualification is one which, in the *Municipality's* opinion, would:
 - (a) Detrimentally affect the scope, quality, or performance of the services or supply identified in the Scope;
 - (b) Significantly change the *Municipality's* or the *Tenderer's* risks and responsibilities under the contract; or
 - (c) Affect the competitive position of other *Tenderers* presenting responsive *tenders*, if it were to be rectified.

2. CONDITIONS OF TENDER & CONTRACT

The specification will be governed by the ***Standard Conditions of Tender*** (Goods and Services), ***Special Conditions of Tender (SCT)***, ***General Conditions of Contract (GCC)*** (Government Procurement General Conditions (July 2010), as amended by National Treasury Circular 52 dated 30 July 2010), the ***Special Conditions of Contract (SCC)***, the ***Occupational Health and Safety Act*** (Act No. 85 of 1993), and the ***eThekweni Code of Conduct***.

Complete Acceptance of Conditions

Unless otherwise expressly stipulated in a letter covering the *tender*, every *Tenderer* shall be deemed to have waived, renounced, and abandoned any conditions printed or written upon any stationery used for the purpose of, or in connection with, the submission of their *tender*, which are in conflict with the ***General Conditions of Contract*** and ***Special Conditions of Contract***. *Tenderers* are advised that any *material divergences / qualifications* from the official Conditions or Specification will render their *tenders* liable to disqualification.

3. TENDER INFORMATION

(1) General

- (a) *Tenders* will be liable for rejection unless made out on the official tendering documentation.
- (b) Any alterations effected upon any of the tendering documents must be clearly shown by means of a hand written (black, non-erasable ink), or typed, entry and must be signed in full by the *Tenderer*. **The use of correction fluid is not permitted.**
- (c) *Tenderers* may submit alternative solutions that, in the *Tenderer's* opinion, are to the *Municipality's* advantage economically and technically. Full technical details of the alternative *tender(s)* shall be submitted with the tender documents. Alternative *tender(s)* shall be submitted separately.

(2) Obtaining Tender Documentation

All tenders must be submitted on official tender documentation issued, in electronic format, by the eThekweni Municipality. Electronically downloaded documentation (obtainable free of charge) should be printed and suitably bound by tenderer.

(3) Queries Relating to this Tender

Queries can be directed to the person / Department as stated in the ***SCT***.

(4) Briefing Session (Clarification Meeting)

Details of the briefing session are stated in the ***SCT***.

Failure to attend a ***compulsory*** briefing session will invalidate the *tender*. *Tenderers* must sign the attendance list in the name of the tendering entity. Tenders will only be evaluated from those tendering entities appearing on the attendance list.

(5) Closing Date and Delivery of Tender Submissions

Sealed *tenders* made out on the enclosed Official Tender Form, which shall be signed by or on behalf of the *Tenderer*, and addressed to the City Manager, marked with the appropriate Tender number, must be placed in the **Tender Box** as stated in the *SCT* not later than the **date and time** as stated in the *SCT*, where after they will be opened publicly.

All tender documents **must** be placed directly into the Tender Box and should not be delivered to any other Municipal Department. *Bidders* are advised that *tenders* submitted by post, fax or email **will not** be considered. All couriered documents must be placed directly into the Tender Box and should not be delivered to any other Municipal Department.

Any *tender* received after the closing date and time stated for the receipt thereof **shall not** be accepted for consideration and shall be returned to the *Tenderer*.

(6) Tender Validity and Withdrawal of Tenders

Tenders must hold good until 16:00 of the 5th week following the date on which *tenders* are opened, or during such other period as may be specified in the *SCT*. The *Municipality* may, during the period for which *tenders* are to remain open for acceptance, authorize a *Tenderer* to withdraw their *tender* in whole or in part on condition that the *Tenderer* pays to the *Municipality* on demand, a sum of one thousand Rand (R1,000.00). The *Municipality* may, if it thinks fit, waive payment of such sum in whole or in part.

4. RETURNABLE SCHEDULES, FORMS, CERTIFICATES

Each *Tenderer* shall complete fully and accurately the following documents and submit these documents with the *tender*:

- (1) **Authority of Signatory:** In terms of Clause 4(5)(c) of the Conditions of Tender.
- (2) **Tax Compliance Status PIN / Tax Clearance Certificate:** SARS has introduced a new Tax Compliance Status System. Tenderers can submit a Tax Compliance Status PIN (TCS PIN) instead of an original Tax Clearance Certificate. This TCS PIN can be used by third parties to certify the taxpayer's real-time compliance status.
- (3) **Declaration of Municipal Fees:** Only those *Bidders* whose municipal fees are fully paid, or those that have concluded acknowledgement of debt agreements with the *Municipality*, are eligible to *tender*.
All *Bidders* must sign the Declaration of Municipal Fees returnable form, declaring that their municipal fees are in order or that acknowledgement of debt agreements have been concluded, and include the relevant account numbers in the declaration. Failure to include account numbers or sign will invalidate the *tender*. The completion of the declaration is also applicable to *Bidders* outside of the eThekweni Municipal Area.
- (4) **Declaration with respect to the Occupational Health and Safety Act:** Acceptance of undertaking in terms of the Occupational Health and Safety Act (Act 85 of 1993) and the relevant Regulations.

(5) Municipal Bidding Documents (which includes):

- (a) **MBD 4: Declaration of Interest:** All *Bidders* are to sign the Declaration of Interest wherein they declare any relationship that may exist with an official of the Municipality involved in the evaluation process.

Regulation 44 of the Supply Chain Management Regulations states that a Municipality or Municipal Entity may not make any award to a person:

- (i) Who is in the service of the state;
- (ii) 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
- (iii) Who is an advisor or consultant contracted with the Municipality or municipal entity.

Should a contract be awarded, and it is subsequently established that Regulation 44 has been breached, the Municipality shall have the right to terminate the contract with immediate effect.

- (b) **MBD 5: Declaration for Procurement Above R10 Million (if applicable):** For all procurement expected to exceed R10 million (all applicable taxes included), tenderers must complete this questionnaire.
- (c) **MBD 6.1: Preference Points Claim Form:** For the awarding of Preference Points, *Bidders* are required to complete the attached MBD 6.1 form and return it with their tender submission. Failure on the part of a tenderer to complete and submit this form will be interpreted to mean that preference points for **Specific Goals** are not claimed.
The Municipality reserves the right to require of a tenderer, 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 Municipality.
- (d) **MBD 8: Declaration of Bidders Past Supply Chain Management Practices Form:** This form 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.
- (e) **MBD 9: Certificate of Independent Bid Determination:** Section 4(1)(b)(iii) of the Competition Act No. 89 of 1998, as amended, prohibits an agreement between, or concerted practice by, firms if it involves collusive tendering or tender rigging. In order to give effect to this, the Certificate of Bid Determination must be completed and submitted with the tender.

(5) **Official Tender Form** (see Section 9)**(a) Legal Status of Tenderer**

It is essential for the purpose of entering into a legal contract that *Bidders* state on the Official Tender Form, under "Name and Address of Tenderer", their full legal status:

- (i) the full registered name of the company making a *tender*; or
- (ii) if the *Tenderer* is a person conducting business under a recognised trading name then:
 - State the name of the person(s);
 - State recognised trading name; and
 - State whether an owner, co-owner, proprietor, etc.

(b) Signing of Official Tender Form

Failure of a *Tenderer* to complete, in its entirety, and sign the Official Tender Form will invalidate the *tender*.

(c) Authority of Signatory

Bidders are to complete and sign the Authority of Signatory returnable document, and attach the required additional documents.

(d) Differences or Discrepancies

Should there be any difference or discrepancy between the prices or price contained in the Official Tender Form and those contained in any covering letter from the *Tenderer*, the prices or price contained in the Official Tender Form shall prevail.

(6) **Any additional Schedules, Forms, or Certificates as stated in the SCT.**5. **INFORMATION TO BE SUPPLIED REGARDING SUB-CONTRACTORS**

Bidders are to state in their *tenders*, or covering letters, whether, if the contract were to be awarded to them, the whole of the work would be executed by them in their own workshop / factory. If the answer is in the negative, they are required to state which part(s) would be handed to sub-contractors and the name and address of such sub-contractors.

6. **SAMPLES**

Bidders may be required to state where samples of the full range of products can be inspected or be required to submit samples for inspection prior to the closing date of the *tender*.

7. **MANUFACTURERS**

The names of the manufacturers of the goods or equipment offered must be stated in the *tender*.

Bidders who are not manufacturers, accredited distributors, or agents must provide a valid agreement / Joint Venture Agreement, entered into with the manufacturer, accredited distributors, or agents, with their submission. This agreement must meet all the requirements as laid down in the *tender* document, and must cover the contract period.

8. **CLARIFICATION**

The Head: Supply Chain Management Unit, or an authorized representative, may request clarification or further information on any aspect of the *tender*. The *Tenderer* **must** supply the requested information within the time specified. Failure to comply will render the *tender* non-responsive.

9. **PRICING**

Bidders would be precluded from this *tender* if their pricing structure deviates from the Official Tender Form.

(1) **Nett Prices**

All prices shall be quoted in South African currency (Rand) after deduction of any brokerage or discount allowed to the Municipality.

(2) **Unit Prices**

Bidders shall quote only one price in respect of each item. Such price is to hold good for the full duration of the contract period, being subject to variation only in accordance with specified criteria, as stated in the **Conditions of Contract**.

(3) **Firm Tenders**

Bidders may submit firm prices for each 12 month period. These prices shall be free from all fluctuations, including any statutory increases.

(4) **Value Added Tax (V.A.T)**

Prices exclusive and inclusive of VAT must be stated separately on the Official Tender Form.

10. **ESTIMATED QUANTITIES**

The estimated quantities are set out in Section 8 : Bill of Quantities / Schedule of Rates/Activities which forms part of the official tender documents. The quantities are stated purely for the information of the *Bidders* and are in order to ascertain an estimated total contract price. The *Supplier* will, however, be bound to supply whatever quantity or quantities the *Municipality* may actually require, and may exceed, or be less than, the estimated quantities stated.

11. **DELIVERY, RISK, PACKAGES, ETC**

- (1) Unless otherwise provided, all goods are to be supplied only against the form of order issued by the *Municipality*.
- (2) *Bidders* shall quote a unit price which shall include delivery to the specified delivery point, as stated in the **SCT**.
- (3) The risk in all goods purchased by the *Municipality* under the contract shall remain with the *Supplier* until such goods shall have been duly delivered.
- (4) *Bidders* shall clearly state the period within which delivery will be made after receipt of the official order, as this may be material in the adjudication of the *tender*.

12. RATES OF EXCHANGE

- (1) Where the goods are imported the *Supplier* shall, within seven days of date of official Purchase Order, arrange through their bankers for the foreign commitment to be covered forward down to the Rand in order to fix the rate of exchange. The *Supplier* shall notify the *Municipality* as soon as possible thereafter regarding the rate which has been fixed on such forward exchange.

Any increase or decrease between the basic rate of exchange as at a date seven days prior to the date of closing of *tenders* and that existing at the date of establishment of the forward exchange cover within the period stipulated above shall be paid or deducted by the *Municipality*. Upon the failure of the *Supplier* to arrange forward exchange cover, the *Supplier* shall be liable should there be any increase in the basic rate of exchange occurring after the last mentioned date.

The bank charges incurred in obtaining the forward exchange cover shall be for the *Municipality's* account.

- (2) The *Supplier* shall on request:
- Submit documentary proof of the rate of exchange; and
 - When an adjustment is claimed in terms of this sub-clause, whether by the *Supplier* or the *Municipality*, submit documentary proof to the satisfaction of the Deputy City Manager: Treasury in respect of such claim.

13. IMPORT PERMITS

- (1) In order to minimise special importation, *Bidders* should, where possible, have recourse to local suppliers and / or manufacturers.
- (2) *Bidders* must state whether their *tender* is dependent upon the issue of a special import permit or whether they are able to supply the goods by making use of the import facilities available to them.
- (3) In the event of a tender being dependent upon the issue of a special import permit, application for such special import permit shall be made by the *Tenderer*, unless otherwise provided for in the *SCT*.

14. EVALUATION PROCESS

The procedure for evaluation of responsive Tender Offers will be in accordance with the eThekweni Municipality's current SCM Policy and the Preferential Procurement Policy Framework Act (5 of 2000), and the Preferential Procurement Policy Framework Act Regulations (November 2022).

Details of additional evaluation criteria, if applicable, are stated in the *SCT*.

Evaluation points for price and preference will only be calculated for *Bidders* who comply with the contractual and technical specification, and if applicable, have attained the minimum Functionality Score as stated in the *SCT*.

The evaluation process of responsive *tenders* will be as follows:

- Score each *tender* in respect of the financial offer made and preferences claimed (if any);
- Calculate the total number of evaluation points (T_{EV}) in accordance with the following formula:
 $T_{EV} = N_{FO} + N_P$ where: N_{FO} : is the number of evaluation points awarded for the financial offer; and N_P : is the number of evaluation points awarded for preferences claimed.
- Rank *tenders* from the highest number of evaluation points to the lowest.
- Recommend the *Tenderer* with the highest number of evaluation points for the award of the contract, unless there are compelling and justifiable reasons not to do so.
- Rescore and re-rank all *Bidders* should there be compelling and justifiable reasons not to recommend the *Tenderer* with the highest number of evaluation points, and recommend the *Tenderer* with the highest number of evaluation points, unless there are compelling and justifiable reasons not to do so, and the process set out in this sub-clause is repeated.

(1) Evaluation points awarded for the financial offer:

Reference is to be made to the Special Conditions of Tender (*SCT*), and returnable form 5(c) in Section 4.

INCOME-GENERATING CONTRACTS

The financial offer will be scored using the formula:

$$N_{FO} = W \left(1 + \frac{P_t - P_{max}}{P_{max}} \right)$$

GOODS and SERVICES

The financial offer will be scored using the formula:

$$N_{FO} = W \left(1 - \frac{P_t - P_{min}}{P_{min}} \right)$$

Where the value of W is:

- (a) **90** where the financial value inclusive of VAT of all responsive *tenders* received have a value in excess of R 50,000,000; OR
80 where the financial value inclusive of VAT of one or more responsive *tenders* offers have a value that equals or is less than R 50,000,000.
It is unclear (at the time of advertising) which of the two preference point systems applies. Either the 80/20 or 90/10 preference point system will apply, determined by the price offered by the lowest acceptable tender.

(b) **P_{max}** is the comparative offer of the most favourable comparative offer (highest acceptable tender).

(c) **P_{min}** is the comparative offer of the most favourable comparative offer (lowest acceptable tender).

(d) **P_t** is the comparative offer of the *tender* offer under consideration.

(2) Evaluation points awarded for preference:

The **Specific Goals** for Preference Points are specified in the *SCT*.

15. **BRIBERY AND COMMUNICATION WITH COUNCILLORS / OFFICIALS**

(1) **Bribery**

No *Tenderer* shall offer, promise or give to any person or person connected with a *tender* or the awarding of a contract, any gratuity, bonus or discount etc, in connection with the obtaining of a contract.

(2) **Communication, Councillors and Officials**

A *Tenderer* shall not in any way communicate with a member of the *Municipality* or with any official of the *Municipality* on a question affecting any contract for the supply of goods or for any work, undertaking or services which is the subject of a *tender* during the period between the closing date for receipt of *tenders* and the dispatch of the written notification of the *Municipality's* decision on the award of the contract; provided that a *Tenderer* shall not hereby be precluded:

- (a) At the request of the Head: SCM Unit, or an authorized representative, from furnishing him with additional information or with a sample or specimen for testing purposes or otherwise from giving a demonstration so as to enable the recommendation to the Bid Committee on the award of the contract to be formulated;
- (b) From obtaining from the Head : SCM Unit, or an authorised representative, information as to the date upon which the award of the contract is likely to be made, or, after the decision upon the award has been made by the *Municipality* or any Committee to which the *Municipality* has delegated its powers, information as to the nature of the decision or such information as was publicly disclosed at the opening of *tenders* or from submitting to the Accounting Officer in writing any communication relating to their *tender* or the award of the contract or a request for leave to withdraw their *tender*; and
- (c) Provided further that nothing contained herein shall be construed so as to prevent information being sought and obtained from an Official in regard to any decision taken at an open Municipal meeting, or any Committee to which the *Municipality* has delegated its powers.

A contravention of subsection (1) and / or (2), or an attempt to contravene such subsection, shall be reported to the Accounting Officer, who may on receipt of such report disqualify the *tender* of the *Tenderer* concerned.

16. **NEGOTIATIONS WITH PREFERRED BIDDERS**

The *Municipality* reserves the right to invoke Regulation 24 of Municipal Finance Management Act if required.

- (1) The Accounting Officer may negotiate the final terms of a contract with *Bidders* identified through a competitive tendering process as preferred *Bidders*, provided that such negotiation:
 - Does not allow any preferred *Tenderer* a second or unfair opportunity;
 - Is not to the detriment of any other *Tenderer* ; and
 - Does not lead to a higher price than the *tender* as submitted.
- (2) Minutes of such negotiations must be kept for record purposes.
- (3) Such negotiation may be delegated by the Accounting Officer.

17. **CANCELLATION OF TENDER PROCESS**

The municipality is entitled to cancel the tender at any time before the award of a tender and the decision to cancel the tender shall be published in the same manner in which the original tender invitation was advertised. The Municipality shall, in no way, be liable for any damages whatsoever, including, without limitation, damages for loss of profit, in any way connected with the cancellation of this bid.

18. **ACCEPTANCE OF BID**

- (1) The *Municipality* does not bind itself to accept the lowest or any *tender*, and reserves the right to accept the whole or any part of a *tender* to place orders.
- (2) The *Municipality* reserves the right to accept more than one technically and contractually compliant *tender* for part or the whole of the contract and to place orders on the price and availability.
- (3) *Bidders* shall not bind the *Municipality* to any minimum quantity per order.
- (4) The successful *Tenderer (s)* shall be bound to provide any quantities stipulated in the specification.
- (5) Tenders will only be accepted on condition that:
 - (a) The *tender* is signed by a person authorised to sign on behalf of the *Tenderer* .
 - (b) A valid (at time of close of tenders), original, Tax Clearance Certificate OR Tax Compliance Status PIN is included with the *tender* submission. Both should have sufficient validity to ensure the process is adequately covered;
 - (c) A *Tenderer* who submitted their *tender* as a Joint Venture has included an acceptable Joint Venture Agreement and a B-BBEE Certificate pertaining to the Joint Venture with their *tender*.
- (6) Financial Standing: The Head: Supply Chain Management reserves the right to require *Bidders* to submit evidence that their financial standing is adequate to meet their obligations under the contract should they be successful.
- (7) Change of Ownership or Major Policy: Where it is known to a *Tenderer* that a change in ownership or major policy (of the tendering entity) will occur, or is likely to occur, during a specified contract period, the scope and effect thereof must be fully defined in a covering letter to be submitted with the *tender*.
- (8) Purchase of Goods From Other Sources: Nothing contained in this contract shall be held to restrain the *Municipality* from purchasing from persons other than the *Supplier*, any of the goods described or referred to in this contract, if it shall in its discretion think fit to do so.
- (9) Capability and Breach of Contract: Tenderers that do not have the capability of undertaking this enquiry in terms of the requirements of the contract or have been in breach of contract previously will not be considered.

19. **PAYMENT and FACTORING**

Payment conditions will be as per the **Conditions of Contract**.

Payment will be made only to the *Supplier(s)*. Factoring arrangements will not be accepted.

20. **APPEALS**

In terms of Regulation 49 of the Municipal Supply Chain Management Regulations persons aggrieved by decisions or actions taken by the *Municipality*, may lodge an appeal within 14 days of the decision or action, in writing to the *Municipality*. The appeal (clearly setting out the reasons for the appeal) and queries with regard to decision of award are to be directed to the office of the City Manager, attention:

Ms. S. Pillay, P.O. Box 1394, Durban, 4000;
eMail: Simone.Pillay@durban.gov.za.

SECTION 3: SPECIAL / ADDITIONAL CONDITIONS OF TENDER

3.1 SPECIAL CONDITIONS OF TENDER (SCT)

The **Standard Conditions of Tender** (Goods / Services) make several references to the **Special Conditions of Tender** (SCT) for details that apply specifically to this tender. The **Special Conditions of Tender** shall have precedence in the interpretation of any ambiguity or inconsistency between it and the **Standard Conditions of Tender**.

Each item below is cross-referenced to the clause in the **Standard Conditions of Tender** to which it mainly applies.

SCT 3(1) TENDER INFORMATION: General

The tender document comprises of a cover page and 151 pages.

SCT 3(2) TENDER INFORMATION: Obtaining Tender Documentation

Documents are issued by the eThekweni Municipality electronic format.

Electronically downloaded documentation is obtainable from:

- the National Treasury's eTenders website
 - (<https://www.etenders.gov.za/>), or
- the eThekweni Municipality's website
 - (<https://www.durban.gov.za/pages/business/procurement>).

The entire document should be printed on A4 paper (one sided), and suitably bound by the tenderer.

SCT 3(3) TENDER INFORMATION: Queries Relating to this Tender

General and Contractual Queries are to be directed to:

Michelle Pearton michelle.pearton@durban.gov.za

Technical Queries are to be directed to:

Suben Govender Suben.govender@durban.gov.za

SCT 3(4) TENDER INFORMATION: Briefing Session

A Compulsory Clarification Meeting will be held at on Wed 10 May 2023 at 10h00

SCT 3(5) TENDER INFORMATION: Closing Date and Delivery of Tender Submissions

Sealed Tenders, addressed to the City Manager and marked with the Tender Number, are to be placed in the Tender Box **Choose an item.** (and not any other municipal department), no later than: **Friday, 30 June 2023 at 11:00am.**

Bidders are to include, with their “hard copy” submission, a memory-stick containing an electronically scanned (300 dpi resolution) Public Document Format (PDF) copy of their complete bid submission. This PDF file should be named using the contract number and the bidder's name, eg. “**XX-xxxx – Tenderers Name.PDF**”. The memory-stick must be securely fixed to the paper submission.

SCT 3(6) TENDER INFORMATION: Tender Validity and Withdrawal of Tenders

Tenders must hold good for 120 days following the date on which tenders are opened.

SCT 4(6) RETURNABLE SCHEDULES, FORMS, CERTIFICATES

| Document name | Reference | Confirmation of Document Included |
|---|-------------|-----------------------------------|
| Evaluation Schedule: Equipment, design and contractor requirements | Form RDD 1 | |
| Evaluation Schedule: Relevant Project Experience | Form RDD 2 | |
| Evaluation Schedule: Methodology and Technical Approach, Project Management and Programme | Form RDD 3 | |
| Evaluation Schedule: Maintenance plan | Form RDD 4 | |
| Evaluation Schedule: Organization and Staffing | Form RDD 5 | |
| Evaluation Schedule: Key Personnel | Form RDD 6 | |
| Evaluation Schedule: Curriculum Vitae of Key Personnel | Form RDD 7 | |
| Evaluation Schedule: Current Users of the System | Form RDD 8 | |
| Evaluation Schedule: Quality Control Procedures | Form RDD 9 | |
| Evaluation Schedule: Training Plan | Form RDD 10 | |
| Letter of intent to provide Insurance Cover | Form RDC 13 | |
| Tenderer's bank details | Form RDC 14 | |

SCT 11(2) DELIVERY, RISK, PACKAGES, ETC

The specified delivery point is detailed in the scope of work

SCT 13 IMPORT PERMITS

In the event of a tender being dependent upon the issue of a special import permit, application for such special import permit shall be made by the Purchaser.

SCT 14 EVALUATION PROCESS

14.1 Price and Preference

The procedure for the evaluation of responsive tenders is **PRICE AND PREFERENCE** in accordance with the Employer's current SCM Policy, the Preferential Procurement Policy Framework Act (5 of 2000), and the Preferential Procurement Policy Framework Act Regulations (2022).

The 90/10 preference points system will be applied. The Formula used to calculate the **Price Points (max. 90)** will be according to that specified Regulation 5.1.

14.2 Preference Point System and Specific Goals

The definitions as per the SCM Policy are applicable.

Preference Points (either 20 or 10) will be derived from points claimed on Returnable Document **MBD 6.1: "Preference Points Claim Form"** (in Section 4 of this procurement document) for the **Specific Goal(s)** as indicated on the table(s) below, and according to the specified **Goal**

RDP Goal: Creation of new jobs to address black youth unemployment

The tendering entity's **Commitment to Appointment or Actual Appointment**, in terms of the categories below, is to be used in the determination of the tenderer's claim for **Preference Points** for this Specific Goal.

Please note ACC10 for further information regarding requirements for this goal

| Goal Weighting 70% | | |
|---|--|-------|
| Number of jobs created | | 90/10 |
| 1 – 5 | | 1.75 |
| 6 – 10 | | 5.25 |
| 11 - 20 | | 7 |
| Proof of claim as declared on MBD 6.1 (the following will be used in verifying the tenderer's status) <ul style="list-style-type: none"> Commitment letter to appoint black youth graduates within the eThekweni region for at least three years or up to the duration of the contract) Evidence of Appointment, copies of ID's and proof of address in Ethekeeni will be verified during the execution of the contract. | | |

RDP Goal: Social Upliftment of communities

The tendering entity's **Involvement in Corporate Social Investment initiatives**, in terms of the categories below, is to be used in the determination of the tenderer's claim for **Preference Points** for this Specific Goal.

| Goal Weighting 30% | | |
|--|--|-------|
| Corporate Social Investment | | 90/10 |
| Clean-up campaigns within public transport precincts | | 0.75 |
| Social upliftment programmes | | 1.5 |
| Bursaries of students in the ICT sector | | 3 |
| Proof of claim as declared on MBD 6.1 (the following will be used in verifying the tenderer's status) <ul style="list-style-type: none"> Evidence that the commitment is in addition to existing CSI initiatives undertaken by the tenderer. CSI target to be 0.2 percent of the tendered value | | |

* Where relevant list and value of projects to be identified at the initiation phase of the contract

EVALUATION PROCESS

The Tender evaluation will be a four-stage process;

Stage 1 – Administrative compliance

This stage will involve the assessment of the bid for responsiveness to mandatory conditions of tender. Tenderers that are not responsive will be disregarded from further stages of evaluation.

Stage 2 – Solution compliance and

This stage will involve the following:

- a) assessment of the tenderers proposed technical solution for compliance to all non-optional tender requirements in section 7.
- b) Assessment of a skills development plan with specific deliverables and outcomes that can be measured as well as the number of new jobs that will be created for the preferential points for the specific goal of addressing black youth employment.

Tenders that are not compliant with these requirements will fail stage 2 and will be disregarded from further stages of evaluation.

Stage 3 – Quality and Functional compliance

This stage will involve the assessment of the tenderers proposed technical solution, experience, capability, capacity and delivery methodology, if Stage 2 has been passed. A minimum score of seventy percent will be required in order to proceed to the final stage of evaluation.

Stage 4 – Financial evaluation

This stage will involve the assessment of the tender price and preference points in determining the successful bid.

Quality and functionality is to be used as a threshold. Tender offers that fail to score the minimum number of evaluation points for Quality and Functionality (seventy percent (70%)) will be rejected as non-responsive.

Further detail on the evaluation criteria, weighting and scoring method is contained in annexure 10.

3.2 ADDITIONAL CONDITIONS OF TENDER (ACT)

ACT 1 ELIGIBILITY – CSD REGISTRATION

Tenderers are required to be registered on the National Treasury Central Supplier Database (CSD) as a service provider. In the case of a Joint Venture, this requirement will apply individually to each party in the Joint Venture. Tenderers not so registered, at time of closing of tenders, will not be eligible to submit tenders.

The Tenderer's CSD Supplier Number (starting with "MAAA") is to be provided on the information table in Section 1.

Tenderers who wish to register on the CSD may do so via web address <https://secure.csd.gov.za>.

SECTION 4: RETURNABLE TENDER DOCUMENTS

The required returnable documents are as detailed in [Section 2 \(Clause 4\)](#): “Returnable Schedules, Forms, Certificates” of the Conditions of Tender / Special Conditions of Tender.

- 1) Authority of Signatory
- 2) Tax Compliance Status PIN / Tax Clearance Certificate
- 3) Declaration of Municipal Fees
- 4) Declaration with respect to The Occupational Health and Safety Act
- 5(a) MBD 4: Declaration of Interest
- 5(b) MBD 5: Declaration for Procurement Above R10 Million
- 5(c) MBD 6.1: Preference Points Claim
- 5(d) MBD 8: Declaration of Bidder's Past Supply Chain Management Practices
- 5(e) MBD 9: Certificate of Independent Bid Determination

The Tender Form can be found in [Section 9](#): “Official Tender Form”, and any additional schedules, forms, certificates can be found in [Section 10](#): “Annexures”.

1) AUTHORITY OF SIGNATORY

Reference is made to the Conditions of Tender: [Clause 4\(5\)\(c\)](#).

Indicate the status of the tenderer by ticking the appropriate box hereunder.

| | | | | | | | | | |
|--|--|-------------------|--|-------------|--|---------------|--|-----------------|--|
| COMPANY | | CLOSE CORPORATION | | PARTNERSHIP | | JOINT VENTURE | | SOLE PROPRIETOR | |
| Refer to Notes at the bottom of the page | | | | | | | | | |

I / We, the undersigned, being the Chairperson (Company), Member(s) (Close Corporation), Partners (Partnership), Sole Owner (Sole Proprietor), Lead Partner (JV), in the company / business trading as:

.....

hereby authorise Mr/Mrs/Ms

acting in the capacity of

to sign all documents in connection with the tender for Contract No. [1T-19865](#) and any contract resulting from it on our behalf.

| NAME | ADDRESS | SIGNATURE | DATE |
|------|---------|-----------|------|
| | | | |
| | | | |
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Notes

Tenderers are to include, at the back of their tender submission document, a printout of the following documents:

If a Company : a "Resolution of the Board" in this regard.

If a Joint Venture : a "Power of Attorney" signed by the legally authorised signatories of all the partners to the Joint venture.

2) TAX COMPLIANCE STATUS PIN / TAX CLEARANCE CERTIFICATE

SARS has introduced a new Tax Compliance Status System. Tenderers can submit a Tax Compliance Status PIN (TCS PIN) instead of an original Tax Clearance Certificate. This TCS PIN can be used by third parties to certify the taxpayer's real-time compliance status.

Separate Tax Clearance Certificates / TCS PINs are required for each entity in a Joint Venture.

The TCS PIN(s) are to be entered on the information table in **SECTION 1: GENERAL INFORMATION**.

Tenderers are to include, at the back of their tender submission document, a printout of their Tax Compliance Status PIN (TCS PIN) OR an original Tax Clearance Certificate.

Failure to include the required document will make the tender submission non-responsive.

*I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct, **and that the requested documentation has been included in the tender submission.***

NAME (Block Capitals):

Date

SIGNATURE:

3) DECLARATION OF MUNICIPAL FEES

I, the undersigned, do hereby declare that the Municipal fees of

.....
(full name of Company / Close Corporation / partnership / sole proprietary/Joint Venture)

(hereinafter referred to as the TENDERER) are, as at the date hereunder, fully paid or an Acknowledgement of Debt has been concluded with the Municipality to pay the said charges in instalments.

The following account details relate to property of the said TENDERER:

Account

Account Number: to be completed by tenderer.

Consolidated Account No.

| | | | | | | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| | | | | | | | | | | | | | | |
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Electricity

| | | | | | | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
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Water

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Rates

| | | | | | | | | | | | | | | |
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Other

| | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|

I acknowledge that should the aforesaid Municipal charges fall into arrears, the Municipality may take such remedial action as is required, including termination of any contract, and any payments due to the Contractor by the Municipality shall be first set off against such arrears.

- Where the TENDERER'S place of business or business interests are outside the jurisdiction of eThekweni Municipality, a copy of the accounts/agreements from the relevant municipality must be attached (to the back inside cover of this document).
- Where the tenderer's Municipal Accounts are part of their lease agreement, then a copy of the agreement, or official letter to that effect is to be attached (to the back inside cover of this document).

Tenderers are to include, at the back of their tender submission document, a printout of the above account's and or agreements signed with the municipality.

Failure to include the required document will make the tender submission non-responsive.

NAME (Block Capitals):

Date

SIGNATURE:

4) DECLARATION WITH RESPECT TO THE OCCUPATIONAL HEALTH AND SAFETY ACT**Definitions**

The Act: The Occupational Health and Safety Act No 85 of 1993 (as amended by the Occupational Health and Safety Amendment Act No 181 of 1993), and any associated / applicable Regulations.

Declaration by Tenderer

1. I, the undersigned, hereby declare and confirm that I am fully conversant with the Act.
2. I hereby declare that my company has the competence and the necessary resources to safely carry out the work / supply / services under this contract in compliance with the Act, and the Employer's / Purchaser's / Client's Health and Safety Specifications.
3. I hereby undertake, if my tender is accepted, to provide on request a suitable and sufficiently documented Health and Safety Plan which plan shall be subject to approval by the Employer / Purchaser / Client.
4. I hereby confirm that adequate provision has been made in my tendered rates to cover the cost of all resources, actions, training and all health and safety measures envisaged in the Act, and that I will be liable for any penalties that may be applied by the Employer / Purchaser / Client for failure to comply with the provisions of the Act.
5. I agree that my failure to complete and execute this declaration to the satisfaction of the Employer / Purchaser / Client will mean that I am unable to comply with the requirements of the Act and accept that my tender will be prejudiced and may be rejected at the discretion of the Employer / Purchaser / Client.

NAME (Block Capitals):**Date****SIGNATURE:**

Power

em

5(a) MBD 4: DECLARATION OF INTEREST**NOTES**

MSCM Regulations: "in the service of the state" means to be:

- (a) a member of:
 - (i) any municipal council.
 - (ii) any provincial legislature.
 - (iii) the national Assembly or the national Council of provinces.
- (b) a member of the board of directors of any municipal enterprise.
- (c) an official of any municipality or municipal enterprise.
- (d) an employee of any national or provincial department, national or provincial public enterprise 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 enterprise.
- (f) an employee of Parliament or a provincial legislature.

"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.

- 1 No bid will be accepted from persons **in the service of the state**.
- 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 and/or take an oath declaring his/her interest.
- 3 In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.

3.1 Name of enterprise

Name of enterprise's representative

3.2 ID Number of enterprise's representative

3.3 Position enterprise's representative occupies in the enterprise

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 / sole proprietors / partners in partnerships, their individual identity numbers and state employee numbers must be indicated in paragraph 4 below. In the case of a joint venture, information in respect of each partnering enterprise must be completed and submitted.

3.8 Are you presently in the service of the state?

If yes, furnish particulars:

.....

.....

3.9 Have you been in the service of the state for the past twelve months?

If yes, furnish particulars:

.....

.....

Circle Applicable

YES

NO

YES

NO

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

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

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

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

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

If yes, furnish particulars:

.....

.....

- 4 The names of all directors / trustees / shareholders / members / sole proprietors / partners in partnerships, their individual identity numbers and state employee numbers must be indicated below. In the case of a joint venture, information in respect of each partnering enterprise must be completed and submitted

| Full Name | Identity No. | State Employee No. | Personal income tax No. |
|-----------------------------------|--------------|--------------------|-------------------------|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| Use additional pages if necessary | | | |

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct.

NAME (Block Capitals):

.....

Date

.....

SIGNATURE:

.....

5(b) **MBD 5: 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.

| | | Circle Applicable | |
|-----|--|-------------------|----|
| | | YES | NO |
| 1.0 | Are you by law required to prepare annual financial statements for auditing? | | |
| 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. | | |
| 2.0 | 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. | | |
| 2.2 | If YES, provide particulars. | | |
| 3.0 | 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, provide particulars. | | |
| 4.0 | Will any portion of goods or services be sourced from outside 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? | YES | NO |
| 4.1 | If YES, provide particulars. | | |

If required by 1.1 above, tenderers are to include, at the back of their tender submission document, a printout of their audited annual financial statements.

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct, and, if required, that the requested documentation has been included in the tender submission.

NAME (Block Capitals):

Date

SIGNATURE:

5(c) **MBD 6.1: PREFERENCE POINTS CLAIM**
In terms of THE PREFERENTIAL PROCUREMENT REGULATIONS (2022)

This preference form must form part of all tenders invited. It contains general information and serves as a claim form for preference points for specific goals.

NB: BEFORE COMPLETING THIS FORM, TENDERERS MUST STUDY THE GENERAL CONDITIONS, DEFINITIONS AND DIRECTIVES APPLICABLE IN RESPECT OF THE TENDER AND PREFERENTIAL PROCUREMENT REGULATIONS, 2022

1.0 GENERAL CONDITIONS

1.1 The following preference point systems are applicable to invitations to tender:

- the 80/20 system for requirements with a Rand value of up to R50 000 000 (all applicable taxes included).
- the 90/10 system for requirements with a Rand value above R50 000 000 (all applicable taxes included).

1.2 **Either the 80/20 or 90/10 preference point system will be applicable in this tender. The lowest/highest acceptable tender will be used to determine the applicable system once tenders are received.**

1.3 Preference Points for this tender shall be awarded for:

- **Price and Specific Goals:** Either 80 or 90 (price) and 20 or 10 (specific goals), in terms of 1.2 above.
- The total Preference Points, for Price and Specific Goals, is 100.

1.4 Failure on the part of the tenderer to submit the required proof or documentation, in terms of the requirements in the (Special) Conditions of Tender for claiming **Specific Goal** preference points, will be interpreted that preference points for **Specific Goals** are not claimed.

1.5 The Municipality reserves the right to require of a tenderer, either before a tender is adjudicated or at any time subsequently, to substantiate any claim in regard of preferences, in any manner required by the Municipality.

2.0 DEFINITIONS

2.1 **“tender”** means a written offer in the form determined by an organ of state in response to an invitation to provide goods or services through price quotations, competitive tendering process or any other method envisaged in legislation.

2.2 **“price”** means an amount of money tendered for goods or services, and includes all applicable taxes less all unconditional discounts.

2.3 **“rand value”** means the total estimated value of a contract in Rand, calculated at the time of bid invitation, and includes all applicable taxes.

2.4 **“tender for income-generating contracts”** means a written offer in the form determined by Municipality in response to an invitation for the origination of income-generating contracts through any method envisaged in legislation that will result in a legal agreement between the Municipality and a third party that produces revenue for the Municipality, and includes, but is not limited to, leasing and disposal of assets and concession contracts, excluding direct sales and disposal of assets through public auctions.

2.5 **“the Act”** means the Preferential Procurement Policy Framework Act, 2000 (Act No. 5 of 2000).

3.0 FORMULA FOR CALCULATION OF PREFERENCE PRICE POINTS

3.1 PROCUREMENT OF GOODS AND SERVICES

PRICE POINTS: A maximum of 80 or 90 points is allocated for price on the following basis:

80 / 20 Points System

OR

90 / 10 Points System

$$P_s = 80 \left(1 - \frac{P_t - P_{min}}{P_{min}} \right)$$

$$P_s = 90 \left(1 - \frac{P_t - P_{min}}{P_{min}} \right)$$

Where:

P_s = Points scored for price of tender under consideration

P_t = Price of tender under consideration

P_{min} = Price of lowest acceptable tender

4.0 POINTS AWARDED FOR SPECIFIC GOALS

- 4.1 In terms of Regulation 4(2); 5(2); 6(2) and 7(2) of the Preferential Procurement Regulations, preference points must be awarded for specific goals stated in the tender. For the purposes of this tender the tenderer will be allocated points based on the **points claimed** for the goal(s) stated in **Table 1** below, as supported by proof/ documentation stated in the **Conditions of Tender**:
- 4.2 In cases where the municipality intends to use Regulation 3(2) of the Regulations, which states that if it is unclear whether the 80/20 or 90/10 preference point system applies, the municipality must, in the tender documents, stipulate in the case of:
 - (a) an invitation for tender for income-generating contracts, that either the 80/20 or 90/10 preference point system will apply and that the highest acceptable tender will be used to determine the applicable preference point system, or
 - (b) any other invitation for tender, that either the 80/20 or 90/10 preference point system will apply and that the lowest acceptable tender will be used to determine the applicable preference point system,

then the municipality must indicate the points allocated for specific goals for both the 90/10 and 80/20 preference point system.

TABLE 1: Specific Goals for the tender and points claimed are indicated per the table below.

Tenderers are to indicate their points claim for each of the Specific Goals.

| The Specific Goals to be allocated points in terms of this tender | Number of points ALLOCATED (80/20 system) | Number of points ALLOCATED (90/10 system) | Number of points CLAIMED (80/20 system) | Number of points CLAIMED (90/10 system) |
|---|---|---|---|---|
| RDP Goal: The Creation of new jobs to address black youth unemployment | n/a | 7 | n/a | |
| RDP Goal: Social upliftment of communities | n/a | 3 | n/a | |
| Should the municipality apply a combination of Specific Goals, the points for the individual goals will be weighted according to the Goal Weightings specified in the Tender Data to arrive at the final points for Preferential Points for Specific Goals . | | | | |

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, certify that the points claimed, based on the specific goals as specified in the tender, qualifies the tendering entity for the preference(s) shown.

I acknowledge that:

- 1) The information furnished is true and correct.
- 2) The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form.
- 3) In the event of a contract being awarded as a result of points claimed as shown in paragraphs 1.4 and 4.2, the contractor may be required to furnish documentary proof to the satisfaction of the organ of state that the claims are correct.
- 4) If the specific goals have been claimed or obtained on a fraudulent basis, or any of the conditions of contract have not been fulfilled, the organ of state may, in addition to any other remedy it may have:
 - (a) disqualify the person from the tendering 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) recommend that the tenderer or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted 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, if deemed necessary.

NAME (Block Capitals):

Date

SIGNATURE:

5(d) MBD 8: DECLARATION OF BIDDER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES

- 1.0 This Municipal Bidding Document must form part of all bids invited.
- 2.0 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.
- 3.0 The bid of any bidder may be rejected if that bidder, or any of its directors have:
- a) abused the 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) wilfully neglected, reneged on or failed to comply with any government, municipal or other public sector contract during the past five years.
 - 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).
- 4.0 In order to give effect to the above, the following questions must be completed and submitted with the bid.

- 4.1 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?

(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 audi alteram partem rule was applied.)

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.

- 4.1.1 If YES, provide particulars.

.....

.....

- 4.2 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)?

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.

- 4.2.1 If YES, provide 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?

- 4.3.1 If YES, provide particulars.

.....

.....

| Circle Applicable | |
|-------------------|----|
| YES | NO |

| | |
|-----|----|
| YES | NO |
|-----|----|

| | |
|-----|----|
| YES | NO |
|-----|----|

- 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

NO

4.4.1 If YES, provide 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

NO

4.5.1 If YES, provide particulars.

.....

.....

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both 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.

NAME (Block Capitals):

Date

SIGNATURE:

5(e) MBD 9: CERTIFICATE OF INDEPENDENT BID DETERMINATION**NOTES**

- 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.
- 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.

- 1.0 This Municipal Bidding Document (MBD) must form part of all **bids**¹ invited.
- 2.0 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.
- 3.0 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.
- 4.0 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**.
- 5.0 In order to give effect to the above, the attached Certificate of Bid Determination (MBD 9) must be completed and submitted with the bid.

CERTIFICATE OF INDEPENDENT BID DETERMINATION

I, the undersigned, in submitting the accompanying bid:

(Bid Number and Description)

in response to the invitation for the bid made by:

(Name of Municipality / Municipal Entity)

do hereby make the following statements that I certify to be true and complete in every respect.

I certify, on behalf of:

(Name of Bidder)

that:

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.
 - (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.

7. In particular, without limiting the generality of paragraphs 6 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:
 - (a) prices.
 - (b) geographical area where product or service will be rendered (market allocation).
 - (c) methods, factors or formulas used to calculate prices.
 - (d) the intention or decision to submit or not to submit, a bid.
 - (e) the submission of a bid which does not meet the specifications and conditions of the bid.
 - (f) bidding with the intention not to win the bid.
8. In addition, there have been no consultations, communications, agreements, or arrangements with any competitor regarding the quality, quantity, specifications and conditions or delivery particulars of the products or services to which this bid invitation relates.
9. The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.
10. I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

NAME (Block Capitals): _____

Date

SIGNATURE: _____

SECTION 5: CONDITIONS OF CONTRACT

GOVERNMENT PROCUREMENT: CONDITIONS OF CONTRACT (July 2010)

The **Conditions of Contract** are the **General Conditions of Contract** as published by the National Treasury titled "Government Procurement: General Conditions of Contract (July 2010), as amended by National Treasury Circular 52 dated 30 July 2010, hereinafter referred to as **GCC**.

THE NATIONAL TREASURY

Republic of South Africa



GOVERNMENT PROCUREMENT: GENERAL CONDITIONS OF CONTRACT

July 2010

TABLE OF CLAUSES

| | | |
|-----|---|----|
| 1. | Definitions | 33 |
| 2. | Application..... | 33 |
| 3. | General | 33 |
| 4. | Standards..... | 34 |
| 5. | Use of contract documents and information inspection..... | 34 |
| 6. | Patent Rights | 34 |
| 7. | Performance security..... | 34 |
| 8. | Inspections, tests and analyses..... | 34 |
| 9. | Packing..... | 34 |
| 10. | Delivery and documents | 34 |
| 11. | Insurance | 34 |
| 12. | Transportation | 34 |
| 13. | Incidental Services | 35 |
| 14. | Spare parts..... | 35 |
| 15. | Warranty..... | 35 |
| 16. | Payment..... | 35 |
| 17. | Prices | 35 |
| 18. | Variation orders | 35 |
| 19. | Assignment | 35 |
| 20. | Subcontracts | 35 |
| 21. | Delays in the supplier's performance | 35 |
| 22. | Penalties | 36 |
| 23. | Termination for default | 36 |
| 24. | Anti-dumping and countervailing duties and rights..... | 36 |
| 25. | Force Majeure | 36 |
| 26. | Termination for insolvency | 36 |
| 27. | Settlement of Disputes | 37 |
| 28. | Limitation of Liability | 37 |
| 29. | Governing language | 37 |
| 30. | Applicable law..... | 37 |
| 31. | Notices..... | 37 |
| 32. | Taxes and duties | 37 |
| 33. | Transfer of contracts..... | 37 |
| 34. | Amendments of contracts | 37 |
| 35. | Prohibition of restrictive practices..... | 37 |

1. Definitions

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 consignee 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 goods are so delivered and a valid receipt is obtained.
- 1.11 "Dumping" occurs when a private enterprise abroad markets 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 goods 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 "Supplier" means the successful bidder who is awarded the contract to maintain and administer the required and specified service(s) to the State.
- 1.26 "Tort" means in breach of contract.
- 1.27 "Turnkey" means a procurement process where one service provider assumes total responsibility for all aspects of the project and delivers the full end product / service required by the contract.
- 1.28 "Written" or "in writing" means hand-written in ink or any form of electronic or mechanical writing.

2. Application

- 2.1 These general conditions are applicable to all bids, contracts and orders including bids for functional and professional services (excluding professional services related to the building and construction industry), 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 goods, 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 Invitations to bid are usually published in locally distributed news media and on the municipality/municipal entity website.

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.
- 6.2 When a supplier developed documentation / projects for the municipality / municipal entity, the intellectual, copy and patent rights or ownership of such documents or projects will vest in the municipality / municipal entity.

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](#).

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 goods to be produced or services to be rendered should at any stage be subject to inspections, tests and analyses, the bidder or contractor's premises shall be open, at all reasonable hours, for inspection by a representative of the purchaser or organization acting on behalf of the purchaser.

- 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 goods 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 goods or services referred to in clauses 8.2 and 8.3 do not comply with the contract requirements, irrespective of whether such goods or services are accepted or not, the cost in connection with these inspections, tests or analyses shall be defrayed by the supplier.

- 8.6 Goods 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 goods may on or after delivery be inspected, tested or analysed and may be rejected if found not to comply with the requirements of the contract. Such rejected goods 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 goods, which do comply with the requirements of the contract. Failing such removal the rejected goods shall be returned at the suppliers cost and risk. Should the supplier fail to provide the substitute goods forthwith, the purchaser may, without giving the supplier further opportunity to substitute the rejected goods, purchase such goods 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 22 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 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, and in any subsequent instructions ordered by the purchaser.

10. Delivery and documents

- 10.1 Delivery of the goods and arrangements for shipping and clearance obligations, shall be made by the supplier in accordance with the terms [specified in the contract](#).

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](#).

12. Transportation

- 12.1 Should a price other than an all-inclusive delivered price be required, [this shall be specified](#).

13. Incidental Services

13.1 The supplier may be required to provide any or all of the following services, including additional services, if any:

- (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, 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.

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 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, 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.

16.2 The supplier shall furnish the purchaser with an invoice accompanied by a copy of the delivery note and upon fulfilment 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.

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 or in the purchaser's request for bid validity extension, as the case may be.

18. Variation orders

18.1 In cases where the estimated value of the envisaged changes in purchase does not vary more than 15% of the total value of the original contract, the contractor may be instructed to deliver the goods or render the services as such. In cases of measurable quantities, the contractor may be approached to reduce the unit price, and such offers may be accepted provided that there is no escalation in price.

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 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 goods are required, or the supplier's services are not readily available.

- 21.4 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 22.2 without the application of penalties.
- 21.5 Upon any delay beyond the delivery period in the case of a goods contract, the purchaser shall, without cancelling the contract, be entitled to purchase goods 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 judgement 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 supplier as having no objection and proceed with the restriction.
- 23.5 Any restriction imposed on any person by the purchaser will, at the discretion of the purchaser, 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 purchaser 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. Antidumping and countervailing duties and rights**
- 24.1 When, after the date of bid, provisional payments are required, or anti-dumping 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 supplier to the purchaser or the purchaser may deduct such amounts from moneys (if any) which may otherwise be due to the supplier in regard to goods 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 Notwithstanding any reference to mediation and/or court proceedings herein,
- (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 for goods delivered and / or services rendered according to the prescripts of the contract.

28. Limitation of Liability

- 28.1 Except in cases of criminal negligence or wilful misconduct, and in the case of infringement pursuant to Clause 6;
- (a) 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
 - (b) 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.

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.

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 SARS must have certified that the tax matters of the preferred bidder are in order.
- 32.4 No contract shall be concluded with any bidder whose municipal rates and taxes and municipal services charges are in arrears.

33. Transfer of Contracts

- 33.1 The contractor shall not abandon, transfer, cede assign or sublet a contract or part thereof without the written permission of the purchaser.

34. Amendment of contracts

- 34.1 No agreement to amend or vary a contract or order or the conditions, stipulations or provisions thereof shall be valid and of any force unless such agreement to amend or vary is entered into in writing and signed by the contracting parties. Any waiver of the requirement that the agreement to amend or vary shall be in writing, shall also be in writing.

35. Prohibition of restrictive practices

- 35.1 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.
- 35.2 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 section 59 of the Competition Act No 89 Of 1998.
- 35.3 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.

SECTION 6: SPECIAL / ADDITIONAL CONDITIONS OF CONTRACT

The **Conditions of Contract** make reference to the **Special Conditions of Contract (SSC)** for details that apply specifically to this bid. The **Special Conditions of Contract** shall have precedence in the interpretation of any ambiguity or inconsistency between it and the **Conditions of Contract**.

Each item below is cross-referenced to the clause in the **Conditions of Contract** to which it mainly applies.

SCC 1.2 **CONTRACT**

This contract will commence on the date of issue of the Letter of Award.

SCC 7.1 **PERFORMANCE SECURITY**

The liability of the Performance Security shall be ten (10) percent of the contract price.

The Contractor will be required to furnish the Performance Security (Surety Bond), from a bank or approved insurance company acceptable to the purchaser within fourteen (14) days of notification of award.

SCC 7.4 **PERFORMANCE SECURITY**

The performance security is to be issued in the form of a bank guarantee an example of which is contained under form RDC15.

SCC 9.2 **PACKING**

N/A

SCC 10.1 **DELIVERY AND DOCUMENTS**

N/A

SCC 11.1 **INSURANCE**

Add the following:

The supplier shall effect all insurances necessary to adequately cover his insurable obligations under the contract and shall maintain such insurances for the duration of the contract. Insurances shall include goods and services where applicable.

The purchaser shall be entitled at its discretion to call for evidence of the scope and validity of such insurance as and when this may be required.

The supplier shall maintain insurances not limited to the following, from the effective date of the contract until handover to the purchaser for operation.

- a) Insurance of the works and supplier's equipment
- b) Insurance against injury to persons and damage to property
- c) Insurance of supplier's personnel

The supplier shall be fully responsible for the above insurances until transfer of risk to the purchaser as defined in the contract documents.

SCC 13.1 INCIDENTAL SERVICES

Replace this clause with the following:

This is an all-inclusive turnkey contract, including all goods and services required to meet the contract requirements including that specified in the scope of work. The onus shall rest with the supplier to prove any assertion of incidental or additional services that fall outside of the contracted scope of work and to follow the provisions of clause 18 and 34.

SCC 14.1 SPARE PARTS

Replace this clause with the following:

Notwithstanding the provisions of this clause, the supplier shall guarantee the availability of spare parts for a period of ten years from date of acceptance for operation despite obsolescence or that product upgrades are backward compatible.

SCC 15.2 WARRANTY

Replace this clause with the following:

The warranty period shall be twenty-four (24) months from date of taking over the whole or any part of the works for operation.

SCC 15.4 WARRANTY REPAIR TIME

Replace this clause with the following:

The time period for repair under warranty shall not exceed the maintenance restore turn-around times contained in the scope of work or such reasonable time as agreed by the Purchaser.

SCC 16.1 PAYMENT

Replace this clause with the following:

Payments will be linked to completed milestones, sub-milestones and measurable items included in the pricing schedule. Partial payment will not be made for incomplete deliverables.

SCC 17 PRICES

Replace this clause with the following:

Prices are fixed for the duration of the contract and thereafter adjusted annually using the CPI per province (KwaZulu-Natal) as specified on table A (Consumer Price Index: Main indices) of Statistical Release P0141 published by Statistics South Africa for local goods and services.

Foreign goods and services, marked as such in the contract, will be similarly adjusted using the applicable CPI for the country of origin.

Price adjustments will not apply where the contract duration is exceeded due to an extension of time granted due to the fault of the supplier.

SCC 21.1 **DELAYS IN THE SUPPLIER'S PERFORMANCE**

Replace this clause with the following:

The time schedule for the delivery of goods and performance of services is as contained in the Contract, as further elaborated in the project initiation document and as updated from time to time provided such updates do not constitute the granting of an extension of time unless agreed in accordance with the provisions of clause 34.

The Supplier is to notify the Purchaser immediately, but no later than five (5) days after becoming aware of a potential delay as well as the impact thereof. Where such delay is within the control of the Purchaser, the Supplier shall submit proposed actions to be taken by the Purchaser to mitigate the delay or impact thereof.

A request for extension of time is to be submitted by the Supplier no later than fourteen days (14) after becoming aware of the potential delay, or no later than fourteen (14) days after the presentation of an updated time schedule reporting and/or forecasting such delay, whichever occurs first. Failure to observe this time bar, shall result in the rejection of an extension of time claim, including related damages claims, at the discretion of the Purchaser

SCC 22.1 **PENALTIES**

Replace this clause with the following:

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, at its discretion and without prejudice to its other remedies under the Contract, deduct from the contract price (as a penalty):

- A penalty of R15,000.00 per day for each day overall delivery is delayed. Overall delay may be forecast on the basis of delayed interim milestones for this purpose.
- A penalty of R 5,000.00 per day for each day the delivery of a bus is delayed, where electronic fare collection is not possible and/or the bus is out of service.

Such amounts shall be deducted from the next and subsequent payments due to the Supplier until fully recovered.

The Supplier agrees that the above is a realistic estimate of the damages incurred by the Purchaser as a result of such delay.

The aggregate of penalties applied will be limited to fifteen percent (15%) of the Contract price.

The Purchaser may also consider termination of the contract pursuant to GCC Clause 23.

ADDITIONAL CONDITIONS OF CONTRACT

ACC1 PERFORMANCE MONITORING & ASSESSMENT OF SERVICE PROVIDERS

For contract awards that are greater than R10m, the Contractor shall be subjected to "Performance Monitoring" assessments in terms of the applicable Section of the Council's current Supply Chain Management Policy.

ACC1 QUALITY OF PRODUCTS

No inferior products will be accepted under this enquiry.

Should there be any cause for complaint against the standard of service or quality of products offered which is not resolved within a period of 10 working days, the Municipality reserves the right to cancel the contract after serving one month's notice, in writing, to the supplier involved. Should such notice be given, the supplier shall nevertheless be obliged to perform the duties covered by the contract up to the date of expiration of the period of notice.

ACC2 SATISFACTORY PERFORMANCE

The supplier shall employ for the purpose of this contract only such personnel as are careful and competent and the Municipality shall be at liberty to object to and require the supplier to remove from the job forthwith any person, including supervisory staff, employed by the supplier who, in the opinion of the Municipality, misconducts himself/herself or is incompetent or negligent in the proper performance of his/her duties and such person shall not again be employed upon this contract without the permission of the Municipality.

ACC4 OCCUPATIONAL INJURIES AND DISEASES ACT

This act replaces the Workmen's Compensation Act:

The supplier shall, before commencement of work, produce documentary proof to the Deputy Municipal Manager, Treasury: Finance that he has complied in all respects with the provisions of the Occupational Injuries and Diseases Act. The supplier undertakes that he/she will perform and comply with all provisions of the Occupational Injuries and Diseases Act and more particularly that he/she will render all returns and pay all assessments for which he/she is liable in terms of such Act.

ACC5 DAMAGE TO PERSONS AND PROPERTY

- (1) The supplier **shall** indemnify and keep indemnified the Council against any claim for death, injury, damage or loss to any person or property whatsoever in respect thereof or in relation thereto.
- (2) The supplier enters into this contract as an independent contractor and shall be solely liable in respect of any claim for death, injury, damage or loss to any person or property whatsoever in respect thereof or in relation thereto.

ACC6 RATE OF EXCHANGE VARIATION

Where the goods are imported the Contractor shall within seven days of date of Official Purchase Order, arrange through his bankers for the foreign commitment to be covered forward down to the Rand to fix the rate of exchange. The Contractor shall notify the Municipality as soon as possible thereafter regarding the rate which has been fixed on such forward exchange. The

forward cover shall be from a reputable South African bank. The Contractor is to confirm with the employer prior to placing forward cover if the service provider is acceptable.

Any increase or decrease between the basic rate of exchange as at 12:00 on the date of close of the bid and that existing at the date of establishment of the forward exchange cover within the period stipulated above shall be paid or deducted by the Municipality. Upon the failure of the Contractor to arrange forward exchange cover, the Contractor shall be liable should there be an increase in the basic rate of exchange occurring after the last-mentioned date.

The bank charges incurred in obtaining the forward exchange cover must be included in the Tenderer's bid.

ACC7 **ESTIMATED QUANTITIES**

The quantities stated in Section 8 are applicable for evaluation purposes only. The final quantity of goods and services required shall vary, depending on the total number of actual instances a service/goods will be required over the Contract Period. The rates tendered shall be applicable, irrespective of the total quantity of goods and services procured over the contract duration.

ACC8 **SERVICE PROVIDER OFFICE REQUIREMENTS**

The service provider must have, for the duration of the contract, a local presence (within the geographical eThekweni boundary).

ACC9 **EMPOWERMENT REQUIREMENT**

The tenderer shall, subcontract a minimum of 20 percent, of this contract to suitable subcontractors. Tenderers are required as part of the submission to submit a subcontracting schedule which outlines the scope of work to be subcontracted which will be equal to a minimum of 20 percent of the contract value.

ACC10 **SUPPORTING DOCUMENTATION FOR PREFERENCE POINT SYSTEM AND SPECIFIC GOALS**

Tenderers are required to provide a skills development plan Supplier to provide a detailed skills development plan for the development of the new employees in this category with specific deliverables and outcomes that can be measured. Tenderer to indicate the number of new jobs that will be created in this category. This is as a **mandatory** requirement to support their commitment to the RDP Goal for creation of new jobs to address black youth unemployment. Failure to produce the skills development plan in the submission will result in the tenderer being disqualified at Stage 2 of the evaluation.

Compliance to the skills development plan and employment of the number of jobs created will be verified and monitored on an ongoing basis as part of the contract management on this tender.

ACC11 **RDP Goal: Creation of new jobs to address black youth unemployment - PENALTY**

Failure to meet the deliverables and outcomes for this goal shall result in the application of penalties, at the discretion of the Employer, payable in Rands. The penalty amount will be determined after tender award and included in the Service Level Agreement.

SECTION 7: SCOPE AND SPECIFICATION OF REQUIRED SUPPLY / SERVICES

1. INTRODUCTION

1.1. Purpose

This document serves to specify the scope of goods and services to be provided by the Supplier as well as the Purchaser's requirements for the Design, Supply, Implementation, Warranty and Support of an Automatic Fare Collection System (AFCS) for the eThekweni Municipality under tender number 1T-19865.

1.2. Scope

This document covers the intended approach to the acquisition of the AFCS as well as the general requirements, anticipated major components and their functional, performance, physical and interface requirements. This document is not a design specification but sets out the Purchaser's (ETA) requirements for the AFCS as input to the Tenderer's design of the proposed turnkey solution. The intention of the turnkey approach is inter alia to offer a degree of freedom to the tenderer in proposing an innovative and appropriate solution which meets the ETA's requirements in a cost-effective manner, with limited involvement of the Purchaser.

1.3. Definitions

| Term | Definition |
|------------------------|---|
| Supplier | Notwithstanding the definition in the conditions of contract, reference to the Supplier in this scope of work, generally means the successful Tenderer, but the terms may occasionally be used interchangeably in this document and may include Contractor as the context requires. |
| Cash Stored Value | Electronic money loaded to a prepaid cash purse residing on an NDOT EMV card, which may be used for travel and low value retail payments. |
| Paid area | An area of the transport network, access to which is authorised by the possession of a valid transit ticket. |
| Tenderer | The bidder responding to this tender inquiry, which if successful will be referred to as the Supplier. The term Tenderer, Bidder, Supplier and Contractor may occasionally be used interchangeably in this document. |
| Transit Products/Trips | Transit points or value loaded to a transit purse on a closed loop card and may only be used for travel, as a period pass or for trips of a pre-determined stage, zone or distance band. |
| Transit Stored Value | Transit points loaded to a transit purse on a closed loop card basis and may only be used for travel. Currently the loading and usage of transit stored value is limited to the issuing network. This may also represent value contained in the NDOT Mobility Account. |
| Unpaid area | An area of the transport network, access to which is free of charge to the public but may be subject to certain conditions of conduct within a |

| Term | Definition |
|------|----------------------------|
| | facility or on a property. |

Table 1: Definitions

1.4. Abbreviations

| Abbreviation | Description |
|--------------|-----------------------------------|
| ABT | Account-Based Ticketing |
| AC | Alternating Current |
| AFCS | Automatic Fare Collection System |
| API | Application Programming Interface |
| BOE | Bus On-board Equipment |
| BOQ | Bill of Quantity |
| BI | Business Intelligence |
| BYOD | Bring-Your-Own-Device |
| °C | Degrees Celsius |
| COTS | Commercial off-the-shelf |
| CPU | Central Processing Unit |
| CM | Corrective Maintenance |
| CSV | Cash Stored Value |
| CS | Central System |
| CT | Cashier's Terminal |
| DB | Distribution Board |
| DLP | Defects Liability Period |
| DNP | Defects Notification Period |
| DRC | Disaster Recovery Centre |
| DT | Dispatcher's Terminal |
| EFT | Electronic Funds Transfer |
| EMC | Electromagnetic Compatibility |
| EMV | Europay, Mastercard and VISA |
| ETA | eThekweni Transport Authority |
| FAT | Factory Acceptance Test |
| FEMS | Fare Evasion Management System |
| FIM | Free Issue Material |
| g | Gravitational Acceleration |

| Abbreviation | Description |
|--------------|---|
| GPRS | General Packet Radio Service |
| GPS | Global Positioning System |
| GSM | Global System for Mobile Communications |
| GUI | Graphical User Interface |
| HTTPS | Hypertext Transfer Protocol Secure |
| HW | Hardware |
| Hz | Hertz |
| IAT | Installation Acceptance Test |
| IEC | International Electrotechnical Commission |
| ID | Identification |
| IFMS | Integrated Fare Management System |
| IMU | Information Management Unit |
| IRPTN | Integrated Rapid Public Transport Network |
| ITP | Integrated Transport Plan |
| IT | Information Technology |
| IP | Impact Protection |
| IP | Internet Protocol |
| ISO | International Standards Organisation |
| LAN | Local Area Network |
| LRU | Line Replaceable Unit |
| LVP | Low Value Payment |
| MCBF | Mean Cycles Between Failures |
| MTBF | Mean Time Between Failures |
| NDOT | National Department of Transport |
| NFC | Near Field Communication |
| NLTA | National Land Transport Act |
| OBV | On-board validation |
| OEM | Original Equipment Manufacturer |
| OHSA | Occupational Health and Safety Act |
| OSPT | Open Standard for Public Transport |
| PAN | Primary Account Number |
| PCS | Passenger Counting System |
| PID | Passenger Information Display |

| Abbreviation | Description |
|--------------|---|
| PID | Project Initiation Document |
| PIN | Personal Identification Number |
| PM | Preventative Maintenance |
| PTS | Public Transport Service |
| PPS | Pre-production Sample |
| QA | Quality Assurance |
| QR | Quick Response |
| ROW | Right of Way |
| RSA | Republic of South Africa |
| RTC | Real Time Clock |
| SAM | Security Access Module |
| SANRAL | South African National Roads Agency Limited |
| SAT | Site Acceptance Testing |
| SFTP | Secure File Transfer Protocol |
| SIM | Subscriber Identity Module |
| SIT | Site Integration Testing |
| SOP | Standard Operating Procedure |
| SW | Software |
| TCH | Transaction Clearing House |
| TMC | Transport Management Centre |
| TOM | Ticket Office Machine |
| TSV | Transit Stored Value |
| UAT | User Acceptance Test |
| UPS | Uninterruptable Power Supply |
| VOC | Value on Credit |
| VPN | Virtual Private Network |
| WIFI | Wireless Network Interface |

Table 2: Abbreviations

1.5. Applicable standards and specifications

The onus rests with the Supplier to comply with all standards and regulations applicable to the proposed solution and its operation and shall provide a complete list of such standards in the bid response, including;

1.5.1. Design and production standards for the AFCS

1.5.2. Installation and implementation standards for the AFCS

1.5.3. Environmental specifications

The system and equipment shall be designed to be operated within the following environmental conditions unless otherwise specified and will thus form part of the criteria in assessing fitness-for-purpose;

1.5.3.1. Elevation: min to max above sea level : 10m to 395m

1.5.3.2. Average Temperature Range: 20 C° to 25C°

1.5.3.3. Maximum Temperature Range: 40C° to 45C°

1.5.3.4. Humidity Range: 73% to 83%

1.5.3.5. Maximum Wind Velocity: 80km/hr

1.5.3.6. Average Rainfall: 69mm per month

1.5.3.7. Maximum Daily Rainfall: 200mm

1.5.3.8. Lightning Conditions: strikes per 4,4km²/year

1.5.3.9. Equipment shall withstand Ultra-Violet (UV) exposure in the place of installation.

1.5.4. Regardless of equipment life expectancy, all products must be supported for at least ten (10) years from date of installation with due attention to obsolescence, i.e. obsolescence of any major component or part thereof should not require any redevelopment in the event that repair or replacement is required and/or parts that have undergone evolution should be backward compatible. This requirement shall survive the termination of the Contract.

1.6. Background

1.6.1. General

The ETA is the branch of the eThekweni Municipality that is responsible inter alia for public transport planning, operations, services, maintenance, monitoring and administration. Bus transport services therefore fall within ETA's scope of responsibility, currently including the Durban Transport, People Mover (inner city) and Mynah (outer city) bus services, collectively referred to as the Public Transport Service (PTS) comprising approximately six hundred (600) buses.

1.6.2. Integrated Fare Management System (IFMS)

Fare collection within the municipality currently comprises a legacy Automatic Fare Collection (AFC) system which has been implemented on the PTS' and an IFMS which is in the process of being implemented on route C3 of the GO!Durban network and which is yet to go into operation. The two systems operate independently of each other and this will continue with the replacement of the existing PTS AFC, however the Go!Durban MIFARE card is **an option** under consideration for this tender.

1.6.3. PTS AFC System

The existing Public Transport Services' legacy AFCS is based on a bank issued contactless EMV smart card as prescribed by the National Department of Transport (NDoT) in Regulation R511 and is branded as the Muvo card. The system has been in operation since 2012.

The cards are issued and loaded with stage-based Transit Products/Trips at points of sale from attended fixed and mobile kiosks.

An on-board card validator is used for trip validation of Muvo card holders on check-in, and both Muvo and cash paying travellers are issued with receipts from an on-board ticket printer unit which is controlled by the driver.

Transactions are conducted off-line and both cash and Muvo transactions are uploaded via a wireless network to a proxy server once the buses return to the bus Depots. Transactions are then transferred to central servers located in the eThekweni Data Centre, which is supported by a Disaster Recovery Centre (DRC).

The fare structure is currently stage based and the patron is therefore only required to check in to the system. The detection of over-riding is therefore reliant on inspectors.

Concession cards and discounted fares apply to pensioners, persons with disabilities and scholars, as well as for peak and off-peak period travellers.

. Figure 1 below illustrates the general system architecture.

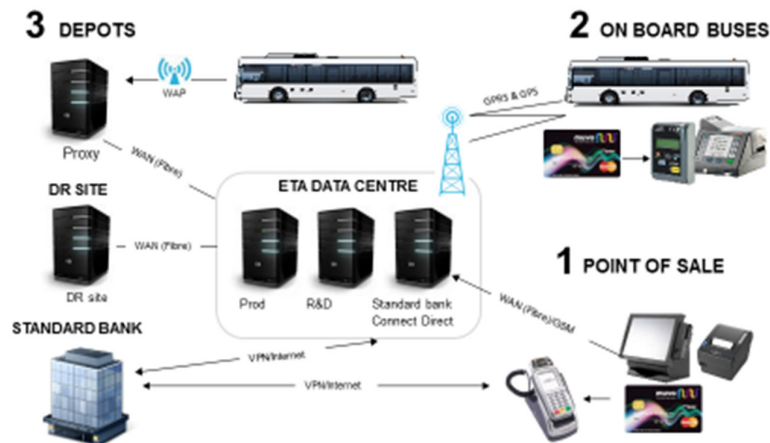


Figure 1: Legacy AFC System

1.6.4. Regulatory Environment

Public Transport AFC solutions are required to meet the provisions of the National Land Transport Act 2009 – Regulations Relating to Integrated Fare Systems, in accordance with which the following requirements inter alia are to be met:

- 1.6.4.1. AFC must be made through any Bank Issued Fare Media utilising the EMV payment standards and specifications;
- 1.6.4.2. AFC must be interoperable through all Participating Banks;
- 1.6.4.3. Clearing and settlement of payment transactions must take place through the National Payment System in accordance with the National Payment System Act, 1998 (Act No. 78 of 1998);
- 1.6.4.4. Passengers with a suitable bank account must be able to use bank issued fare media obtained as a result of their relationship with any participating bank;
- 1.6.4.5. Passengers without a suitable bank account must be able to obtain prepaid stored value bank issued fare media from a participating bank or a third-party card issuer operating in conjunction with the participating bank;
- 1.6.4.6. The payment system must adhere to the banking and payment regulatory framework;

- 1.6.4.7. A single trip prepaid ticket based on any appropriate fare media may be issued for occasional or infrequent commuters.

The NDOT is currently in the process of amending the regulations to require Transport Authorities and Operators to implement the NDOT Account Based Ticketing (ABT) system in addition to the current abovementioned requirements.

The NDOT ABT system is a hybrid ABT system that stores information in the back office and also writes key fare and trip related data to the card. The card is planned to utilise the CIPURSE open standards for AFC.

Although a proof of concept has been successfully performed and regulatory amendments are under development, the precise requirements will be subject to change until finally gazetted.

1.6.5. Tender Scope

The aging legacy AFC system, advances in AFC technology and industry standards, public procurement policy, the need for interoperability and integration across all public transport in the municipality, regulatory compliance as well as other strategic objectives, has motivated the upgrading or replacement of the legacy system. This is the subject of this bid inquiry and if awarded, the subsequent contract.

2. REQUIREMENTS

The purpose of this section is to specify the Purchaser's requirements for the Design, Supply, Implementation, Warranty, Maintenance and Support of the AFCS for the ETA.

All Requirements are Mandatory. Where it stated "an option", the Purchaser reserves the right to purchase this item or not.

2.1. Strategic Objectives

The following are the ETA's primary strategic objectives which are intended to be achieved through the upgrading and/or replacement of the AFCS in the eThekweni Municipality;

- Latest regulatory compliance
- Improve the customer experience
- Improve sustainability of operating costs
- Establish architecture supportive of vendor/product agnostic systems
- Maximise revenue collection

2.2. Interventions

The following interventions are considered to contribute toward the achievement of the above objectives;

2.2.1. Interoperability

The ETA intends to achieve interoperability by broadening the range of fare media accepted by the AFCS for the purposes of usage and where necessary, for the loading of transit value and/or products/trips. Practically, it is envisaged that a hybrid of a closed and open loop system may be achieved in this way, whilst balancing technical and performance constraints with financial risk to the operator. A further consideration is the prioritisation of local

interoperability within multiple public transport services and modes within the municipality, followed by those within the province and finally nationally, with due consideration to impending regulatory amendments.

2.2.1.1. Contactless bank credit and debit cards and mobile payment applications

In line with general trends in the industry, the adoption of contactless bank cards as a form of transit media opens all systems accepting such cards to full interoperability without the need to register or purchase operator specific products. This method of payment has also been extended to include mobile payment applications which may be used by activating near field communication (NFC) functionality on mobile phones.

The scope of interoperability is thus extended from local to national level for those operators accepting this form of transit payment, in line with existing regulation.

The tenderer is therefore required to accommodate contactless credit and debit cards as well as mobile payment applications and card emulations and to include them in the solution as well as related card organisation and banking certifications. The Tenderer is required to provide a reference site on which it has successfully implemented a contactless AFC Smart Card solution.

The Tenderer is also required to cooperate with the City's incumbent banking service provider, which will provide the AFCS acquiring function as incorporated in the proposed solution. The Supplier is to cooperate with the bank for the delivery of the AFCS and will accept full responsibility for the delivery of the related scope of work.

The appointment of the banking service provider will occur under a separate tender, contracted for a five-year period. The Tenderer's proposal shall therefore consider the technical implications of a new banking partner potentially being contracted every five years and shall indicate the implications of accommodating this and how this may be achieved with minimum disturbance to operations during the transitional period.

2.2.1.2. Universal NDOT EMV cards

Pre-paid NDOT EMV cards will no longer be issued, loaded or accepted for transit usage on the PTS, other than being used as a form of payment similar to any other EMV card.

2.2.1.3. CIPURSE compatibility

As stated in the background section above, the NDOT is in the process of introducing regulatory amendments which are envisaged to require the use of cards adopting the CIPURSE open standard. In anticipation of these amendments and due to the open standards, the ETA considers the implementation of CIPURSE based media, to promote the objective of interoperability despite potential uncertainty regarding the detail of the final published regulations.

The AFCS will therefore include the issuing and use of a CIPURSE standard and network branded transit card, which will be capable of containing transit pay-as-you-go (PAYG) and period products as well as utilising ABT as contemplated in the anticipated NDOT regulation.

The Master keys for ABT use will belong to NDOT or their agent, and sub-keys will be issued to enable the use of network specific products.

2.2.1.4. Go!Durban MIFARE card

The ETA has implemented a closed loop Go!Durban DESFire (EV2). The proposed AFCS is required to accept this card for use on a PAYG basis and its integration is therefore to

be included in the bid as **an option**.

A further evolution of the Go!Durban card is planned to incorporate a common transit purse, which will allow multiple operators, including other modes and services, to participate by their inclusion on the card and consumption of transit value from the common purse, which would be loaded via ETA infrastructure.

The ETA would be responsible for aggregation of transactions and the allocation of revenue to the various participants. Whilst this initiative is the subject of a future phase of the project and the decision whether to proceed is yet to be finalised, the Tenderer is to ensure that the proposed solution will not pose a technical constraint, requiring excessive further development in order to accommodate it. Any risks in this regard should be highlighted in the tender response.

2.2.1.5. Account based ticketing (ABT)

It is envisaged that the AFCS will comprise aspects of a hybrid card centric and back-office centric system. The former will obviously apply to the CIPURSE, and MIFARE cards. The CIPURSE cards will be card centric in respect of network specific transit products and back-office centric with regards to the NDOT ABT scheme respectively. Contactless bank cards and mobile payment applications will likely necessitate a version of ABT for fare calculation prior to submission to the bank for payment.

a) EMV ABT

In order to maintain the benefits of the unfettered use of contactless bank cards and mobile applications, the related back office account is to be automatically created upon first presentation of the card or device to an AFCS validation device. Such an account could thus be anonymous, i.e. referencing a secure token created by the device and which will be used to recognise the card or mobile device in future use on the network, thereby associating it with the same account. The solution should however also make provision for the named registration of accounts at the card holder's discretion.

b) NDOT ABT

The NDOT ABT system, further elaborated later in this document, will be hosted by SANRAL, requiring registration and loading of a back office account with funds, which may be used for transit on participating networks. Unlike the EMV ABT, some information will be distributed to validation devices and reading and writing to cards will occur, making this a hybrid ABT arrangement. The Tenderer prove certification of competency to implement NDOT ABT, or that it is the process of undergoing such certification, as required under clause 2.6.1.6.

2.2.1.6. Independent point of sale

Despite the adoption of the CIPURSE standard, the sale of network specific transit products, would necessitate network specific points of sale, but are envisaged to be web-based and thus independent of proprietary hardware. Network specific points of sale are envisaged to comprise, fixed (sales centres and depots) and mobile (Muvovans) manned sales points.

Given the CIPURSE compatibility, the above points of sale will also be used as issuing and loading points for the NDOT ABT cards, should the concept be enforced through regulation. NDOT ABT adoption would extend the points of sale to include the so called 'points of presence' to include non-transit merchants both locally and nationally, however

these would not load network specific products, but would load account value which could be used for transit.

The introduction of the common purse MIFARE EV2 card, if adopted, will allow the loading of value for use by various scheme participants through the sharing of keys under ETA control, whilst potentially broadening the loading platform through web-based channels. The Tenderer's platform has to be implemented on EV3, as EV2 is no longer recommend for new implementations. The Tenderer shall therefore be required to provide an EV3 platform that is backward compatible for the loading of the EV2 card upon which a specific purse will be allocated for the PTS as an option.

2.2.1.7. Bring-your-own-device (BYOD) -

In pursuit of a completely open system, the ETA intends achieving a BYOD based system as far as technically practical and subject to cost-effectiveness. To this end, and in addition to bank card and mobile payments, the ETA would like to consider the use a wide range of media or devices as tokens, linked to registered accounts. These media or devices could include, but are not limited to; smart identity cards, store cards, mobile phones, wearables, contactless transit cards, etc. The Tenderer must provide platform within the AFC cloud based environment for the integration of third party payment vendors. The Tenderer is to make related proposals as part of their solution. The system should have the capability to incorporate the functionality should it be required in the future.

2.2.2. Cloud-based back-office

The back-office solution is to be deployed on a Microsoft Azure cloud platform which will be procured by the Purchaser. The AFCS databases are therefore required to be Microsoft SQL running on Microsoft Server.

The Tenderer must clearly demonstrate compliance with adequate cyber security standards and compliance with applicable data protection and privacy legislation. Disaster recovery functionality is also to be provided.

Open standards are to be employed which are AFC equipment vendor agnostic. It should be possible for future additional services to be implemented with a diverse range of vendors which can integrate with a consolidated back office.

2.2.3. Existing Public Transport System implementation

The PTS, i.e. Durban Transport, People Mover and Mynah bus AFC system is to be replaced. Quantities of major elements are included in Table 3 below for scoping purposes however these may be subject to change. Further context is given in Section 8 – Bill of quantities and schedule of prices which contains the estimated contractual quantities.

| ITEM DESCRIPTION | QUANTITIES | | | |
|--|--------------|----------|---------|--------------|
| | OPERATIONS | TRAINING | TESTING | TOTAL |
| Buses - on-board equipment | 600 | 22 | 1 | 623 |
| Fixed ticket offices - ticket office machines | 35 | 22 | 1 | 58 |
| Mobile ticket offices - ticket office machines | 14 | | | 14 |
| Ticket vending machines | 20 | 1 | 1 | 22 |
| Inspection devices | 50 | 5 | 1 | 56 |
| Cashier terminals | 17 | 5 | | 22 |
| Dispatching terminals | 17 | 5 | | 22 |
| Driver card encoders | 10 | 5 | | 15 |
| Spares | 10% of total | | | 10% of total |
| Driver and inspector cards | 50000 | | | 50000 |

Table 3: Indicative Quantities

2.2.4 Migration from existing system

The Tenderer must provide a detailed project plan and approach (to be included in the overall project approach) on how it intends migrating from the existing system to the Tenderers system. The plan must consider the Buses, passengers and operational areas and hours.

2.3. Project Approach

- 2.3.1. ETA intends taking a hybrid version of a turnkey approach to this contract. In a traditional turnkey contract the Supplier would be responsible for the Engineering, Procurement and Construction (EPC) of the complete project, generally through contractual relationships with other participants upon which delivery is dependent.

In this case, certain infrastructure and services will be supplied by others without a direct contractual relationship with the Supplier. The relationship with such participants (as further elaborated below), will be limited to one of technical liaison and coordination, but with the Supplier having overall turnkey delivery responsibility, subject to the limitations described below.

Furthermore, the Purchaser will require the application of specified quality processes and the achievement of certain sub-milestones during the process of delivery.

- 2.3.2. The Supplier is therefore to accept full responsibility for the design, execution and fitness for purpose of the works associated with the AFCS, with limited prescription and involvement from the Purchaser, other than the provision of specific requirements, provision of agreed Purchaser deliverables, responses to legitimate and reasonable requests for information, free issue materials (FIM) and the measurement of outcomes.
- 2.3.3. To the above end, the Supplier will be required to liaise with, provide requisite inputs to, and coordinate with, other project participating parties upon which the AFCS will be dependant for delivery. The Purchaser's AFCS project manager will arrange an initiation meeting at the commencement of the project in which the Supplier will be introduced to these parties, general roles and responsibilities will be agreed in a protocol, distributed by minutes and included in the purchaser's Project Initiation Document (PID), where after the Supplier will be responsible for further interactions with the parties and associated deliveries.

- 2.3.4. The turnkey delivery responsibility will include the smooth transition from the existing AFCS to the new, with progressive deployment to buses without disruption to ongoing operations. The Supplier is to offer options for this to be finalised during the project initiation phase.
- 2.3.5. Further involvement of the Purchaser in the above process will generally be limited to inter alia receiving status reports, high level planning and dealing with critical issues raised by the Supplier which may delay or impact on the cost of the AFCS delivery, which is to be notified in accordance with the provisions of the Contract.
- 2.3.6. The parties referred to above, include but may not be limited to;
- 2.3.6.1. Information Management Team – provision of network infrastructure and computer hardware and software where applicable.
- 2.3.6.2. PTS bus operations team – provision of existing bus fleet for design, integration and fitment.
- 2.3.6.3. ETA AFCS operations team – provision of existing AFCS and operational processes and requirements for transition from existing to new AFCS turnkey delivery.
- 2.3.6.4. City's banking service provider – design, integration and EMV L3 certification of the acquiring function as part of the AFCS solution.

For the avoidance of doubt, the roles and responsibilities for certifications is indicated in the table below;

| CERTIFICATION | SUBJECT | CERTIFYING ORGANISATION | RESPONSIBLE | SUPPLIERS OBLIGATION | COST LIABILITY |
|---------------------------------------|---------------|-------------------------|----------------|--|----------------------|
| EMV L1 | Devices | EMVCo | Supplier | Supplier design & support docs to labs | Supplier |
| EMV L2 | Devices | EMVCo | Supplier | Supplier design & support docs to labs | Supplier |
| MC TIP, M-TIP and Visa ADVT VISA (L3) | Full system | Mastercard & Visa | Acquiring bank | Supplier design & support to acquiring bank | Acquiring bank |
| PA DSS | Equip & BO SW | PCI Association | Supplier | Supplier support to the audit | Supplier |
| PCI DSS | Full system | PCI Association | Acquiring bank | Supplier design & support to acquiring bank & Operator | Operator as Merchant |
| SANRAL NDOT ABT | Devices | SANRAL/NDOT | Supplier | Supplier | Supplier |

- 2.3.7. Notwithstanding the Supplier's responsibility above, the ETA wishes to establish hold points for the purposes of establishing technical baselines with a view to reducing technical risk and rework, as well as for the purposes of interim payment. These are to be largely based on the stages defined below.
- 2.3.8. With due consideration to the proposed stages, the deployment of the solution is to be phased to reduce operational risk. The first phase will involve the deployment of the CIPURSE and cash payment functionalities and the second, the ABT/EMV functionality. The Tenderer is to

elaborate on how it proposes implementing these phases without service interruption and limiting risks.

2.3.9. Proposed main project stages

| | PROJECT STAGE | INITIATION BASELINE | PRIMARY ACTIVITIES | COMPLETION BASELINE |
|---|--|---|--|---|
| 1 | Tender | <ul style="list-style-type: none"> - Invitation to tender – 1T-19865 | <ul style="list-style-type: none"> - Response to invitation to tender - Tender evaluation - Clarifications & Negotiations - Development of final offer & acceptance | <ul style="list-style-type: none"> - Purchaser's Letter of Award |
| 2 | Initiation | <ul style="list-style-type: none"> - Purchaser's Letter of Award | <ul style="list-style-type: none"> - Compliance to conditions precedent - Project initiation workshop & introduction to participating parties, etc. | <ul style="list-style-type: none"> - Conditions precedent met - Project initiation document (PID) |
| 3 | Design | <ul style="list-style-type: none"> - Signed PID | <ul style="list-style-type: none"> - Finalise business rules - Interaction with other participants - Detailed design - Design documentation - Design reviews - Design revisions - Sign-off | <ul style="list-style-type: none"> - Signed-off Design |
| 4 | Development, Integration & Qualification | <ul style="list-style-type: none"> - Signed-off Design | <ul style="list-style-type: none"> - Software development - Hardware modifications & production - Test facility installation - Factory Acceptance Testing - Pre-production sample inspection | <ul style="list-style-type: none"> - Factory Acceptance - Pre-production sample approval |
| 5 | Production | <ul style="list-style-type: none"> - Factory Acceptance - Pre-production sample Approval | <ul style="list-style-type: none"> - Manufacture - Inspection - Acceptance / rejection - Preparation & packaging - Shipment | <ul style="list-style-type: none"> - Receipt and acceptance of equipment in store |
| 6 | Installation & Integration | <ul style="list-style-type: none"> - Factory Acceptance - Equipment in stock - Successful completion of IAT, SAT, SIT - UAT-QA approval - Integrated production testing approval | <ul style="list-style-type: none"> - Site preparation - Site acceptance - Delivery site - Equipment installation - IAT, SAT, SIT - UAT in QA environment - Snag rectification - Verification testing | <ul style="list-style-type: none"> - Successful completion of IAT, SAT, SIT - UAT-QA approval - Equipment tested and commissioned on site and accepted as operation ready. |

| | PROJECT STAGE | INITIATION BASELINE | PRIMARY ACTIVITIES | COMPLETION BASELINE |
|---|--|---|--|---|
| | | | <ul style="list-style-type: none"> - Production testing and commissioning on site - Staff training - As-Is documentation - Acceptance for operation | <ul style="list-style-type: none"> - Taking over certificates |
| 7 | Defects Notification Period (DNP) / warranty | <ul style="list-style-type: none"> - Taking over certificate | <ul style="list-style-type: none"> - Identifying and reporting of defects - Rectification of defects - Maintenance skills transfer | <ul style="list-style-type: none"> - Notice of DLP completion - System Acceptance Certificate |
| 8 | Maintenance | <ul style="list-style-type: none"> - Taking over certificate | <ul style="list-style-type: none"> - Preventative maintenance - Corrective maintenance - Spares stock management - Repairs - Warranty repairs | <ul style="list-style-type: none"> - Monthly Maintenance reports |

Table 4: Proposed Project Stages

2.4. Project Workflow

The following diagram shows the anticipated workflow based on the above stages and the project phases, with further scope definition below;

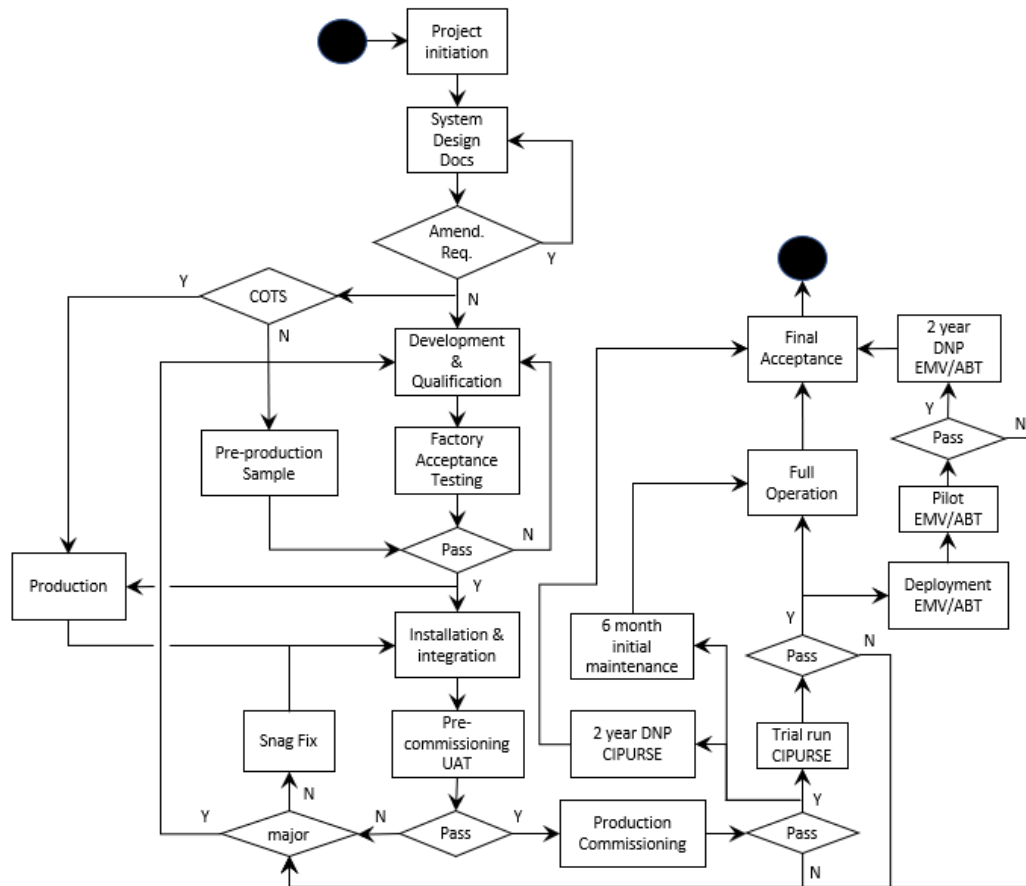


Figure 2 – Proposed Project Workflow

2.5. Project Milestones

The following are anticipated major milestones on the project to be shown in the tenderer's programme, some of which may include sub-milestones. This will depend on the Contractor's proposed work program and interim payment milestones.

| Milestone no. | Description |
|---------------|--------------------------------------|
| 0 | Submission of Tender (T0) |
| 1 | Contract award (T1) |
| 2 | Commencement (T2) |
| 3 | Design sign-off (T3) |
| 4 | Factory acceptance (T4) |
| 5 | Equipment delivered to stores (T5) |
| 6 | Site installation & integration (T6) |
| 7 | UAT-QA acceptance (T7) |
| 8 | Takeover for operation CIPURSE (T8) |
| 9 | Maintenance period (T9) |
| 10 | Takeover for operation EMV (T10) |
| 11 | Defects liability (T11) |

| Milestone no. | Description |
|---------------|------------------------|
| 12 | Final acceptance (T12) |

Table 5: Anticipated Major Milestones

2.6. Statement of Work

2.6.1. Tender Stage

2.6.1.1. Notwithstanding the instructions to Tenderers contained in this tender inquiry, the tenderer shall propose the AFCS solution in accordance with the stated requirements contained herein.

2.6.1.2. The Tenderer must confirm or qualify compliance to these requirements as specified under section 8 by means of a compliance statement in which each and every requirement must be cross referenced and responded to with comply (C), no comply (NC) or comply conditionally (CC) and included in returnable document RDD1.

2.6.1.3. In the event of conditional compliance, the Tenderer must clearly qualify the condition, failing which it will be assumed that the Tenderer is not compliant. Failure to submit a compliance statement will disqualify a bid.

2.6.1.4. Notwithstanding the above, the ETA aims inter alia to encourage innovative solution responses through the turnkey approach to this tender. Conditional compliance must be adequately qualified in the sense that the base requirement, despite any deviation, is either still adhered to and/or the benefit of the deviation to the ETA is clearly demonstrated by directly linking it to the objectives under §2.1. and/or how the consequent risk is mitigated.

2.6.1.5. The Tenderer is to provide full details of the proposed solution, architecture and the functionalities and products forming the solution as appropriate in returnable documents RDD 1 & 3. The Supplier must provide letters from any OEM whose products are used in the solution, authorising the Supplier to tender for and confirming it is certified to implement their products in the solution.

2.6.1.6. In addition to the above, the Supplier provide letters of confirmation related to the NDOT ABT solution to be provided from:

- **Hyphen Technology** – for the successful testing of the interface to Hyphen Technology for the acceptance and processing of top up transactions.
- **SANRAL** – for the successful testing of the interface to the transaction clearing house (TCH) for the transfer of ABT transactions to the TCH.

If Letters of Confirmation are not available due to certification processes and testing which is not yet complete, then the date by which certification of system testing is expected to be achieved, must be advised in the Supplier's bid response.

2.6.1.7. The Tenderer must demonstrate an understanding of the AFCS requirements and objectives in the above responses.

2.6.1.8. The tenderer must provide a list of reference sites which have been implemented by the Tenderer using the proposed major equipment components and solution in returnable document RDD 2.

2.6.1.9. At least one of the reference sites should include an EMV based contactless card solution, NDOT EMV, CIPURSE or MIFARE solution.

2.6.1.10. Returnable documents are listed under Section 10 of this tender inquiry, together with instructions for their completion.

2.6.2. Initiation Stage

2.6.2.1. The Tenderers bid responses shall undergo evaluation to identify the preferred Bidder. Evaluation criteria and scoring is contained in Section 10.

2.6.2.2. Following a process of clarifying final aspects of the Contract, the parties may negotiate the final terms and conditions of the Contract where permissible, prior to the letter of award being issued.

2.6.2.3. A Project Initiation meeting will be held with the project participants and stakeholders upon which the Supplier will be dependent for the delivery of certain deliverables. The purpose of the meeting will be inter alia to introduce the parties to enable future liaison, consultation and cooperation toward the turnkey delivery of the AFCS and to agree on the limits of mandates and protocols to do so.

2.6.2.4. The Project Initiation Document (PID), signed by all parties, will record such agreement, which once accepted by the parties, will form the basis of a working relationship between the parties and in terms of which the Supplier will be accountable for the turnkey delivery.

2.6.3. Design Stage

2.6.3.1. The purpose of the design stage is to finalise the design of the solution as provided in the Tenderer's proposal, the documentation thereof for review by the ETA and in order to begin with system development, integration and qualification as well as low risk procurement activities. These documents will also form the basis for technical reference for the operator in the future.

2.6.3.2. The design will therefore be conducted to a standard which is suitable for the AFCS software development, hardware manufacturing and/or procurement, installation and site requirements, test and acceptance plans, as well as interface specifications enabling the provision of ancillary interfaces, services, facilities and free issue materials (FIM's) by the Purchaser and/or others.

2.6.3.3. The design of the AFCS will proceed immediately upon the commencement date.

2.6.3.4. The design will also include the finalisation of the AFCS business rules based on the contracted solution, by the Supplier in conjunction with the Purchaser's technical team.

2.6.3.5. The Supplier is therefore cautioned not to proceed with the design aspects which are dependent upon the completion of the business rules, as no claims will be entertained for

sunken costs which may result. Such dependencies are to be clearly shown in the Supplier's programme.

- 2.6.3.6. The Supplier will be required to produce the following document deliverables during the life cycle of the Contract and prior to going live as a minimum, or as may be required in addition in order to fulfil the requirements of the Contract, for review by the Purchaser's technical team, the approval of which will not relieve the Supplier of any obligations under the Contract and the purpose of which will be to demonstrate compliance of the design to specified requirements;

| Ref. No. | Deliverable Documents | Description |
|----------|-------------------------------|---|
| FD1 | System Design Description | Descriptive information and technical specifications for all equipment included in the proposal, including a description of the overall system functionality. |
| FD2 | System Functional Description | Description of the functions of all system, sub-system components to LRU level including use cases, process flow, principle of operations. |
| FD3 | System Architecture | A schematic diagram and narrative showing all major system components and interfaces. |
| FD4 | Block diagrams | Block diagrams of each major system component to LRU level. |
| FD5 | Item list | List of all items to be supplied by the Contractor under the Contract, including part number, description, quantity and unit of measure. |
| FD6 | Hardware documentation | Product specifications, general arrangement drawings, functional and performance specifications. |
| FD7 | Cable plan | Cable and wiring specifications for interconnection between equipment and termination points, labelling convention and structure. |
| FD8 | Drawings | Diagrams and schematics required to clarify any of the above, to ensure a full understanding of the contractors proposed design. |
| FD9 | Software Description | Functional description of software, modules, sub-system in which to be installed and interfaces internal and external. |
| FD10 | Software User Documentation | User interface descriptions, screen flows, menu functions, etc. |
| FD11 | Interface control document | HW & SW interface specification for distribution to other stakeholders where applicable. |
| FD12 | Applicable standards | A list of standards to which the system and components will comply as an updated version of that submitted in the bid. |
| FD13 | Spares list | Updated spares list as included in the initial tender submission. |
| FD14 | Operator manuals | Manuals and standard operating procedures (SOP's) for the operation of the AFCS. |
| FD15 | Maintenance manuals | Manuals and standard operating procedures (SOP's) for the maintenance of the AFCS. |
| FD16 | Inspection and test plan | Test plan including the system FAT, PPS, IAT, SAT and SIT, which may be subject to revision prior to execution. |
| FD17 | Business rules | As documented during joint development sessions. |
| FD18 | Minutes of the Design Review | Including list of deficiencies and agreed corrective actions. |

| Ref. No. | Deliverable Documents | Description |
|----------|-----------------------------|---|
| FD19 | Design Approval Certificate | Certificate confirming acceptance of the contractor's design. |

Table 6: Design Document Deliverables

2.6.4. Development, Integration and Qualification stage

2.6.4.1. The purpose of this stage will be to develop the necessary software and hardware in accordance with the approved final design, and to assemble a representative AFCS, inclusive of at least one representative sample of each major component of the system in a factory environment, capable of demonstrating full system functionality.

2.6.4.2. As the Supplier will be responsible for a working system, it is proposed that the FAT installation be performed as part of the installation of the test facility referred to under §2.6.4.3. below. In this way, the acceptance of the test facility and the FAT, may be dispensed with simultaneously.

2.6.4.3. The purpose of the above system shall be two-fold;

2.6.4.3.1. Factory acceptance testing (FAT)

- a) The FAT shall be performed to demonstrate pre-implementation compliance of the system to all functional, performance and technical requirements.
- b) The above testing shall be conducted in accordance with a test plan to be developed by the Supplier and submitted for review and approval of the Purchaser's technical team in advance of the testing, which shall enable the testing of the system for compliance to all requirements; functional, physical, performance and business rules.
- c) The Supplier will be responsible for providing all testing tools, equipment, etc. required for the successful execution of the tests at the Supplier's expense, however, the test facility (room) shall be provided by the Purchaser as FIM and the FAT must therefore be held in Durban.
- d) Where such compliance cannot be proven in this environment (e.g. standards compliance), certificates are to be obtained from applicable authorities, certifying compliance and/or the Supplier's own test results are to be provided.
- e) The Purchaser's technical team shall be invited to attend the FAT with notice of at least fourteen days.
- f) The results of all tests together with supporting certificates of compliance are to be captured in a test book, which will include a deficiency or non-compliance list which is to be rectified by the Supplier by a reasonable and mutually agreed date.
- g) The Supplier will invite the Purchaser's representatives with notice of at least fourteen days to attend a second test session during which the rectified deficiencies are to be proven and cleared from the list if compliant.

- h) The approval of the FAT test results will permit the Supplier to proceed with the implementation of the system, subject to the approval of the pre-production samples for production where applicable.
- i) The Supplier will be required to produce the following document deliverables as a minimum, or as may be required in addition in order to fulfil the requirements of the Contract, for joint review by the purchaser's technical team, the approval of which will not relieve the supplier of any obligations under the Contract;

| Ref. No. | Deliverable | Description |
|----------|-----------------------------------|---|
| FAT1 | Factory Acceptance Test Procedure | Detailed approach to FAT, including test procedures as derived from the Inspection and Test Plan (FD16) |
| FAT2 | Factory Acceptance Test Book | Compilation of test results. |
| FAT3 | Test certificates | 3 rd party test certificates |
| FAT4 | Minutes of FAT review | Including list of deficiencies and agreed corrective actions. |
| FAT5 | Defect tracking list | A tracking list containing the agreed defects, severity levels, corrective actions, delivery dates, owners, status, to be reviewed and updated as agreed. |
| FAT6 | FAT approval certificate | Certificate confirming acceptance of the Supplier's FAT and approval to proceed with the system implementation, subject to PPS approval. |

Table 7: Factory Acceptance Test Document Deliverables

2.6.4.3.2. Pre-production sample (PPS) inspection

- a) The purpose of the PPS inspection is to verify the acceptability of major hardware (HW) components which are either significantly modified from the standard original equipment manufacturers (OEM's) specification, or which does not yet exist at the time of tendering and is yet to be proto-typed. (COTS equipment need not undergo PPS).
- b) The representative samples of the above components of the AFCS forming the subject of the FAT will be inspected for compliance to the design specifications in fit, form and function, against the Supplier's design documentation, jointly reviewed and approved by the Purchaser's authorised representative or delegate in advance of the testing.
- c) The PPS may occur prior to the FAT and after design approval at the Supplier's convenience where appropriate, to avoid unnecessary delay to production.
- d) Where such compliance cannot be proven in the FAT environment (e.g. standards compliance), certificates are to be obtained from applicable authorities or manufacturers, certifying compliance.

- e) Where modifications to previously certified equipment and/or software are implemented which invalidates such certification, the equipment and/or software must be recertified.
- f) The Purchaser will be responsible for providing the test facility required for the successful execution of the tests/inspections, however the required tools, equipment, installation and commissioning costs should be included in the Tenderer's proposal.
- g) The inspection may be performed together with the FAT session with due consideration to time and cost economy however, the results will be captured in a separate report.
- h) The results of all tests together with supporting certificates of compliance are to be captured in a test book, which will include a deficiency or non-compliance list which is to be rectified by the Supplier by an agreed date.
- i) The Supplier will invite the Purchaser's representatives to attend a second inspection session during which the rectified deficiencies are to be demonstrated and cleared from the list if compliant. This may again be scheduled to occur together with the rectification of the FAT deficiencies for the purposes of economy and must therefore occur in Durban.
- j) The approval of the test results will permit the Supplier to proceed with the production of units for delivery to site and subsequent implementation.
- k) The Supplier will be required to produce the following document deliverables as a minimum, or as may be required in addition in order to fulfil the requirements of the Contract, for joint review by the Purchaser's technical team, the approval of which will not relieve the Supplier of any obligations under the Contract;

| Ref. No. | Deliverable | Description |
|----------|---------------------------------|---|
| PPS1 | Pre-production sample test plan | Detailed approach to PPS as derived from the Inspection and Test Plan (FD16) |
| PPS2 | Pre-production sample test book | Compilation of test results. |
| PPS3 | Test certificates | 3 rd party test certificates |
| PPS4 | Minutes of PPS review | Including list of deficiencies and agreed corrective actions. |
| PPS5 | Defect tracking list | A tracking list containing the agreed defects, severity levels, corrective actions, delivery dates, owners, status, to be reviewed and updated as agreed. |
| PPS6 | PPS approval certificate | Certificate confirming acceptance of the supplier's PPS and approval to proceed with the system procurement and manufacture. |

Table 8: Pre-Production Sample Document Deliverables

2.6.5. Production Stage

- 2.6.5.1. The Supplier will be responsible for the management of the manufacturing process and for ensuring compliance of the goods to approved specifications in accordance with the Supplier's proposed and accepted quality management plan as included in returnable tender documents RDD3 and RDD9, and as further elaborated and finalised in the design stage where necessary.
- 2.6.5.2. The Purchaser reserves the right in accordance the terms and conditions of Contract, to inspection and the witnessing of tests during the production process.
- 2.6.5.3. The Supplier will be responsible for the maintenance and archiving of quality documentation which will provide traceability from delivery of materials for production to in-process quality control, non-conformances, concessions, test certificates, etc.
- 2.6.5.4. The Supplier will produce such documentation upon demand.
- 2.6.5.5. Each major equipment component is to be clearly and indelibly serialised to LRU level, supported by a build certificate listing the serial numbers of LRU's contained within the assembled unit as well as certifying compliance to specification.
- 2.6.5.6. The Supplier is to implement a system configuration control process, whereby the serial numbers of any units replaced after delivery, as well as the version numbers of software and firmware, are to be captured and updated on a continuous basis to contemporary status.
- 2.6.5.7. The Supplier is to propose a process for approval of the Purchaser's authorised representative, which will provide a contemporary and historical record of the location of all major equipment, sub-components and LRU's.
- 2.6.5.8. The Supplier will be responsible for the appropriate packaging of the equipment units for delivery and interim storage until installation and acceptance on site.
- 2.6.5.9. The Supplier will be required to produce the following document deliverables as a minimum, and to produce the same upon demand;

| Ref. No. | Deliverable | Description |
|----------|--|--|
| PRD1 | Equipment conformance certificates (Quality Control) | Proof of conformance of all items shipped and delivered to the Supplier's or Purchaser's store, as agreed. |
| PRD2 | System configuration record | A record of all part and serial numbers, parent and child. |
| PRD3 | Software certificates | Software conformance certificates. |
| PRD4 | Software licenses | All software licenses required for the legitimate use of the software by ETA. |

Table 9: Production Deliverables

2.6.6. Installation and integration

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- 2.6.6.1. The Supplier will be responsible for the delivery to site of all goods forming part of the AFCS with the exception of the items provided by others and/or FIM's as detailed under the interface sections included in the technical requirements as well as §2.7.1.1.
 - 2.6.6.2. As part of the design deliverables, the Supplier is required to provide final interface requirements for the infrastructure and bus construction teams in order for the requisite site preparation activities to be performed prior to installation, in accordance with the protocols established in the PID.
 - 2.6.6.3. Notwithstanding the installation documentation provided by the Supplier, a method statement for each site and/or bus configuration, is to be provided which shall detail the scope of work to be performed, works area, safety and security risks, access routes, materials, plant and equipment to be used, storage areas, potential impacts on adjacent systems and activities, etc.
 - 2.6.6.4. The Purchaser's representative as well as relevant stakeholders, shall review the method statement prior to granting site access and any site work beginning.
 - 2.6.6.5. When the requisite site interfaces have been prepared or supplied by others, the Supplier will inspect and accept the site and/or bus as ready for installation or raise deficiencies to be rectified. This process will form part of the coordination responsibility detailed under §2.3.6. and in accordance with the PID.
 - 2.6.6.6. Once the Supplier accepts that the site and/or bus is ready, is in possession of an approved method statement and is in compliance with site access procedures which may be implemented by the Purchaser or its contractors and stakeholders, from time to time, work may proceed on site.
 - 2.6.6.7. The Supplier will be responsible for the maintenance of safety standards applicable to the execution of the work in accordance with the Occupational Health and Safety Act no. 85 of 1993 (as amended), OHS Act 14 (or latest applicable legislation) and the general safety rules implemented on site and/or bus by the Purchaser or its contractors and stakeholders with overall possession of the site.
 - 2.6.6.8. To the above end, the Supplier is reminded to keep a site diary and attendance register and will be required to report on safety incidents and risks.
 - 2.6.6.9. The Supplier shall take cognisance of the fact that some sites and buses in particular, constitute public facilities and that all cables and materials installed in these facilities may not pose a hazard to the public, particularly with regard to fire and smoke emissions.
 - 2.6.6.10. The above is to be considered in the design process and the Supplier will be required to certify that the system and components forming the AFCS supplied are inherently safe for use within such a public facility thus indemnifying ETA in this regard.
 - 2.6.6.11. Notwithstanding the above, all cabling shall comply with SANS 10142 regulating the wiring of premises.

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- 2.6.6.12. All cables (origin and destination), termination points, circuit breakers, network ports and sockets are to be labelled in accordance with a system wide labelling convention, to be approved by the Purchaser or asset owner.
- 2.6.6.13. Once the Supplier has installed the equipment on a fixed site, which shall include mounting, fastening, connections and terminations, the Supplier shall notify the Purchaser that the equipment is available for inspection, which shall occur at the Purchaser's discretion.
- 2.6.6.14. In the case of buses, time is of the essence, to avoid operational downtime. Inspection of the first installation of each bus type or configuration will be mandatory, prior to proceeding with the remaining buses.
- 2.6.6.15. Suppliers are to note that buses may not be available for installation during normal working hours. Tenderer's pricing should therefore include provision for any additional related costs, equipment, tools, etc. No additional costs will be entertained in this regard post Contract award.
- 2.6.6.16. The Supplier is to conduct installation and integration in a staged manner, namely;
- 2.6.6.16.1. Installation Acceptance Test (IAT) is an inspection check list to be applied to the physically installed equipment. The Supplier may not power up the equipment until the IAT has been successfully conducted.
- 2.6.6.16.2. Site Acceptance Test (SAT) is the testing of each major equipment component on a site or bus, in a stand-alone mode. The purpose of the SAT shall be to test the functions and features of the installed units on site, without full integration with the remainder of the system.
- The Supplier shall be responsible for the creation of software applications or routines which may be required to facilitate this.
- As the implementation of the system requires portions of the works to continue functioning under operational conditions, the SAT of a portion of the system, e.g. as each station or bus is completed, shall not interfere with the parts of the system which are already taken over and in operation.
- 2.6.6.16.3. Site Integration Test (SIT) is the testing of the site and/or bus once linked to the rest of the system. As the implementation of the system requires portions of the works to continue functioning under operational conditions, the SIT of a portion of the system, e.g. as each station, bus or route is completed, shall not interfere with the parts of the system which are already taken over and in operation as well as the existing system.
- The Supplier shall therefore provide a system test environment, in which a range of test media may be used across a variety of origin and destinations, routes and buses, in which all system functionality and rules may be comprehensively tested without contaminating the operational environment.
- All costs including but not limited to banking fees, related to the above, shall be provided at the Supplier's expense.

- 2.6.6.17. The Supplier shall develop a test plan for joint review and approval by the Purchaser's authorised representative. This plan shall make provision for the transition of the PTS from the status quo to the new AFCS without disturbing operations.
- 2.6.6.18. The results of the IAT, SAT and SIT shall be captured in a test book per site, with sections covering each sub-system.
- 2.6.6.19. The Purchaser may request the witnessing of tests and the inspection of test documentation at its discretion, otherwise apart from the initial buses of each type, the installation and integration stage will be conducted by the Supplier in conjunction with relevant stakeholders without direct involvement of the Purchaser.
- 2.6.6.20. After the installation and integration of each bus, the bus will be required to go into operation using on-board cash payment and ticket issuing as a minimum, with full back-office functionality, accounting and reporting. The Supplier's implementation plan shall provide a solution to the transition from the current AFCS to the new.
- 2.6.6.21. The Supplier will be required to produce the following document deliverables as a minimum upon request, or as may be required in addition in order to fulfil the requirements of the Contract, the acceptance and/or approval of which will not relieve the Supplier of any obligations under the Contract;

| Ref. No. | Deliverable | Description |
|----------|--|---|
| INS1 | Bus installation drawings | Technical drawings of equipment installations, build interfaces, wiring schematics, DB layouts, etc. for each vehicle configuration, i.e. Durban Transport, People Mover and Mynah. |
| INS2 | Installation documents | Installation instructions for site/bus. |
| INS3 | Method statement | Approved methods statements, which may be modified to suit the specific site/bus. |
| INS4 | Installation and Integration Test Book | Test results for IAT, SAT and SIT signed by installer. |
| INS5 | Site attendance register | As maintained during installation by the supplier. |
| INS6 | Site diary with photographic records | As maintained before, during and after installation by the supplier. |

Tables 10: Installation and Integration Document Deliverables

2.6.7. Pre-commissioning stage (as part of installation costs)

- 2.6.7.1. The purpose of this stage is to perform user acceptance testing (UAT) on the installed AFCS, or a section thereof, in a quality assurance (QA) environment, prior to testing and commissioning in the production environment.
- 2.6.7.2. The Purchaser shall be responsible for the development of the UAT test schedule and plan, which shall be issued to the Supplier in advance in preparation for the UAT.

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- 2.6.7.3. The Purchaser will be in attendance for the duration of the performance of the UAT and shall provide adequate resources to support the Purchaser in the performance of the UAT.
- 2.6.7.4. The Purchaser will capture the test results, as witnessed by the Supplier, and will compile and issue a test report indicating any snags and deficiencies, which will be categorised as critical, major or minor.
- 2.6.7.5. At the discretion of the Supplier, a review session will be conducted in order to clarify any issues related to the report, the minutes of which will be captured and distributed to the Parties.
- 2.6.7.6. The Supplier will notify the Purchaser as to when the deficiencies will be rectified and ready for retesting and the Parties will agree on a mutually suitable date to retest.
- 2.6.7.7. The scope of retesting will depend on the extent and severity of the deficiencies. This could necessitate a full retest or performance of selected tests to clear snags.
- 2.6.7.8. Upon successful clearing of all critical and major snags, as well as the provision of clearing dates for the minor snags, the Purchaser will issue a UAT-QA certificate.
- 2.6.8. Commissioning Stage (as part of Installation costs)
- 2.6.8.1. The purpose of the commissioning stage is to perform the UAT in a production environment as a precursor to trial running of the system and ultimately going live.
- 2.6.8.2. The same procedure as with pre-commissioning will be followed, with the difference being that testing will be performed in the production environment.
- 2.6.8.3. Upon successful clearing of all critical and major snags, as well as the provision of clearing dates for the minor snags, the Purchaser will issue a taking-over certificate. This will also signal the start of the Supplier's six (6) month maintenance and ongoing support obligations.
- 2.6.8.4. An initial two (2) month trial run will be conducted during which the CIPURSE and cash ticketing functionality will be used, with a view to migrating as many commuters as possible to the CIPURSE card on a stable AFCS. Notwithstanding the compliance of the AFCS to the contractual requirements in general, the following objectives and pass criteria;
- 2.6.8.4.1. Verify the adequacy of all SOP's, including;
- a) System administration
 - b) Card and product sales
 - c) Driver cashier and dispatch functionality (see workflow diagram Figure 5)
 - d) Driver cash ticket issuing
 - e) Passenger CIPURSE card usage
 - f) Card replacement and refunds where applicable
- 2.6.8.4.2. Verify the competency of operating staff in the above context.
- 2.6.8.4.3. Verify the accuracy of all reports related to the above.

- 2.6.8.4.4. The pass criteria will be the absence of any major issues from the above. The process of clearing such issued will follow the process indicated in the process flow diagram in Figure 2.

The Supplier will be responsible for maintaining an issue tracking list which will include the following as agreed with the Purchaser; uniquely identify each issue, a description of the issue, the severity categorisation, corrective action required, date to be corrected, issue owner and current status.

Unless otherwise mutually agreed, a weekly meeting will be held to review the tracking list and to agree on corrective action planning. This will continue until clearing of all major issues.

- 2.6.8.5. After the passing of the trial operation, and whilst normal operations will proceed with cash and CIPURSE functionality, the EMV and NDOT ABT functionality is to be deployed and piloted for a period of six (6) months with a limited user group, typically controlled by a whitelist distributed to buses servicing selected depots and routes.

The purpose of the pilot will be to ensure that the bank acquiring (EMV) and SANRAL clearing (NDOT ABT) is correctly and reliably functioning before the opening of the functionality to all commuters. Notwithstanding the compliance of the AFCS to the contractual requirements in general, the following objectives and pass criteria will apply;

- 2.6.8.5.1. Adequacy of any specific EMV/ABT related SOP's not covered during the trial run, including handling and resolution of customer queries / disputes.
- 2.6.8.5.2. All EMV media, VISA, Mastercard, and mobile payments function correctly and reliably when used on the AFCS, including blocking of declined cards.
- 2.6.8.5.3. Automatic unblocking of cards when debt has been cleared.
- 2.6.8.5.4. Automatic reversal and rectification of overcharges to EMV cards.
- 2.6.8.5.5. CIPURSE media with NDOT ABT mobility accounts function correctly and reliably when used on the AFCS, including validity lists and card balance updates.
- 2.6.8.5.6. Products issued on the home network continue to function on CIPURSE cards.
- 2.6.8.5.7. Verify that device transaction speeds for all media are 500ms or less.
- 2.6.8.5.8. EMV cards are not declined by banks unless there is a valid reason.
- 2.6.8.5.9. All reporting, clearing, settlement and reconciliation is reliable, accurate and correct for EMV and ABT.
- 2.6.8.5.10. No major anomalies exist.
- 2.6.8.5.11. PCI compliance is confirmed.
- 2.6.8.5.12. Acquiring bank approval to go live is given.

- 2.6.8.6. The above will signify the start of the twenty-four-month Defects Liability Period (DLP) applicable to the CIPURSE and EMV/ABT functionality respectively, after which a final

acceptance certificate will be issued by the Purchaser, which will be survived by the Supplier's support obligations.

- 2.6.8.7. The Supplier is to include its proposed approach to the trial run and pilot in the returnable document RDD 3, detailing the resourcing and support to be provided by the Supplier during this period. The response should demonstrate and rely on the Supplier's experience in the formulation of any suggestions and proposals in order to address the Purchaser and other stakeholder's objectives in the above regard.

2.6.9. Warranty / DLP Stage

- 2.6.9.1. Notwithstanding the obligations of the Supplier under the Contract during the DLP, the Supplier shall warrant all equipment and workmanship, including hardware, software and all other project deliverables, for a period of two (2) years from the date of issuance of the associated take-over certificate.
- 2.6.9.2. The Supplier will repair or replace any item which fails to perform as specified in the Contract and technical documents, or in accordance with its fitness for purpose.
- 2.6.9.3. All associated costs of material, labour, shipping and any and all ancillary costs shall be borne by the Supplier and is deemed to be included in the warranty line item in the cost schedules unless malicious or exceptional damage has occurred.
- 2.6.9.4. The system configuration control process initiated during the production stage is to be maintained until the completion of the maintenance obligation (where after the Purchaser will assume responsibility for this) and shall be used to track the repairs and replacement of the hardware parts as well as the repair, updating or modification of software during the life cycle of the AFCS.
- 2.6.9.5. The above process will include marking such repairs as warranty or non-warranty related.
- 2.6.9.6. The Supplier shall ensure that OEM warranty agreements are extended where necessary in order to meet the contracted warranty period, and that where standard warranties are offered which exceed that period, the warranty is ceded to the Purchaser.
- 2.6.9.7. The Tenderer shall submit a schedule as part of the tender document, indicating the warranty period for each major component of the system under returnable document RDD 1 and RDD 3 where appropriate.
- 2.6.9.8. Where LRU warranties differ within a major component, this is to be detailed but may not be less than two (2) years from date of taking-over.
- 2.6.9.9. The time period for repair under warranty shall be a reasonable time as agreed upon by the Purchaser under the prevailing circumstances and the Supplier will ensure that sufficient warranty spares are held in stock locally to cater for this without the need for ordering replacement parts.

- 2.6.9.10. The Supplier will be required to produce the following document deliverables as a minimum, or as may be required in addition in order to fulfil the requirements of the Contract, the acceptance and/or approval of which will not relieve the Supplier of any obligations under the Contract;

| Ref. No. | Deliverable | Description |
|----------|--|--|
| WTY1 | Warranty schedule | List of items with warranty start and end dates |
| WTY2 | As-built system configuration document | System asset, part and serial numbers, software versions, and locations. |
| WTY3 | Monthly warranty repair report | List of all warranty faults and repair details. |
| WTY4 | Monthly system configuration status report | Update of WTY2 based on any approved changes to the system. |

Table 11: Warranty / DLP Document Deliverables

2.6.10. Training

2.6.10.1. Operator training

- 2.6.10.1.1. At least one (1) month prior to the taking over of the AFCS or portions thereof for operation, the Supplier will provide the training of ETA training staff in the operation of the system, i.e. training the trainer, with the exception of the central system, upon which full training of the ETA staff will be provided.
- 2.6.10.1.2. Due to the turnkey nature of the Contract, not all aspects of the proposed solution and training may be clear to the ETA and may not therefore be comprehensively addressed in the bid inquiry. The Supplier is therefore to address such deficiencies in the training plan provided in the bid response under returnable document RDD 10, such that the training content is fit for the purpose of enabling ETA to operate the system autonomously.
- 2.6.10.1.3. The operations manuals developed by the Supplier will form the basis of the training however the Supplier will be required to develop presentations, videos and/or other media and materials necessary for the comprehensive training of ETA staff, which will include training facilitator's guides.
- 2.6.10.1.4. The Supplier shall prepare a training programme with materials for the joint review and approval of the Purchaser.
- 2.6.10.1.5. The Purchaser will provide a suitable venue for the training of personnel, and the test facility is proposed for this purpose.
- 2.6.10.1.6. Training must comprise a theoretical and practical component.

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- 2.6.10.1.7. The training course must include the testing of attendees and the Supplier's written confirmation that each attendee is competent in the operation of the system / sub-system or equipment items, as well as in the provision of further training to other operators.
- 2.6.10.1.8. The Supplier shall provide for the following training sessions as a minimum and the Tenderer shall provide details of the approach, duration, content and intended outcomes of the proposed training in returnable document RDD 10;
- a) Central system user and administrator training
 - b) Depot system user and administrator training
 - c) On-board system user training
- 2.6.10.1.9. The above shall include first line maintenance tasks and troubleshooting to be performed by operators.
- 2.6.10.1.10. The Supplier shall supply equipment for the training venues.
- 2.6.10.2. Maintenance training
- 2.6.10.2.1. At least one (1) month prior to the taking over of the works or equipment or portions thereof, the Supplier will provide the training of selected ETA technical staff in the full maintenance of the system.
- 2.6.10.2.2. The purpose of this training will be to provide ETA technical staff with in-depth knowledge in the maintenance of all aspects of the system, for the purposes of performing the full maintenance of the system and is therefore to be fit for such purpose.
- 2.6.10.2.3. The maintenance manuals developed by the Supplier will form the basis of the training however the Supplier will be required to develop presentations, videos and/or other media and materials necessary for the comprehensive training of ETA staff.
- 2.6.10.2.4. The Supplier shall prepare a training programme with materials for the joint review and approval of the Purchaser's authorised representative.
- 2.6.10.2.5. The Purchaser will provide a suitable venue for the training of personnel, and the test facility is proposed for this purpose.
- 2.6.10.2.6. Training will comprise a theoretical and practical component.
- 2.6.10.2.7. The training course will include the testing of attendees and the Supplier's written confirmation that each attendee is competent in the maintenance of the system / sub-system or equipment items.
- 2.6.10.2.8. The Supplier shall provide for initial training sessions as follows and the Tenderer shall provide details of the approach, duration, content and intended outcomes of the proposed training to be included in returnable document RDD 10;
- a) Central system maintenance including application installation in the production

- environment as well as changes to configurable parameters, e.g. fares.
- b) Depot system maintenance
 - c) Bus on-board equipment maintenance
 - d) Point of sale equipment maintenance

The following document deliverables form part of the Supplier's scope of training obligations and shall be delivered for review no later than three (3) months in advance of the training;

| Ref. No. | Deliverable Documents | Description |
|----------|-------------------------------|--|
| TRG1 | Training manuals | Training manuals for operations and maintenance. |
| TRG2 | Training instructor's manuals | Manuals to be used for training of operator and maintenance staff in the future. |

Table 12: Training Document Deliverables

2.6.11. Maintenance and Support

2.6.11.1. The Tenderer must provide a dedicated AFC Technician Onsite for Support and Maintenance at each of the 4 Bus Depots from Monday to Friday from 04h00 to 18h00 and on Saturday from 05h00 to 13h00.

2.6.11.2. The Tenderer must provide a dedicated AFC Backoffice/Software Engineer Onsite for Support and Maintenance at the central Bus Depots from Monday to Friday from 07h30 to 16h00.

2.6.11.3. The Tenderer shall be responsible for the full maintenance of the AFCS for a period of six months after the system 'go live', as may be extended at the Purchaser's discretion with minimum two (2) month notice period.

2.6.11.4. The maintenance associated with each section or portion of the AFCS, will be activated upon issuance of the relevant taking over certificate.

2.6.11.5. The Purchaser shall assume full responsibility for the maintenance of the field equipment as well as the back-office administration at the end of the six (6) month period.

2.6.11.6. During the six (6) month period, the Purchaser's maintenance staff will shadow the Supplier's staff to effect a smooth transition. The Tenderer must transfer to the Purchaser's maintenance staff during this period and demonstrates this commitment through statements in the bid response. Note that the Purchaser's policy does not allow access by the Supplier to the production environment, unless under the supervision of authorised staff, and access rights will therefore only be granted on a case-by-case basis if absolutely required. The Tenderer is to take the availability of the Purchaser's staff into consideration when resourcing the maintenance for the six (6) month period, so as to provide the Purchaser with a cost-effective option. This is to be detailed in the Supplier's maintenance proposal in returnable document RDD4.

- 2.6.11.7. Following the initial six (6) month period, the scope of the Supplier's responsibility will be reduced to providing software support and upgrades which fall outside of the scope of system administration. The total support period, including the initial six (6) month period will be Ten (10) years.
- 2.6.11.8. The Tenderer will be responsible for the provision of all materials, consumables, labour, tools and special tools, and anything else required in order to provide the applicable maintenance and support service.
- 2.6.11.9. The Tenderer shall provide monthly reports or information as required, regarding maintenance status including but not limited to, fault rectification statistics, warranty repairs, out of warranty repairs, spares stock levels, to an agreed reporting format.
- 2.6.11.10. The Tenderer is to provide a maintenance plan in returnable document RDD4 as part of the tender submission, which will meet the following requirements as a minimum and will apply to the Supplier for the first six months of maintenance and to the Purchaser thereafter;

a) Preventative maintenance

- i This will include routine maintenance activities required in order to preserve the life of the AFCS whilst promoting and achieving the desired availability of an overall 99.5% for the AFCS.
- ii The Tenderer is to provide a provisional preventative maintenance activity list as part of the maintenance proposal, which is to be further defined during the design phase.
- iii The list is to clearly identify any activities such as cleaning, which are to be conducted by the operator as Level 0 maintenance, as defined below.
- iv The maintenance of the AFCS FIM's will be conducted by the ETA Information Management Unit (IMU) but shall nevertheless be included in the activities list and training content by the Supplier.
- v Preventative maintenance activities may not disturb operations and the supplier must therefore identify which activities are to be conducted outside of operating hours (including weekends).
- vi The maintenance manual is to contain a preventative maintenance section, detailing the procedures, tools, materials, consumables, etc. required in order to perform these activities.
- vii Preventative maintenance must be performed on Sundays.

b) Corrective maintenance

- i Corrective maintenance will occur at the following levels;
 - a Level 0
This will be performed by the system operator, based on troubleshooting procedures detailed in the maintenance manuals and will be distinguished by not requiring any tools for its performance.
 - b Level 1
This will be performed by the Purchaser's maintenance staff and the

Suppliers maintenance staff and will include the replacement of LRU's, with minimal service interruption. The maintenance staff will ensure that in the event of an LRU replacement that no transactional data is lost, and the Supplier will provide for procedures in the maintenance manual for data recovery and transfer to the central server where applicable.

This level of maintenance is to be provided for the full system operating hours.

The Supplier must provide technical maintenance support staff onsite at the following Bus Depots: Ntuzuma, Umalzi, Rossburg, Central.

These resources must be dedicated to the Bus Depots on weekdays (Including Public Holidays) from 04h30 to 13h00 and on Saturdays from 06h00 to 13h00.

c Level 2

Workshop repairs below LRU level (component level) conducted by the Supplier.

d Level 3

Repairs below component level conducted by the OEM.

2.6.11.11. The Supplier is to provide a maintenance management tool which is further detailed in the central system requirements specification, which will provide for *inter alia*;

- a) Capturing of fault occurrence and related details from the field
- b) Capturing of call out details
- c) Capturing of corrective action taken, including part swap
- d) System configuration status
- e) Closure of fault report

2.6.11.11.1. For the avoidance of any doubt, the maintenance management tool is a contract deliverable. If a commercial off-the-shelf (COTS) tool is provided, the license is to be registered to the ETA and the Tenderer should include any configuration setup costs to meet requirements, in the Tender price. The Supplier is to provide comprehensive training in the usage of the tool as part of the maintenance training.

2.6.11.11.1.1. The severity of system faults is to be classified as follows;

a) Minor

A failure which has no significant effect on system functionality and/or loss of revenue.

b) Major

A failure which results in a significant loss in system functionality and/or loss of revenue.

c) Critical

A failure which threatens the overall system functionality.

d) Catastrophic

A complete loss in system functionality.

The response and repair times associated with the above are as follows (note that restore time is measured from time of fault reporting to the Supplier until fault closure);

| SEVERITY CATEGORY | RESPONSE TIME | RESTORE TIME |
|----------------------|------------------|-----------------|
| Minor | 24 hrs | 32 hrs |
| Major | 4 hrs | 8 hrs |
| Critical | 2 hrs | 4 hrs |
| Catastrophic | 1 hr | 3 hrs |

Table 13: Response and Repair Times

2.6.11.12. Spares supply

- 2.6.11.12.1. The Tenderer is to provide a priced provisional spares list from the provisional LRU list, detailing quantities anticipated for a 10 year maintenance period, per annum, based on the original equipment manufacturer (OEM's) stated mean time between failures (MTBF) and mean cycles between failures (MCBF).
- 2.6.11.12.2. The spares list is to be developed from the LRU list as provided in the Tender submission and as further elaborated during the design stage.
- 2.6.11.12.3. In addition to spares, the Tenderer shall provide a list of 3rd party software license renewals that will be required for the period of the maintenance together with costs, where applicable. Note that the Purchaser will not pay license fees for the vendor applications.
- 2.6.11.12.4. The spares list and quantities are to be further defined during the design stage, with part numbers and OEM details.
- 2.6.11.12.5. The Supplier will be responsible for the provision of replacement parts required during the warranty period, unless the spares are required as a result of malicious damage to equipment, in which case the purchaser will be responsible for payment of those spares. The Supplier will however procure a spares stock of 10% for the maintenance of the system in accordance with the unit prices quoted in the spares price schedule. The Supplier is responsible for the holding costs of the spare parts.
- 2.6.11.12.6. Sufficient spares shall be available from warranty stock in addition to the 10% spares stock, so as to ensure the desired system availability of 99.5%.
- 2.6.11.12.7. The Supplier shall ensure that spares remain available for a period of ten (10) years with due consideration to obsolescence. New product evolutions which are backward compatible will be acceptable.
- 2.6.11.13. The Tenderers maintenance plan contained in returnable document RDD 4, is to elaborate on the above in terms of the full scope of services proposed for inclusion, delivery method, staff quantities and competencies, and any other factors and benefits that would make the Tenderers proposal a cost effective and efficient option to ETA.
- 2.6.11.14. The Supplier will be required to produce the following document deliverables as a minimum during the six (6) month period, or as may be required in addition in order to fulfil the requirements of the services, the acceptance and/or approval of which will not relieve the Supplier of any obligations;

| Ref. No. | Deliverable | Description |
|----------|--|--|
| MNT1 | Monthly maintenance report | PM activities conducted as well as CM with status. |
| MNT2 | Performance report | Repair response times, turnaround times and system availability. |
| MNT3 | Monthly system configuration status report | Update of WTY2 based on any approved changes to the system. |

Table 14: Maintenance and Support Document Deliverables

2.7. System Requirements

2.7.1. General

The following requirements will address the functional, performance, physical and interface requirements of the major components of the AFCS, including those items which will be provided to the Supplier by the Purchaser or others as free issue material or FIM.

Quantities or major components are reflected in the pricing schedule under Section 8.

2.7.1.1. Free Issue Materials (FIM)

As will become clear from the following paragraphs, the definition of FIM is not limited to materials but includes labour and services as applicable.

2.7.1.1.1. Computer Hardware and Software

The Purchaser, more specifically the Information Management Unit (IMU) has access to negotiated government procurement schemes for information technology (IT) products and shall therefore supply the items described below free of charge, subject to the Supplier's detailed specifications.

It should be noted that apart from the Original Equipment Manufacturers (OEM's) warranty, the purchaser accepts no further responsibility for the FIM and this will be considered to form an integrated part of the Supplier's system, for which it shall bear full responsibility.

Any workstation or server shall be supplied, installed and maintained by the Purchaser. This shall include any peripherals and supporting equipment such as UPS's, Screens, Keyboards, Mouse, etc as well as operating systems and general office applications such as e-mail, word processing, etc.

Exceptions to the above are any workstation or peripheral that might be integrated into other items such as a Ticket Office Machine (TOM) which forms a sealed integrated unit, and/or items of a proprietary nature as further defined below.

The Supplier shall provide the specifications and requirement for the aforesaid equipment and software. The Purchaser's supply shall also include the supply and installation of the operating system.

It shall be the Supplier's responsibility to install, configure software (AFCS software, databases, etc) to implement the AFCS on site up to pre-production stage, whereafter the Supplier will provide support to the Purchaser to implement in the production environment, in accordance with Purchasers policy.

For the avoidance of doubt, the Tenderer is to clearly indicate items that are to be

supplied by the Purchaser in the offer. In the absence of such indication, it will be assumed that any other items form part of the Supplier's supply.

2.7.1.1.2. Communication infrastructure

The IMU is also responsible for the provision and maintenance of data communication services to the ETA and throughout the municipality. The AFCS network will therefore form part of the Municipality's communication infrastructure.

The Supplier shall provide the network specifications and requirement for the AFCS to the IMU for implementation.

The IMU will be responsible for the provision of the AFCS data communication network as well as the mapping and allocation of IP addresses to meet the Supplier's requirements.

In general, the IMU will provide the Supplier with the following network interfaces;

- Site equipment rooms / closet switches with allocated ports and RJ45 sockets for the AFCS equipment, including, TOM where sites include Depots, test and training facilities and other locations under Municipal control where appropriate
- Depot WIFI access points for buses to communicate with the AFCS back-office. The Supplier will be responsible for the on-board communication infrastructure.
- Mobile network access and services where required.
- Any other network infrastructure related requirements dependent on the Supplier's accepted solution.

Notwithstanding the Purchaser's responsibility to provide the data communication network to the Supplier's requirements, it is the Supplier's responsibility to ensure that the communication channel to the bank meets the banking industry standards and that it will pass their certification requirements where required.

2.7.1.1.3. Power supply

The provision of power shall form part of the Purchaser's responsibility, through the operations teams where existing operational facilities are used.

The above shall be subject to the Supplier's detailed statement of requirements for all AFCS equipment and for each location in which such equipment is to be installed. The supply of power will be limited to locations which form part of the municipality's infrastructure.

In general, the Purchaser will provide the following power infrastructure;

- Site DB with dedicated circuit breakers for each AFCS equipment item and 3-point power sockets for TOM, where sites include Depots, test and training facilities and other locations under Municipal control where appropriate.
- Bus power access point for the powering of AFCS on-board equipment. The Supplier will be responsible for the distribution of power to the equipment within the bus.
- Any other power related requirements dependent on the Supplier's accepted solution, within the scope limitations referred to above.

The above supply shall be performed through two primary avenues, namely the applicable ETA operations team and the bus manufacturers where new buses or those under warranty are involved.

2.7.1.1.4. Cabling infrastructure

The provision of cabling and containment between primary communication and power interfaces and equipment will be provided by the Purchaser, through the IMU and Operations teams.

The above shall be subject to the Supplier's detailed statement of requirements for all AFCS equipment and for each location in which such equipment is to be installed. The supply of cabling will be limited to locations which form part of the Municipality's infrastructure as detailed in the communications and power supply sections above.

Note that cabling and containment for bus on-board equipment will not form part of the Purchaser's supply and will require direct liaison between the Supplier and bus operations team for existing buses and with the bus manufacturer for new buses or those under warranty respectively. It is suggested, although not prescribed, that the Supplier enter into agreements with the bus manufacturer to install cabling as part of the manufacturing process for new buses where applicable. In any event, it will be the Supplier's responsibility to ensure that any active warranties on buses are not nullified by the implementation of the AFCS equipment.

2.7.1.1.5. Building interfaces

The Purchaser will be responsible for the provision of building interfaces which facilitate the proper installation of the AFCS equipment, subject to the Supplier's specified requirements and through the relevant ETA operations team. This is primarily related to Depots, testing and training facilities and 3rd party premises where applicable, subject to the Supplier's accepted solution.

Although it is not anticipated that construction work will be required for this contract, the Supplier will be responsible for communicating and coordinating its requirements with the ETA operations team's as well as for checking and approving any technical drawings which may be provided by the teams showing the provisions for the AFCS equipment installations as well as accepting the building interfaces provided for compliance.

2.7.1.1.6. Bank Acquiring Services

The City issues a five-yearly contract for banking services across the municipality. These services include acquiring services, which will apply to the bank card payment transactions for the transit loading of the CIPURSE cards as well as transit usage transactions generated by using contactless bank cards and mobile payment applications for travel.

The Supplier will be required to liaise and coordinate with the City's banking service provider for the technical solution, banking infrastructure, relevant tests and certifications required for the turnkey delivery of the AFCS, as well as for the Purchaser's compliance with the applicable regulations.

The above will be conducted in accordance with the protocols established in the PID.

2.7.1.1.7. NDOT ABT Integration

The Purchaser will be responsible for entering into a contractual agreement with SANRAL for the provision of clearing services under the anticipated amended NDOT regulations and any ancillary services.

The Supplier shall be required to liaise and coordinate with the City's IMU as well as with SANRAL in order to achieve the required integration between the AFCS and the SANRAL ABT back-office for the TCH as well as to Hyphen Technology for processing of top up transactions, and for any other aspects required to facilitate the proper functioning of the AFCS, such as validation list distribution, card balance updates, the issuing and loading of cards from ETA points of sale, etc. in compliance with the SANRAL

specifications and requirements.

The above shall be conducted in accordance with the protocols established in the PID.

The Purchaser shall introduce the Supplier to the representatives of the various participating organisations or units at a project initiation meeting, where after and given the turnkey form of Contract, it shall be the responsibility of the Supplier to liaise and coordinate with the parties for the execution of the project as if they were the Supplier's suppliers.

In exceptional circumstances, such as issues that will impact on the project delivery schedule or cost, the Supplier shall escalate the matter to the Purchaser in accordance with the appropriate notification procedure in the Conditions of Contract or the protocols provided in the PID. On the basis of the above, the Supplier will therefore be responsible for the turnkey execution of the AFCS, subject to the Purchaser's hold points under §2.5 and the accepted Supplier's solution, project plan and programme.

2.7.2. System Major Components Requirements

2.7.2.1. Fare media

The intention of the ETA is to achieve vendor neutrality by accommodating a variety of fare media form factors, enabling a traveller to Bring-Your-Own-Device (BYOD) and promoting cross-vendor interoperability wherever practicable. To achieve this, a hybrid of a card-centric and back-office-centric approach is to be taken. The following media must be accepted by the AFCS as a minimum;

2.7.2.1.1. CIPURSE cards

- a) The AFCS must accept contactless cards with the standard CIPURSE sub-set T as specified by the Open Standard Public Transport (OPST) Alliance.
- b) The supplier must design and supply the cards required for the testing and qualification of the AFCS to the point of handover for operation and will provide the purchaser with required technical documentation to order production cards for system operations. Master keys will be owned by the Purchaser.
- c) The card shall provide for the loading and usage of PAYG transit value as well as network specific period pass products and concession profiles.
- d) The card shall also contain a data file structure which is functionally compliant with the standard published by the NDOT in the applicable regulations.
- e) The loading and usage of cards and other media must be accepted across the PTS network.
- f) The card must be suitable for use with the anticipated NDOT ABT scheme once this comes into effect.

2.7.2.1.2. Bank issued EMV cards

The AFCS shall accept contactless credit, debit or pre-paid bank issued cards as a form of travel authorisation. As a minimum Mastercard and VISA cards must be accepted, however the Tenderer should state whether its solution will accommodate the acceptance of cards from other organisations where available.

The Purchaser's banking partner will perform the role of acquiring bank and will route the request for payment to the issuing bank for settlement. The Supplier is to liaise with the acquiring bank in the design, development, testing and certification required to enable this.

A pilot operation using EMV cards is envisaged in accordance with the project statement of work §2.6, with a limited user base typically controlled by a whitelist during this period. Once the pilot is successfully completed the whitelist will be removed allowing use by all EMV card holders (see §2.6.8).

2.7.2.1.3. Bank issued NDOT EMV cards

Pre-paid NDOT EMV cards will no longer be issued, loaded or accepted for transit usage on the PTS, other than being used as a form of payment similar to any other EMV card.

2.7.2.1.4. Mobile phone media

The AFCS must accept mobile payment applications using Near Field Communication (NFC). These include but are not limited to Apple Pay, Google Pay, Samsung Pay, VISA payWave, Mastercard Paypass and Paypal. In addition, emulated credit cards on mobile phones must also be accepted for transit.

The Purchaser's banking partner will perform the role of acquiring bank and will route the request for payment to the issuing bank or organisation for settlement.

As in the case of EMV cards in §2.7.2.1.2. above, the Supplier is to liaise with the bank in the design, development, testing and certification required to enable this, preferably as a single combined effort.

2.7.2.1.5. Current DESFIRE EV2 Go!Durban card

This is a contactless DESFire EV2 card with the NDOT transit data structure on it as shown in Figure 3 below.

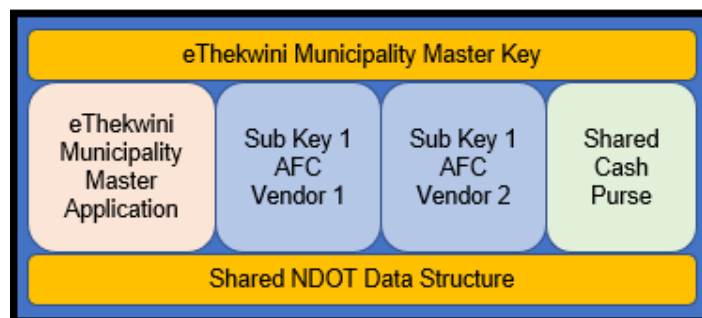


Figure 3: Go!Durban EV2 card functions

The ETA will own the Master Application and Master Keys and will allocate memory space and issue keys to scheme participants (including AFC vendors) for their space. A shared space will be allocated to hosting the NDOT Data Structure, to which participants will be given read / write access for certain fields. A shared e-purse or cash wallet will be created, and participants will be given access to read / write to the balance of the wallet. A history of transactions will also be maintained within this space.

The Tenderer is to make provision for any related development in order to accommodate the above in its offer as **an option**.

2.7.2.2. Ticket Office Machine (TOM)

Attended ticket sales points will be located at Depots and municipal sales points, mobile sales points (Muvo Vans) and selected 3rd party premises. Details of locations and quantities are contained in Section 8.

2.7.2.2.1. Functional Requirements

The TOM shall;

- a) provide an attended ticket sales facility to the public.
- b) provide a fixed ticket sales point for Depots, municipal sales points and 3rd party premises.
- c) provide a mobile ticket sales point for Muvo Vans.
- d) issue cards anonymously or by registration of the user's details.
- e) load transit value and products to cards where applicable.
- f) manage refunds and card replacements subject to business rules.
- g) accommodate card purchases/loading using cash, vouchers and all major bank credit and debit cards including but not limited to MasterCard and VISA, for payment. (bank payment terminal will be provided as FIM under the acquiring bank contract)
- h) provide traceability of payments and cards by unique card transaction sequence numbers.
- i) facilitate the selectable viewing and print outs of each of the following aspects of the fare media in §2.7.2.1.;

- card / token validity
- concession status
- card / token expiry date
- concession expiry date
- card / token and/or account balance
- transaction history (including usage)
- details of any penalties applied

Notwithstanding the above and the availability of more complex inquiries at a centralised information centre, the TOM should provide assistance to users for routine inquiries, such as usage transactions, locations, time, date, any penalties applied, etc.

- j) provide a GUI through which transaction information may be viewed and operator actions may be entered.
- k) not allow users to delete or alter committed transactions.
- l) provide a GUI menu including inter alia;
 - operator log on and off (subject to ETA policy)
 - user/account registration
 - choice of standard or concession card issuing (latter to be restricted by access control)
 - choice of status view or sales transactions
 - transit product / value selection
 - display of transaction value
 - choice of cash, voucher or card payment
 - choice of refunding (to be restricted by access control)
 - choice of blacklisting/hotlisting cards (to be restricted by access control)
 - choice of receipt or not
 - printing of shift and other reports
 - etc.

It should be noted that the above are to function in a manner and with the flexibility to accommodate business rules and is not exhaustive. The Supplier is required to provide a solution that is fit for purpose.

- m) print transaction receipts, account and status summaries as well as shift reports on demand.

- n) provide a cash drawer from which vouchers, bank card transaction receipts, cash received and change required from cash transactions in notes and coins may be stored and issued respectively.
- o) provide for the tracking of the cash balance in the cash drawer, including float and deposits and will provide related reports on demand;
 - start of shift
 - end of shift
 - sales report
 - cash sales
 - card sales
 - voucher sales
 - etc.
- p) be configurable in the form of editable parameters, from the central system and downloadable to individual or all TOM's via the ETA network, changing the data displayed on the TOM screen such as fares, etc.
- q) capture and store all transaction and event data required for back office reconciliation and device management.
- r) require a continuous network connection to the central system in order to function operate with an on-line and mobile web-based sales application, as a minimum using Android.
- t) be restored to full functionality automatically once power is restored in the event of a power failure.
- u) provide user access control and authentication in accordance with the municipality's latest information security and access control policy.
- v) automatically enforce the Municipality's password policy during user registration and modification, through a password management system.
- w) Provide a facility to load funds to a linked ABT account as per amended NDOT regulations.

2.7.2.2.2. Performance Requirements

The TOM shall;

- a) enable the completion of all transactions as quickly as possible, limiting unnecessary input actions and processing steps, through optimisation of logical command sequences, to achieve fitness for purpose.

2.7.2.2.3. Physical Requirements

The TOM shall;

- a) be desktop mounted.
- b) have a card reader/writer for the interrogation, issuing and loading of cards (reliant on a virtual SAM).
- c) not require any vendor proprietary components (preferably standard commercially available PC, mobile device, printer and cash draw to be procured by the Purchaser as FIM to Supplier's requirement).
- d) have a cash draw which is secured by a robust locking mechanism.
- e) have a touch screen with built in central processing unit (CPU).
- f) run on MS Windows Operating System, or Android and iOS for mobile devices.
- g) have a minimum useful life of ten (10) years.

2.7.2.2.4. Interface Requirements

The TOM shall;

- a) interface with the local fixed network for fixed installations (provided by others).
- b) interface with the Depot wireless network for mobile installations (provided by others).
- c) interface with the GSM network for mobile installations (provided by others).
- d) interface with a 220-240V AC power socket array for fixed and mobile installations (provided by others).
- e) interface with a redundant GSM network for both mobile and fixed installations (provided by others).
- f) be monitored from the central system for operational status.

2.7.2.5. Bus On-board Equipment (BOE)

The BOE comprises two sub-systems, which may be integrated depending on the Tenderer's solution, with the primary subsystem being on-board validation and the secondary, fare evasion monitoring, the latter being **an option** to be included at the Purchaser's discretion.

2.7.2.5.1. On-board Bus Validator sub-system (OBV).

a) Functional Requirements

The OBV shall;

- i. provide an unattended ticket validation facility to the travellers on the PTS Buses for fare media listed in §2.7.2.1.
- ii. provide, in addition to the above, a driver attended paper ticket and receipt issuing device for using cash-based payment and card-based travel respectively.
- i. provide an integrated touch screen GUI with a menu for the driver inputting of the following to perform a cash transaction;
 - journey origin location
 - journey destination location
 - number of stages as an alternative to the above
- ii. display the amount payable by the traveller on the driver screen based on the above inputs.
- iii. provide for the confirmation of receipt of payment by the driver and the printing of the ticket, whilst storing the transaction details to be written to the driver card upon log-off at end of shift and for transfer to the central system via the wireless network at the Depot upon shut-down.
- iv. retain cash transaction records until the total is written to the driver card, even if transfer of transactions to the central system has occurred.
- vii. be designed for a bus configuration with a single curb-side door.
- viii. accommodate the following fare rule options;
 - flat fare
 - distance based
 - staged / zonal based

The Tenderer shall offer the stage based / zonal option requiring the checking-in of boarding passengers, as the base offer.
- ix. perform off-line fare media validation en-route.
- x. include audio visual indicator to confirm successful/failed transaction.

- xi. capture and store all transaction and event data required for back office reconciliation and device management.
 - xii. store the transaction data locally and transfer the data to the central system when within range of an available WiFi network. The data shall only be deleted from the OBV when receipt acknowledgement is received that transaction data was received error free and authenticated from an authorised device.
 - xiv. receive software update and upgrade downloads to individual or all OBV's via the ETA network.
 - xv. have the ability to communicate via GPRS, WIFI and ethernet.
 - xvi. store event data in the event of communication failure until such time as communication is restored. If communication cannot be restored due to a fault on the OBV, it shall be possible to recover the data from a removable non-volatile memory card or alternative means.
 - xvii. have an on-board battery backup, which in the event of complete power failure, will support the completion of the current transaction before beginning a safe shut-down procedure automatically.
 - xviii. in the event of a total power failure, recover full functionality automatically once power is restored.
 - xix. have an internal or external Global Positioning System (GPS) which shall be used to indicate the bus location for fare calculations in the case of distance-based fares.
 - xx. be provided with an integrated battery backed-up real time clock (RTC), which will not lose time under power loss conditions. The RTC shall be updated (synchronised) on a regular basis (minimum once a day) with a centralised time server (provided by others).
 - xxi. use the RTC's data as reference for all transactions and events. The data that shall be provided by the RTC includes year, month, day, hour, minute, seconds and tenth of a second.
 - xxii. be provided with a system check at start up and the reporting of errors via the display, which shall include verifying that the last RTC synchronisation is not older than 24 hours, in which event synchronisation must occur prior to clearing the error message.
 - xxviii. require driver login using a valid driver card and password/PIN, prior to processing any transactions.
 - xxix. check the shift, bus number and route serviced based on the dispatch terminal (DT) authorisation on the card.
 - xxx. write the cash transactions and value to the card upon log-off, for reconciliation with the driver's cash deposit at the cashier terminal (CT).
 - xxxi. read or write the following fields as appropriate to satisfy the above requirements;
 - authorised shift start/end date and time
 - authorised route
 - actual shift start/end date and time
 - cash transactions performed during shift
 - total cash collected during shift
- See §2.7.2.7. and §2.7.2.8 for additional detail.

b) Performance Requirements

The OBV shall;

- i. require a maximum of five hundred (500) milliseconds to perform a complete transaction using NFC based fare media.

- ii. be capable of retaining at least sixty (60) hours of transaction data, including all events
- iii. possess sufficient memory to accommodate five thousand (5000) blacklisted cards, which when depleted will delete records on a first in first out basis.
- iv. require no longer than thirty (30) minutes to replace any LRU (wiring must not require re-termination during exchange).
- v. have a minimum useful life span of ten (10) years.
- vi. have guaranteed support from the OEM during this period, which shall include availability of spare parts despite obsolescence unless upgrades are backward compatible.
- vii. be a current model that is still in manufacture with the latest technology platform such as MS Windows, Android or iOS.

c) Physical Requirements

The OBV shall;

- i. be mounted in such a position and orientation as to allow easy flow of passengers boarding and alighting and in the case of multiple validators, to eliminate the possibility of signal interference or accidental media processing accessing between validators.
- ii. have a separate validator, which is physically segregated from driver console unit due to the presence of a security cage forming a barrier surrounding the driver's cab.
- iii. be neatly secured in a manner consistent across the bus fleet and shall not become loose or damaged due to vibrations on the bus frame or structure.
- iv. not have any sharp or hard corners that might endanger passengers, drivers, maintenance or cleaning staff.
- v. operate under varying supply conditions as can be expected from a bus during operation, such as high and low voltages brown outs and black outs.
- vi. be protected with over current devices.
- vii. be fitted with connectors either secured by fasteners or snap-lock type mechanisms.
- viii. in all equipment and mounting design aspects cater for continuous vibration during operation.

d) Interface Requirements

The OBV shall;

- i. be provided with a 12 or 24V dc power supply, from the bus power distribution unit and a termination point to be provided by others.
- ii. be appropriately earthed at the closest fastening point on the chassis or a point identified by the bus manufacturer or operations team.
- iii. include supply and installation of the cables between the OBV and other related equipment including the power supply.
- iv. include if applicable the supply, installation and integration of a Wi-Fi access module and antenna as well as GPRS interface to connect to the Wi-Fi Access Points at the depots and/or the central system, respectively.
- v. include the provision of all interface and cable containment requirements to the bus manufacturer, where new buses are involved. The supplier will be fully responsible for existing buses in liaison with the bus operator's maintenance department and consultation with manufacturers where running warranties may be affected.

2.7.2.5.2. Fare Evasion Monitoring (FEM) sub-system

a) Functional Requirements

The FEM shall;

- i. provide a means of detecting and determining the approximate level of fare evasion present on buses; individually, per driver, per route, per location, per Depot, per operator and/or across the entire fleet.
- ii. provide planning data in the form of passenger origin/destination demand figures.
- iii. provide fare evasion and planning data export files and reports in industry standard format compatible with MS.
- iv. count passengers alighting (out-count) and boarding (in-count) at the bus entrance/exit passage.
- v. perform self-diagnosis and provide an indication of the system status upon start-up, with a default fault indication, which will be cleared after a successful internal and peripheral check.
- vi. keep the following counts per shift;
 - Current passenger count on the bus
 - Total In count
 - Total Out count
- vii. identify and record successful check-in and check-out validations, and cash sales (where applicable) and compare these in real-time with the relevant passenger counts to detect fare evasion.
- viii. raise and record an exception when the passenger count and validator and cash sales counts differ.
- ix. record an exception with video evidence, and store on-board until network connectivity is established, where after the related exception file is to be transferred automatically to the central system and flagged.
- x. store all video footage for a period of at least seven days, with bus, location, driver, time and date stamp displayed on the footage.
- xi. overwrite video footage once storage capacity is reached, on a first-in-first-out basis.
- xii. allow for video footage files to be downloaded manually from the BOE or transferred upon demand over the ETA network in a format generally accepted in the industry and compatible with MS.
- xiii. In addition to the function of fare evasion management, the system will include four cameras for general observation, for monitoring of road, driver and passengers.
- xiv. be able to set counters manually by an authorised person subject to ETA access control policy, at installation/replacement to a known value for at least the current passenger count.
- xv. store status changes in a log file with date time stamp for each status change.
- xvi. store exceptions in an exception report with date and time stamp.
- xvii. communicate to the Back Office via a network; LAN, Wi-Fi and Mobile (GPRS, 3G, 4G etc.)
- xviii. have an integrated battery backed up Real Time Clock/Calendar (RTC) which is synchronised with a master system clock whenever network connectivity is established, using the NTP/NTPS protocol.
- xix. generate audio/visual exception alarms.
- xx. be configurable for the following non-exhaustive rules;
 - to always process counts, or only if bus driver is logged in.
 - to always process counts, or only when bus is stationary.
 - to generate or not generate exceptions.

- to generate exceptions for in-counting only or both in and out-counting.
 - to clear counters upon driver log-off or to never clear counters.
 - to generate audio alarm on exceptions or not.
 - to generate visual alarm on exceptions or not.
 - to send exception reports in real time if network is available, or to send upon driver log-off if network is available.
- xxi. store system configuration in a file that can be updated manually or automatically, locally or remotely via the network, to all or selected units.
- xxii. provide a suitable front-end GUI enabling authorised users to manage and access all of the above functionality, subject to ETA access control policy from a local or remote terminal.
- xxiii. provide reports for fare evasion and planning purposes, automatically generated daily, or on demand for a selected period of time, with field filters. The precise format of these reports are to be agreed between supplier and purchaser, and the Tenderer is to include examples of standard reports in its bid response.

b) Performance Requirements

The FEM shall;

- i. require no longer than thirty (30) minutes to replace any LRU
- ii. have an RTC drift < +/- 1.7 sec per day
- iii. not have a count error of larger than +/- 5% of the actual count of a full bus load of passengers, walking in different directions and in close proximity to each other.
- iv. not have a direction count error of larger than +/- 5% of the actual count of a full bus load of passengers.
- v. operate in light conditions ranging from full daylight to night-time.
- vi. have a minimum useful life span of ten (10) years.

c) Physical Requirements

The FEM shall;

- i. have an IP 54 rating
- ii. be neatly secured in a manner consistent across the bus fleet and shall not become loose or damaged due to vibrations on the bus frame or structure.
- iii. be mounted in such a position and orientation as to allow easy flow of passengers boarding and alighting
- iv. not have any sharp or hard corners that might endanger passengers, drivers, maintenance or cleaning staff.
- v. be fitted with connectors either secured by fasteners or snap-lock type mechanisms.

d) Interface Requirements

The FEM shall;

- i. be provided with a nominal 24V dc power supply, from the bus power distribution unit and a termination point to be provided by others.
- ii. be able to operate under varying supply conditions as can be expected from a bus during operation, such as high and low voltages brown outs and black outs.
- iii. be appropriately earthed at the closest fastening point on the chassis or a point identified by the bus manufacturer or operations team.
- iv. include supply and installation of the cables between the FEM and other related equipment including the power supply.

- v. include if applicable the supply, installation and integration of a Wi-Fi access module and antenna as well as GPRS interface to connect to the Wi-Fi Access Points at the depots and/or the central system, respectively.
- v. include the provision of all interface and cable containment requirements to the bus manufacturer, where new buses are involved. The Supplier will be fully responsible for existing buses, in liaison with the bus operator's maintenance department.

2.7.2.6. Portable Validation Unit (PVU) (Optional)

2.7.2.6.1. Functional Requirements

The PVU shall;

- a) serve as a means of on-board verification of fare media and the identification of fare evaders by inspectors.
- b) provide for secure user Log in and Log Out.
- c) log all events and transactions with a reference to the current user.
- d) serve as a means of issuing penalties.
- e) read the fare media and display the following *inter alia*, on a display screen where applicable;
 - card / token number
 - card / token status
 - last transaction details
 - type of product or value
 - remaining value / trips
- f) download hotlist / blacklist and other updates wirelessly from the ETA network when within coverage.
- g) store event / transaction data whilst off-line for later uploading to the central network as soon as connectivity is possible.
- h) continue to operate off-line in the event of network failure.
- i) restart the upload of data if the network connection is interrupted as soon as connectivity is restored.
- j) ensure that no files are deleted or removed until the transfer of files to the central system has been authenticated and verified to be correct with no transmission errors.
- k) receive software updates and upgrades downloaded to individual or all equipment via from the central server by an administrator with appropriate rights.
- l) be provided with theft prevention technology to ensure that missing devices are disabled.
- m) provide a visual and audio alarm in the event of low power.
- n) automatically and safely shut down in the event of critically low power.
- o) be dockable and supplied with a charging station.

2.7.2.6.2. Performance Requirements

The PVU shall;

- a) be capable of supporting a minimum of eight (8) hours of continuous use if a replaceable external battery is used, alternatively sixteen hours (16) hours for embedded batteries.
- b) require no longer than five (5) minutes to replace any LRU.
- c) be capable of retaining at least six (6) days of transaction data, including all events.
- d) possess sufficient memory to accommodate five thousand (5000) blacklisted cards.
- e) have a minimum useful life span of ten (10) years.

2.7.2.6.3. Physical Requirements

The PVU shall;

- a) be a form suitable for operation whilst the operator is standing in a moving bus.
- b) be provided with a holster when not in use.
- c) have a rechargeable battery and is to be supplied with a spare battery if external.
- d) have a docking station with network interface and PVU as well as spare battery charging slot for external batteries.
- e) be designed to withstand dropping during operation.

2.7.2.6.4. Interface Requirements

The PVU shall;

- a) interface with 220-240V AC power socket at the Depot (provided by others).
- b) interface with the AFCS network via WIFI at the Depot or via an ethernet socket (provided by others) provided for the PVU docking station.
- c) interface with a GSM network if required (provided by others).
- d) be controllable via a GUI from an authenticated remote access terminal as required.
- e) must authenticate at set intervals or time out.

2.7.2.7. Drivers Dispatch Terminal (DT)

2.7.2.7.1. Functional requirements

The DT shall;

- a) provide an attended terminal from which a dispatcher will program a driver's card with the duty details required to begin a shift. (see Workflow diagram Figure 5)
- b) provide a touch screen GUI through which driver card information may be viewed and dispatcher actions may be entered.
- c) provide user access control and authentication in accordance with the municipality's latest information security and access control policy.
- d) automatically enforce the municipality's password policy during user registration and modification, through a password management system.
- e) be on-line in order to function, with web-based application.
- f) facilitate the selectable viewing of the driver's card details, including;
 - card number
 - personnel number
 - card expiry date
 - shift/operational status
 - cash float balance
 - cash sales balance
 - bus number
 - shift number
 - route number
 - dispatch date and time
- e) facilitate the entry of the following by the authenticated dispatcher;
 - bus number
 - shift number
 - route number
 - shift/operational status
- f) auto-check that the entries for the above are in a valid format.

- g) write the above entries to the driver's card in a format which will be read by the BOE for driver log in.
- h) print transaction receipts and shift reports on demand.
- i) be configurable in the form of editable parameters, from the central system and downloadable to individual or all DT's via the ETA network.
- j) capture and store all transaction and event data required for back office reconciliation and device management.
- k) require a connection to the central system to function.
- l) transfer the transaction and event data to the central system in real time, and only delete data from the DT when receipt acknowledgement is received that transaction data has been authenticated transferred error free and transmission is verified.
- m) store event data in the event of network failure until such time as communication is restored and transmission is verified.
- n) be restored to full functionality automatically once power is restored in the event of a power failure.
- o) allow for the combined use of the DT as a Cashier's Terminal (CT) function if the purchaser opts to do so, subject to appropriate access rights.

2.7.2.7.2. Performance Requirements

The DT shall;

- a) enable the completion of all transactions as quickly as possible, limiting unnecessary input actions and processing steps, through optimisation.

2.7.2.7.3. Physical Requirements

The DT shall;

- a) be desktop mounted.
- b) have a card encoder for the reading and writing information to driver cards (reliant on a virtual SAM).
- c) not require any vendor proprietary components (preferably standard commercially available PC, mobile device, printer and cash draw to be procured by the Purchaser as FIM to Supplier's requirement).
- d) have a touch screen with built in central processing unit (CPU).
- e) run on MS Windows Operating System, IOS or Android.
- f) have a minimum useful life of ten (10) years.

2.7.2.7.4. Interface Requirements

The DT shall;

- a) interface with the local network (provided by others).
- b) interface with a 220-240V AC power socket array in the ticket office (provided by others).
- c) interface with a redundant GSM network (provided by others).
- d) be monitored from the central system for operational status.

2.7.2.8. Cashiers Terminal (CT)

2.7.2.8.1. Functional requirements

The CT shall;

- a) provide an attended terminal from which a cashier will read, download data from and program a driver's card with the cash float, sales made, and cash collected at the start and end of shift respectively. (see Workflow diagram Figure 5)
- b) provide a touch screen GUI through which driver card information may be viewed, transferred and cashier actions may be entered.
- c) provide user access control and authentication in accordance with the municipality's latest information security and access control policy.
- d) automatically enforce the municipality's password policy during user registration and modification, through a password management system.
- e) be on-line in order to function, with web-based application.
- f) facilitate the selectable viewing of the driver's card details, including;
 - card number
 - personnel number
 - card expiry date
 - shift/operational status
 - cash float balance
 - cash sales balance
 - bus number
 - shift number
 - route number
 - dispatch date and time
- p) facilitate the entry of the following by the authenticated cashier;
 - cash float value issued at start of shift
 - confirmation of receipt of correct cash float at end of shift
 - confirmation of receipt of correct cash sales value at end of shift
 - change of shift status
- q) auto-check that the entries for the above are in a valid format.
- r) print transaction receipts and shift reports on demand.
- s) be configurable in the form of editable parameters, from the central system and downloadable to individual or all CT's via the ETA network.
- t) capture and store all transaction and event data required for back office reconciliation and device management.
- u) require a connection to the central system to function.
- v) transfer the transaction and event data to the central system in real time, and only delete data from the CT when receipt acknowledgement is received that transaction data has been authenticated transferred error free and transmission is verified.
- w) store event data in the event of network failure until such time as communication is restored and transmission is verified.
- x) be restored to full functionality automatically once power is restored in the event of a power failure.

2.7.2.8.2. Performance Requirements

The CT shall;

- a) enable the completion of all transactions as quickly as possible, limiting unnecessary input actions and processing steps, through optimisation.

2.7.2.8.3. Physical Requirements

The CT shall;

- a) be desktop mounted.

- b) have a card encoder for the reading and writing information to driver cards (reliant on a virtual SAM).
- c) not require any vendor proprietary components (preferably standard commercially available PC, mobile device, printer and cash draw to be procured by the Purchaser as FIM to Supplier's requirement).
- d) have a touch screen with built in central processing unit (CPU).
- e) run on MS Windows Operating System, IOS and Android.
- f) Have a minimum useful life of ten (10) years.

2.7.2.8.4. Interface Requirements

The DT shall;

- a) interface with the local network (provided by others).
- b) interface with a 220-240V AC power socket array in the ticket office (provided by others).
- c) interface with a redundant GSM network (provided by others).
- d) be monitored from the central system for operational status.

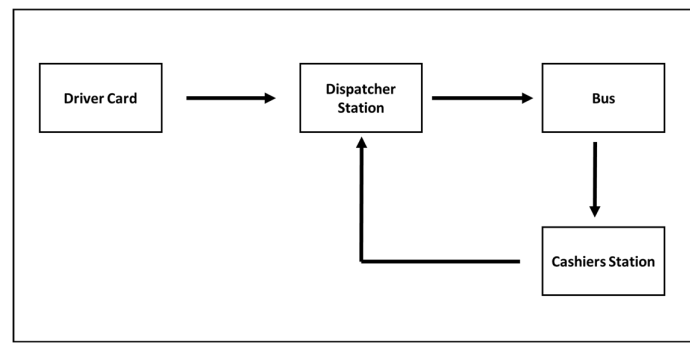


Figure 5: Cashier and Dispatcher Workflow Diagram

The following steps provide a narrative to further describe the work processes for the dispatcher and cashier function in more detail when read together with Figure 5 below;

Step 1:

The Driver card is presented at the Dispatcher's Station. The Driver Card is validated based on the following:

- Checks if the card was presented to the Cashier's Station.
- Checks if the balance is "0".
- Checks if the Card is Locked.

The card can be then dispatched with the option of a Bus Number and/or Shift Number.

Step 2:

The Driver card is presented to the Bus Terminal. The Driver Card is validated based on the following:

- Checks if the card was presented to the Dispatcher's Station or the last "Cash Up" from the Bus was less than a preconfigure time interval. (Normally 14 Hours).
- If the card "Cash Up" from the Bus was more than the preconfigure time interval and the card was not presented to the Cashier and Dispatcher station, then the Driver Card has to be presented to the Cashier Station before proceeding to the Dispatcher Station.
- Bus Number and Shift is check, if the card was dispatched with these details.
- Option for the Driver to change this when logging on the Bus terminal.

Driver card is presented to Bus terminal and Driver enters Pin code.
When the driver logs off, the Bus terminal will require the Driver Card to be presented.
The Bus Terminal will write the Total Cash Value of Cash Tickets issued.

Step 3:

The Driver Card is then presented to the Cashier Station based on the following:

- Checks if the card was presented to the Bus Terminal.
- The Cash value of tickets issues will be presented on the Cashiers station.
- The Cashier will input the actual amount received.
- The Driver card is then cleared of all transactions.

The cash received from the Driver and the Actual Cash Tickets sold on the Bus is reconciled in the back office. The Report i.e. "Driver Shorts and Overs."

2.7.2.9. Communication Network

The data communication network comprises two primary elements, a fixed and mobile network. The current requirement is that the former will be implemented whilst the latter should be provided for in equipment for potential implementation subject to the supplier's design solution and its economic sustainability. This section shall therefore focus on the fixed network as the base requirement for the AFCS, however the Tenderer may include a mobile network in its proposed solution, providing an economic (cost / benefit) justification for this.

2.7.2.9.1. Fixed network

- a) The Purchaser will be responsible for the provision and operation of the fixed data communication network.
- b) The network comprises a combination of cable and wireless communication media providing an interface in the form of switch ports and wireless access points as further detailed below;
 - i. a wireless access point will be provided at each depot for data communication with the buses.
 - ii. a network switch will be provided at each Depot with ports allocated to any fixed AFCS equipment.
 - iii. in the event that a mobile network is required and implemented, the Purchaser will be responsible for the provision thereof.
 - iv. the network will form part of the ETA Information Management Unit's (IMU) scope of responsibilities. The Supplier will therefore be required to liaise with the IMU team and provide technical inputs for the AFCS requirements as well as coordinate all aspects of implementation of the network, with AFCS implementation activities as required under §2.3.

2.7.2.10. Central System (also referred to as the back-office)

The Central System (CS) will perform the primary management function of the AFCS system

The eThekwini Municipality has entered into an Enterprise agreement with Microsoft. Any new application/system/back office must be implemented on eThekwini's platform on Microsoft Azure. The application/system/back office must run on Microsoft platforms:

- Microsoft Windows/Server (Latest version on Azure)
- All databases must be Microsoft SQL Server (Latest version on Azure)

- BI and Dashboards must be implemented on Microsoft Power BI. (Latest version on Azure)

The CS interfaces with the various sub-systems of the AFCS as well as with external parties such as banking institutions, clearing houses, etc, via the fixed network provided by IMU.

The primary function of the CS is to provide the main Information System data processing unit of the AFCS, while the Disaster Recovery Centre (DRC) will serve as back up unit and will act as a mirror function of the CS in event of failure, and which comes as standard with the MS Azure package.

Option – The Supplier must quote for the following as an option:

- Monthly Azure Subscription costs
- Monthly Azure Server and Licensing costs.

2.7.2.10.1. Functional Requirements

- a) The CS and the DRC shall have the same functional and technical requirements with the exception of the location.
- b) The role of the CS and DRC shall be interchangeable by automatic switch over and/or manual switch over, but at no time will both systems perform the same role simultaneously.
- c) The default priority for the AFCS shall be the CS Server first and then DRC Server.
- d) The current AFCS Data Centre shall stay in operation until the new CS has been implemented and is fully operational.
- e) The CS shall incorporate fare media listed under Fare Media §2.7.2.1.
- f) The GUI applications for managing the AFCS shall be implemented as web services, web pages or web servers which can be opened by any web browser.
- g) The AFCS CS application or services shall;
 - i. administer information of transactions undertaken on the AFCS;
 - ii. have the capability to change and add business rules, fare structure and AFCS equipment configuration data without the need to recompile or reinstall applications.
 - iii. use formats (cvs, xlm etc.) as configuration files which shall comply with the open operability clause or specifications, compatible with MS.
 - iv. allow for the AFCS to be configured without additional source code changes, recompiling and re-building for Fare Regimes:
 - v. allow for the AFCS to be configured without additional source code changes, recompiling and re-building for Fare Concessions.
 - vi. collect AFCS data pertaining to the usage of media to generate reports for planning and changes.
 - vii. store and manage personal data for personalised Fare Media.
- a) The tenderer shall provide a list of standard reports, content and format as part of the solution proposal. These reports may be system wide or per fleet, operator, external participant, etc. As a minimum the following reports must be provided:
 - i. Sales Reports
 - Cash declaration

- Transit sales per point of sale
 - Sales report per cashier
 - Sales report per kiosk location
 - Transit product listing (Masterfile report)
 - Consolidated transit sales report
 - Transit product sales per kiosk operator
 - Transit product sales summary per location
 - Transaction exception report (comparison between transactions processed on the kiosk versus bank system)
- ii. Usage (on buses) Reports
- Sales by Route and Depot
 - Summary of passengers per route
 - Depot Sales per Route
 - Fare price per depot
 - Depot Sales by product / product type
 - Depot Sales by fare / value
 - Depot sales by driver
 - Devices not updated to BackOffice (Devices not seen)
 - Tracking of driver usage per device
 - Origin / destination analysis report
 - Route inspectors report
 - Daily inspectors report
 - Bus reconciliation report (all transaction processed on a particular bus)
 - Depot revenue by date
 - Depot revenue by route
 - Driver revenue report
 - Driver revenue report by product
 - Summary revenue report by fare type (cash / card)
- iii. Card reports
- Transaction details at Card level – showing date card activated, amount loaded, usage of the card, balance of trips or value.
 - Notwithstanding the above the solution shall provide the facility to design and generate additional reports which may be required from time to time. ETA staff are to be comprehensively trained in the use of this tool.
- iv. Bank reports
- Settlement and reconciliation reports
- v. Clearing house reports (NDOT ABT)
- Settlement and reconciliation reports
- vi. Fraud or error detection and exception reports and functionality (optional based on Purchaser's decision to implement FEM).
- b) The CS shall have export utilities to export information both manually and automatically, so that data from the AFCS CS may be analysed by other database managers using inter alia the Municipality's Business Intelligence tool.
- c) All privacy and confidentiality laws must be adhered to and access to information will be according to agreements between ETA and any third party.

The CS shall;

- d) provide facilities to manage the routes, fare structures as well as the technical configuration of the system.
- e) provide a facility to configure all the staff (driver, POS seller, inspector, cashier, etc) and the functions they perform.
- f) provide a facility to configure the driver operational environment such as duty and trip scheduling. Tenderers must detail what will be provided for this function.
- g) provide a facility to reconcile all monies paid in by the cashiers. Attention is drawn to the requirement for the management of cash deposits referred to under §2.7.2.2. and §2.7.2.3.
- h) provide a facility for all transactional data to be exported into a data warehouse managed by the Purchaser.
- i) provide a facility to track and report management information at bus operator level.
- j) accommodate multiple operators with different business rules, concession profiles, fare structures, etc.
- k) provide facilities where the end point devices used in the system can be configured to perform the required functions and to allow for changes to the configuration to be distributed to the end point devices. The functions must include:
 - route and stage definitions
 - fare structures and fare revision management
 - cash and EMV card product definition
 - transit product definition
 - operational business rule definition
 - end point device configuration control
- s) manage Fare Transactions.
 - capture, authorization, processing, routing, storage of all transactions generated in the AFCS.
 - activation, deactivation, blacklisting or whitelisting of fare media.
 - sales and recharging of fare media.
 - errors or fault messages from equipment
- t) perform fare transactions reconciliation.
 - calculate daily total revenues and generate reports.
 - prepare batches for settlement by bank according to banking standards and be configurable to submit transactions individually if required. All banking related transactions will be handled by the purchaser's bank.
- u) detect and flag suspected fraud in the use of fare media.
- v) ensure that product value is spent (zero balance) before activation of next product. This will be in line with the fare structure and business rules.
- w) ensure that no negative balances occur on cash purse of fare media. (A negative balance on the transit portion may be allowable in accordance with the final business rules).
- x) report and disable fare media that are reported stolen or damaged and update validation equipment with blacklisted cards
- y) provide a maintenance management system that will;
 - provide an Asset Register which shall include the part no., serial no., Description, Location and operational status.
 - provide schedules for preventive maintenance activities.
 - provide the estimated time for maintenance activities, works authorisation, capture actual activity time, and compare with service levels and report.

- provide for the capture and logging of all corrective maintenance activities. All activities shall be monitored and compared with service levels and reported.
- generate reports on the operational status of all assets.
- update Asset register with changes such as parts swap out.
- log changes for audit purposes.
- retain maintenance history data for a minimum of ten years.
- be licensed for use by the Purchaser's maintenance staff during the entire duration of the contract if a commercially available tool is used, at the supplier's expense.

z) possess the following security measures as a minimum;

- compliance with industry IT security practises and comply with the ETA IT security standard (Information Security Policy for eThekweni Municipality, Access Control and any applicable policies) and regulations.
- enforce password management rules.
- permit the administration of user access to the system and data according to the ETA security plan and agreements for information access rights.
- log all user activities for audit purposes.
- register all AFCS equipment in the system and authenticate on a regular basis.
- coordinate with ETA IT department to ensure measures are in place to detect and prevent access from unauthorised devices and to protect the AFCS from viruses, malware, adware and any other malicious software.

Close collaboration between the AFCS Supplier and the ETA IT department are required for the establishment of a secure network, information such as ports (physical and logical), authentication schemes, IP address allocations, IP address allocation schemes etc. need to be documented and communicated.

aa) Protection of information

- all information must be protected against loss, modification and/or unauthorized disclosure while stored or in transmission.
- the equipment must be protected with access passwords in compliance with the ETA access control policy and password rules.
- a facility to change the password and generate new passwords for forgotten passwords is required as well as enforcing password expiry period, length, composition, etc.
- the sharing of information shall be governed by agreements between ETA and third parties.
- software license keys shall be treated as confidential and the management of license keys shall be contained with system administrator only.
- the AFCS shall comply to the ETA privacy policy as well as applicable privacy legislation.

bb) The AFCS Central Control shall have the following minimum Administrative functions;

- User administration; adding, removing, altering of users, grant access rights, define user groups, and administer passwords. This will apply to BIOS, OS, Applications, Databases and Database management programs.
- Equipment administration; adding, removing and changing configuration data and updating equipment in the AFCS, verification and authentication of equipment.

2.7.2.11. Account Based Ticketing (ABT)

2.7.2.11.1. NDOT ABT

a) Overview

The NDOT ABT system is a hybrid ABT system combining back office centric and card centric concepts to provide a fit for purpose fare collection solution that can operate in an online environment as well as successfully in an offline situation. Travel and account balance details are stored in the back office with pertinent information also stored on the fare media in order to facilitate fare collection processes in an offline mode.

The NDOT ABT system enables interoperability of fare media acceptance across the services of all participating Transport Authorities and Operators. This will be achieved by utilising the NDOT sanctioned back office account hosting and transaction processing systems and infrastructure that is provided by the South African National Roads Agency Limited (SANRAL) Transaction Clearing House (TCH), together with its communication links and data processing and storage capabilities.

The proposed AFC system must support the NDOT ABT solution and utilise the NDOT ABT provided back office for the account hosting and transaction processing functions of the ABT solution. The AFCS will submit transactions to the NDOT ABT account hosting back office for processing and Mobility Account update.

The ABT solution is based on the non-proprietary CIPURSE open standards for fare collection media and validators/readers as supported and published by the Open Standards for Public Transport (OSPT) Alliance to ensure interoperability across all public transport services.

The system functionality is dependent on a Validation List, that stipulates account balances, that will be updated and distributed by the NDOT ABT account hosting back office system and made available to the AFCS back office or central system. The AFCS will download this list at predetermined intervals or events and distribute to all reader/validator terminal devices connected to the AFCS's back office. When the fare media is presented to a validator at time of travel, the latest balance will be updated to the fare media.

The system functionality is designed to allow for offline fare transaction acceptance at validators as the "open to transact" balance is written and carried on the card.

b) Mobility Account

Integrated travel is a critical success factor for sustainable public transport systems. Interoperable fare collection systems are the key enablers of multimodal, integrated travel. In the case of the NDOT ABT system this is facilitated and implemented by using SANRAL's Mobility Account as the basis for interoperable fare collection functionality.

The SANRAL TCH back office will host the ABT accounts, known as Mobility Accounts. Commuters are required to deposit funds into Mobility Accounts held at the SANRAL TCH to prepay expected usage of public transport services. The Mobility Account stores relevant information related to the balance of value available and that can be accessed by the ABT fare media which is the unique identifier linked to the Mobility Account.

Commuters are allowed the option to register a personalised "Mobility Account" that they can top up by linking a pre-registered payment card or by transferring funds by Electronic Funds Transfer (EFT), or by depositing monies at retail locations. There will also be an option to fund an anonymous account by depositing monies at retail locations countrywide. A network of retail stores with countrywide points-of-presence

where monies can be deposited for credit to Mobility Accounts, is already in place and operational.

Registration of a personalised Mobility Account and activation of the Account can be finalised on the internet or by visiting SANRAL specific points-of-presence.

In the event that a commuter elects not to register a Mobility Account an anonymous Mobility Account will be created and activated when the fare media is utilised for the first transaction and this transaction is submitted to the TCH back office. The Primary Account Number (PAN) personalised on the fare media will be linked to the anonymous account as the unique identifier.

c) Fare media

Contactless smart cards will be utilised as a Mobility Account identifier for the initiation of transactions on fare validators and transfer to the back office account hosting system. The smart card carrying the PAN as the unique identifier will be linked to the commuter's Mobility Account.

The NDOT ABT is a viable Integrated Fare Management solution by providing a single card that meets the common requirements of all participating Transport Operators in an Integrated public transport network.

The ABT Fare Media shall be based on and comply with the CIPURSE T card format and will be personalised with a Card Profile that meets the functional requirements of the current NDOT Data Structure Specification utilised on EMV bank issued fare media. The card profile and data file structure specification will be provided by the NDOT.

d) Fare validation

The NDOT ABT is a fare collection system where the balance "open-to-spend" and proof of entitlement to travel is held in the back-office account hosting system as well as on the Fare Media. Fare collection can take place in an online as well as an offline environment where appropriate risk management and revenue protection techniques are required. The NDOT ABT system will store information on the fare media as part of these risk management techniques.

Public transport operators will accept CiPurse specified contactless cards, linked to a Mobility Account as fare media for the collection of a fare. Business and Fare Structure rules will be formulated by the purchaser and implemented in the AFCS for the collection of fares in both an online as well as in offline environments. The downloading of validation lists to Validators on buses and station gates will need to be specified together with relevant business rules to facilitate risk management related to the frequency of downloads to the AFCS's Back Office and subsequent distribution to Validators.

Fare transactions initiated at Validators will be submitted to the Transport Operator's AFCS Back Office, where these will be locally stored and batched and subsequently transferred to the NDOT ABT back office at pre-determined intervals. The NDOT ABT back office system will process transactions by debiting relevant Mobility Accounts and reimbursing the Operator for all valid transactions submitted by Electronic Funds Transfer (EFT).

e) Architecture

The proposed AFC system shall include and make use of Validators that comply with the following requirements. The AFC systems' validator software shall:

- i. support the CIPURSE V2 Cryptographic Protocol, Revision 1.0, including PLAIN, MAC'ed and ENC'ed modes;
- ii. comply with CIPURSE V2 Operation and Interface Specification, Revision 2.0;
- iii. comply with all relevant ISO/IEC standards including ISO/IEC-7816, ISO/IEC 7816-4, ISO/IEC 14443-3 and ISO/IEC 14443-4;
- iv. comply with the CIPURSE V2 SAM Specification, Revision 1.0 in order to facilitate secure transactions. The card readers on Validators shall support the CIPURSE T card format.

A complete list of all the required standards that must be complied with can be found in the **Cipurse Interface Specification**. In addition to specified Validator software requirements, the AFCS's Validators shall:

- v. comply with the NDOT ABT Card Profile Specification that will be provided at implementation phase;
- vi. be able to validate CIPURSE fare media issued by all other authorized ABT card issuers;
- vii. have SAM slots available for both EMV and CIPURSE SAMs and shall support both concurrently;
- viii. support software embedded SAM deployment;
- ix. support scenarios where SAMs are stored on offsite equipment that is available through various connectivity options.

The proposed AFCS shall have its own back office that must integrate with the NDOT ABT back office at the TCH and comply with the requirements below. The Supplier provided back office shall remain responsible for all the functionality required of an AFCS, including communication with and updating validators with the latest validation list(s).

The ETA AFCS back office shall perform the following functions:

- x. download the latest Validation List from the ABT back office at the TCH, at regular system configurable intervals. The NDOT ABT back office at the TCH will provide an API for the AFCS back office to download the latest Validation List.
- xi. update Validators on buses with the Validation List downloaded from the TCH in predetermined intervals or in real-time.
- xii. upload transactions from Validators and gates to the AFCS back office system at predetermined intervals and when online connectivity can be maintained. If communications with the validator is interrupted, it shall update the transaction file with all remaining transactions as soon as communications are restored.
- xiii. upon receipt of the transactions from the validators, the AFCS back office will batch the transactions for subsequent uploading to the NDOT ABT back office. The NDOT ABT back office at the TCH will provide an API for the AFCS back office to upload batched transactions to the NDOT ABT Back Office. Transactions shall be submitted in predetermined intervals or in real-time if practicable.
- xiv. the NDOT ABT back office system at the TCH will process transactions by debiting relevant Mobility Accounts and the Operator will be reimbursed for all transactions submitted.

The following diagram shows the high level NDOT ABT architecture;

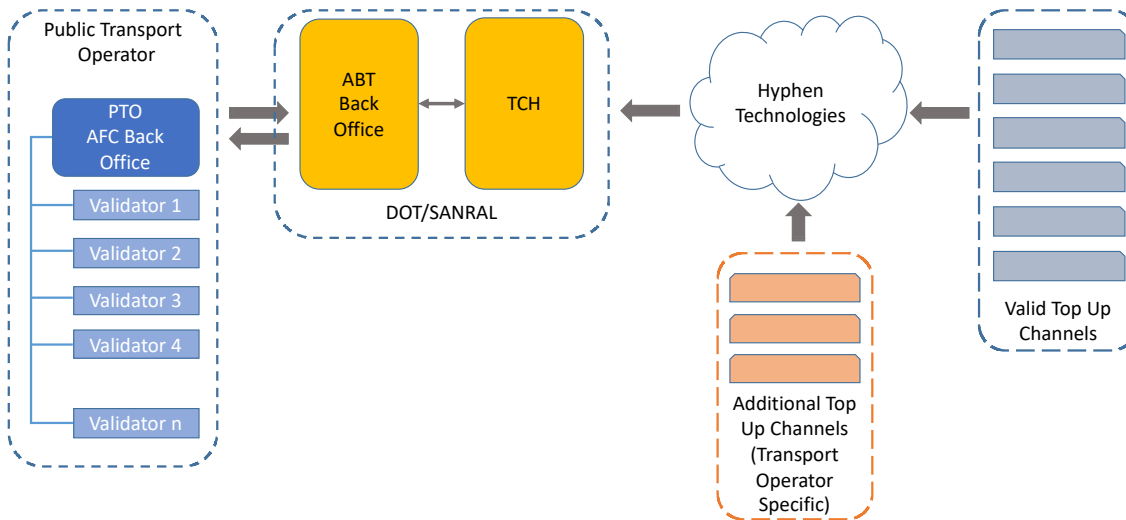


Figure 4: NDOT ABT Architecture

f) Interface requirements

It is a requirement of this tender to provide an Automatic Fare Collection (AFC) solution with a back office that will have an interface with the NDOT ABT back office, should the amended regulations require it. The AFCS back office shall receive validation lists from the NDOT ABT back office at the TCH and will be required to upload and submit transactions to the NDOT ABT back office. The interface with the NDOT ABT back office shall where possible be a near real time interface for the purpose of downloading the validation lists and submitting transactions.

The main goal of the communications infrastructure between the Operator and the NDOT ABT back office is to provide a reliable, high speed, large bandwidth communication channel to allow close to real-time (online) processing between the parties.

The NDOT ABT back office primary interface for near real time interaction will be implemented through a standard RESTful API over HTTPS for enhanced security. The API implements its own layer of security by means of using a JWT token authentication mechanism and a HMAC signature for each message.

The AFCS back office will use this interface for all operational and configuration functions, such as submitting transactions, configuring locations and obtaining the latest updates for the Validation List.

There will be a secondary interface available at the NDOT ABT back office for bulk and/or deferred operations, based on a File Transfer Hub implemented through an SFTP. The very same data structures and data specifications will be used in both interfaces.

The NDOT ABT back office interfaces will be exposed to the Operator and made available on secured networks, either through a VPN tunnel over the Internet or through a private MPLS network between the two peers. MPLS is the preferred technology as it offers a more reliable and guaranteed network, unlike a VPN over the Internet.

g) Account top-ups

Commuters' fund their Mobility Accounts held at the TCH using existing and any new

Operator established top up Locations and channels. Commuters have the option to utilise automated payment services by registering appropriate bank account or payment card details with the TCH, or else convenient payment acceptance Points-of-Presence that are located in the retail sector and/or any other suitable location easily accessible to commuters, for the acceptance of over-the-counter payments and for the convenience of Commuters.

i. Register Credit Card

Commuters are able to register their credit card details with a pay-as-you-go option of post paid settlement of Mobility Account transactions or automatic balance top-up based on a pre-set minimum balance threshold. This facility is available for registered Mobility Accounts.

ii. Debit Order

Commuters are able to provide bank account details for the funding of Mobility Accounts by interbank debit order services. This facility is available for registered Mobility Accounts.

iii. Internet Banking

Commuters can transfer monies to a Mobility Account via their banks' internet banking service. This facility is available for registered Mobility Accounts as well as non-registered anonymous Mobility Accounts

iv. Mobile Application

SANRAL has implemented a Mobile phone Application that can be used to transfer value to a Mobility Account via a pre-registered credit card in the Application. Full Mobility Account transaction history and balances are available via the Application as well. This facility is available for registered Mobility Accounts

v. Retail Points-of-Presence

SANRAL has appointed Agents to provide a countrywide network of locations for the acceptance of over-the-counter top-up transactions from the general public for transfer to a Mobility Account. Top-up transactions can be effected by cash or card payments at major retail stores countrywide.

- Appointed Agents will accept payments from Commuters on behalf of SANRAL.
- Besides the acceptance of cash, retail agents will accept debit and credit cards as a payment method. Debit and credit card payments will be submitted to the agent's own acquiring bank for processing and the value of the payment transaction is transferred to the TCH for credit of the Mobility Account by the agent via EFT.
- In order to ensure that payments made by Commuters are credited to the correct Mobility Account at the TCH, the card PAN will be the account reference number that will be utilised by the Commuter and provided to the agent at the time the payment is made.
- The account reference number will be validated by the agent by applying a pre-set validation rule to ensure that only payments to valid account numbers are accepted.
- Transaction details including the amounts, together with correctly validated reference numbers will be transferred to the NDOT ABT back office account hosting system for credit to relevant Mobility Accounts.
- Consolidated transaction batch files will be transferred to Mobility Accounts in multiple data files during a business day.

vi. Operator Kiosks or Appointed Agents

Operator managed kiosks or offices as well as appointed Agents to provide for the acceptance of top-up transactions from commuters for transfer to a Mobility Account. Top-up transactions can be effected by cash or card payments as determined by the Operator.

2.7.2.12. Preliminary Business Rules

Notwithstanding the following requirements (which should not be considered exhaustive), the supplier's solution should be flexible enough to accommodate changes to business rules within the scope of the supplier's obligation to meet the higher-level requirement of fitness for purpose. To this end, fares and other values are to be fully configurable. The system shall accommodate multiple operators and/or external service providers, etc, which may wish to apply different business rules and the system should allow different configurations for each to operate in an integrated manner without the need for development.

2.7.2.12.1. Conditions of travel

- a) Any holder of any valid form of fare media included in §2.7.2.1. will be entitled to travel on the system, subject to the business rules.
- b) Prepaid media will be subject to a minimum value balance before being permitted to enter the system.
- c) Upon entering the system, a base fare is to be applied to prepaid TSV media, unless a flat fare structure applies, in which case the full fare will be deducted regardless of the media format. In the case of prepaid EMV cards, this base fare will be deducted upon exiting.
- d) A traveller may elect to change its mind and exit the system by checking out within a configurable time period, in which case the base fare will be written back to the prepaid TSV card. (This may be set to R0.00 due to media constraints).
- e) An anti-pass back time period must be configurable.
- f) Any fare media which is not prepaid, must possess an authorised payment application or with a valid back-office account in order to travel.
- g) If a penalty or debt is outstanding against a traveller's fare media, then entry is to be denied until settled.
- h) The system should also allow for cash payments for travel and provide the commuter with a receipt which will serve as a ticket.

2.7.2.12.2. Card issuing

- a) A purchase fee is to be charged upon issuing of a new card.
- b) Cards may either be anonymous or registered at the purchaser's discretion.
- c) Multiple cards may be registered to a single purchaser.

2.7.2.12.3. Concessions

- a) Cards will generally be issued as 'adult' profile status.
- b) Subject to centralised approval based on the submission of requisite documentation and in accordance with standard operating procedures (SOPs), colour coded concession cards will be issued.
- c) The following concessions currently apply, however the system shall allow for additional concessions to be applied if required;
 - i. Pensioner
 - ii. Scholar

- iii. Disabled
- iv. Temporary disabled
- d) The system shall allow for specific fare rules to be applied for each concession.

2.7.2.12.4. Fare structure

The system shall be configurable to accept any of the following fare structures

- a) flat fare
- b) distance based fare
- c) zonal / stage-based fare

The AFCS will need to cater for different fares values for the same product for cash versus card payment.

2.7.2.12.5. Peak / Off-peak travel

- a) The AFCS shall provide for multiple peak and off-peak periods per day, to start and end at configurable times.
- b) The AFCS shall allow for the above to be set up per day, working day, public holiday or weekend.

2.7.2.12.6. Penalties

- a) Configurable penalties shall be applied for distance or zonal based journeys for pre-paid cards with insufficient value required on exiting.
- b) No fare media shall be permitted entry into the system until penalties are settled and/or minimum required card balances are met.
- c) Configurable penalties shall be applied to fare media when maximum journey time is exceeded.
- d) Configurable penalties shall be applied to fare media for missing entry or exit transactions where required by the business rules.

2.7.2.12.7. Validity periods

- a) Notwithstanding the manufacturers expiry date on the cards, a configurable expiry date of three (3) years is to be applied by the system.
- b) Expiry dates for concession products shall be configurable and will require card holders to apply for renewal.
- c) If a concession product has expired, the card will default to an 'adult' profile and will thus not benefit from concession discount for use until renewal.

2.7.2.12.8. Discounts

- a) Configurable discounts are to be applied depending on the time of travel including but not limited to, concession status, off-peak, public holidays, weekends, events, etc.
- b) Configurable frequent user discounts may be applied for ABT.

2.7.2.12.9. Refunds

- a) The system shall make provision for the refunding of value or product contained on lost or damaged cards subject to certain conditions.
- b) The above may be performed at a central TOM and will require access control.
- c) The system must provide for the return of cards and closure of back-office accounts respectively, in which case any remaining value is to be returned, less a configurable administration fee and subject to certain conditions.

- d) The system must allow for the reversal of penalties and the crediting of associated value in the event of erroneously applied penalties, e.g. penalty charged for missing check-out as a result of late transmission of transaction from the validator to the back-office in the case of account based fare media.

2.7.2.12.10. Blacklisting (hot-listing)

- a) The system must allow for the manual blacklisting (also referred to as hot-listing) of fare media at a TOM without such media being present, which will render it unusable on the system. This would typically be at the request of the media owner in the event of loss or theft and will be permanent.
- b) The system shall automatically blacklist or block media from use, which is account based, when payment is declined, or the account is in negative balance.
- c) Once the blocking condition is cleared, the media must be automatically unblacklisted or unblocked to allow use on the system again.

2.7.2.12.11. Transit Products

- a) The AFCS shall provide for a variety of standard transit products, including but not limited to the following;
 - i. Daily period pass
 - ii. Weekly period pass
 - v. Monthly period pass
 - vi. Stage based products
 - vii. Staff travel products
- b) The system shall provide for the application of unlimited daily travel with a capped value, for account-based media.
- c) Single trip products shall be available for cards at a configurable flat rate.

2.7.2.13. Staff Cards

2.7.2.13.1. Cards shall be colour coded for use of operational and maintenance staff.

2.7.2.13.2. These cards will be issued from a TOM which is configured with this capability, which functions will not be generally available on TOM's used for card issuing to the public.

2.7.2.13.3. Staff cards will be loaded with user limits including, but not limited to;

- i. Functions, such as maintenance staff, ticket clerk, supervisor, etc.
- ii. Days and times for use
- iii. Routes for use
- iv. Staff travel products
- v. etc

2.7.2.14. Driver Cards

Driver cards shall;

2.7.2.14.1. be colour coded to be distinguished from other staff and travel cards.

2.7.2.14.2. be issued from a TOM, CT or DT which is configured with this capability, which functions will not be generally available on TOM's used for card issuing to the public.

2.7.2.14.3. be compatible with reader/writer devices on DT's, CT's, TOM's as well as BOE.

2.7.2.14.4. be loaded with the following information;

- i. Driver personnel number (fixed upon issuing)
- ii. Card validity expiry date (fixed upon issuing)

- iii. Shift/operational status (variable e.g. off-duty, dispatched, on-duty, pending cash-up)
- iv. Shift sales balance (variable, loaded by BOE, cleared by CT)
- v. Shift sales transactions (variable, date, time, amount, loaded by BOE, cleared by CT)
- vi. Shift cash float balance (variable, loaded and cleared by CT)
- vii. Shift number (variable, verified by BOE, loaded by DT, cleared by CT)
- viii. Bus number (variable, verified by BOE, loaded by DT, cleared by CT)
- ix. Route number (variable, verified by BOE, loaded by DT, cleared by CT)
- ii. Other fields that may be required to ensure fitness for purpose

2.7.2.14.5. be included in the supplier's scope of supply as quantified in the BOQ.

2.7.2.15. Test facility

The Tenderer shall include in the solution, the design, supply and installation of a Testing Facility. The Testing Facility shall be used for the testing and simulation of the AFCS comprising representative samples of each major component of the systems/sub-systems as per the FAT setup, sufficient to test all business rules.

A suitable site will be provided by ETA for the installation of the test facility.

2.7.2.15.1. Functional Requirements

The facility shall serve the following functions;

- b) to qualify and test any changes to system hardware and/or software.
- c) facilitate demonstrations to users and other stakeholders.
- d) have the equipment items to simulate a Depot, including all AFCS equipment (WIFI AP, driver admin).
- e) have the equipment to simulate buses, including all AFCS equipment (BOE, PVU (if included)).
- f) have the equipment items to simulate the banking payment system.
- a) provide a user interface using any computer terminal with a web browser, which clearly indicates that the user is working in the testing environment.
- g) provide a platform for software development to perform the following:
 - i. application software development platform for changes in AFCS
 - ii. database administration and management, database modifications
 - iii. testing
 - iv. debugging
 - v. tools to perform version control and revision management as specified in AFCS central system
- h) provide for the configuration of parameters in a replicated production version of the AFCS for testing, this shall include the testing of the following:
 - i. fare tables
 - ii. equipment Configuration Data
 - iii. etc.
- j) provide for the training of:
 - i. operators
 - ii. administrators
 - iii. technical
 - iv. sales staff

- v. etc.
- k) allow for the testing of hardware to accommodate the following:
 - i. Testing of new hardware units
 - ii. Testing of enhancements
 - iii. Testing of modifications
 - iv. Etc

2.7.2.15.2. Other Requirements

All other functional, physical, performance and interface requirements, including the provision of FIM and the supplier's corresponding liaison and coordination responsibilities, shall remain the same for the test facility as for the production AFCS.

2.7.2.16. Driver training facility

2.7.2.16.1. Functional requirements

The driver training facility shall;

- a) provide a simulated BOE installation, located at each of the bus Depot's as quantified in the BOQ Section 8.
- b) provide a TOM with driver card encoder to issue driver cards.
- c) provide a DT/CT to dispatch drivers and cash-up at end of shift.
- d) make use of the test/development server environment to facilitate training scenarios including;
 - driver dispatch
 - bus log-on
 - on-board cash ticket sales
 - on-board contactless media travel
 - bus log-off
 - cash deposit
 - end of shift
- e) provide a user interface using any computer terminal with a web browser, which clearly indicates that the user is working in the training environment.

2.7.2.16.2. Other requirements

All other functional, physical, performance and interface requirements, including the provision of FIM and the supplier's corresponding liaison and coordination responsibilities, shall remain the same for the training facility as for the production AFCS.

SECTION 8: BILL OF QUANTITIES / SCHEDULE OF RATES / ACTIVITIES

See instructions for completion of cost schedule after tables below;

SECTION 8 - SUMMARY OF COSTS CARRIED FORWARD FROM PROCEEDING SCHEDULES

| COST TABLE REFERENCE | ITEM | REMARKS | TOTAL AMOUNT (Excluding OPTIONAL) |
|----------------------------|-------------------------------------|---------|--|
| S8.1 | General Items | | |
| S8.2 | Design stage | | |
| S8.3 | Development and Qualification stage | | |
| S8.4 | Production stage | | |
| S8.5 | Installation and Testing stage | | |
| S8.6 | Training | | |
| S8.7 | Maintenance and support stage | | |
| | TOTAL Incl Optional | | |
| | VAT @ 15% | | |
| | TOTAL (INCL. VAT) | | |

| TOTAL AMOUNT OPTIONAL ONLY |
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| TOTAL AMOUNT INCLUDING OPTIONAL |
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Please Note: If completing this document electronically tenderer is responsible checking all formulas in the spreadsheet are correct.

SECTION 8: BILL OF QUANTITIES / SCHEDULE OF RATES / ACTIVITIES

| S8.1 General Items | | | | | | FOREX COMPONENT Y/N | OPTIONAL |
|--|---|---------------------|-------------|------|-------|------------------------|----------|
| ITEM | REMARKS | UNIT | QTY | RATE | TOTAL | | |
| Tenderer to specify any general items not already included in the schedules below (lines may be added if necessary). | Care should be taken not to duplicate costs across schedules. Apart from these specified general items, other rates are deemed to be all inclusive. | Specify Unit | Specify qty | | | | |
| Project management as specified in Section 10 Form RDD 3. | For period up to final acceptance. Rates for the warranty, maintenance and support period are considered to be inclusive of project management and other overheads. | Lump sum | 1 | | | | |
| Provision of full performance security (initial). | | Lump sum | 1 | | | | |
| Provision performance security (replacement). | | Lump sum | 1 | | | | |
| Tenderer specified items (add additional lines if needed) | The tenderer may add any items it may wish to specify, forming part of the general items in addition to the above. Failure to do so will result in the presumption that all other costs required for the execution of the Contract will be inclusive of the total Contract Price. | Add unit of measure | Add Qty | | | | |
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| S8.2 Final Design | | | | | | FOREX COMPONENT Y/N | OPTIONAL |
|---|--|---------------------|---------|------|-------|------------------------|----------|
| ITEM | REMARKS | UNIT | QTY | RATE | TOTAL | | |
| System wide | All inclusive cost of all design related activities including design documents deliverables, reviewed, corrected and signed-off. Excluding optional items. | Lump sum | 1 | | | | |
| PVU's | Optional | Lump sum | 1 | | | | |
| FEM | Optional | Lump sum | 1 | | | | |
| Tenderer specified items (add additional lines if needed) | The tenderer may add any items it may wish to specify, forming part of the design stage. | Add unit of measure | Add Qty | | | | |
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| S8.3 Development, Integration and Qualification | | | | | | | | |
|--|---|---------------------|---------|------|-------|--|------------------------|----------|
| ITEM | REMARKS | UNIT | QTY | RATE | TOTAL | | FOREX COMPONENT Y/N | OPTIONAL |
| System wide development activities | Cost of all D&Q related activities and deliverables, including the FAT and excluding optional items, including all software modules, licenses, etc. not specified in other price schedules. | Lump sum | 1 | | | | | |
| PVU's | Optional, including the above items where applicable | Lump sum | 1 | | | | | R - |
| FEM | Optional, including the above items where applicable | Lump sum | 1 | | | | | R - |
| Tenderer specified items (add additional lines if needed) | The tenderer may add any items it may wish to specify, forming part of the D&Q stage. | Add unit of measure | Add Qty | | | | | |
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| S8.4 Production | | | | | | FOREX COMPONENT Y/N | OPTIONAL |
|---|---|----------|-----------|------|-------|------------------------|----------|
| ITEM | REMARKS | UNIT | QTY | RATE | TOTAL | | |
| Central System (excluding cost of all FIM from price) | | | | | | | |
| Central system | To include server functionality for testing facility. | Complete | 1 | | | | |
| Ticket Office Machine (excluding cost of all FIM from price) | | | | | | | |
| TOM Muvo sales centres | | Each | 35 | | | | |
| TOM Muvo Vans | | Each | 14 | | | | |
| TOM Training Alice str | | Each | 5 | | | | |
| TOM Testing | For test facility, may also be used for FAT. | Each | 1 | | | | |
| Ticket Office Machine | | | 55 | | | | R - |
| Ticket Vending Machine | | | | | | | |
| TVM Operations | | Each | 20 | | | | |
| TVM Training | | Each | 1 | | | | |
| TVM testing | | Each | 1 | | | | |
| Ticket Vending Machine | | | 22 | | | | R - |
| Depot system (excluding costs of all FIM from price) | | | | | | | |

| Portable Validation Unit (PVU) | | | | | |
|---------------------------------------|--|----------|-----|------|-------|
| ITEM | REMARKS | UNIT | QTY | RATE | TOTAL |
| Portable Validation Unit (PVU) | Optional | Each | 50 | | |
| PVU Battery replacement | Optional | Each | 50 | | |
| PVU Docking station | Optional | Each | 50 | | |
| PVU Neck holster | Optional | Each | 50 | | |
| PVU testing | Optional, if elected may be used for FAT | Full set | 1 | | |
| Portable Validation Unit (PVU) | | | 55 | | |
| Drivers Dispatch Terminal (DT) | | | | | |
| DT Operations | | Each | 17 | | |
| DT Training | | Each | 5 | | |
| DT Testing | May be used for FAT. | Each | 1 | | |
| Drivers Dispatch Terminal (DT) | | | 25 | | |
| Cashier Dispatch Terminal (CT) | | | | | |
| CT Operations | | Each | 17 | | |
| CT Training | | Each | 5 | | |
| CT Testing | May be used for FAT. | Each | 1 | | |
| Cashier Dispatch Terminal (CT) | | | 25 | | |
| | | | | | |
| Bus System | | | | | |

| OBV Validator Unit | | | | | | FOREX COMPONENT Y/N | OPTIONAL |
|--|--|---------------------|---------|--------|-------|------------------------|----------|
| ITEM | REMARKS | UNIT | QTY | RATE | TOTAL | | |
| OBV Validator unit - operations | | Each | 650 | | | | |
| OBV Driver's ticket issuing machine / console - operations | | Each | 650 | | | | |
| OBV Validator unit - training | | Each | 22 | | | | |
| OBV Driver's ticket issuing machine / console - training | | Each | 22 | | | | |
| OBV Validator unit - testing | May be used for FAT. | Each | 1 | | | | |
| OBV Driver's ticket issuing machine / console - testing | May be used for FAT. | Each | 1 | | | | |
| On Board Validator (OBV) | | | 1345 | | | | R - |
| Fare Evasion Monitoring (FEM) | | | | | | | |
| FEM Operations | | | 650 | | | | R - |
| FEM Training | | | 22 | R - | | | R - |
| FEM Testing | May be used for FAT. | Each | 1 | R - | | | R - |
| Fare Evasion Monitoring (FEM) | | | 673 | R - | | | R - |
| | | | | | | | |
| Media | | | | | | | |
| Driver and Inspector Cards | To be called off in batches of 1000 every 3 months | Each | 50 000 | | | | |
| CIPURSE, ABT (CIP) | For testing purposes | Each | 500 | | | | |
| EMV | For testing purposes | Each | 500 | | | | |
| Tenderer specified items (add additional lines if needed) | The Tenderer may add any items it may wish to specify, forming part of the production stage. | Add unit of measure | Add Qty | | | | |
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| S8.5 Installation and Integration | | | | | | | |
|-----------------------------------|---------|----------|-----|------|-------|------------------------|----------|
| ITEM | REMARKS | UNIT | QTY | RATE | TOTAL | FOREX COMPONENT Y/N | OPTIONAL |
| Central System | | | | | | | |
| Central system | | Complete | 1 | | | | |
| Back Office complete | | | | | | | R - |
| | | | | | | | |
| Ticket Office Machine | | | | | | | |
| TOM Muvo sales centres (fixed) | | Each | 35 | | | | |
| TOM Muvo Vans (mobile) | | Each | 14 | | | | |
| TOM Training Alice str (fixed) | | Each | 5 | | | | |
| TOM Testing (fixed) | | Each | 1 | | | | |
| Ticket Office Machine | | | 55 | | | | R - |
| Ticket Vending Machine | | | | | | | |
| TVM Operations | | Each | 20 | | | | |
| TVM Training | | Each | 1 | | | | |
| TVM Testing | | Each | 1 | | | | |
| Ticket Vending Machine | | | 21 | | | | R - |

| Depot system | | | | | |
|---------------------------------------|----------|------|-----|------|-------|
| Portable Validation Unit (PVU) | Optional | | | | |
| ITEM | REMARKS | UNIT | QTY | RATE | TOTAL |
| Portable Validation Unit (PVU) | Optional | Each | 50 | | |
| PVU Docking station | Optional | Each | 50 | | |
| Portable Validation Unit (PVU) | | | | | |
| Drivers Dispatch Terminal (DT) | | | | | |
| DT Operations | | Each | 17 | | |
| DT Training | | Each | 5 | | |
| DT Testing | | Each | 1 | | |
| Drivers Dispatch Terminal (DT) | | | 23 | | |
| Cashier Dispatch Terminal (CT) | | | | | |
| CT Operations | | Each | 17 | | |
| CT Training | | Each | 5 | | |
| CT Testing | | Each | 1 | | |
| Cashier Dispatch Terminal (CT) | | | 23 | | |

| FOREX COMPONENT Y/N | OPTIONAL |
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| | R - |
| | R - |
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| Bus system | | | | | |
|--|--|---------------------|---------|------|-------|
| On Board Validator (OBV) | | | | | |
| ITEM | REMARKS | UNIT | QTY | RATE | TOTAL |
| OBV Validator unit – operations | | Each | 650 | | |
| OBV Driver's ticket issuing machine / console - operations | | Each | 650 | | |
| OBV Validator unit - training | | Each | 22 | | |
| OBV Driver's ticket issuing machine / console - training | | Each | 22 | | |
| OBV Validator unit - testing | | Each | 1 | | |
| OBV Driver's ticket issuing machine / console - testing | | Each | 1 | | |
| On Board Validator (OBV) | | | 1322 | | |
| Fare Evasion Monitoring (FEM) Optional | | | | | |
| FEM Operations | | | 650 | | |
| FEM Training | | | 22 | | |
| FEM Testing | | Each | 1 | | |
| Fare Evasion Monitoring (FEM) | | | 673 | | |
| Tenderer specified items (add additional lines if needed) | The Tenderer may add any items it may wish to specify, forming part of the Installation stage. | Add unit of measure | Add Qty | | |
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SECTION 8

| S8.8 Training | | | | | | | FOREX COMPONENT Y/N | OPTIONAL |
|---|---------------------------------|---|---------------------|---------|------|-------|------------------------|----------|
| ITEM | TENDER REF. | REMARKS | UNIT | QTY | RATE | TOTAL | | |
| Operator training 'train the trainer' | Section 7: 2.6.10.1. | Excluding optional items | Complete | 1 | | | | |
| Maintenance training 'train the trainer' | Section 7: 2.6.10.2. | Excluding optional items | Complete | 1 | | | | |
| Training manuals | Section 7: 2.6.10.2.8, TRG 1 | Excluding optional items | Complete | 1 | | | | |
| Training instructor's manuals | Section 7: 2.6.10.2.8, TRG 2 | Excluding optional items | Complete | 1 | | | | |
| PVU's | Section 7: 2.7.2.6 | Optional, includes the above related to PVUs | Complete | 1 | | | | R - |
| FEM | Section 7: 2.7.2.5.2 | Optional, includes the above related to FEM | Complete | 1 | | | | R - |
| Tenderer specified items (add additional lines if needed) | Add applicable tender ref. no. | The Tenderer may add any items it may wish to specify, forming part of the post-commissioning stage.. | Add unit of measure | Add Qty | | | | |
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| | | | | | | | | |
| | | | | | | | | R - |

| S8.9 Maintenance and Support | | | | | | FOREX COMPONENT Y/N | OPTIONAL |
|---|---|---------------------|---------|------|-------|------------------------|----------|
| ITEM | REMARKS | UNIT | QTY | RATE | TOTAL | | |
| Initial maintenance and support | System wide for period of 6 months, excluding optional items | Months | 6 | | | | |
| Ongoing support | System wide for period of 90 months, excluding optional items | Months | 90 | | | | |
| Monthly maintenance reports and document deliverables | For whole maintenance period | Months | 6 | | | | |
| PVU's | System wide for period of 6 months | Monthly | 6 | | | | R - |
| PVU's | System wide for period of 90 months | Monthly | 90 | | | | R - |
| FEM | System wide for period of 6 months | Monthly | 6 | | | | R - |
| FEM | System wide for period of 90 months | Monthly | 90 | | | | R - |
| Tenderer specified items (add additional lines if needed) | The Tenderer may add any items it may wish to specify | Add unit of measure | Add Qty | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | R - |

| S8.10 Ongoing licenses | | | | FOREX COMPONENT Y/N |
|-------------------------------|--|-------------|-------------|------------------------------------|
| ITEM | REMARKS | UNIT | RATE | |
| Tenderer to specify licence | Tenderer to state renewal intervals in next column, e.g. annual, and any clarifications below. | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

| S8.11 Ongoing licenses | | |
|--|----------------|-------------|
| ITEM | REMARKS | RATE |
| Tenderer to add any other relevant resources below | | |
| Project manager | | |
| Quality controller | | |
| Electronics Engineer | | |
| Software developer | | |
| Systems administrator | | |
| MS SQL Data base administrator | | |
| Site supervisor | | |
| AFC Electronics Technician | | |
| Installer | | |
| Electrician | | |
| Microsoft Azure Cloud Engineer | | |
| Other | | |

SECTION 8 CONTINUED: BILL OF QUANTITIES / SCHEDULE OF RATES / PRICING / ACTIVITIES

1. General

- 1.1 This section provides the Tenderer with guidelines and requirements regarding the completion of the price schedule.
- 1.2 The price schedule is available in electronic format on request as an MS Excel spreadsheet. Tenderers shall not make any changes to the content or layout of spreadsheet, except for items forming part of the Tenderers solution which have not been included in the schedule.
- 1.3 Tenderer is responsible for all data provided in the price schedule and therefore shall ensure that formulas used in the spreadsheet are correct and that quantities and prices which are calculated are correctly updated. If any errors exist in any of the formulas in the spreadsheet the unit price and rates provided shall take precedence in determining total values. The Tenderer may add lines for items not listed in the price schedule where indicated. The Tenderer shall ensure that the line items added shall be provided with unit price and rates as specified above and are included in the summation formulae.
- 1.4 Tenderers shall complete the electronic schedules by inserting all the required rates and lump sums and shall print and sign the completed schedules and insert them into their Tender submissions.
- 1.5 Tenderers shall ensure that the pricing schedule is printed in the same format it appears in this document. In addition to the printed and signed pricing schedule, Tenderers shall submit an electronic version in MS-Excel format.
- 1.6 The Tenderer is referred to the conditions of tender regarding the correction of errors. The price schedule shall be read with all the documents which form part of this Contract.
- 1.7 The following words shall have the meanings hereby assigned to them:
- 1.7.1 Unit: The unit of measurement for each item of work in terms of the Specifications and the Project Specifications.
- 1.7.2 Quantity: The number of units of work for each item.
- 1.7.3 Rate: The payment per unit of work at which the Tenderer tenders perform the work.
- 1.7.4 Price: The product of the quantity and the rate tendered for an item.
- 1.7.5 Lump sum: An amount tendered for an item, the extent of which is described in the price

schedule, the scope of work, but the quantity of work of which is not measured in any units.

2. Schedule completion

This price schedule has columns for unit, quantity, rate, total amount for the goods, forex component per item and a column for options. Entries in these columns are made as follows:

- 2.1. 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 amount column only, the other columns being left blank.
- 2.2. 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, 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 amount which is also entered.
- 2.3. All prices and rates entered in the Price Schedule must be **excluding** VAT. VAT will be added on the summary page of the Price Schedule.
- 2.4. The Tenderer is indicate of the component or parts thereof is subject to foreign exchange by indicating Y/N in the forex component column. Refer to ACC 6 regarding Rate of Exchange / Forward cover process.
- 2.5. The 'optional' column should automatically reference optional items from the total amount column so as to create sub-totals for optional items which will be carried forward to the summary sheet.
- 2.6. The price schedule is to be read in conjunction with the General and Special Conditions of Contract and the Scope of Work specification – section 7.
- 2.7. The rates and prices entered in the price schedule shall be deemed to include for compliance with the statutory obligations arising from the appointment and duties of the Supplier as well as any other overheads and incidental costs not specifically delineated in the schedule.
- 2.8. Any major items that the Tenderer considers have been omitted from the schedule must be added by the Tenderer in the places provided in the schedule and described as "...Tenderer Specified Items...".
- 2.9. Prices for minor items Tenderers consider are omitted from the schedule must be included within prices for appropriate existing schedule items, which will be the Purchaser's assumption to the extent that the total price may be considered a lump sum for the scope of work specified.

- 2.10. Items against which no price or rate is entered shall be deemed to be covered by the other rates and prices in the price schedule.
- 2.11. The quantities in the price schedule are indicative and the Purchaser does not guarantee these quantities as minimum or maximum quantities for purchase and reserves the right to re-measure quantities, without limit if required, at the rates provided in the price schedule, subject to the provisions of the Contract. However, these quantities will be used for evaluation purposes of the total price of the Supplier's Tender.

SECTION 9 : OFFICIAL TENDER FORM

Part A: OFFER BY TENDERER - In response to **Tender Number : 1T-19865** I / we hereby offer to supply the goods / services detailed hereunder in accordance with the Technical Specification, and subject to the Standard and Special Conditions of Tender (Goods/Services), and General and Special Conditions of Contract, which accompanied your Tender (with which I / we acknowledge myself / ourselves to be fully acquainted) at the price stated below, or in the case of individual rates are indicated in Section 8 : Bill Of Quantities / Schedule of Rates / Activities.

| TENDERED PRICE EXCLUSIVE OF VAT | VAT AMOUNT | TENDERED PRICE INCLUSIVE OF VAT |
|--------------------------------------|------------|------------------------------------|
| R | R | * R |
| * AMOUNT IN WORDS (incl. VAT): | | |

I / We hereby agree that this tender will hold good and remain open for acceptance as specified in the Conditions of Tender or during such other period as may be specified in the Special Conditions of Tender.

eThekwini Vendor Portal Registration Number:

PR

C.S.D Registration Number:

MAAA

S.A.R.S Pin Number:

Completion of the following is compulsory. Failure to declare the following will invalidate your offer.

Declaration of Interest

| Are any of the entity's directors, managers, principle shareholder or stakeholders currently in the service of the state or have been in the service of the state in the past twelve (12) months? | | | | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
|---|--------------------|----------------------------------|---------------------------|------------------------------|-----------------------------|
| Is any spouse, child or parent of the entity's directors, managers, principle shareholder or stakeholder currently in the service of the state or have been in the service of the state in the past twelve (12) months? | | | | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Name of entity's member | Position in Entity | Name of Relative (if applicable) | Name of State Institution | Nature of Relationship | |
| | | | | | |
| | | | | | |
| Do you or any other directors, managers, principle shareholder or stakeholder of your entity have any relationship (spouse, family, friend, associate) with persons in the service of the state and/or who may be involved with the evaluation of this quotation? If yes please furnish particulars below | | | | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Name of entity's member | Position in Entity | Name of Relative (if applicable) | Name of State Institution | Nature of Relationship | |
| | | | | | |
| | | | | | |

Refer to the Consolidated MBD Documents in Section 4(d) for the definition of "in service of the State"

* Signature :

* Name (capitals):

Date:

Capacity:

* Name of Business:

Tel:

Address:

Fax:

* Denotes Mandatory Information

Failure to complete the Mandatory Information and sign this Tender Form will invalidate the tender

Part B: ACCEPTANCE BY PURCHASER - The Purchaser, as represented by the following Official, hereby accepts the Tenderer's offer in terms of the Conditions of Tender, Specifications, and Conditions of Contract.

Signature:

Name (capitals):

Date:

Capacity:

SECTION 10: ANNEXURES (if applicable)**FORM RDD 1****EVALUATION SCHEDULE: EQUIPMENT, DESIGN AND CONTRACTOR REQUIREMENTS**

The Tenderer must respond to the Purchaser's requirements in Section 7 which shall include a detailed description of the solution as well as a statement of compliance, the general format of which is indicated in the table below.

The Tenderer is to insert the pages necessary for the solution description, supporting documents, diagrams etc.

The statement of compliance is to be completed in response to each clause in the requirements document, Section 7.

| Item | Reference in Section 7 | Requirement | Comply (C) No Comply (NC) Comply Conditionally (CC) | Qualification |
|------|------------------------------|-------------|--|---------------|
| 1 | | | | |
| 2 | | | | |
| etc | | | | |

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
the tender:

Full name (in BLOCK letters): _____

Signature: _____

Date: _____

FORM RDD 2

EVALUATION SCHEDULE: TENDERER'S RELEVANT PROJECT EXPERIENCE

The tenderer must demonstrate the following criteria:

The experience of the Tenderer or joint venture partners in the case of an unincorporated joint venture or consortium as opposed to the key staff members / experts in similar projects or similar areas and conditions in relation to the scope of work over the last ten (10) years will be evaluated. *Relevant experience must be demonstrated in the field of Public Transport Services and Automatic Fare Collection Systems (AFCS) as described in the Scope of Works – Section 7.*

International experience as well as experience and knowledge of local transportation networks and AFCSS equipment and issues pertinent to the project will be evaluated. Points for the references will be based on the Tenderers work for its clients who have received similar solutions and services;

In particular, Tenderers must demonstrate experience in the following areas:

- *Implementation of AFCS systems in public transport.*
- *Implementation of EMV contactless card-based fare collection systems*
- *Implementation of Cipurse based fare collection systems*
- *Implementation of contactless mobile payments on fare collection systems*
- *Implementation of account-based ticketing in fare collection systems*
- *Design of the above systems, including system architecture and detail system design*
- *Software development*
- *Hardware adaptation / customisation*
- *Systems integration*
- *Setup and configuration of database systems*
- *Maintenance and support of AFCS systems*

Tenderers must complete Form RDD 2: Schedule of Tender's Experience to comply with this schedule.

Current users of the systems (see Form RDD 8: Current Users) should be attached to this schedule:

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
the tender:

Full name (in BLOCK letters): _____

Signature: _____

Date: _____

FORM RDD 2 - CONTINUED
SCHEDULE OF TENDERER'S EXPERIENCE

The following is a statement of similar work successfully executed by myself / ourselves.

| EMPLOYER, CONTACT PERSON AND TELEPHONE NUMBER. | DESCRIPTION OF CONTRACT | VALUE OF WORK INCLUSIVE OF VAT (RAND) | DATE COMPLETED |
|---|--|---|--|
| 1. _____ _____ (Name) _____ (Telephone Number) | _____ _____ _____ _____ _____ _____ | _____ _____ _____ _____ | _____ _____ _____ _____ |
| 2. _____ _____ (Name) _____ (Telephone Number) | _____ _____ _____ _____ _____ _____ | _____ _____ _____ _____ | _____ _____ _____ _____ |
| 3. _____ _____ _____ (Name) _____ (Telephone Number) | _____ _____ _____ _____ _____ _____ | _____ _____ _____ _____ | _____ _____ _____ _____ |
| 4. _____ _____ _____ (Name) | _____ _____ _____ _____ _____ _____ | _____ _____ _____ _____ | _____ _____ _____ _____ |

| | | | |
|--|---|--|-------------------------|
| <div><div></div><div>(Telephone Number)</div><div></div><div>5.</div><div></div><div></div><div>(Name)</div><div></div><div>(Telephone Number)</div></div> | <div></div> <div></div> <div></div> <div></div> | | <div></div> <div></div> |
|--|---|--|-------------------------|

Attach additional pages if more space is required)

FORM RDD 3
EVALUATION SCHEDULE: METHODOLOGY AND TECHNICAL APPROACH,
PROJECT MANAGEMENT AND PROGRAMME

- 1) Tenderers shall supply a detailed methodology outlining the system criteria as detailed in the Scope of Works – Section 7. The approach paper must respond to the scope of work and outline the proposed approach / methodology including that relating to health and safety. The approach paper should articulate what added value the tenderer will provide in achieving the stated objectives for the project.

The Tenderer must as such explain its understanding of the objectives of the assignment and the Purchaser's stated and implied requirements, highlight the issues of importance, and explain the technical approach they would adopt to address them. The approach paper should explain the methodologies which are to be adopted and demonstrate the compatibility of those methodologies with the proposed approach.

The approach should also include a quality plan which outlines processes, procedures and associated resources, applied by whom and when, to meet the requirements and indicate how risks will be managed and what contribution can be made regarding value management.

- 2) The detailed Outline System Specification, to include:
- Detailed information on the proposed system architecture including hardware requirements; software requirements and functionality; and, communication requirements that complies with the Purchaser's communication system;
 - Detailed information on the approach taken to integrate all the applications with the AFCS central system;
 - Features, capability and flexibility of the proposed AFCS front end, and how other applications can be viewed, controlled and set using the AFCS front end;
 - Approach to supply and installation of equipment and systems;
 - Approach to transferring from existing to new AFCS without operational disturbance;
 - Information on system and communications data security; and
 - Information on the day to day operation of the system.
- 3) Tenderers shall supply a detailed project programme indicating timescales for the system's implementation (showing each phase of implementation); Tenderers should note that the project includes the necessity of working with other stakeholders and service providers, which although requiring liaison and coordination by the Supplier, are likely to impact on their project programme. Such dependencies should be clearly indicated.
- 4) In the project programme, the tenderer shall clearly show the various inception dates as milestones and indicate all systems and equipment to be installed as operational at this date.
- 5) Tenderers shall provide timescale of the supply of equipment to the site and installation;
- 6) Tenderers shall provide details on works that will be carried out by the Tenderer on Purchaser's premises (if any supply and installation work will be outsourced then all details shall be provided in this Tender submission);

- 7) Tenderers shall provide information on how the contract will be managed by the Tenderer (details of key personal to be submitted including Curriculum Vitae); Form RDD 7
- 8) Tenderers shall provide details on how they will work with other stakeholders / service providers to ensure integrated systems work as specified, as a basis for the PID;
- 9) Tenderers shall set out a procedure for resolving integration issues;
- 10) Tenderers shall provide details on how they will minimise and manage risk.

The tenderer must attach the proposed project programme to this page. At least the following shall be clearly shown on the programme:

Project implementation phases according to the Sections specified in the Scope of Work – Section 7.

(Only complete the table below if any supply and installation work will be outsourced)

| Name of Supplier | Description of Work | Value of Work |
|------------------|---------------------|---------------|
| | | |
| | | |
| | | |
| | | |
| | | |

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
the tender:

Full name (in BLOCK letters): _____

Signature: _____

Date: _____

FORM RDD 4
EVALUATION SCHEDULE: MAINTENANCE & SUPPORT PLAN

The Tenderer shall display the ability to perform system maintenance and support as specified in the Scope of Work – Section 7.

The Tenderer shall provide his detailed maintenance plan and show how this will meet the maintenance and support requirements. The maintenance plan shall be attached to this page.

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 the
tender:

Full name (in BLOCK letters):

Signature:

Date:

FORM RDD 5
EVALUATION SCHEDULE: PROPOSED ORGANISATION AND STAFFING

The Tenderer should propose the structure and composition of their team i.e. the main disciplines involved, the key staff member / expert responsible for each discipline, and the proposed technical and support staff and site staff. This shall include an organogram. The roles and responsibilities of each key staff member / expert should be set out as job descriptions.

In the case of an association / joint venture / consortium, it should, indicate how the duties and responsibilities are to be shared.

The Tenderer must attach his / her organization and staffing proposals to this page. This shall include an organogram showing key roles to address the following:

- Strong Project Management Skills
- Contract Management Expertise
- AFCS expertise in EMV, mobile and ABT implementations
- Software Development Expertise
- Database Expertise
- Hardware Development Expertise
- Training and Skill Transfer Expertise
- Systems Engineering Expertise
- Systems integration expertise, including Network Design and System Integration

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 the
tender:

Full name (in BLOCK letters): _____

Signature: _____

Date: _____

FORM RDD 6
EVALUATION SCHEDULE: KEY PERSONNEL AND CURRENT USERS

The experience of assigned staff member in relation to the scope of work will be evaluated from three different points of view:

- 1) General experience (total duration of professional activity), level of education and training and positions held of each discipline specific team leader.
- 2) The education, training, skills and experience of the assigned staff in the specific sector, field, subject, etc which is directly linked to the scope of work.
- 3) The key staff members' / experts' knowledge of issues which the Tenderer considers pertinent to the project e.g. local conditions, affected communities, legislation, techniques etc.
- 4) Tenderers shall provide the names and addresses of a minimum of three (3) current users of similar systems provided by the Tenderer, together with a letter authorising users to divulge information pertinent to their satisfaction or otherwise, with the Tender and its system's performance. The Purchaser will approach these users for comments on the performance of these systems and the maintenance and support services offered.

Tenderers must complete Form RDD 6: Key Personnel to comply with this schedule. A CV (see Form RDD 7: Curriculum Vitae Of Key Personnel).

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 the tender:

Full name (in BLOCK letters): _____

Signature: _____

Date: _____

**FORM RDD 6
KEY PERSONNEL**

The Tenderer shall list in the table below the key personnel to be engaged for this project. This shall include his proposed Project Manager.

Note: Form RDD 7 must be complete for each person listed below.

| | NAME | POSITION/ROLE | LOCAL / NON LOCAL |
|----|------|---------------|----------------------|
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |
| 13 | | | |
| 14 | | | |
| 15 | | | |

(Attach additional pages if more space is required)

FORM RDD 7
CURRICULUM VITAE OF KEY PERSONNEL

Note: This form should be completed for each key person listed in Form RDD 6

| | |
|--|-------------------------|
| Name: | Date of birth: |
| Profession: | Nationality: |
| Qualifications: | |
| Professional membership: | |
| Name of employer (firm): | |
| Current position: | Years with firm: |
| Employment record: (list in chronological order starting with earliest work experience)(max 500 words) | |
| | |
| Experience record pertinent to required service: (max 500 words) | |
| | |
| Certification: I, the undersigned, certify that to the best of my knowledge and belief, this data correctly describes me, my qualifications and my experience. | |
| _____ <i>(Signature of person named in schedule)</i> | _____ Date: |

FORM RDD 8
CURRENT USERS OF THE SYSTEM

| Name and reference contact details | Address | Description of the systems used | Comments on performance of the Systems |
|---|----------------|--|---|
| | | | |
| | | | |
| | | | |

FORM RDD 9
EVALUATION SCHEDULE: QUALITY CONTROL PROCEDURES

The quality control practices and procedures which ensure compliance with stated Purchaser's requirements will be evaluated. The Tenderer must include any quality standards certifications such as ISO 9000 and proof of such certification should it exist.

Tenderers must complete and elaborate Form RDD 9: Quality Management Procedures and Systems to comply with this schedule.

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
the tender:

Full name (in BLOCK letters): _____

Signature: _____

Date: _____

FORM RDD 9
QUALITY MANAGEMENT PROCEDURES AND SYSTEMS

Briefly describe the quality systems incorporated by the tenderer in his organisation, with specific reference to this contract.

| TYPE OF WORK (Specify Task or Group of Tasks) | INTERNAL | EXTERNAL | NAME OF RESPONSIBLE COMPANY/PERSON (In case of a person provide qualifications and years experience) |
|---|-----------------|-----------------|--|
| Factory Testing | | | |
| Site Testing | | | |
| Materials testing | | | |
| Staff accreditation | | | |
| Additional quality systems | | | |

FORM RDD 10
EVALUATION SCHEDULE: TRAINING PLAN

- 1) Tenderers shall provide detail of their proposed training course for the Purchaser's staff as defined in the Scope of Work – Section 7;
- 2) Tenderers shall provide a training programme including, timescale of implementation, the number of days and hours for training course, the number of sessions proposed and the number of staff to be trained in each session.

Tenderers must complete Form RDD 10: Training Programme to comply with this schedule.

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 the
tender:

Full name (in BLOCK letters):

Signature:

Date:

**FORM RDD 10
TRAINING PROGRAMME**

Details of the Proposed Training Course

| <u>Details of the Proposed Training Course</u> | | | | |
|---|------------------------------------|--|------------------------------------|--|
| Name of the Training Course | Timescale of Implementation | Duration of the Training Course | Number of Sessions Proposed | Number of Staff to be trained in each session |
| | | | | |
| | | | | |

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 the tender:

Full name (in BLOCK letters):

Signature:

Date:

FORM RDC 14**TENDERER'S BANK DETAILS****Notes to tenderer:**

1. The tenderer shall attach to this form a letter from the bank at which he declares he conducts his account. The contents of the bank's letter must state the credit rating that it, in addition to the information required below, accords to the tenderer for the business envisaged by this tender. Failure to provide the required letter with the tender submission may render the tenderer's offer unresponsive in terms of tender condition F.3.8.
2. The tenderer's banking details as they appear below shall be completed.
3. In the event that the tenderer is a joint venture enterprise, details of all the members of the joint venture shall be similarly provided and attached to this form.

The tenderer shall provide the following:

- i) Name of Account Holder:
- ii) Account Number:
- iii) Bank name:
- iv) Branch Number:
- v) Bank and branch contact details
-

SIGNED ON BEHALF OF THE TENDERER:

FORM RDC15**LETTER OF INTENT TO PROVIDE A PERFORMANCE DEMAND GUARANTEE**

It is hereby agreed that a Performance Bond drafted exactly as set out in the attached examples (See Section 5: §7 Performance Security) will be provided by the Surety named below:

Name of Surety (Bank or Insurer)

Address:

Signed:

Name:

Capacity:

On behalf of Tenderer (name of Tenderer)

Date:

CONFIRMED BY Surety's Authorised representative

Signature(s):

Name (print):

Capacity

On behalf of Surety (Bank or Insurer)

Date:

BID EVALUATION SCHEDULE

The following evaluation and scoring structure is to be applied in the awarding of the bid, notwithstanding the provisions of Section 2:18

| Stage 1 | | | | | | |
|---------------------------|----------------------------|---|--------|--|--------|--------------------------|
| Decsription | Quality criteria | Sub criteria | Scores | Scoring criteria | Scores | Maximum Number of points |
| Administrative Compliance | Complete tender submission | Completion and submission of returnable documents RDA | Y/N | Submission 1 x original + 1 x copy + Memory Stick, correctly labelled and identified | | Pass/Fail |
| | | | Y/N | Signed Authority of Signatory | | |
| | | | Y/N | Signed Declaration of Municipal Fees | | |
| | | | Y/N | Signed Declaration with Respect to the OHASA | | |
| | | | Y/N | Signed General Enterprise Information Forms including valid Central Supplier Database registration number. | | |
| | | | Y/N | Valid Tax Clearance Certificate / Tax compliance status PIN | | |
| | | | Y/N | Completed Declaration of Interest | | |
| | | | Y/N | Completed Declaration for Procurement above R10 million | | |
| | | | Y/N | Completed Preference Points claimed ITO Preference points system | | |
| | | | Y/N | Competed Declaration Certificate for Local Production and Content for Designated Sectors | | |
| | | | Y/N | Completed Declaration of Bidder's Past Supply Chain Management Practices | | |
| | | | Y/N | Certificate of Independent Bid Determination | | |
| | | | Y/N | Signed, Confirmations, Authorities, Certifications, Acknowledgements and Signatures | | |
| | | | Y/N | Signed Official Form of Tender | | |
| | | | Y/N | Submission of CPG plan and subcontractor for min 20% of maintenance | | |
| | | | Y/N | Signed J/V agreement submitted (Where applicable) | | |
| | | | Y/N | Compulsory briefing session attendance | | |
| | | | Y/N | Company Three Year Financial Statements | | |
| | | | Y/N | All pages of the bid document initiated and signed where required | | |

| Stage 2 | | | | | |
|----------------------------|---|--|-----------|--|--------|
| Description | Quality criteria | Sub criteria | Scores | Scoring criteria | Scores |
| Solution Compliance | AFC - Equipment, design and supplier requirements | Ability for equipment and supplier to fully comply with the requirements criteria as set out in RDD 1, and supported by supplementary information where required. | NA | The tender has complied with all requirements in section 7. Fail if non-compliant and does not progress to the next stage of evaluation. | NA |
| RDP Goal Compliance | Creation of new jobs to address black youth unemployment | Supplier to provide a detailed skills development plan for the development of the new employees in this category with specific deliverables and outcomes that can be measured. Tenderer to indicate the number of new jobs that will be created in this category | NA | Tenderer has provided a detailed skills development plan with deliverables and outcomes and indicated the number of new jobs that will be created to address this criteria. Fail if not provided | NA |

| Stage 2 | | | | | | |
|--------------------------------------|--|---|--------|--|--------|--------------------------|
| Description | Quality criteria | Sub criteria | Scores | Scoring criteria | Scores | Maximum Number of points |
| Quality and Functionality Compliance | AFC - Equipment, design and supplier requirements | Ability for equipment and supplier to comply with the specification and requirements criteria as detailed in RDD 1 and provide supporting documentation where relevant. | 0 | The Tenderer has not provided a comprehensive statement of compliance for the proposed AFCS solution and does not comply with all the mandatory functional requirements. | 0 | 25 |
| | | | 40 | The Tenderer's solution or statement of compliance complies with all the mandatory requirements but has poor supporting documentation. | 10 | |
| | | | 80 | The Tenderer's solution or statement of compliance complies with all the mandatory requirements and has good supporting documentation. | 20 | |
| | | | 100 | The Tenderer's solution or statement of compliance complies with all the mandatory requirements and very good supporting documentation | 25 | |
| | Relevant Project Experience on similar contracts and Current Users of the system | Relevant experience of key automatic fare collection, contactless card or similar projects as described in RDD 2 and RDD 8. | 0 | The tenderer has no experience in the field of AFCS related projects. | 0 | 20 |
| | | | 40 | The tenderer has poor and limited (1-2 projects) experience in the field of AFCS. | 8 | |
| | | | 80 | The tenderer has satisfactory and relevant (2-3 projects) experience in the field of AFCS related projects. | 16 | |
| | | | 90 | The tenderer has good and extensive (3-5 projects) experience in the field of AFCS related projects. | 18 | |
| | | | 100 | The tenderer has very good and outstanding (+5 projects) experience in the AFCS related projects. | 20 | |
| | Methodology and Technical Approach, Project Management and Programme | Approach paper which responds to the scope of work and outlines the proposed approach / methodology, project management and programme including that relating to health and safety. (RDD 3) | 0 | The technical approach and / or methodology are very poor / are unlikely to satisfy project objectives or requirements. The tenderer has misunderstood most aspects of the scope of work and does not deal with the critical aspects of the project. | 0 | 20 |
| | | | 40 | The technical approach and / or methodology are poor / are unlikely to satisfy project objectives or requirements. The tenderer has misunderstood certain aspects of the scope of work and does not deal with the critical aspects of the project. | 8 | |
| | | | 80 | The approach addresses the specific project objectives and methodology. The approach identifies the critical characteristics of the project and offers solutions that show an adequate understanding of the systems and services required. The quality plan, manner in which risk is to be managed etc. is adequate/ Satisfactory . | 16 | |
| | | | 90 | The approach is specifically tailored to address the specific project objectives and methodology and is sufficiently flexible to accommodate changes that may occur during execution. The quality plan and approach to managing risk etc is specifically tailored to the critical characteristics of the project (Good) | 18 | |
| | | | 100 | Besides meeting the "good" rating, the important issues are approached in an innovative and efficient way, indicating that the tenderer has outstanding knowledge of state-of-the-art approaches. The approach paper details ways to improve the project outcomes and the quality of the outputs (Very Good) | 20 | |

| Description | Quality criteria | Sub criteria | Scores | Scoring criteria | Scores | Maximum Number of points |
|--------------------------------------|------------------------------------|--|--------|---|--------|--------------------------|
| Quality and Functionality Compliance | Maintenance and Support plan (AFC) | Ability to provide a suitable operations and maintenance plan to meet the specified requirements. (RDD 4) | 0 | Very poor response received which does not meet the requirements. | 0 | 20 |
| | | | 40 | The proposed operations and maintenance plan may likely not meet the stated purchaser's requirements (Poor) | 4 | |
| | | | 80 | The proposed operations and maintenance plan may possibly be able to meet the stated purchaser's requirements (Satisfactory) | 8 | |
| | | | 90 | The proposed operations and maintenance plan is likely to meet the stated purchaser's requirements (Good) | 9 | |
| | | | 100 | The proposed operations and maintenance plan is most likely to meet the stated purchaser's requirements. (Very Good) | 10 | |
| | Organization and staffing | Qualifications and general experience of key staff and Adequacy for the assignment (assigned personnel) in relation to the Scope of Works (Part C3). (RDD 5; RDD 6; RDD 7) | 0 | Very poor/no response received which does not comply with the requirements A score of 0 will also be awarded for any misrepresentation made in the schedule of experience of key personnel. | 0 | 5 |
| | | | 40 | The organization chart is not clearly defined, the staffing plan is weak/ poor in important areas There is no clarity in allocation of tasks and responsibilities. Key staff have limited levels of project specific education, skills, training and experience | 4 | |
| | | | 80 | The organizational chart is complete and detailed, the technical level and composition of the staffing arrangements are adequate/ Satisfactory . Key staff have reasonable levels of project specific education, skills, training and experience (5 years) | 8 | |
| | | | 90 | Besides meeting the "satisfactory" rating, staff are well balanced i.e. they show good co-ordination, complimentary skills, clear and defined duties and responsibilities, and the approach to satisfying local consultants. Some members of the project team have worked together before on limited occasions. Key staff have extensive levels of project specific education, skills, training and experience (6-10 years) | 9 | |
| | | | 100 | Besides meeting the "good" rating, the proposed team is well integrated and several members have worked together extensively in the past. Key staff have outstanding/ Very Good levels of project specific education, skills, training and experience (+11 years) | 10 | |

| Decsription | Quality criteria | Sub criteria | Scores | Scoring criteria | Scores | Maximum Number of points |
|--------------------------------------|----------------------------|---|--------|---|--------|--------------------------|
| Quality and Functionality Compliance | Quality Control Procedures | Demonstrate the tenderers Quality Control practices and procedures. (RDD 9) | 0 | Very poor response received which does not meet the requirements. | 0 | 5 |
| | | | 40 | The described Quality control procedures are unlikely to ensure compliance with stated purchaser's requirements (poor) | 2 | |
| | | | 80 | The described Quality control procedures are likely to ensure compliance with stated purchaser's requirements (satisfactory) | 4 | |
| | | | 90 | The described Quality control procedures are very likely to ensure compliance with stated purchaser's requirements, add to a well-managed project environment and ensure quality deliverables (good) | 4.5 | |
| | | | 100 | Quality control procedures are very likely to ensure compliance with stated purchaser's requirements, add to a well management environment and are highly likely to add value to the project deliverables (very good) | 5 | |
| | Training Plan | Detail the tenderers proposed Training programme. (RDD 10) | 0 | Very poor response received which does not meet the requirements. | 0 | 5 |
| | | | 40 | The training plan proposed may likely not meet the stated purchaser's requirements (poor) | 2 | |
| | | | 80 | The training plan is likely to meet the stated purchaser's requirements (satisfactory) | 4 | |
| | | | 90 | The training plan is very likely to ensure compliance with stated purchaser's requirements and to add value to the capability of the operations team. (good) | 4.5 | |
| | | | 100 | The training plan complies with or exceeds the stated purchaser's requirements and will add value to the capability of the operations team. (very good) | 5 | |
| | | | | | | 100 |
| | | | | | | 70 |

| Stage 4 | | | | | |
|---------|----------------------|---|--|--------|--------------------------|
| Stage | Description | Quality criteria | Scoring criteria | Scores | Maximum Number of points |
| 4 | Financial evaluation | Financial scoring | Evaluation points awarded for the financial offer in accordance with GCC §14(1) | NFO | |
| | | Preference scoring | Evaluation points awarded for preference in accordance with GCC §14(2) | NP | |
| | | Combined financial and preference score | Calculate the total number of evaluation points (TEV) in accordance with the following formula: $TEV = NFO + NP$ where: NFO : is the number of evaluation points awarded for the financial offer; and NP : is the number of evaluation points awarded for preferences claimed. | TEV | |

