

TENDER NO: 387G/2015/16



**CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD**

Making progress possible. Together.

CONTRACT FILE

FOR THE

Supply, Install and Maintain Integrated Engineering Communications System

CONTRACTOR:

TENDER DOCUMENT GOODS AND SERVICES		 CITY OF CAPE TOWN ISIXEKO SASEKAPA STAD KAAPSTAD
SUPPLY CHAIN MANAGEMENT		
SCM - 542	Approved by Branch Manager: 10/09/2014	Version: 5b Page 1 of 194

TENDER NO: 387G/2015/16

SUPPLY, INSTALL AND MAINTAIN INTEGRATED ENGINEERING COMMUNICATIONS SYSTEM

CONTRACT PERIOD: From date of award for 9 years

CLOSING DATE: 04/08/2016

CLOSING TIME: 10:00 a.m.

**TENDER BOX
NUMBER: 159**

TENDER FEE: R50

TENDER SERIAL NO.: 6	
SIGNATURES OF CITY OFFICIALS TENDER OPENING	
1	
2	
3	

Non-refundable tender fee payable to City of Cape Town (CCT) for a hard copy of the tender document. This fee is not applicable to website downloads of the tender document (these are free of charge).

IMPORTANT NOTES TO TENDERERS:

- a) Tenders must be properly received and deposited in the abovementioned tender box on or before the closing date and before the closing time at the Tender Submission Office, situated on the 2nd floor, Concourse Level, Civic Centre, 12 Hertzog Boulevard, Cape Town.
- b) No late tenders will be accepted under any circumstances.
- c) Tender offers must be submitted in a sealed envelope clearly reflecting the tender number and tender description as indicated above.
- d) Only original tenders will be accepted. No copies will be accepted. For this tender to be valid the Form of Offer and Acceptance) must be signed by the tenderer. The tender price(s) must be inserted and the tenderer's name must appear clearly
- e) **DO NOT DISMEMBER THIS TENDER DOCUMENT (DO NOT TAKE IT APART, OMIT PAGES, CHANGE WORDING OR PUT DOCUMENTS BETWEEN ITS PAGES). ALL OTHER DOCUMENTS MUST BE ATTACHED AT THE END OF THIS DOCUMENT TO SCHEDULE [13] IN ORDER OF THE INDEX AS SET OUT ON PAGE 2. TENDERERS SHOULD CHECK THE NUMBERS OF THE PAGES TO SATISFY THEMSELVES THAT NONE ARE MISSING OR DUPLICATED. NO RESPONSIBILITY WILL BE ACCEPTED BY CCT WITH REGARD TO ANYTHING ARISING FROM THE FACT THAT THE PAGES ARE MISSING OR DUPLICATED.**

TENDERER	
NAME of Company/Close Corporation or Partnership / Joint Venture/ Consortium or Sole Proprietor /Individual	
TRADING AS (if different from above)	

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(1) DETAILS OF TENDERER**1.1 Type of Tenderer / Firm** (Please tick one box)☐ Individual/Sole Proprietorship☐ Close Corporation☒ Company☐ Partnership or Joint Venture or Consortium☐ Trust☐ Other:**1.2 Required Details** (Please provide applicable details in full):

Name of Company / Close Corporation or Partnership / Joint Venture / Consortium or Individual /Sole Proprietor	
Trading as (If different from above)	
Company / Close Corporation registration number (if applicable)	
Postal address	Postal Code <u>1609</u>
Physical address (Chosen domicilium citandi et executandi)	Postal Code _____
Contact details of the person duly authorised to represent the tenderer	Name: Mr/Ms _____ (Name & Surname) Telephone: _____ Fax: _____ Cellular Telephone: _____ E-mail address: _____
Income tax number	
VAT registration number	
City of Cape Town Vendor Database Registration Number (See Conditions of Tender)	

**(2) FORM OF OFFER AND ACCEPTANCE 387G/2015/16
SUPPLY, INSTALL AND MAINTAIN INTEGRATED ENGINEERING
COMMUNICATIONS SYSTEM**

PART A (TO BE FILLED IN BY TENDERER):

1.1 Type of Tenderer / Firm (Please tick one box)

- ☐ Individual/Sole Proprietor
 ☐ Close Corporation
 ☒ Company
☐ Partnership or Joint Venture or Consortium
 ☐ Trust
 ☐ Other:

1.2 Required Details (Please provide applicable details in full):

Name of Company / Close Corporation or Partnership / Joint Venture/ Consortium or Individual/Sole Proprietor* ("the tenderer")	
Trading as (if different from above)	
Company / Close Corporation registration number (if applicable)	

***Refer to Clause 6.2 Evaluation Criteria: Invalid Tenders**

AND WHO IS represented herein by: (full names of signatory) _____
 duly authorised to act on behalf of the tenderer in his capacity as: (title/ designation) DIRECTOR

HEREBY AGREES THAT by signing the *Form of Offer and Acceptance*, the tenderer:

1. confirms that it has examined the documents listed in the Index (including Schedules and Annexures) and has accepted all the Conditions of Tender;
2. confirms that it has received and incorporated any and all notices issued to tenderers issued by the CCT;
3. confirms that it has satisfied itself as to the correctness and validity of the tender offer; that the price(s) and rate(s) offered cover all the goods and/or services specified in the tender documents; that the price(s) and rate(s) cover all its obligations and accepts that any mistakes regarding price(s), rate(s) and calculations will be at its own risk;
4. offers to supply all or any of the goods and/or render all or any of the services described in the tender document to the CCT in accordance with the:
 - 4.1 terms and conditions stipulated in this tender document;
 - 4.2 specifications stipulated in this tender document; and
 - 4.3 at the prices as set out in the Price Schedule (**Section 3**).

*** Refer to Clause 6.2 Evaluation Criteria: Invalid Tenders**

5. agrees that the following documents shall form the Contract between the parties in the event that the tenderer is successful:
- 5.1 Price Schedule;
 - 5.2 Specification;
 - 5.3 All Declarations and Authorisations;
 - 5.4 General Conditions of Contract; and
 - 5.5 Special Conditions of Contract.
6. accepts full responsibility for the proper execution and fulfilment of all obligations and conditions devolving on it in terms of the Contract.

SIGNED AT Cape Town ON THIS THE 10 DAY OF AUGUST 2016
(PLACE) (DD) (MM) (YY)

Signature

***Refer to Clause 6.2 Evaluation Criteria: Invalid Tenders**

Print name(s):
On behalf of the tenderer (duly authorised)

2016-08-10
Date

INITIALS OF OFFICIALS
1

**(2) FORM OF OFFER AND ACCEPTANCE 387G/2015/16
SUPPLY, INSTALL AND MAINTAIN INTEGRATED ENGINEERING
COMMUNICATIONS SYSTEM**

PART B (TO BE FILLED IN BY THE CITY OF CAPE TOWN)

By signing this *Form of Offer and Acceptance* the City of Cape Town (also referred to as the 'Purchaser'):

1. accepts the offer submitted by (DETAILS OF SUCCESSFUL TENDERER, ALSO REFERRED TO AS THE "SUPPLIER") _____ thereby concluding a contract with the supplier for a contract period commencing on 1 March 2017 and 29 February 2020.
2. undertakes to make payment for the goods/services delivered in accordance with the terms and conditions of the Contract.

SIGNED AT CAPE TOWN ON THIS THE 31ST DAY OF JANUARY 2017
(PLACE) (DD) (MM) (YY)

Signature(s) and stamp of _____
Executive Director or his/her delegated authority

Print name(s): _____
(duly authorised in terms of the System
of Delegations as approved by Council)

2017 -01- 3 1

Date

**(2) FORM OF OFFER AND ACCEPTANCE 387G/2015/16
SUPPLY, INSTALL AND MAINTAIN INTEGRATED ENGINEERING
COMMUNICATIONS SYSTEM**

PART B (TO BE FILLED IN BY THE CITY OF CAPE TOWN)

By signing this *Form of Offer and Acceptance* the City of Cape Town (also referred to as the 'Purchaser');

1. accepts the offer submitted by (DETAILS OF SUCCESSFUL TENDERER, ALSO REFERRED TO AS THE "SUPPLIER") _____, thereby concluding a contract with the supplier for a contract period commencing on [date of signature] and terminating after nine years
2. undertakes to make payment for the goods/services delivered in accordance with the terms and conditions of the Contract.

SIGNED AT CAPE TOWN ON THIS THE 10 DAY OF AUGUST 2016
(PLACE) (DD) (MM) (YY)

Sig
Exe

Signature authority

Print name(s): _____
(duly authorised in terms of the System
of Delegations as approved by Council)

2016-08-10

Date

(3) PRICE SCHEDULE

Pricing Instructions:

- 3.1 All prices shall be tendered excluding VAT but including customs or excise duty and any other duty, levy, or other applicable tax.
- 3.2 All prices shall be tendered in accordance with the units specified in this schedule.
- 3.3 All prices tendered must include all expenses, disbursements and costs (e.g. transport, accommodation etc.) that may be required for the execution of the tenderer's obligations in terms of the Contract, and shall cover the cost of all general risks, liabilities and obligations set forth or implied in the Contract as well as overhead charges and profit (in the event that the tender is successful). All prices tendered will be final and binding.
- 3.4 The successful tenderer is required to perform all tasks listed against each item. The tenderer must therefore tender prices/rates on all items as per the section in the Price Schedule. Where the tenderer indicates a "Nil/R.0.00", "Not Applicable (N/A)" or as a "dash (-)" without explanation, the tenderer may be declared non-responsive.
- 3.5 The City wishes to enter into a contract with one tenderer only therefore tenderers will only be regarded responsive if the Pricing Schedule is completed for all items.
- 3.6 Prices Tendered below shall be subject to adjustment in accordance with Schedule 9.

- 3.7 Prices tendered below shall be subject to adjustment in accordance with **Schedule 9**. Firm prices will not be considered and the tender will be declared non-responsive.

Notwithstanding the above, if:

- a) the termination or end delivery date of a fixed price contract exceeds a period of one year from the expiry of the original tender validity period; or
- b) due to any extension of time granted by the CCT, the duration of the contract period exceeds one year;

then contract price adjustment will automatically apply for that period by which the extended time limit exceeds such one year. The CCT will inform the supplier in writing of the appropriate contract price adjustment mechanism which will apply.

- c) the award of a contract is delayed beyond the original tender validity period, and a tenderer is prepared to extend the validity period conditional to contract price adjustment;
- then the CCT may in its sole discretion approve or reject such proposed contract price adjustment.

3.8 Product Sourcing

In the event that a product required for a project arising out of this contract is not included in the pricing schedules or replaces an item that is no longer available during the contract period, then the successful tenderer may price the item based on the cost price and the stated administrative fee percentage as follows:

Cost Price : This is the price that you pay your supplier or manufacturer.

Administrative Fee : The amount you add to the cost price. That is the final price minus the cost price.

Administrative Fee Percentage : Final price minus the cost price, divided by the cost price.

Mark-up value : Cost price times Administrative Fee Percentage.

Final Price : This is the price that you invoice your customers, the City of Cape Town.
That is cost price plus mark-up value:
Final Price = Cost Price x (100 + Administrative Fee Percentage) divided by 100.

Note: This is not margin percentage – Administrative Fee divided by final price.

- 3.9 Please note that the tenderer shall submit their Pricing Schedule and Price Adjustment table in electronic format and hard copy format. A soft copy will be available on request from Mr Thomas Bosman.

Note:

- Please provide an electronic copy in an single , unprotected Excel- format file of the pricing schedule, together with a hard copy with the required accompanying documents inserted at the appropriate places.
- Name the file COCT___your company name, doc. Do not provide several digital files as the adjudicators will look at one file only.
- The purpose of the single file is to provide a quick reference for key word searches and enable a single spreadsheet of all vendor solution metrics and process to be easily created.
- Where separate documents are requested which cannot be inserted digitally into this document, please insert them into the hard copy of your response at the back of the paper document.

- 3.10 As this is a rates based tender, only unit costs, labour rates and monthly fees are requested. With evaluation the Bid Evaluation Committee will add estimated quantities as a basket to allow the financial evaluation of the pricing. Items 7 to 10 will be excluded from the basket.

ITEM NO:	DESCRIPTION	B Net Unit once off cost Excluding VAT (R)	C Net unit hourly rate Excluding VAT (R)	D Net Unit monthly Price for 1 month Excluding VAT (R)
1.	IN FIELD EQUIPMENT			
1.1	<u>Vehicle On Board Computer (OBC)</u>			
1.1.1	Basic OBC		XXXXX N/A XXXXX	XXXXX N/A XXXXX
1.1.2	Dual SIM upgrade for OBC		XXXXX N/A XXXXX	XXXXX N/A XXXXX
1.1.3	Wi-Fi upgrade for OBC		XXXXX N/A XXXXX	XXXXX N/A XXXXX
1.1.4	Wireless RF tracking unit upgrade for OBC		XXXXX N/A XXXXX	XXXXX N/A XXXXX
1.1.5	Movement sensor upgrade for OBC		XXXXX N/A XXXXX	XXXXX N/A XXXXX
1.1.6	Proximity sensor upgrade for OBC		XXXXX N/A XXXXX	XXXXX N/A XXXXX
1.1.7	CAN BUS upgrade for OBC		XXXXX N/A XXXXX	XXXXX N/A XXXXX
1.1.8	MPI upgrade for OBC		XXXXX N/A XXXXX	XXXXX N/A XXXXX
1.1.9	In Vehicle storage device for OBC		XXXXX N/A XXXXX	XXXXX N/A XXXXX
1.2	<u>In vehicle LAN</u>			
1.2.1	Mobile Data Terminal bracket and cradle		XXXXX N/A XXXXX	XXXXX N/A XXXXX
1.2.2	Basic in vehicle LAN		XXXXX N/A XXXXX	XXXXX N/A XXXXX
1.2.3	3G modem and SIM upgrade for LAN		XXXXX N/A XXXXX	XXXXX N/A XXXXX
1.2.4	CCTV camera for odometer reading upgrade		XXXXX N/A XXXXX	XXXXX N/A XXXXX
1.2.5	Sound microphone upgrade		XXXXX N/A XXXXX	XXXXX N/A XXXXX
1.2.6	CCTV Dash camera upgrade		XXXXX N/A XXXXX	XXXXX N/A XXXXX
1.2.7	CCTV external camera upgrade		XXXXX N/A XXXXX	XXXXX N/A XXXXX
1.2.8	Mobile Data terminal – Standard		XXXXX N/A XXXXX	XXXXX N/A XXXXX
1.2.9	Mobile Data Terminal Ruggedised		XXXXX N/A XXXXX	XXXXX N/A XXXXX
1.3	<u>Bin counting and tag reading system</u>			
1.3.1	One Bin counting and tag reading unit(1 of 2 for dual lifting truck)		XXXXX N/A XXXXX	XXXXX N/A XXXXX
1.3.2	One external CCTV camera control and video display unit (4 x power over USB camera inputs, 10 inch display)		XXXXX N/A XXXXX	XXXXX N/A XXXXX
1.3.3	One external CCTV camera (USB)		XXXXX N/A XXXXX	XXXXX N/A XXXXX
1.3.4	Portable RFID reader – Basic store use		XXXXX N/A XXXXX	XXXXX N/A XXXXX
1.3.5	Portable RFID reader – Field use		XXXXX N/A XXXXX	XXXXX N/A XXXXX
1.3.6	Portable RFID reader – Executive use		XXXXX N/A XXXXX	XXXXX N/A XXXXX
1.4	<u>SCADA devices</u>			
1.4.1	SCADA unit		XXXXX N/A XXXXX	XXXXX N/A XXXXX
1.5	<u>Toilet and tap counting and tag reading system</u>			
1.5.1	One Portable toilet/tap counting and tagging unit		XXXXX N/A XXXXX	XXXXX N/A XXXXX

ITEM NO:	DESCRIPTION	B Net Unit once off cost Excluding VAT (R)	C Net unit hourly rate Excluding VAT (R)	D Net Unit monthly Price for 1 month Excluding VAT (R)
2.	IN FIELD SPARES			
2.1	<u>Basic OBC</u>			
2.1.1	GPS antenna		XXXXX N/A XXXXX	XXXXX N/A XXXXX
2.1.2	GSM antenna		XXXXX N/A XXXXX	XXXXX N/A XXXXX
2.1.3	Wi-Fi antenna		XXXXX N/A XXXXX	XXXXX N/A XXXXX
2.1.4	Dallas tag reader		XXXXX N/A XXXXX	XXXXX N/A XXXXX
2.1.5	Dallas tag reader with tag clip lock		XXXXX N/A XXXXX	XXXXX N/A XXXXX
2.1.6	Starter inhibitor relay		XXXXX N/A XXXXX	XXXXX N/A XXXXX
2.1.7	Emergency button		XXXXX N/A XXXXX	XXXXX N/A XXXXX
2.1.8	Voltage sensor		XXXXX N/A XXXXX	XXXXX N/A XXXXX
2.1.9	RPM sensor		XXXXX N/A XXXXX	XXXXX N/A XXXXX
2.1.10	CAN BUS interface		XXXXX N/A XXXXX	XXXXX N/A XXXXX
2.1.11	Dallas tag programmer		XXXXX N/A XXXXX	XXXXX N/A XXXXX
2.1.12	OBC loom – 3meters		XXXXX N/A XXXXX	XXXXX N/A XXXXX
2.1.13	OBC loom - 5 meters		XXXXX N/A XXXXX	XXXXX N/A XXXXX
2.2	<u>Bin lifting and tagging</u>			
2.2.1	100 x RFID tags		XXXXX N/A XXXXX	XXXXX N/A XXXXX
2.2.2	1000 x RFID tags		XXXXX N/A XXXXX	XXXXX N/A XXXXX
2.2.3	10 000 x RFID tags		XXXXX N/A XXXXX	XXXXX N/A XXXXX
2.2.4	RFID reader for truck		XXXXX N/A XXXXX	XXXXX N/A XXXXX
2.2.5	Buzzer for truck		XXXXX N/A XXXXX	XXXXX N/A XXXXX
2.2.6	Flashing light for truck		XXXXX N/A XXXXX	XXXXX N/A XXXXX
2.2.7	Loom for truck unit (1 of 2)		XXXXX N/A XXXXX	XXXXX N/A XXXXX
2.3	<u>SCADA</u>			
2.3.1	Loom		XXXXX N/A XXXXX	XXXXX N/A XXXXX
2.3.2	GPS antenna		XXXXX N/A XXXXX	XXXXX N/A XXXXX
2.3.3	GSM antenna		XXXXX N/A XXXXX	XXXXX N/A XXXXX
2.4	<u>Toilet and tap counting and tagging</u>			
2.4.1	100 x RFID tags for toilets		XXXXX N/A XXXXX	XXXXX N/A XXXXX
2.4.2	1000 x RFID tags for toilets		XXXXX N/A XXXXX	XXXXX N/A XXXXX
2.4.3	10 000 x RFID tags for toilets		XXXXX N/A XXXXX	XXXXX N/A XXXXX
2.4.4	100 x RFID tags for standpipes		XXXXX N/A XXXXX	XXXXX N/A XXXXX
2.4.5	100 x RFID tags for taps		XXXXX N/A XXXXX	XXXXX N/A XXXXX

ITEM NO:	DESCRIPTION	B Net Unit once off cost Excluding VAT (R)	C Net unit hourly rate Excluding VAT (R)	D Net Unit monthly Price for 1 month Excluding VAT (R)
2.4.6	1000 x RFID tags for standpipes		XXXXX N/A XXXXX	XXXXX N/A XXXXX
2.4.7	1000 x RFID tags for taps		XXXXX N/A XXXXX	XXXXX N/A XXXXX
2.4.8	RFID tag reader for portable unit		XXXXX N/A XXXXX	XXXXX N/A XXXXX
2.4.9	Battery for portable unit		XXXXX N/A XXXXX	XXXXX N/A XXXXX
3.	INSTALLATIONS			
3.1	Install OBC in vehicle		XXXXX N/A XXXXX	XXXXX N/A XXXXX
3.2	De install OBC from vehicle		XXXXX N/A XXXXX	XXXXX N/A XXXXX
3.3	Install one bin lifting and tag reading unit in truck (1 of 2 for dual lifting truck)		XXXXX N/A XXXXX	XXXXX N/A XXXXX
3.4	De install one bin lifting and tag reading unit in truck (1 of 2 for dual lifting truck)		XXXXX N/A XXXXX	XXXXX N/A XXXXX
3.5	Install in vehicle bracket and cradle		XXXXX N/A XXXXX	XXXXX N/A XXXXX
3.6	De install in vehicle bracket and cradle		XXXXX N/A XXXXX	XXXXX N/A XXXXX
3.7	Install in vehicle LAN		XXXXX N/A XXXXX	XXXXX N/A XXXXX
3.8	De install in vehicle LAN		XXXXX N/A XXXXX	XXXXX N/A XXXXX
3.9	Install RFID tag in a refuse bin		XXXXX N/A XXXXX	XXXXX N/A XXXXX
3.10	Install RFID tag in chemical toilets		XXXXX N/A XXXXX	XXXXX N/A XXXXX
3.11	Install RFID tag in containerised toilets		XXXXX N/A XXXXX	XXXXX N/A XXXXX
3.12	Install RFID tag in portable flush toilets tanks		XXXXX N/A XXXXX	XXXXX N/A XXXXX
3.13	Install RFID tag in full flush toilets		XXXXX N/A XXXXX	XXXXX N/A XXXXX
3.14	Install RFID tag in pitliners toilets		XXXXX N/A XXXXX	XXXXX N/A XXXXX
3.15	Install RFID tag in modified African toilets		XXXXX N/A XXXXX	XXXXX N/A XXXXX
3.16	Install RFID tag in and pour flush Toilets		XXXXX N/A XXXXX	XXXXX N/A XXXXX
3.17	Install RFID tag in Mobisan toilets		XXXXX N/A XXXXX	XXXXX N/A XXXXX
3.18	Install RFID tag on standpipes		XXXXX N/A XXXXX	XXXXX N/A XXXXX
3.19	Install RFID tag on taps		XXXXX N/A XXXXX	XXXXX N/A XXXXX
4.	MAINTENANCE - IN FIELD			
4.1	In vehicle OBC installation			
4.1.1	Maintenance of OBC in vehicle	XXXXX N/A XXXXX	XXXXX N/A XXXXX	
4.1.2	Maintenance Wireless RF tracking unit	XXXXX N/A XXXXX	XXXXX N/A XXXXX	
4.1.3	Maintenance in vehicle storage device	XXXXX N/A XXXXX	XXXXX N/A XXXXX	
4.2	In vehicle LAN installation			
4.2.1	Maintenance of In vehicle LAN	XXXXX N/A XXXXX	XXXXX N/A XXXXX	
4.2.2	Maintenance of CCTV camera	XXXXX N/A XXXXX	XXXXX N/A XXXXX	
4.2.3	Maintenance of sound microphone	XXXXX N/A XXXXX	XXXXX N/A XXXXX	
4.3	Bin counting and tag reading system			
4.3.1	Maintenance of one Bin counting and tag reading unit(1 of 2 for dual lifting truck)	XXXXX N/A XXXXX	XXXXX N/A XXXXX	

ITEM NO:	DESCRIPTION	B Net Unit once off cost Excluding VAT (R)	C Net unit hourly rate Excluding VAT (R)	D Net Unit monthly Price for 1 month Excluding VAT (R)
4.3.2	Maintenance of one external CCTV camera control and video display unit (4 x power over USB camera inputs, 10 inch display)	XXXXX N/A XXXXX	XXXXX N/A XXXXX	
4.3.3	Maintenance of one external CCTV camera (USB)	XXXXX N/A XXXXX	XXXXX N/A XXXXX	
4.3.4	Maintenance of Portable RFID reader – Basic store use	XXXXX N/A XXXXX	XXXXX N/A XXXXX	
4.3.5	Maintenance of Portable RFID reader – Field use	XXXXX N/A XXXXX	XXXXX N/A XXXXX	
4.3.6	Maintenance of Portable RFID reader - Executive use	XXXXX N/A XXXXX	XXXXX N/A XXXXX	
4.4	Toilet and tap counting and tag reading system			
4.4.1	Maintenance of portable toilet/tap counting and tag reading unit	XXXXX N/A XXXXX	XXXXX N/A XXXXX	
5.	LABOUR RATES			
5.1	Project Manager	XXXXX N/A XXXXX		XXXXX N/A XXXXX
5.2	Electronic Engineer	XXXXX N/A XXXXX		XXXXX N/A XXXXX
5.3	Mechanical engineer	XXXXX N/A XXXXX		XXXXX N/A XXXXX
5.4	GIS specialist	XXXXX N/A XXXXX		XXXXX N/A XXXXX
5.5	IT Network Engineer	XXXXX N/A XXXXX		XXXXX N/A XXXXX
5.6	IT Sequel database programmer	XXXXX N/A XXXXX		XXXXX N/A XXXXX
5.7	IT firmware programmer/debugger	XXXXX N/A XXXXX		XXXXX N/A XXXXX
5.8	Technician	XXXXX N/A XXXXX		XXXXX N/A XXXXX
6.	SERVICES			
6.1	Radio GPS tracking service per radio per month	XXXXX N/A XXXXX	XXXXX N/A XXXXX	
6.2	Field asset tracking service, cost per scan		XXXXX N/A XXXXX	XXXXX N/A XXXXX
6.3	Solid Waste Bin counting and tag reading system, cost per successful lift		XXXXX N/A XXXXX	XXXXX N/A XXXXX
6.4	In vehicle LAN service per unit installed per month	XXXXX N/A XXXXX	XXXXX N/A XXXXX	
6.5	SCADA service	XXXXX N/A XXXXX	XXXXX N/A XXXXX	
6.6	Fleet management service per unit per month	XXXXX N/A XXXXX	XXXXX N/A XXXXX	
6.7	Vehicle recovery service per unit per month	XXXXX N/A XXXXX	XXXXX N/A XXXXX	
6.8	WAP database access service per radio per month	XXXXX N/A XXXXX	XXXXX N/A XXXXX	
6.9	25MB per month data only package on GSM APN	XXXXX N/A XXXXX	XXXXX N/A XXXXX	
6.10	Toilet counting and tag reading system, cost per successful service (scan)		XXXXX N/A XXXXX	XXXXX N/A XXXXX
6.11	Tap counting and tagging system, cost per successful service (scan)		XXXXX N/A XXXXX	XXXXX N/A XXXXX
6.12	50MB per month data only package on GSM APN	XXXXX N/A XXXXX	XXXXX N/A XXXXX	
6.13	100MB per month data only package on GSM APN	XXXXX N/A XXXXX	XXXXX N/A XXXXX	
6.14	250MB per month data only package on GSM APN	XXXXX N/A XXXXX	XXXXX N/A XXXXX	
6.15	500MB per month data only package on GSM APN	XXXXX N/A XXXXX	XXXXX N/A XXXXX	
6.16	1GB per month data only package on GSM APN	XXXXX N/A XXXXX	XXXXX N/A XXXXX	
6.17	5GB per month data only package on GSM APN	XXXXX N/A XXXXX	XXXXX N/A XXXXX	

ITEM NO:	DESCRIPTION	B Net Unit once off cost Excluding VAT (R)	C Net unit hourly rate Excluding VAT (R)	D Net Unit monthly Price for 1 month Excluding VAT (R)
6.18	10GB per month data only package on GSM APN	XXXXX N/A XXXXX	XXXXX N/A XXXXX	
6.19	100GB per month data only package on GSM APN	XXXXX N/A XXXXX	XXXXX N/A XXXXX	
7.	Optional items that are applicable to the product			
7.1			XXXXX N/A XXXXX	XXXXX N/A XXXXX
7.2			XXXXX N/A XXXXX	XXXXX N/A XXXXX
7.3			XXXXX N/A XXXXX	XXXXX N/A XXXXX
7.4			XXXXX N/A XXXXX	XXXXX N/A XXXXX
8.	Spares that are applicable to the product			
8.1			XXXXX N/A XXXXX	XXXXX N/A XXXXX
8.2			XXXXX N/A XXXXX	XXXXX N/A XXXXX
8.3			XXXXX N/A XXXXX	XXXXX N/A XXXXX
8.4			XXXXX N/A XXXXX	XXXXX N/A XXXXX
9.	Accessories that are applicable to the product			
9.1			XXXXX N/A XXXXX	XXXXX N/A XXXXX
9.2			XXXXX N/A XXXXX	XXXXX N/A XXXXX
9.3			XXXXX N/A XXXXX	XXXXX N/A XXXXX
9.4			XXXXX N/A XXXXX	XXXXX N/A XXXXX

Item No.	DESCRIPTION	Percentage
10	Administrative Fee (In respect of product sourcing)	%

INITIALS	CITY
1	

(4) SPECIFICATION(S)

1. SCOPE OF SPECIFICATION

- 1.1 The city has over the last nine years, through various tenders, established a fleet tracking and management solution which was further developed to accommodate other in vehicle and in field engineering solutions which includes RFID asset management, live vehicle and radio tracking, remote telemetry transmissions systems, etc.
- 1.2 This system currently utilizes commercial cellphone networks, TETRA radio networks, RFID technology and Wi-Fi technology in the field, in and around its vehicles and as transmission networks.
- 1.3 The system currently consists of:
 - 1.3.1 a Customer Enterprise Network (CEN) separate from its Information Technology network to receive, manage and store engineering data, operate the various engineering systems.
 - 1.3.2 The CEN is linked to the corporate network to provide essential data for corporate initiatives and providing comprehensive operational and management reports.
 - 1.3.3 An in vehicle solution for fleet tracking and management services for some 6000 vehicles providing a bureau service, support and vehicle recovery service.
 - 1.3.4 An in vehicle Solid Waste bin asset management solution utilizing RFID technology and cellular technologies to management in the order of 800 000 waste bins throughout the city.
 - 1.3.5 An infield telemetry solution utilizing TETRA communications for some 200 critical remote installations.
- 1.4 The current tender 504G/2013/14, awarded to Ramm Technologies provides all these services but under proprietary Intellectual rights.
- 1.5 The city however owns the hardware and networks for the current IECS.
- 1.6 This tender calls for a system and services to replace the existing Ramm system over a period of time.

1.7 However to prevent fruitless expenditure, ensure continuity of services, protection of in field assets and ensure safety of staff in the field, the city plans to enter into a contract with Ramm Technologies for a three year period (From 1 July 2016) to maintain the existing assets and infrastructure established. This contract will not make provision for any further development or further installations but merely to maintain existing assets.

1.8 This specification provides for the following:

1.8.1 The provision and installation, support, maintenance and services of new services and products for a period of 3 years from commencement of the contract.

1.8.2 The further support, maintenance and services associated with paragraph 1.8.1(excluding provision and new installations) for a further period of 6 years from the end of the first 3 year period. The award of this further period of 6 years will be subject to the approval of a process according to section 33 of the Municipal Finance Management Act (MFMA)

1.9 To avoid complications with sharing of responsibilities as well as the intricate interaction between the OBC and the infrastructure, the tender will be awarded to one tenderer only.

1.10 Tenders are to note that no minimum quantities are specified for the new services as this will be undertaken as and when required. This tender is thus a rates based tender.

Compliance statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
1.1	Comply	
1.2	Comply	
1.3	Comply	
1.4	Comply	
1.5	Comply	
1.6	Comply	
1.7	Comply	
1.8	Comply	
1.9	Comply	
1.10	Comply	

2. GENERAL

- 2.1 Tenderers will be given a period of 3 months from appointment to prove their capability to provide the required support and maintenance support to ensure the system meets the stipulated Service Level. Thereafter the city shall have the right to cancel the contract with a months' notice and appoint another service provider. (M)
- 2.2 Tenderers must provide in the pricing schedule a list of all optional accessories including data cables and antennas available per item and the unit prices.
- 2.3 Tenderers must include, if applicable, any licensing costs in the tender pricing. No additional licence costing will be entertained.
- 2.4 Any decision implemented in one department with the consent of that department's contract manager must not be considered to be a blanket implementation for all departments. For example configuration changes must be discussed and agreed upon per department.
- 2.5 Any proven damage to City of Cape Town's assets due to failure / wrong installations of IECN equipment shall be for the cost of the tenderer.

Compliance statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
2.1	Comply	
2.2	Comply	
2.3	Comply	
2.4	Comply	
2.5	Comply	

2.6 Other services

- 2.6.1 Tenderers are to note that a separate system is in operation on the City's TETRA network for paging and tracking called "Safe Mobile". This system will continue to be used for specific clients only requiring paging and tracking of TETRA radios. (M)

Compliance statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
2.6.1	Comply	

3. APPLICABLE STANDARDS AND INTERFACES

- 3.1 Except where otherwise specified or implied, the following standards must apply:
- 3.2 Wherever relevant, even if not directly requested within this tender, all radio equipment must comply to all applicable ETSI specifications for ETSI TETRA subscriber equipment including ETS 300 392, ETS 300 394, ETS 300 395, ETS 300 396.
- 3.3 EMC
All equipment and accessories shall ensure Electro Magnetic Compatibility in compliance with EEC89/336, EN 50081-1 and EN50082-1 4.3
- 3.4 Where relevant, equipment shall seamlessly interface into the city's ETSI TETRA Motorola Dimetra 8.2 infrastructure and Motorola TETRA subscribers
- 3.5 Wherever relevant, even if not directly requested within this tender, all equipment must comply to all applicable ETSI specifications for ETSI GSM, including ETSI TS 100 559, 100 585, 101 344, 101 348, 101 356, GSM 03 04, GSM 07 07
- 3.6 The equipment offered for RFID functionality shall comply as a minimum to the following standards:

Emissions: ETSI EN 302-208-2 (4 channel plan), ETSI EN 300-220, EN 301-489.
- 3.7 All Wi-Fi and RFID equipment shall comply with the relevant SA regulatory requirements
- 3.8 Radio communication and data services
Where relevant the Electronics Communications Act of 2005 or amended and the Independent Communications Regulatory Authority (ICASA) regulations.
- 3.9 Fleet management
Where applicable the Administrative Adjudication of Road Traffic Offences (AARTO) compliance as well as all in vehicle equipment to be approved by the OEM (Original Equipment Manufacturer) for all vehicles procured by the City.
- 3.10 Original Equipment Manufacturers
Written authorization to be obtained from vehicle OEM to enable the various units to be fitted to the vehicles. If not it shall be the tenderers responsibility to obtain authority from the suppliers to prevent invalidation of warranties. If not tenderers will be held responsible for the invalidated portion of the warranty.
- 3.11 ISO 14001
Environmental Management System or conformance to a similar system
- 3.12 ISO 9001
Quality Management System or conformance to a similar system
- 3.13 OHSAS 18001

Occupational Health & Safety Management System or conformance to a similar system

3.14 All equipment and accessories must, for safety aspects, be compliant with EN 60950.

3.15 All equipment such as relays and accessories must be SABS approved

Compliance statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
3.1	Comply	
3.2	Comply	
3.3	Comply	
3.4	Comply	
3.5	Comply	
3.6	Comply	
3.7	Comply	
3.8	Comply	
3.9	Comply	
3.10	Comply	
3.11	Comply	
3.12	Comply	
3.13	Comply	
3.14	Comply	
3.15	Comply	

4. HARDWARE REQUIREMENTS (In field)

4.1 On Board Computer (OBC)

4.1.1 The OBC units shall be suitable to be installed in any vehicle with a 9 to 36 Volt DC supply and must be complete with a suitable metal casing, and required external connectors for power, communication and interfacing to sensors and devices as specified. (M)

4.1.2 The units shall be suitable to be installed covertly underneath the dashboard in a vehicle without being visible or to easily reach the unit or cabling. (C)

4.1.3 The units shall be fitted with a GSM 3G modem and SIM. (M)

- 4.1.4 The unit shall have the capability to optionally accommodate a dual SIM for redundancy (two networks). (M)
- 4.1.5 The units shall be equipped to interface to an existing TETRA radio via the PEI interface (M)
- 4.1.6 The units shall be capable to accommodate a Wi-Fi communication device as an option to connect to WI-Fi hotspots (peer to peer) and to serve as an APN for devices in and around the vehicle. (M)
- 4.1.7 The unit shall be capable to supply a CAN BUS interface to a modern vehicle as an option to allow obtaining true kilometers and speed. (C)
- 4.1.8 Where CANBUS solution is not available and ODO readings are extracted via the vehicle diagnostic plug (ODB2), the service provider must provide a guarantee that it will not have any adverse effect on the ECU and the vehicle safety functionality of the ABS/EBD/Airbags etc.
- 4.1.9 The unit shall be capable as an optional item to be fitted with a wireless RF unit which stays dormant until activated from the tenderers control room. The unit will transmit to allow the tenderer to trace via a directional RF receiver for at least 36 hours at intervals of not more than 10 seconds until appropriate intervention has succeeded to secure driver and vehicle. (M)
- 4.1.10 The unit shall be capable of being fitted with Early Warning motion sensor to pick up if vehicle is moved illegally (accelerometer) (M)
- 4.1.11 The unit shall be capable of being fitted with a proximity sensor in the dashboard to pick up illegal movement inside the vehicle. (M)
- 4.1.12 The units shall have a standard RS232 interface to allow connection to a TETRA radio device and other peripheral equipment such as laptops or mobile data terminals. (M)
- 4.1.13 Power to the OBC shall be provided via an approved Multiple Product Interface (MPI) board as an option. The installation thereof to be approved by OEM manufacturers. See Annexure H for an example. (C)
- 4.1.14 The internal battery of the OBC shall be a Li-Ion rechargeable battery and shall recharge automatically from vehicle battery. (C)
- 4.1.15 The unit shall include a dallas one wire button reader with a USB port suitable for mounting in or below the dashboard of a vehicle to enable drivers to tag them present with a Dallas tag or to connect a computer device. (M) Preferably all reader fitments to be located in the blank auxiliary provisional spaces of the dashboard.
- 4.1.16 The system must provide a urgent notification / flag if a deactivated / stolen / invalid key is used.

- 4.1.17 The units shall have GSM, GPS and Wi-Fi antennas, connectors and plugs capable to be installed covertly underneath the dashboard of a vehicle and still allow acceptable receive signals for optimum operation. (C)
- 4.1.18 The units shall have a standard Ethernet interface to enable attachment of peripheral equipment such as data terminals, laptops or a loom. (C)
- 4.1.19 The unit shall include a Starter inhibit relay to prevent vehicle being started before successful registration by the approved driver. (C)
- 4.1.20 The delay time, by the driver tagging, before startup must be minimized to prevent operational and security issues.
- 4.1.21 The unit shall have an emergency button fitted in the vehicle for driver security. (C)
- 4.1.22 The unit shall have a voltage sensor to monitor the vehicle battery voltage and removal of the battery (M)
- 4.1.23 The unit shall have the means to monitor the RPM of the vehicle engine. (C)
- 4.1.24 The unit must have a standard internal GPS module and external SMB GPS antenna connector to enable connection of a GPS antenna (M)
- 4.1.25 A minimum of four (4) Digital input, (1) digital input/output and two (2) analogue inputs must be available on connectors to be connected to external devices or a loom. (M)
- 4.1.26 The units shall be capable of performing least cost routing or switching dependent on availability, size or importance of data between all the communication mediums available. (C)

Compliance statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
4.1.1	Comply	
4.1.2	Comply	
4.1.3	Comply	
4.1.4	Comply	
4.1.5	Comply	
4.1.6	Comply	
4.1.7	Comply	
4.1.8	Comply	
4.1.9	Comply	

4.1.10	Comply	
4.1.11	Comply	
4.1.12	Comply	
4.1.13	Comply	
4.1.14	Comply	
4.1.15	Comply	
4.1.16	Comply	facility to enable only active devices
4.1.17	Comply	
4.1.18	Comply	USB
4.1.19	Comply	
4.1.20	Comply	
4.1.21	Comply	
4.1.22	Comply	
4.1.23	Comply	
4.1.24	Comply	
4.1.25	Comply	
4.1.26	Comply	

4.2 In vehicle storage device

4.2.1 The unit shall be a solid state Hard Disk Drive with minimum 4GB storage capacity in a sealed enclosed and capable of interfacing via USB to the OBC and/or In vehicle LAN for safe storage of data. (C)

4.2.2 The unit shall be installed and wired covertly.

Compliance statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
4.2.1	Comply	
4.2.2	Comply	

4.3 In vehicle LAN

- 4.3.1 The in Vehicle Local Area Network (LAN) shall be suitable to be installed in any vehicle with a 9 to 36 VDC supply and must be complete with a suitable casing and required fitment brackets, external connectors for power, communication and interfacing to sensors and devices as specified. (M)
- 4.3.2 The units shall be suitable to be installed either as a whole on the mobile data terminal bracket of item 4.4 or alternatively underneath the dashboard with the required interfaces mounted on item 4.4.
- 4.3.3 The permanent cabling between the units, such as power, interfaces to OBC and HDD shall not be visible or be run in the piping of the data terminal bracket to avoid tampering. All cabling must be installed in protective sleeving (C)
- 4.3.4 The unit shall include a suitable power supply for a tablet. (M)
- 4.3.5 The unit shall include a removable power unit in a sealed enclosure with necessary connectors and be installed underneath the passenger seat. (M)
- 4.3.6 The power unit shall include a rechargeable battery, to be recharged at a depot, and shall have adequate capacity to power the in vehicle LAN and Lenovo tablet for at least 8 hours. (C)
- 4.3.7 The power unit shall power the LAN and mobile device.
- 4.3.8 To avoid excessive draining of the vehicle battery, the power unit shall be charged from the vehicle battery via an intelligent battery monitoring device (such as battery buddy) to keep the power unit charged under normal driving conditions but to allow disconnection of the vehicle battery should the vehicle battery drop below a certain threshold. This is to prevent the LAN system draining the vehicle battery below safe starting voltage. (M)
- 4.3.9 The USB and Ethernet ports shall be in an easily accessible position for the user.
- 4.3.10 The unit shall be directly interfaced to the OBC and HDD and shall be capable of accessing and utilizing all the communication, position reporting and storage mediums available for these devices.
- 4.3.11 The unit shall be capable of, in addition to the 3G modem in the OBC, to be fitted with a 3G modem, antenna and SIM as a redundant option. (M)
- 4.3.12 The unit shall provide for at least 4 power over USB ports to cater for and power devices such as USB CCTV cameras, storage devices or computing devices. (M)
- 4.3.13 The unit shall be capable of accommodating optional CCTV cameras for recording snap shots for odometer readings, sound recording, dash cameras for security and external cameras

4.3.14 The Unit shall be capable of connecting to any computing device in and around the vehicle utilizing the USB and Ethernet ports or Wi-Fi supplied by the OBC. (M)

4.3.15 The units shall be capable of performing least cost routing or switching dependent on availability, size or importance of data between all the communication mediums available. (C)

Compliance statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
4.3.1	Comply	
4.3.2	Comply	
4.3.3	Comply	
4.3.4	Comply	
4.3.5	Comply	
4.3.6	Comply	
4.3.7	Comply	
4.3.8	Comply	
4.3.9	Comply	
4.3.10	Comply	
4.3.11	Comply	
4.3.12	Comply	
4.3.13	Comply	
4.3.14	Comply	
4.3.15	Comply	

4.4 Mobile Data terminal bracket and cradle

4.4.1 The unit shall be designed as to not be noninvasive to the vehicle dashboard and to be screwed securely in position by means of the vehicle seat fixtures. (C)

4.4.2 The unit shall be installed between the front seats without interfering with the functionality of the dashboard controls or the air conditioning and not to interfere with the vision of the driver.

4.4.3 The unit shall safely house a handheld computing device such as a tablet or mobile data terminal to allow for easy viewing and operation in the centre of the vehicle without inconveniencing the driver or passenger or obscuring driver view. (C)

- 4.4.4 The unit shall consist of a bracket attached to the seats which will also serve as a conduit for neat and unobtrusive cabling. Attached to the bracket will be a cradle which needs to cater for a range of device sizes from 5 to 13 inch by inserting different templates.
- 4.4.5 The cradle must make provision for protecting/screening the mobile device screen from direct sunlight by fitting side plates. (M)
- 4.4.6 The cradle must make provision to accept a tablet device and to allow access for power and USB connection from the In vehicle LAN in item 4.3. (M)
- 4.4.7 The device must allow computing devices to be installed and secured by means of a locking device allowing a personal key for the owner. (M)

Compliance statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
4.4.1	Comply	
4.4.2	Comply	
4.4.3	Comply	
4.4.4	Comply	
4.4.5	Comply	
4.4.6	Comply	
4.4.7	Comply	

4.5 **Bin Counting and tag reading system**

- 4.5.1 This system shall be installed in Solid Waste trucks used to empty 240 liter Wheely refuse bins.
- 4.5.2 The systems shall consist of two identical units to serve the two mechanical bin lifting mechanisms.
- 4.5.3 Each unit shall consist of the standard OBC hardware requirements as per item 4.1, additional hardware and firmware required, RFID receiver antenna, a bin lift counting sensor, a flashing light and loud buzzer to indicate successful reading of bin, an additional Dallas tag reader at the back of the vehicle, as well as all the necessary cabling, antennas and connectors to make up a complete functional installation as specified. (M)
- 4.5.4 Tenderers are to note that the system will be used in harsh operating environment, all weather conditions and subject to regular and repeated knocks. Tenderers shall ensure and shall warrant the life of the system under these conditions and general use. (M)

- 4.5.5 For this reason the equipment used shall be housed in hermetically sealed boxes and comply with environmental specifications specified. (C)
- 4.5.6 The units shall be installed in a tamper proof box to prevent unauthorized tampering. (M)
- 4.5.7 The RFID reading antennas shall be fitted to the combs of the bin lifter, within 40mm of the RFID transponder (tag) fitted to a wheely bin. The onus is on the tenderers to familiarize themselves with the manner in which the tags are fitted to the refuse bins. (M)
- 4.5.8 Tenderers must provide detailed technical drawings indicating their proposed method of fitting of the system in the vehicle. Tenderers must be aware that the combs of the mechanical bin lifting equipment are subject to wear. Such proposals shall ensure that the system is not incapacitated due to wear and tear of the combs during the warranty period. (M)
- 4.5.9 The RFID receiver shall be capable of reading the number of the RTID tag when the tag passes between 40 and 100mm from the centre of the antenna, in the correct orientation as fitted to the bin. (C)
- 4.5.10 A lifting cycle shall be action/s plus sensory input from the point of lifting a container, emptying the contents into the vehicle, rocking the container and lowering it to the ground. The provision of the maximum container mass and RFID code must be recorded during this cycle at the times/stages agreed to by the city. Tenders are to analyze, test and provide different points of recording to ensure maximum data accuracy at no cost to the city. A Prototype must be made available to demonstrate this.
- 4.5.11 Tenderers shall ensure that their system is able to read existing COCT and the new RFID transponders offered. (M)
- 4.5.12 The system shall not necessitate the bins to be modified or equipped with any additional devices such as id labels, or transponders in order to count and register each complete lift. (C)
- 4.5.13 The system shall provide a dry contact output to the bin lifting mechanism to only allow a successful bin discharge once a bin has been identified via RFID reader and validated. (M)
- 4.5.14 The RFID antenna readers must be robust to withstand industrial application in a waste management environment as specified.
- 4.5.15 The unit shall have analogue inputs to record the mass information provided from load cells or other means of automated on vehicle bin mass calculation. (M)
- 4.5.16 The unit shall visually as well as audibly indicate the successful/unsuccessful reading of a bin RFID tag. (C)

4.5.17 The unit shall have adequate storage capacity to buffer data in the event of communication failure to the infrastructure. (C)

4.5.18 The unit shall use an appropriate method to accurately identify and distinguish between the following with regards to refuse bins, but not limited to:

- Damaged bins
- No-Council bins
- Bins with faulty tags
- Vacant property

4.5.19 In such instances the contractor shall not tag the bin but shall be required to locate the bin at a specific point relative to each erf and then use an appropriate method to identify the bin for the purpose of geo coding and subsequent linking to the appropriate LIS key/erf.

4.5.20 Final confirmation of a successful fitment of a tag shall occur only when a city refuse collection vehicle, fitted with this system in its normal course of operation successfully reads and transmits the relevant data to the infrastructure and being viewed as successful lift on a report.

4.5.21 Tenderers must supply as an optional item, the ability of connection USB on board cameras for video monitoring and recording in and around the vehicle

4.5.22 The cabling of the antennas and other ancillary equipment on the vehicle must run through conduit or inside the vehicle body structure to avoid tampering and operational damage. (M)

4.5.23 The infrastructure needs to have the capacity to support the following minimum requirements with full implementation:

- Monitor and data storage of approximately 800 000 bin lifts per week
- Operations TACTICAL Control centre of 25 users
- Management, operations, administration and stores for approximately 80 users

Compliance statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
4.5.1	Comply	
4.5.2	Comply	
4.5.3	Comply	
4.5.4	Comply	
4.5.5	Comply	
4.5.6	Comply	
4.5.7	Comply	

4.5.8	Comply	
4.5.9	Comply	
4.5.10	Comply	
4.5.11	Comply	
4.5.12	Comply	
4.5.13	Comply	
4.5.14	Comply	
4.5.15	Comply	
4.5.16	Comply	
4.5.17	Comply	
4.5.18	Comply	
4.5.19	Comply	
4.5.20	Comply	
4.5.21	Comply	
4.5.22	Comply	
4.5.23	Comply	

4.6 Portable toilet counting and tag reading system

4.6.1 This system shall be a portable unit that can be installed in a rucksack, to be carried by contractors and city staff, to enable reading of RFID tags installed in various types of toilets and taps that has to be cleaned and maintained.

4.6.2 The unit shall be powered by a 12 VDC rechargeable battery in a sealed container

4.6.3 Each unit shall consist of the standard OBC hardware requirements as per item 4.1, additional hardware and firmware required, a robust RFID receiver antenna that can be fixed to the persons arm or to his body and a loud buzzer to indicate successful reading of assets, as well as all the necessary cabling, antennas and connectors to make up a complete functional installation as specified. (M)

4.6.4 Tenderers are to note that the system will be used in harsh operating environment, all weather conditions and subject to regular and repeated knocks. Tenderers shall ensure and shall warrant the life of the system under these conditions and general use. (M)

4.6.5 For this reason the equipment used shall be housed in hermetically sealed boxes and comply with environmental specifications specified. (C)

- 4.6.6 The RFID reading antennas shall be completely hermetically sealed and epoxied with an at least 2m flexible cable to allow easy and reliably reading the RFID transponder (tag) fitted to a toilet or tap. The onus is on the tenderers to familiarize themselves with the manner in which the tags are fitted to the toilet bins and taps. (M)
- 4.6.7 Tenderers must provide detailed technical drawings indicating their proposed method of fitting of the unit in a rug sack and operated by a person.. Such proposals shall ensure that the system is not incapacitated due to wear and tear during the warranty period. (M)
- 4.6.8 Tenderers shall ensure that their system is able to read existing COCT and the new RFID transponders offered. (M)
- 4.6.9 The RFID antenna readers must be robust to withstand industrial application in a waste management environment as specified.
- 4.6.10 The unit shall audibly indicate the successful/unsuccessful reading of a bin RFID tag. (C)
- 4.6.11 The unit shall have adequate storage capacity to buffer data in the event of communication failure to the infrastructure. (C)
- 4.6.12 The unit shall use an appropriate method to accurately identify and distinguish between the following with regards to toilets and bins, but not limited to:
- Damaged bins
 - No-Council bins
 - Bins with faulty tags
- 4.6.13 In such instances the contractor shall not tag the bin but shall be required to locate the bin at a specific point relative to each erf and then use an appropriate method to identify the bin for the purpose of geo coding and subsequent linking to the appropriate LIS key/erf.
- 4.6.14 Final confirmation of a successful fitment of a tag shall occur only when a person, fitted with this system in its normal course of operation successfully reads and transmits the relevant data to the infrastructure and being viewed as successful clean on a report.
- 4.6.15 The infrastructure needs to have the capacity to support the following minimum requirements with full implementation:
- Monitor and data storage of approximately 1000 bin cleans per week
 - Operations TACTICAL Control centre of 5 users
 - Management, operations, administration and stores for approximately 10 users

Compliance statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
4.6.1	Comply	
4.6.2	Comply	
4.6.3	Comply	
4.6.4	Comply	
4.6.5	Comply	
4.6.6	Comply	
4.6.7	Comply	
4.6.8	Comply	
4.6.9	Comply	
4.6.10	Comply	
4.6.11	Comply	
4.6.12	Comply	
4.6.13	Comply	
4.6.14	Comply	
4.6.15	Comply	

4.7 Portable RFID reader – Basic use

- 4.7.1 The unit shall be as small as possible with a built in RFID reader, basic display, LED light and mode selector switch to allow switching display between RFID counter or RFID code display.
- 4.7.2 The unit shall operate from a rechargeable battery.
- 4.7.3 Tenderers shall ensure that their system is able to read existing COCT and the new RFID transponders offered. (M)
- 4.7.4 The unit shall read RFID data and be used as a counter, to display RFID code and as go/no tester.

Compliance statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
4.7.1	Comply	
4.7.2	Comply	
4.7.3	Comply	
4.7.4	Comply	

4.8 Portable RFID reader – Field use

- 4.8.1 The unit shall be ruggedized with at least a IP65 environmental rating with a built in RFID reader, LED light, buzzer, fitted with a 3G modem, internal antenna and SIM and GPS modem with internal antenna. (M)
- 4.8.2 The unit shall operate from a rechargeable removable battery to allow changing of batteries in the field.
- 4.8.3 Tenderers shall ensure that their system is able to read existing COCT and the new RFID transponders offered. (M)
- 4.8.4 The unit shall read RFID and GPS data, give audible and visual of successful RFID reads and transmit the data to the infrastructure via GSM.

Compliance statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
4.8.1	Comply	
4.8.2	Comply	
4.8.3	Comply	
4.8.4	Comply	

4.9 Portable RFID reader – Executive use

- 4.9.1 The unit shall be supplied with a built in RFID reader, display, and keypad, fitted with a 3G modem, internal antenna and SIM and GPS modem with internal antenna. (M)
- 4.9.2 The unit shall operate from a rechargeable battery
- 4.9.3 Tenderers shall ensure that their system is able to read existing COCT and the new RFID transponders offered. (M)
- 4.9.4 The unit shall read RFID data and store in internal storage for linking with various and bin related data

4.9.5 The unit shall have a GSM 3G modem to download data via a GSM APN to the COCT infrastructure.

4.9.6 The unit shall have a display and keyboard for user input and shall visually as well as audibly indicate the successful/unsuccessful reading of a bin RFID tag

Compliance statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
4.9.1	Comply	
4.9.2	Comply	
4.9.3	Comply	
4.9.4	Comply	
4.9.5	Comply	
4.9.6	Comply	

4.10 **SCADA device**

4.10.1 The system shall consist of the standard OBC hardware requirements as per item 4.1 without the requirement for in vehicle sensors and devices and only require RS232, GSM and TETRA communication functionality. (M)

4.10.2 The unit shall be supplied with all connectors and cabling loom to make up a complete functional installation as specified.

Compliance statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
4.10.1	Comply	
4.10.2	Comply	

4.11 **GPS antenna**

4.11.1 The GPS antenna must be a magnetic mount patch antenna with a minimum of 5 meter coax cable. A standard SMB Female connector must be included for connecting the antenna to OBC.

4.11.2 The antenna must be compatible to the OBC's offered to ensure reliable GPS communications as specified. (M)

4.11.3 The antenna must comply with the minimum requirements as specified in Annexure A.

4.11.4 The tenderer must provide satisfactory proof that the antenna will work, if installed covertly under vehicle dashboards.

4.11.5 Tenderers may offer, as optional items, alternative antennas in the covering letter.

Compliance statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
4.11.1	Comply	
4.11.2	Comply	
4.11.3	Comply	
4.11.4	Comply	
4.11.5	Comply	

4.12 GSM antenna

4.12.1 The GSM antenna, capable of reliable 3G data communication, must be suitable for mounting underneath the dash of a vehicle, with a minimum of 3 meter coaxial cable. Standard connectors shall be included to fit the antenna to the OBC's offered.

4.12.2 The antenna must be compatible to the OBC's offered to ensure reliable GSM communications. (M)

4.12.3 The antenna must comply with the minimum requirements as specified in Annexure A.

4.12.4 Tenderers may offer, as optional items, alternative antennas in the covering letter.

Compliance statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
4.12.1	Comply	
4.12.2	Comply	
4.12.3	Comply	
4.12.4	Comply	

4.13 Wi-Fi antenna

4.13.1 The Wi-Fi antenna must be suitable for mounting underneath the dash of a vehicle, with a minimum of 3 meter coaxial cable. Standard connectors shall be included to fit the antenna to the OBC's offered.

4.13.2 The antenna must be compatible to the OBC's offered to ensure reliable Wi-Fi communications. (M)

4.13.3 The antenna must comply with the minimum requirements as specified in Annexure A.

4.13.4 Tenderers may offer, as optional items, alternative antennas in the covering letter.

Compliance statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
4.13.1	Comply	
4.13.2	Comply	
4.13.3	Comply	
4.13.4	Comply	

4.14 **RFID tags**

4.14.1 The Radio Frequency Identification (RFID) transponders shall be of the "Read only" type, operating in the 125 KHz frequency range, pre-programmed with a unique 32 bit random number and capable of being converted to a 10 character hexadecimal code. (M)

4.14.2 The RFID tag unique number shall be readable at a range of between 40 and 100 mm at a temperature of 75 Celsius by commonly available low-power RFID readers. (C)

4.14.3 The RFID tags for bins and toilets shall be of the cylindrical type and capable of being secured to the bins by hammering them into a pre drilled hole. (M)

4.14.4 The RFID tags for standpipes and taps shall be suitable for such a permanent mounting and complete for installation with any straps or other material required making a successful and tampering proof installation. Tenderers to advise the type of tag proposed and the fixing and installation method required. (M)

4.14.5 Tenderers to note that these tags will be mounted in plastic wheely bins and toilet buckets and will be subject to knocks and drops. Tenderers shall warrant the life of these tags under these installation conditions and methods of installing (Hammering into position) (C)

4.14.6 The tenderer shall state the type of chip offered, frequency, source factory and details of the fixing mechanism to avoid theft.

4.14.7 Installation of these tags may also be undertaken by COCT staff therefore tenderers must provide a comprehensive list with pricing as optional extras for any tools, equipment and procedures in order to install tags in bins.

4.14.8 Tenders must provide for alternative tags for other applications in the field as optional extras.

Compliance statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
4.14.1	Comply	
4.14.2	Comply	
4.14.3	Comply	
4.14.4	Comply	
4.14.5	Comply	
4.14.6	Comply	
4.14.7	Comply	
4.14.8	Comply	

4.15 **RFID Readers**

4.15.1 Tenderers to note that RFID readers are to be supplied with the Bin Counting and tag reading unit and Toilet and tap counting and tagging units. These specifications are for replacement purposes.

4.15.2 Tenders shall ensure that readers offered are capable of reading existing COCT and new RFID transponders offered. (M)

4.15.3 Tenderers are to note that the system will be used in harsh operating environment, all weather conditions and subject to regular and repeated knocks. Tenderers shall ensure and shall warrant the life of the readers under these conditions and general use.

4.15.4 Tenderers must provide detailed technical drawings indicating their proposed method of fitting of the RFID readers in the vehicles and on persons. Tenderers must be aware that the combs of the mechanical bin lifting equipment are subject to wear. Such proposals shall ensure that the RFID readers is not incapacitated due to wear and tear of the combs or any other condition for sanitation applications during the warranty period. (M)

4.15.5 The RFID receiver shall be capable of reading the number of the RFID tag when the tag passes between 40 and 100mm from the center of the antenna, in the correct orientation as fitted to the bin. (M)

4.15.6 The RFID antenna readers must be robust to withstand industrial application in a waste and sanitation environment as specified.

Compliance statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
4.15.1	Comply	
4.15.2	Comply	
4.15.3	Comply	
4.15.4	Comply	
4.15.5	Comply	
4.15.6	Comply	

4.16 On Board Computer loom (3 meter)

4.16.1 Tenderers to note that looms are to be supplied with the OBC. These specifications are for replacement purposes.

4.16.2 The looms must be compatible with the OBC and shall have cable lengths of 3 meter.

4.16.3 The looms must make provision for all the power, communication and ancillary sensors and devices connections in the vehicle as specified.

4.16.4 The looms must be fitted with molded DB connector plugs for connecting the cables to the OBC. The RS232 shall also have a molded DB9 plug to connect to external devices.

4.16.5 These units must comply with the minimum requirements as specified in Annexure A

Compliance statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
4.16.1	Comply	
4.16.2	Comply	
4.16.3	Comply	
4.16.4	Comply	
4.16.5	Comply	

4.17 On Board Computer loom (5 meter)

4.17.1 Tenderers to note that looms are to be supplied with the OBC. These specifications are for replacement purposes.

- 4.17.2 The looms must be compatible with the OBC and shall have cable lengths of 3 meter.
- 4.17.3 The looms must make provision for all the power, communication and ancillary sensors and devices connections in the vehicle as specified.
- 4.17.4 The looms must be fitted with molded DB connector plugs for connecting the cables to the OBC. The RS232 shall also have a molded DB9 plug to connect to external devices.
- 4.17.5 These units must comply with the minimum requirements as specified in Annexure A.

Compliance statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
4.17.1	Comply	
4.17.2	Comply	
4.17.3	Comply	
4.17.4	Comply	
4.17.5	Comply	

4.18 On Board Computer loom (SCADA)

- 4.18.1 The looms must be compatible with the SCADA device and shall have cable lengths of 5 meter.
- 4.18.2 The looms must consist of a RS232 programming cable and 12 Volt DC cables for the OBC.
The looms must be fitted with molded DB connector plugs for connecting the cables to the OBC. The RS232 must also have a molded RJ45 plug to connect to external devices.

Compliance statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
4.18.1	Comply	
4.18.2	Comply	

4.19 Bin Counting and tag reading unit loom

- 4.19.1 Tenderers to note that looms are to be supplied with the OBC. These specifications are for replacement purposes.

4.19.2 The looms must make provision for all the power, communication and ancillary devices and sensors for the bin counting and tag reading unit installation

Compliance statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
4.19.1	Comply	
4.19.2	Comply	

4.20 **Driver tag reader and tags**

4.20.1 Tenderers to note that the tag readers are to be supplied with the OBC. These specifications are for replacement purposes.

4.20.2 The driver tag reader must be suitable to be installed in a city vehicle and to read the existing Dallas driver tags offered. (M)

4.20.3 The technology used shall be Dallas DS1992 or fully compatible alternative.

4.20.4 The driver tags shall be capable to be interfaced to the OBC via cable and must include all hardware and software to make up a complete functional unit.

4.20.5 The driver tag reader shall include a USB port below the reader that connects directly to the OBC to enable connection of computing devices such as laptops or tablets

4.20.6 The cost to install the driver tag readers shall be included in the tender price

4.20.7 The driver tags must be suitable to be worn on a key ring and be compatible to the driver tag readers.

4.20.8 Tenderers shall as optional extras offer special tag readers that allow tags to be clipped in and held in place.

4.20.9 Specific tag colours must be allocated to the various fleets
i.e. Electricity Fleet requires red tags, Water requires blue and solid waste requires orange to be supplied with all OBC installations or purchasing of the Dallas tag only. (to be arranged and agreed upon with the specific departments)

Compliance statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
4.20.1	Comply	
4.20.2	Comply	
4.20.3	Comply	
4.20.4	Comply	

4.20.5	Comply	
4.20.6	Comply	
4.20.7	Comply	
4.20.8	Comply	
4.20.9	Comply	

4.21 Vehicle management sensors and devices

4.21.1 Tenderers to note that the sensors and devices are to be supplied with the OBC. These specifications are for replacement purposes.

4.21.2 The Emergency button shall be installed in any vehicle either glued on the dash or fastened to the gear lever in order to provide an emergency alarm if depressed.

4.21.3 The ignition inhibit relay must be installed in any city vehicle and must if operated by the ODC, disable the starter motor of the vehicle.

4.21.4 The CANBUS interface must be capable of connecting to any city vehicle with such an interface.

4.21.5 The sensors shall be capable to be interfaced to the OBC specified via cable and must include all hardware and software to make up a complete functional unit.

4.21.6 The cost to install and commission the sensors shall be included in the tender price.

Compliance statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
4.21.1	Comply	
4.21.2	Comply	
4.21.3	Comply	
4.21.4	Comply	
4.21.5	Comply	
4.21.6	Comply	

4.22 Mobile data terminals

4.22.1 The mobile data terminals are required to be used in the field or in vehicles and shall have the minimum specifications as per annexure A.

4.22.2 The units shall be capable to interface to the OBC or LAN via cable and via Wi-Fi in order to connect to the IECS infrastructure.

Compliance statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
4.22.1	Comply	
4.22.2	Comply	

4.23 **Tag programmer**

4.23.1 The unit shall be used to program Dallas button tags as currently used by the city for vehicle driver identification and shall interface to a computer device via USB.

4.23.2 The unit shall be capable to receive the ID code from the fleet tracking system and program the tag.

4.23.3 The unit shall have the audible or visual indication to indicate a successful programming of the tag.

4.23.4 All these units must comply with the minimum requirements as specified in Annexure A.

Compliance statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
4.23.1	Comply	
4.23.2	Comply	
4.23.3	Comply	
4.23.4	Comply	

5. HARDWARE REQUIREMENTS (infrastructure)

5.1 All items must comply with the technical requirements as specified in Annexure A. Tenders shall be regarded as invalid if these schedules are not completed or if insufficient technical data is included in the tender submission.

5.2 All data collected from the field shall be transmitted to the infrastructure in real time, stored and reported on as the City requires the data to be stored on their premises. (M)

5.3 Tenderers shall be responsible for interfacing to the Motorola Dimetra 8.2 infrastructures packet data and Short data routers and shall be in possession of a Motorola application partner license. (C)

5.4 Tenderers shall be responsible for interfacing to the GSM service providers and linking their back office to the infrastructure. The installation and maintenance cost for all data lines shall be the responsibility of the tenderer. Tenderers shall include these costs in their tender pricing.

- 5.5 Tenderers shall be responsible to create, maintain and staff their own control room of premises to render all services as specified including the installation and maintenance of all required data lines shall be the responsibility of the tenderer. Tenderers shall include these costs in the tender pricing.
- 5.6 Tenderers shall be responsible for the installation, commissioning, maintenance and network administration of the infrastructure and the cost thereof shall be included in the tender pricing.
- 5.7 The cost of all software and licencing shall be included in the tender pricing.
- 5.8 Tenderers are to provide and install their own hardware for their infrastructure requirements and the cost thereof to be included in the tender pricing.
- 5.9 For any additional or replacement hardware requirements for increase in capacity, failures, upgrades, etc. Tenderers are required to provide all hardware at no cost and the costs to be included in the tender pricing. All new hardware supplied will become the property of the city.
- 5.10 Provision shall be made at the Radio Network Control Centre, Bellville for tenderers to install their cabinets and equipment and air conditioning and back up power shall be provided.
- 5.11 Links shall be provided to the data centre at the Traffic Management Centre, Goodwood as well as equipment room space, air conditioning and backup power for tenderers to install their interface equipment to the IT corporate network.
- 5.12 The cost of all cabling, connectors, software installation/configuring and any other items required to provide a full installation of the infrastructure equipment shall be included in the cost of the hardware.
- 5.13 Tenderers are responsible for the full maintenance and operation of the infrastructure to ensure all specifications and service levels are met as specified.

Compliance statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
5.1	Comply	
5.2	Comply	
5.3	Comply	
5.4	Comply	
5.5	Comply	
5.6	Comply	
5.7	Comply	

5.8	Comply	
5.9	Comply	
5.10	Comply	
5.11	Comply	
5.12	Comply	
5.13	Comply	

6. TECHNICAL REQUIREMENTS – In field

- 6.1 All items must comply with the technical requirements as specified in Annexure A. Tenders shall be regarded as invalid if these schedules are not completed or if insufficient technical data is included in the tender submission.
- 6.2 All the Wi-fi devices offered in this tender must be compatible with each other and the tenderer must provide the technical specifications and standards of the technology supplied. (M)
- 6.3 The RFID technology and frequencies must comply to the SA regulatory requirements and tenderers shall state in detail the technologies and frequencies offered, to which international standards they comply and provide SA regulatory sanction either by including ICASA type approval certificates or written consent by the authority to utilize the equipment, the frequency and standards offered. (M)

Compliance statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
6.1	Comply	
6.2	Comply	
6.3	Comply	

7. TECHNICAL REQUIREMENTS - infrastructure

- 7.1 All items must comply with the technical requirements as specified in Annexure A. Tenders shall be regarded as invalid if these schedules are not completed or if insufficient technical data is included in the tender submission.
- 7.2 For all software and hardware tendered for, all licensing costs must be included in the purchase price in the pricing schedule. No annual license fees will be entertained. (M)
- 7.3 Tenderers shall be responsible for interfacing to the existing Motorola 8.2 packet data and short data routers. (M)

- 7.4 For tracking and managing vehicles and in field devices, google maps or equivalent, licenced for corporate use, shall be used. Tenderers are to include the cost thereof in the tender pricing. (M)
- 7.5 Tenderers may use any software for their operating platform but preference will be to use Microsoft as it is the city standard.
- 7.6 The Tenderer must ensure compatibility with the current software being utilized by the City of Cape Town i.e. Microsoft, Linux, Apple etc.
- 7.7 SAP interface/database exchange**
- Data exchange between the SAP environment and the infrastructure will be executed via staging servers and databases..
 - The protocol used for the exchange will preferably be one or more of the three following approaches / protocols:
 - File Transfer Protocol (FTP) for the exchange of files and potentially also for large data sets, both inbound to SAP and outbound from SAP are supported.
 - Application to Application HTTP exchange protocols (for example SOAP or XML string transfer), typically used for smaller data sets and can be inbound and outbound.
 - Database connected imports and exports (pulled or pushed from an SAP application environment via SQL statements to tables in the staging database) for large datasets where the above methodologies are not practical.
 - The preferred modes would be FTP for file transfers and application-to-application transfers for data wherever practical.
 - Tenderers are responsible for the hardware, software and development/implementation for both staging servers and databases.
- 7.8 IECS Management and reporting Web application**
- 7.8.1 Part of the infrastructure shall be a Web application operating on any of the city's corporate PC on the corporate network. (M)
- 7.8.2 The IECS infrastructure shall be connected to the corporate network via a web server and firewall to allow connectivity between the IECS and web application.
- 7.8.3 The application shall be licensed as an enterprise licensed and the cost thereof must be included in the tender pricing items.
- 7.8.4 This application shall have all the functionality required, as specified in this tender, to perform integrated viewing, management and reporting on all the services requested in this tender. (C)

7.8.5 All the costs for the installation of the hardware and software, upgrading, maintenance and support shall be included I the tender pricing items.

Compliance statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
7.1	Comply	
7.2	Comply	
7.3	Comply	
7.4	Comply	
7.5	Comply	
7.6	Comply	
7.7	Comply	
7.8.1	Comply	
7.8.2	Comply	
7.8.3	Comply	
7.8.4	Comply	
7.8.5	Comply	

8. FUNCTIONALITY/FEATURES

8.1 Infield

8.1.1 The units must have the functionality and features as specified in Annexure A.

8.2 Infrastructure

8.2.1 The infrastructure shall have the functionality and features as specified in Annexure A.

Compliance statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
8.1	Comply	
8.2	Comply	

9. SERVICES

The following services shall be provided:

9.1 Radio GPS tracking service

9.1.1 Description of required service

- It is required to track the movement of trunked radios (GPS enabled) and to display on a Web application operating on the city's corporate network.
- These radios report position based on time, distance travelled and on certain conditions with radios (emergency alarms, battery low, etc.)
- It is required for the radios spatial information to be recorded. This includes as a minimum GPS position, name or ISSI, service/ department/function/ depot, date, time and associated event information.
- This information must be displayed on Google maps via the web based application with information such as current location, movement history, places visited (AOI/POI)
- It shall be possible to display additional overlays such as GIS layers- roads, beats, wards, service areas, etc.
- It is a prerequisite that the city's ortho-photography be incorporated into the spatial framework
- It shall be possible for users to select radios to be displayed based on different fleets, services, departments, functions or depots
- This information will be uploaded and stored on a database on a dedicated server(s) in the infrastructure.
- It shall be required to draw different types of report on movement history for each vehicle/radio to assist in investigations, enquiries and shall include accurate maps, addresses, etc.
- Alerts and messages needs to be automatically sent to responsible users in the event of certain limits being exceeded

9.1.2 Scope of Work: Responsibilities of the tenderer.

The following work and responsibilities shall be included in the scope of work as a minimum:

- 9.1.2.1 Validating incoming data and correct data or delete and report missing data
- 9.1.2.2 Build and maintain a register of radios included in the contract. (C)
- 9.1.2.3 Provide means of updating and maintaining this register via the web based application (C)
- 9.1.2.4 Provide Google maps and special GIS overlays via the web based application to display above movement information (M)
- 9.1.2.5 It is required that logs be kept of all data sent and received for audit trail purposes
- 9.1.2.6 Provided as a minimum the following functionality for users via the web based application on the IS&T network: (M)
 - o Current location, identification(name/ISSI/reg nr), speed of radios on vector/raster maps
 - o Display all alerts and alarms (emergency button, battery low, log on/of, etc)
 - o Movement history

- o AOI and POI
 - o Any additional GIS, ortho photography supplied as overlays
 - o Provide allowable/disallowed configurable areas for radios
 - o Ability for the user to select radios to be displayed based on service/department/function/depot, etc.
- 9.1.2.7 Design, develop and implement the necessary software for the infield devices and infrastructure to provide the necessary operational functionality.
- 9.1.2.8 Automatically generating alerts if certain conditions occur or limits exceeded via a messaging service operating over TETRA, GSM and internet (Outlook)
- 9.1.2.9 Ensuring automated archiving of data to be able to meet KPI's and provide history for a minimum of one (1) year. (C)
- 9.1.2.10 Continuously develop and maintain reports via the web based reporting and management interface to meet operations needs
- 9.1.2.11 Ongoing training for in field and web application users
- 9.1.2.12 The cost to develop and implement the SAP interface shall be included in the pricing as well as any 3rd party software licensing costs (Excluding SAP license costs and development).
- 9.1.2.13 Responsible to create, staff and operate a back office on a 24/7/365 basis, directly connected to the IECS infrastructure, to ensure all the requirements and specifications for radio tracking as specified in this document can be met, all the client assistance, reporting, updating of documentation, handling of emergencies and alarms and recovery of vehicles can be met according to stipulated KPI's
- 9.1.2.14 All the costs associated with these services must be included in the tender price as no additional costs will be entertained by the city.

9.1.3 Scope of work: Responsibilities of the city

The city shall be responsible for the following:

- Purchase of all in field and infrastructure hardware and software
- Installation of in field devices (Unless separate orders are placed)
- Maintenance of the infield and infrastructure hardware (Unless the separate option for maintenance is requested)
- Monitoring, managing and drawings reports for the service via the web based reporting application
- Any SAP development work and software licencing

Compliancy statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
9.1.1	Comply	
9.1.2.1	Comply	
9.1.2.2	Comply	
9.1.2.3	Comply	
9.1.2.4	Comply	
9.1.2.5	Comply	

9.1.2.6	Comply	
9.1.2.7	Comply	
9.1.2.8	Comply	
9.1.2.9	Comply	
9.1.2.10	Comply	
9.1.2.11	Comply	
9.1.2.12	Comply	
9.1.2.13	Comply	
9.1.2.14	Comply	
9.1.3	Comply	

9.2 Toilet and tap counting and tagging service

9.2.1 Description of required service

- The city has the need to control and manage the cleaning and maintaining of various types of toilets, taps and standpipes.
- For asset management purposes all assets will be fitted with an RFID tag to enable spatial capturing, maintaining and reporting on these assets
- This information will be used to update SAP AM and GIS on a continuous basis
- The asset will be scanned with a RFID reader whenever visited or functions performed thereon.
- Each visit by council staff and contractors are to be recorded. This includes as a minimum GPS position, name, company, date, time and very important the action taken by the visitor (cleaning, asset verification, inspection, etc.). This intelligence will reside in the OBC/ scanner used (either logging in as specific user or using a RFID tag to identify)
- This information will be uploaded to a database on a dedicated server in the infrastructure using TETRA, Wi-Fi or 3G as the transfer medium
- Various reports is required to undertake asset management and to properly manage billing by external service providers and billing for city clients.
- Operations in the field will be managed by having information available such as frequencies of visits, identifying persons, time of visit, type of visit, actions taken, etc.
- Alerts and messages needs to be automatically sent to responsible users in the event that certain limits are exceeded or not met.

9.2.2 Scope of Work: Responsibilities of the tenderer.

The following work and responsibilities shall be included in the scope of work as a minimum:

- 9.2.2.1 Validating incoming data and correct data or delete and report missing data.
- 9.2.2.2 Build and maintain a register of assets that have been RFID tagged. (M)
- 9.2.2.3 Provide means of updating and maintaining this register via web based application. (C)
- 9.2.2.4 Spatially map these assets to beats, depots, suburbs or constituencies and update spatial maps.
- 9.2.2.5 Provide spatial maps and special overlays via the web based application to display above asset information.
- 9.2.2.6 Responsible for loading and configuring GIS spatial data for all assets.
- 9.2.2.7 Responsible for extracting changes and enhancements of GIS spatial information by users and uploading changes.
- 9.2.2.8 Maintain asset usage/visit history.
- 9.2.2.9 It is required that logs be kept of all data sent and received for audit trail purposes.
- 9.2.2.10 Record and process all actions undertaken on assets by city staff and contractors.
- 9.2.2.11 Monitor assets and report if no action is undertaken or visits reported within a defined window.
- 9.2.2.12 Analysis of service delivery by contractor/city staff, area, and or time period.
- 9.2.2.13 Produce reconciled billing reports for all work undertaken on assets and upload to SAP for billing purposes.
- 9.2.2.14 Design, develop and implement the necessary software for the infield devices and infrastructure to provide the necessary operational functionality.
- 9.2.2.15 Automatically generating alerts if certain conditions occur or limits exceeded via a messaging service operating over TETRA, GSM and internet (Outlook) (C)
- 9.2.2.16 Ensuring automated archiving of data to be able to meet KPI's and providing history for a minimum of one (1) year.
- 9.2.2.17 Continuously develop and maintain reports via the web based reporting and management interface to meet changing operational needs.
- 9.2.2.18 Ongoing training for in field and web application users
- 9.2.2.19 The cost to develop and implement the SAP interface shall be included in the pricing as well as any 3rd party software licensing costs (Excluding SAP license costs and development).
Responsible to create, staff and operate a back office on a 24/7/365 basis, directly connected to the IECS infrastructure, to ensure all the requirements and specifications for asset tracking as specified in this document can be met, all the client assistance, reporting, updating of documentation, handling of emergencies and alarms and recovery of vehicles can be met according to stipulated KPI's
- 9.2.2.20 All the costs associated with these services must be included in the tender price as no additional costs will be entertained by the city.
- 9.2.2.21 The cost for a 25MB data only package on GSM APN must be included in the tender price. Any additional data requirements must be priced for in the pricing schedule.

9.2.3 Scope of work: Responsibilities of the city

The city shall be responsible for the following:

- Purchase of all in field hardware.
- Installation of in field devices (Unless separate orders are placed)
- Maintenance of the infield and infrastructure hardware (Unless the separate orders for maintenance are placed)
- Monitoring, managing and drawings reports for the service via the web based reporting application
- Any SAP development work and licensing

Compliance statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
9.2.1	Comply	
9.2.2.1	Comply	
9.2.2.2	Comply	
9.2.2.3	Comply	
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9.2.2.17	Comply	
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9.2.2.20	Comply	
9.2.2.21	Comply	
9.2.3	Comply	

9.3 Solid Waste Bin counting and tag reading service

9.3.1 Description of required service

- The city has the need to control and manage the emptying of Solid Waste Bins (240 liter Wheely bins) as well as the logistics around issuing new bins, replacing faulty bins and, managing contractors and business partners(rate payers) and providing management reports on these operations in the field.
- For asset management purposes all bins will be fitted with an RFID tag to enable spatial capturing, erf and owner information and maintaining and reporting on these assets
- This information will be stored on the infrastructure and used to produce management and spatial reports and to update update SAP AM and GIS on a continuous basis
- The asset will be scanned with a RFID reader whenever visited or functions performed.
- Each visit by council staff and contractors are to be recorded. This includes as a minimum GPS position, name, company, date, time and very important the action taken by the visitor (cleaning, asset verification, inspection, replacement, etc.). This intelligence will reside in the Bin counting and tagging system unit on trucks, RFID scanners used (either logging in as specific user or using a RFID tag to identify)
- This information will be uploaded to a database on a dedicated server in the data infrastructure using either TETRA, Wi-Fi or 3G as the transfer medium
- Various reports is required to undertake asset management and to properly manage billing by external service providers and billing for city clients.
- The RFID captured bins, together with rate payer properties shall be displayed on vectorised maps with the requirement to overlay these maps with other GIS or ortho photography maps supplied by the City of Cape Town
- It shall be possible to display Areas of Interest and Points of Interest
- It shall be possible to select vehicles, bins, erf to be displayed based on service/department/depot/area/beat. Etc.
- Operations in the field will be managed by having information available such as frequencies of *visits*, identifying persons, time of visit, type of visit, actions taken, action required etc.
- Alerts and messages needs to be automatically sent to responsible users in the event that certain limits are exceeded or not met.

9.3.2 Scope of Work: Responsibilities of the tenderer.

The following work and responsibilities shall be included in the scope of work as a minimum:

- 9.3.2.1 All the data being read on the units shall be locally stored with capacity for storing at least 5 days data in case of communication failure. The stored data shall then be downloaded either at first available GSM link, via USB docking or a serial communication system provided by the city. (M)
- 9.3.2.2 The data collected shall in real time be downloaded to the infrastructure via the GSM network (M)
- 9.3.2.3 The units shall have their own unique identity number for identification and be transmitted with data collected.
- 9.3.2.4 The units shall have audible (Buzzer) and visual (light) means to indicate to the operators of truck that a bin was successfully read.
- 9.3.2.5 Validating incoming data and correct data or delete and report missing data.
- 9.3.2.6 Build and maintain a register of assets that have been RFID tagged with at least date, time, geographical location, load mass if fitted, action taken/required (lift, faulty tag/bin, service, replacement, etc.) left and right bin lift count, RFID number all referred to as data of each Wheely bin serviced by the city's refuse collection trucks equipped with high-level bin lifters. (C)
- 9.3.2.7 Provide means of updating and maintaining this register via web based application.
- 9.3.2.8 Geo-code and correctly link refuse bins fitted with RFID tags, read in the field to the appropriate LIS Key/Erf where billing occurs. (C)
- 9.3.2.9 Load Solid Waste Management Collections refuse collection "Beats" and various other information.
- 9.3.2.10 Spatially map these assets to beats, depots, suburbs or constituencies and update spatial maps. (C)
- 9.3.2.11 Provide spatial maps and special overlays via the web based application to display above asset information.
- 9.3.2.12 Responsible for loading and configuring GIS spatial data for all assets.
- 9.3.2.13 Responsible for extracting changes and enhancements of GIS spatial information by users and uploading changes.
- 9.3.2.14 Maintain asset usage/visit history.
- 9.3.2.15 Intelligent filtering shall be employed to prevent duplicate counts during process of lifting bins, shaking bins or re lift of bins if not completely emptied with first lift.
- 9.3.2.16 Determining when the truck has discharged a load and the number of bins lifted relative to each specific load.
- 9.3.2.17 It is required that logs be kept of all data sent and received for audit trail purposes.
- 9.3.2.18 Record and process all actions undertaken on assets by city staff and contractors.
- 9.3.2.19 Monitor assets and report if no action is undertaken or visits reported within a defined window.
- 9.3.2.20 Analysis of service delivery by contractor/city staff, area, and or time period.
- 9.3.2.21 Produce reconciled billing reports for all work undertaken on assets and upload to SAP for billing purposes.
- 9.3.2.22 As a minimum the reports as listed in Annexure I shall be available within one month of contract start (M)
- 9.3.2.23 Requests for development of new reports shall be implemented within 8 weeks(C)

- 9.3.2.24 Reports and tool outputs must be exportable to Excel, PDF or text files
- 9.3.2.25 Design, develop and implement the necessary software for the infield devices and infrastructure to provide the necessary operational functionality.
- 9.3.2.26 Automatically generating alerts if certain conditions occur or limits exceeded via a messaging service operating over TETRA, GSM and internet (Outlook) (C)
- 9.3.2.27 Ensuring automated archiving of data to be able to meet KPI's and providing history for a minimum of one (1) year.
- 9.3.2.28 Continuously develop and maintain reports via the web based reporting and management interface to meet changing operational needs.
- 9.3.2.29 Ongoing training for in field and web application users
- 9.3.2.30 The cost to develop and implement the SAP interface shall be included in the pricing as well as any 3rd party software licensing costs (Excluding SAP license costs and development).
- 9.3.2.31 Responsible to create, staff and operate a back office on a 24/7/365 basis, directly connected to the IECS infrastructure, to ensure all the requirements and specifications for Bin counting and tagging as specified in this document can be met, all the client assistance, reporting, updating of documentation, handling of emergencies and alarms and recovery of vehicles can be met according to stipulated KPI's
- 9.3.2.32 All the costs associated with these services must be included in the tender price as no additional costs will be entertained by the city.
- 9.3.2.33 The cost for a 25MB data only package on GSM APN must be included in the tender price. Any additional data requirements must be priced for in the pricing schedule.
- 9.3.2.34 Scheduling and auctioning of maintenance and repairs of the system and components
- 9.3.2.35 Data backup and recovery
- 9.3.2.36 System upgrades

9.3.3 Scope of work: Responsibilities of the city

The city shall be responsible for the following:

- Purchase of all in field hardware.
- Installation of in field devices (Unless separate orders are placed)
- Maintenance of the infield and infrastructure hardware (Unless the separate orders for maintenance are placed)
- Monitoring, managing and drawings reports for the service via the web based reporting application
- Any SAP development work and licensing

Compliance statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
9.3.1	Comply	
9.3.2.1	Comply	
9.3.2.2	Comply	
9.3.2.3	Comply	

9.3.2.4	Comply	
9.3.2.5	Comply	
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9.3.2.29	Comply	
9.3.2.30	Comply	
9.3.2.31	Comply	
9.3.2.32	Comply	

9.3.2.33	Comply	
9.3.2.34	Comply	
9.3.2.35	Comply	
9.3.2.36	Comply	
9.3.3	Comply	

9.4 In vehicle LAN service

9.4.1 Description of the service:

- It is required to use the in vehicle LAN to prove network connectivity, via the on board OBC to devices, such as cell phones, laptops, tablets, Mobile Data terminals, CCTV cameras, etc. via GSM 3G, Wi-Fi and TETRA back to the infrastructure.
- The LAN shall provide connectivity for these devices via Ethernet, Power over USB, RS232.
- The LAN shall also provide power to the in vehicle devices
- It is also required to link computer devices around the vehicle to this LAN via Wi-Fi.
- For this a GSM APN is required to ensure security of data communication and to prevent misuse of the GSM service by users and to protect the city in case of theft of these units or SIM cards
- Further the infrastructure needs to be connected to the city's corporate network to enable computer devices connected to the LAN to have IP access to the corporate network

9.4.2 Scope of Work: Responsibilities of the tenderer.

The following work and responsibilities shall be included in the scope of work as a minimum:

- 9.4.2.1 Provision of a GSM APN on at least two GSM service providers to allow for redundancy. (M)
- 9.4.2.2 Responsible for the procurement, logistics and administration of the required SIM cards
- 9.4.2.3 Responsible for the installation, maintenance and administration of the GSM, Wi-Fi and TETRA routes between the LAN and corporate network.
- 9.4.2.4 The cost for a 25MB data only package on GSM APN must be included in the tender price. Any additional data requirements must be priced for in the pricing schedule.
- 9.4.2.5 Responsible to create, staff and operate a back office on a 24/7/365 basis, directly connected to the IECS infrastructure, to ensure all the requirements and specifications for LAN services as specified in this document can be met, all the client assistance, reporting, updating of documentation, handling of emergencies and alarms and recovery of vehicles can be met according to stipulated KPI's
- 9.4.2.6 All the costs associated with these services must be included in the tender price

as no additional costs will be entertained by the city.

9.4.3 Scope of work: Responsibilities of the city

The city shall be responsible for the following:

- Purchase of all in field hardware.
- Installation of in field devices (Unless separate orders are placed)
- Maintenance of the infield and infrastructure hardware (Unless the separate orders for maintenance are placed)
- Utilising the data links and funding the data costs
- Any SAP development work and licensing

Compliance statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
9.4.1	Comply	
9.4.2.1	Comply	
9.4.2.2	Comply	
9.4.2.3	Comply	
9.4.2.4	Comply	
9.4.2.5	Comply	
9.4.2.6	Comply	
9.4.3	Comply	

9.5 **WAP service**

9.5.1 Description of required service

- It is required for city officials to access database information stored in a dedicated server on the IECS infrastructure via a WAP enabled TETRA radio or mobile data terminal coupled to a TETRA radio
- It is required to track the movement of the radios (If GPS enabled).
- It is required for the radios spatial information to be recorded. This includes as a minimum GPS position, name or ISSI, service/ department/function/ depot, date, time and associated event information.
- Updates to this database is received via the internet from a third party and it is required that the local database be automatically synchronized/updated and that the data received as well as total database be verified as correct with each update.

- It shall be possible for users to request different type of reports to access the information available in the local database
- It is required for users to be enabled on the system to access the information via usernames and passwords.
- It shall be possible to draw management reports on the following:
 - Users registered for the service
 - Usage by volume, type of query, time, date and location per user or groups of users
- Alerts and messages needs to be automatically sent to responsible users in the event of certain limits or conditions being exceeded
- No city work flow processing such as time, kilometers, material and work order generation is required for this function
- No interface to SAP is required

9.5.2 Scope of Work: Responsibilities of the tenderer.

The following work and responsibilities shall be included in the scope of work as a minimum:

- 9.5.2.1 Automatically updating the local traffic offence database on the IECS infrastructure(m)
- 9.5.2.2 Validating the updates and database and correcting or deleting and flagging/ reporting on errors
- 9.5.2.3 Build and maintain a register of radios and users included in the contract
- 9.5.2.4 Provide means of updating and maintaining this register via web based application. (C)
- 9.5.2.5 It is required that logs be kept of all data sent and received for audit trail purposes
- 9.5.2.6 Provided as a minimum the following functionality for users via the web based application on the IS&T network: (C)
 - Users registered for the service
 - Usage by volume, type of query, time, date and location per user or groups of users
- 9.5.2.7 Design, develop and implement the necessary software for the infield devices and infrastructure to provide the necessary operational functionality.
- 9.5.2.8 Automatically generating alerts if certain conditions occur or limits exceeded via a messaging service operating over TETRA, GSM and internet (Outlook) (C)
- 9.5.2.9 Ensuring automated archiving of data to be able to meet KPI's and providing history for a minimum of one (1) year.
- 9.5.2.10 Continuously develop and maintain reports via the web based reporting and management interface to meet operations needs

- 9.5.2.11 Ongoing training for in field and web application users
- 9.5.2.12 No interface to SAP is required
- 9.5.2.13 Responsible to create, staff and operate a back office on a 24/7/365 basis, directly connected to the IECS infrastructure, to ensure all the requirements and specifications for WAP services as specified in this document can be met, all the client assistance, reporting, updating of documentation, handling of emergencies and alarms and recovery of vehicles can be met according to stipulated KPI's
- 9.5.2.14 All the costs associated with this services must be included in the tender price as no additional costs will be entertained by the city.

9.5.3 Scope of work: Responsibilities of the city

The city shall be responsible for the following:

- Purchase of all in field and infrastructure hardware and software
- Installation of in field devices (Unless separate orders are placed)
- Maintenance of the in field and infrastructure hardware (Unless the separate option for maintenance is requested)
- Undertake WAP queries in the field, monitoring, managing and drawings reports for the service via the web based reporting application
- Any future workflow or SAP requirements

Compliance statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
9.5.1	Comply	
9.5.2.1	Comply	
9.5.2.2	Comply	
9.5.2.3	Comply	
9.5.2.4	Comply	
9.5.2.5	Comply	
9.5.2.6	Comply	
9.5.2.7	Comply	
9.5.2.8	Comply	
9.5.2.9	Comply	
9.5.2.10	Comply	
9.5.2.11	Comply	

9.5.2.12	Comply	
9.5.2.13	Comply	
9.5.2.14	Comply	
9.5.3	Comply	

9.6 Supervisory Control and Data Acquisition (SCADA) service

9.6.1 Description of required service

- It is required for city owned SCADA/telemetry outstations to be connected to a central in station via the TETRA data network and GSM 3G network to enable required data to be transferred between the in station and outstation.
- For this, SCADA OBC's will be connected to the SCADA outstation in the field via the RS232 connector. The SCADA in station will be connected to the IECS infrastructure via a firewall and Ethernet connection.
- It is required that necessary connection tables be created, maintained and updated as outstation equipment are moved, added or deleted to ensure seamless connectivity through the data switch.
- It is required that the communication links between the in station and outstations be monitored on a continuous basis for correct operation and immediate alerting/reporting of any communication failures
- Data traffic management and troubleshooting shall be undertaken on a continuous basis.
- It is required that logs be kept of all data sent and received for audit trail purposes
- Various reports is required to enable proper management of the service with respect to data traffic between the in station and outstations
- No city work flow processing such as time, kilometers, material and work order generation is required for this function
- No SAP interfacing is required

9.6.2 Scope of work: Responsibilities of the tenderer

The following work and responsibilities shall be included in the scope of work as a minimum:

- 9.6.2.1 Provide the necessary data switch tables and links to enable seamless connection between the in station and outstations(C)

- 9.6.2.2 Continuously update and maintain these tables and links as changes occur to ensure a reliable and seamless service
- 9.6.2.3 Provide means of updating and maintaining this tables and links via web based application
- 9.6.2.4 Monitor and validate all data traffic on a continuous basis for correctness and rectify or delete and generate appropriate alerts and alarms
- 9.6.2.5 Monitor all communication links between in and outstations on a continuous basis for correct operation bases on data size and time reporting and generate alerts and alarms for any incorrect operation
- 9.6.2.6 It is required that logs be kept of all data sent and received for audit trail purposes
- 9.6.2.7 Provided as a minimum the following functionality for users via the web based application on the IS&T network: (C)
 - Outstations connected to the network with identification and location information
 - Usage by volume, type of query, time, date and location per unit or groups of units
- 9.6.2.8 Design, develop and implement the necessary software for the infield devices and infrastructure to provide the necessary operational functionality.
- 9.6.2.9 Automatically generating alerts if certain conditions occur or limits exceeded via a messaging service operating over TETRA, GSM and internet (Outlook) (C)
- 9.6.2.10 Ensuring automated archiving of data to be able to meet KPI's and provide history for a minimum of one (1) year.
- 9.6.2.11 Continuously develop and maintain reports via the web based reporting and management interface to meet operations needs
- 9.6.2.12 Ongoing training for in field and web application users
- 9.6.2.13 Responsible to create, staff and operate a back office on a 24/7/365 basis, directly connected to the IECS infrastructure, to ensure all the requirements and specifications for SCADA services as specified in this document can be met, all the client assistance, reporting, updating of documentation, handling of emergencies and alarms and recovery of vehicles can be met according to stipulated KPI's
- 9.6.2.14 All the costs associated with this services must be included in the tender price as no additional costs will be entertained by the city.

9.6.3 Scope of work: responsibilities of the City

The city shall be responsible for the following:

- Purchase of all in field and infrastructure hardware and software
- Installation of in field devices (Unless separate orders are placed)
- Maintenance of the infield and infrastructure hardware (Unless the separate option for maintenance is requested)
- Undertake monitoring, managing and drawings reports for the service via the web based reporting application
- Any future SAP development work and licence costs required to implement

Compliance statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
9.6.1	Comply	
9.6.2.1	Comply	
9.6.2.2	Comply	
9.6.2.3	Comply	
9.6.2.4	Comply	
9.6.2.5	Comply	
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9.6.2.7	Comply	
9.6.2.8	Comply	
9.6.2.9	Comply	
9.6.2.10	Comply	
9.6.2.11	Comply	
9.6.2.12	Comply	
9.6.2.13	Comply	
9.6.2.14	Comply	
9.6.3	Comply	

9.7 Fleet Management service**9.7.1 Description of required service**

- It is required to track the movement of fleet vehicle equipped with an OBC, to store all the relevant information and to display on a Web application operating on the city's corporate network.
- These vehicles report position based on time, distance travelled, 30 degree turned and on certain conditions (emergency alarms, battery low, etc).
- It is required for the vehicles spatial information to be recorded. This includes as a minimum driver details, vehicle identification, GPS coordinates, service/department/function/depot, date, time, closest street address within 50 meters and associated event information.
- This information must be displayed on Google maps or equivalent via the web based application with information such as current location, movement history, places visited (AOI/POI)
- It shall be possible to display additional overlays such as GIS layers- roads, beats, wards, service areas, etc.

- It is required to indicate allowable areas or no go areas for vehicles which if transgressed must raise alarms or alerts.
- It is a prerequisite that the city's ortho-photography be incorporated into the spatial framework
- It shall be possible for users to select vehicles to be displayed based on different fleets, services, departments, functions or depots
- This information will be uploaded and stored on a database on a dedicated server(s) in the infrastructure.
- It shall be required to draw different types of report on movement history for each vehicle/radio to assist in investigations, enquiries and shall include accurate maps, addresses, driver details and vehicle details with ignition on or off status's etc.
- The accuracy of the movement reports with respect to position, date, time, driver, speed, etc. as it is required to be used in disciplinary hearings or courts of law.
- Alerts and messages needs to be automatically sent to responsible users in the event of certain limits being exceeded.
- The retention of the existing driver and vehicle identification databases as well as the archived vehicle monitoring and tracking data must at all times be maintained as matter of priority.
- The system shall have the means to:-
 - Remotely immobilise driver ID tag and vehicle
 - Blacklist driver Tag (immobilise the tag) when required
 - Remotely update driver ID tag information.
 - The ID tags must be department specifically grouped. I.e. a hierarchy and one sub fleet cannot operate another's vehicles.
- It is a requirement to interface with SAP, HR SAP, PM and AM to synchronise the driver database and vehicle assets on a continuous basis.
- It is required that the following documentation be stored on the infrastructure and that it be updated and actions taken as required:
 - ID document
 - Drivers License
 - PDP
 - Proof of address
- It is required that the system automatically disable a driver Tag if the Driver's License or PDP has expired, if the driver is no longer working for the City of Cape Town or Lost / stolen (unauthorized keys) .
- It is required that reports as requested be delivered (via email) the city clients or pushed at agreed intervals
- It is essential that traffic offence date and time stamps can confirm the location and speed of the vehicle with a high accuracy.
- Should the vehicle experience high acceleration or deceleration, it shall down load its last one minute of data to the server at a minimum of 1 second intervals. This is to allow for the scenario to be replayed with as much crucial information as possible.
- Once implemented, it is a requirement to access and utilise the E-Natis driver warrants / demerit point's system database to report on driver demerit status as well as the accumulated Operator point's status.
- Weekly polling/health checks must be performed on all vehicle OBC's.
- Monthly polling/health checks must be performed on all vehicles equipped with RF units. This includes RF units and motion sensors installed where applicable.

- The following alarms/events shall be responded to and automated e-mails/SMS send to fleet controllers:
 - Battery disconnect
 - Vehicles crossing pre-defined geo-fencing boundaries or user defined roads
 - Non reporting vehicles
 - Vehicles over speeding
 - LAN disconnect
- Fleet controller shall have the means to override these alarms via Web reporting application in cases where vehicles are in for repairs at vendors
- The reports to be supplied immediately (standard) and within 2 months (customized) upon award of this tender is included in Annexure E.

9.7.2 Scope of Work: Responsibilities of the tenderer.

The following work and responsibilities shall be included in the scope of work as a minimum:

- 9.7.2.1 Validating incoming data and correct data or delete and report missing data
- 9.7.2.2 Build and maintain a register of vehicles, OBC's and drivers and included in the contract
- 9.7.2.3 Provide means of updating and maintaining this register via the web based application. (C)
- 9.7.2.4 Provide Google maps or equivalent and special GIS overlays via the web based application to display above movement information (M)
- 9.7.2.5 It is required that logs be kept of all data sent and received for audit trail purposes
- 9.7.2.6 Provided as a minimum the following functionality for users via the web based application on the IS&T network: (C)
 - Current location (address), identification(name/reg nr), speed on vector/raster maps
 - Display all alerts and alarms (emergency button, battery low, log on/of, etc)
 - Movement history
 - AOI and POI
 - Any additional GIS, ortho-photography supplied as overlays
 - Provide allowable/disallowed configurable areas for vehicles
 - Ability for the user to select vehicles to be displayed based on service/department/function/depot, etc.
 - Weekly polling/health checks must be performed on all vehicle OBC's.
 - Monthly polling/health checks must be performed on all vehicles equipped with RF units. This includes RF units and motion sensors installed where applicable.
 - Manual Polling rate increase from the web application
- 9.7.2.7 Design, develop and implement the necessary software for the infield devices and infrastructure to provide the necessary operational functionality.
- 9.7.2.8 Automatically generating alerts if certain conditions occur or limits exceeded via a messaging service operating over TETRA, GSM and internet (Outlook) (C)
- 9.7.2.9 Ensuring automated archiving of data to be able to meet KPI's and provide history for a minimum of one (1) year. Historical data must be stored in yearly packages.

- 9.7.2.10 Continuously develop and maintain reports via the web based reporting and management interface to meet operations needs
- 9.7.2.11 Ongoing training for in field and web application users
- 9.7.2.12 The cost to develop and implement the SAP interface shall be included in the pricing as well as any 3rd party software licensing costs (Excluding SAP license costs and development).
- 9.7.2.13 Responsible to create, staff and operate a back office on a 24/7/365 basis, directly connected to the IECS infrastructure, to ensure all the requirements and specifications for fleet tracking and management as specified in this document can be met, all the client assistance, reporting, updating of documentation, handling of emergencies and alarms and recovery of vehicles can be met according to stipulated KPI's
- 9.7.2.14 All the costs associated with these services must be included in the tender price as no additional costs will be entertained by the city.
- 9.7.2.15 All the costs for GSM data via the APN for fleet tracking and management shall be included in the tender pricing.

9.7.3 Scope of work: Responsibilities of the city

The city shall be responsible for the following:

- Purchase of all in field and infrastructure hardware and software
- Installation of in field devices (Unless separate orders are placed)
- Maintenance of the infield and infrastructure hardware (Unless the separate option for maintenance is requested)
- Monitoring, managing and drawings reports for the service via the web based reporting application
- Any SAP development work and software licensing

Compliance statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
9.7.1	Comply	
9.7.2.1	Comply	
9.7.2.2	Comply	
9.7.2.3	Comply	
9.7.2.4	Comply	
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9.7.2.6	Comply	
9.7.2.7	Comply	
9.7.2.8	Comply	
9.7.2.9	Comply	

9.7.2.10	Comply	
9.7.2.11	Comply	
9.7.2.12	Comply	
9.7.2.13	Comply	
9.7.2.14	Comply	
9.7.2.15	Comply	
9.7.3	Comply	

9.8 Vehicle recovery service

9.8.1 Description of required service

- It is required to initiate responses on any suspicion or reported theft or tampering with city vehicles.
- It is required to on a 24/7/365 basis monitor the total fleet equipped with fleet tracking devices.(M)
- For this it is required to operate, staff, maintain a Stolen Vehicle Recovery call centre that is directly linked to the IECS infrastructure.

Action is required for the following instances(M)

- A vehicle is started without the driver identification key
 - A vehicle is moved more than 300m without the use of a vehicle driver identification key
 - A vehicles battery or LAN network is disconnected
 - Initiation of an emergency alarm
 - Initiation of any alarm device installed in the vehicle
- The response shall be as follows: (M)
 - For Group A (High risk vehicles, fitted with wireless RF units) immediate response is required, within 2 minutes of alarm trigger. This could involve both dedicated ground and air response
 - For Group B (Normal vehicles) require immediate response, within 2 minutes, after client authorization has been telephonically obtained.
- Annexure D summarises the process to be followed for vehicle recovery
- The communications centre and dispatched recovery crews must be in constant communication with the city's Special Investigations Unit until the vehicle is recovered.
- The position of affected vehicle shall be reported to the recovery centre at least every 10 seconds via the OBC's internal battery. (C)
- If required and fitted the control centre shall activate the wireless RF unit fitted to the vehicle and utilize their RF direction finding equipment to assist with tracking the position of the vehicle(C)
- A full report is required of each incident within 1 working day of the incident.
- A debriefing meeting is to be arranged by City of Cape Town's responsible department after the report is submitted involving the tenderer, Special Investigations, Recovery team representative, City's fleet coordinator, cost centre manager, driver of the vehicle and witness if applicable.

9.8.2 Scope of Work: Responsibilities of the tenderer.

The following work and responsibilities shall be included in the scope of work as a minimum:

- 9.8.2.1 Respond to various alerts and alarms utilizing processes and procedures as specified in this specification.
- 9.8.2.2 Perform all logistics, reporting required.
- 9.8.2.3 Responsible for all communications, vehicle response teams and air response teams
- 9.8.2.4 Ensuring that all relevant KPI's and service levels for this service is met as specified.
- 9.8.2.5 Responsible to create, staff and operate a back office on a 24/7/365 basis, directly connected to the IECS infrastructure, to ensure all the requirements and specifications for vehicle recovery as specified in this document can be met, all the client assistance, reporting, updating of documentation, handling of emergencies and alarms and recovery of vehicles can be met according to stipulated KPI's
- 9.8.2.6 All the costs associated with these services must be included in the tender price as no additional costs will be entertained by the city.

9.8.3 Scope of work: Responsibilities of the city

The city shall be responsible for the following:

- Reporting of any alerts or alarms to the vehicle recovery call centre
- Monitoring, managing and drawings reports for the service via the web based reporting application

Compliance statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
9.8.1	Comply	
9.8.2.1	Comply	
9.8.2.2	Comply	
9.8.2.3	Comply	
9.8.2.4	Comply	
9.8.2.5	Comply	
9.8.2.6	Comply	
9.8.3	Comply	

9.9 Reporting and management service (Web reporting application)**9.9.1 Description of required service**

- The city requires an integrated reporting and management platform to report and manage all the services offered in this specification.

- It is required for this platform to operate as a web application service on the city's corporate network.
- It is required that this application will be licensed as an enterprise service with unrestricted users.
- It is required that this service will be provided by a web server situated on the IECS infrastructure and connected to the corporate network via a IECS firewall and IS&T firewall and the web application to be installed on corporate PC's.

9.9.2 Scope of Work: Responsibilities of the tenderer.

The following work and responsibilities shall be included in the scope of work as a minimum:

- 9.9.2.1 Tenderers are responsible for all the software, licensing and hardware required to ensure compliance to the reporting and management requirements as specified in this tender.
- 9.9.2.2 All the hardware, licensing and software cost associated with developing further reports, maintenance of web reporter, expansion of web reporter, all licensed costs, all hardware required, all costs associated with web reporter must be included in the relevant tender pricing items.

9.9.3 Scope of work: Responsibilities of the city

The city shall be responsible for the following:

- The city shall from time to time indicate further specific reports required to be developed at no further cost.
- Arrange necessary peering requests for connection to the corporate network and for installation of web application on corporate PC's.

Compliance statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
9.9.1	Comply	
9.10.2.1	Comply	
9.10.2.2	Comply	
9.9.3	Comply	

9.10 **WAP database access**

9.10.1 Description of required service

- It is required for city officials to access database information stored in a dedicated server on the data infrastructure via a WAP enable TETRA radio or mobile data terminal coupled to a TETRA radio
- It is required to track the movement of the radios (If GPS enabled).
- It is required for the radios spatial information to be recorded. This includes as a

minimum GPS position, name or ISSI, service/ department/function/ depot, date, time and associated event information.

- Updates to this database is received via the internet from a third party and it is required that the local database be automatically synchronized/updated and that the data received as well as total database be verified as correct with each update.
- It shall be possible for users to request different type of reports to access the information available in the local database
- It is required for users to be enabled on the system to access the information via usernames and passwords.
- It shall be possible to draw management reports on the following:
 - Users registered for the service
 - Usage by volume, type of query, time, date and location per user or groups of users
- Alerts and messages needs to be automatically sent to responsible users in the event of certain limits or conditions being exceeded
- No city work flow processing such as time, kilometers, material and work order generation is required for this function
- No interface to SAP is required

9.10.2 Scope of Work: Responsibilities of the tenderer.

The following work and responsibilities shall be included in the scope of work as a minimum:

- 9.10.2.1 Automatically updating the local traffic offence database on the IECS infrastructure(C)
- 9.10.2.2 Validating the updates and database and correcting or deleting and flagging/ reporting on errors(C)
- 9.10.2.3 Build and maintain a register of radios and users included in the contract
- 9.10.2.4 Provide means of updating and maintaining this register via web based application(C)
- 9.10.2.5 It is required that logs be kept of all data sent and received for audit trail purposes
- 9.10.2.6 Provided as a minimum the following functionality for users via the web based application on the IS&T network: (C)
 - Users registered for the service
 - Usage by volume, type of query, time, date and location per user or groups of users
- 9.10.2.7 Design, develop and implement the necessary software for the infield devices and infrastructure to provide the necessary operational functionality as described.

- 9.10.2.8 Automatically generating alerts if certain conditions occur or limits exceeded via a messaging service operating over TETRA, GSM and internet (Outlook) (C)
- 9.10.2.9 Ensuring automated archiving of data to be able to meet KPI's and providing history for a minimum of one (1) year.
- 9.10.2.10 Continuously develop and maintain reports via the web based reporting and management interface to meet operations needs
- 9.10.2.11 Ongoing training for in field and web application users

10.2.12 No interface to SAP is required

9.10.3 Scope of work: Responsibilities of the city

The city shall be responsible for the following:

- Purchase of all in field and infrastructure hardware and software
- Installation of in field devices (Unless separate orders are placed)
- Maintenance of the in field and infrastructure hardware (Unless the separate option for maintenance is requested)
- Undertake WAP queries in the field, monitoring, managing and drawings reports for the service via the web based reporting application
- Any future workflow or SAP requirements

Compliance statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
9.10.1	Comply	
9.10.2.1	Comply	
9.10.2.2	Comply	
9.10.2.3	Comply	
9.10.2.4	Comply	
9.10.2.5	Comply	
9.10.2.6	Comply	
9.10.2.7	Comply	
9.10.2.8	Comply	
9.10.2.9	Comply	
9.10.2.10	Comply	
9.10.2.11	Comply	

9.10.2.12	Comply	
9.10.3	Comply	

10. MAINTENANCE SERVICES– IN FIELD EQUIPMENT

- 10.1 All main and associated hardware (looms and accessories) and software making up the total vehicle installation shall be included to ensure a fully operational installation at Key Performance Indicators as stipulated in Annexure C.
- 10.2 Service to include arranging and visiting the installation in the field and undertaking cable and accessories repairs, testing, configuration and replacement of the units, if faulty, with new replacement units.
- 10.3 The tenderer is responsible to carry a stock of new units for replacement and the faulty new units must be repaired by the tenderer or replaced at the tenderers cost unless it is willful or negligent damage. (M)
- 10.4 The city reserves the right to not take out maintenance for some of its units and request labour rates for repair of faulty units.

Compliance statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
10.1	Comply	
10.2	Comply	
10.3	Comply	
10.4	Comply	

11. MAINTENANCE SERVICES– IECS

- 11.1 The maintenance of the IECN shall be all inclusive of all hardware, software and cabling making up the full operational system.
- 11.2 Any software failure or hardware failure or replacement shall be for the cost of the tenderer. (M)
- 11.3 Tenderers shall provide maintenance services to ensure that the system complies to the Key Performance Indicators as stipulated in Annexure C.
- 11.4 The cost associated to this maintenance and support service shall be included in the tender pricing items available.

Compliance statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
11.1	Comply	
11.2	Comply	
11.3	Comply	
11.4	Comply	

12. ENVIRONMENTAL REQUIREMENTS

All the units must comply with the environmental requirements as specified in the Schedule of Technical Data (Annexure A). Tenders shall be regarded as invalid if these schedules are not completed.

Compliance statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
12.	Comply	

13. INTEROPERABILITY- FIELD EQUIPMENT**13.1 Field equipment**

13.1.1 The units offered are required to interface with subscribers operating on a Motorola Dimetra - P ETSI TETRA infrastructure version 6.2 or higher. (M)

13.2 Infrastructure

13.2.1 The IECS must interface to the Motorola Dimetra 8.2 Packet Data and Short Data routers for integration and communicating to field devices utilizing the TETRA network. (M)

Compliance statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
13.1.1	Comply	
13.2.1	Comply	

14. DESIGN AND STANDARDISATION

14.1 The design of the equipment must be in accordance with the best current engineering practice and workmanship must be of a uniformly high standard. The design must be such as to ensure complete accessibility for ease of maintenance.

- 14.2 Equipment cases and lids must be of strong rigid construction to eliminate flexing and the ingress of dust and moisture.

Compliance statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
14.1	Comply	
14.2	Comply	

15. ACCESSORIES

- 15.1 All accessories required for full functionality must be included in the tender price.
- 15.2 Tenderers must state in pricing schedule what other accessories are available and the prices thereof.

Compliance statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
15.1	Comply	
15.2	Comply	

16. PARTICULARS AND DRAWINGS

- 16.1 Tenderers must submit with their tenders full particulars and drawings in respect of all equipment offered.
- 16.2 A tender will not be considered unless sufficient technical, descriptive and operating data is submitted to enable the merits of the equipment offered to be ascertained.
(M)

Compliance statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
16.1	Comply	
16.2	Comply	

17. DOCUMENTATION

- 17.1 The Contractor must on delivery provide four (4) technical service manuals, pertinent to each model offered to allow the city to undertake their own 1st line maintenance (All repairs excluding circuit board repairs) if they so wish. The service manuals must depict detail component and circuit diagrams. The service manual must also support all the software functionality of the equipment offered. Only original color copies will be accepted.

Compliance statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
17.1	Comply	

18. INSPECT, DEMONSTRATION AND TESTING OF EQUIPMENT

- 18.1 The Tenderer must deliver, on request, within 10 working days after the tender closing date at least one demo unit of each type of field unit offered. The units must be of the same type and software version in all respects of the equipment offered. The units will be inspected by the Engineer and be subjected to such tests, as the Engineer may deem necessary. The units must be delivered to the Network Control Centre, No10 Voortrekker, Road Bellville, Cape Town, for attention Mr. Bosman. (M)
- 18.2 During the evaluation period the Engineer will arrange with each tenderer a period of 5 working days during which the interoperability tests will be undertaken and the Tenderer will be afforded the opportunity to demonstrate the interoperability of his offered equipment.(M)
- 18.3 Should tenderers take the option of installing their own IECS infrastructure software, demo hardware and software must be supplied to conduct demonstration and testing of functionality.
- 18.4 Should the units not meet the expectations of the Engineer during this period the tender will not be considered. The Engineers decision will be final and no further discussions or correspondence will be entered into in this regard.

Compliance statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
18.1	Comply	
18.2	Comply	
18.3	Comply	
18.4	Comply	

19. SPARES AND MAINTENANCE

- 19.1 Tenderers must guarantee that an adequate supply of spares is readily available for at least 10 years. (C)

Compliance statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
19.1	Comply	

20. TOOLS

- 20.1 Equipment supplied must include any special tools needed for affecting routine adjustments, tuning and general maintenance of the equipment offered including connecting cords with associated plugs and sockets needed for effecting routine adjustments, tuning and general maintenance of the equipment offered. At least four (4) sets must be supplied.

Compliance statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
20.1	Comply	

21. ESCROW AGREEMENT

- 21.1 Tenderers will be required to enter into an "Escrow" agreement with the City where all the latest and detailed software and hardware design, software codes and full rights to utilise of the equipment offered will be kept by an independent third party for a period not less than 10 years. In order for the City to issue this information to other suppliers for supply and support of the equipment should the successful tenderer not be in a position to supply equipment or provide the specified support.

- 21.2 Tenderers not accepting these conditions will not be considered. (M)

Compliance statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
21.1	Comply	
21.2	Comply	

22. TECHNICAL SUPPORT

- 22.1 Tenderers must indicate in the covering letter what support infrastructure is available locally in the Cape Metropolitan Area and in South Africa to support their products to ensure an effective after sales technical support service. Tenders will not be considered unless suitable guarantees are given for after sales technical support.(M)
- 22.2 It is a mandatory that tenderers shall have admin offices, a control room and workshop, owed or rented under their own name, of an adequate size and adequate equipment to house the operating and technical staff and to perform all testing and repairs in their local workshop.(M)
- 22.3 Tenderers are required to have an adequate pool of technical staff available to provide support as specified under the resource requirements paragraph.

- 22.4 Tenderers must provide a detailed support proposal in their covering letter for all services to describe how the Service Levels indicated in Annexure C will be achieved. (C)
- 22.5 The successful tenderer will be required to maintain the equipment at the required levels during the warranty period and to enter into a Service Level Agreement with the City after the warranty period to provide the technical support as proposed by the tenderer. The contract will make provision for penalties. Tenderers not accepting this condition will not be considered. (M)

Compliance statement		
Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
22.1	Comply	
22.2	Comply	
22.3	Comply	
22.4	Comply	
22.5	Comply	

23. RESOURCE REQUIREMENTS

- 23.1 It is a mandatory requirement that tenderers shall have the minimum operating (Control room) staff, or undertake to resource such staff, to allow an effective 24/7/365 fleet management and vehicle recovery service:
- 23.2 It is a mandatory requirement that tenderers shall provide a contract manager per department (M)
- 23.3 It is a mandatory requirement that tenderers shall provide a technical team with transport per department meeting the minimum requirements as per the functionality requirements but shall not be less than as per table below or proportionally depending on the quantities. (M)

Department	Approximate Fleet Size	Functionality minimum Tech's
Electricity	1000	2
Water	1500	1
Solid Waste	1000	3
Corporate	2500	2

- 23.4 Only accredited Vehicle OEM approved technicians will be allowed to fit or maintain equipment and tenderers shall supply proof of accreditation with their CV's.(M)

23.5 The cost for these resources shall be included in the tender pricing and the resources shall be employed within 2 months from award of the contract.

23.6 Preference shall be given for tenderers having the following permanent staff, not contractors, with the following skills, qualifications and relevant experience and shall be scored as per the evaluation criteria: (C)

- 23.6.1 Project Manager, Diploma, 8 years relevant experience (C)
- 23.6.2 Electronic Engineer, Degree, 8 years relevant experience (C)
- 23.6.3 Mechanical engineer, Degree, 8 years relevant experience
- 23.6.4 GIS specialist, Diploma, 8 years' experience (C)
- 23.6.5 IT Network Engineer, Degree, 8 years relevant experience (C)
- 23.6.6 IT Sequel database programmer, Diploma with 8 years' experience (C)
- 23.6.7 Two (2) x IT application programmers, Diploma with 8 years' experience (C)
- 23.6.8 Two (2) x IT firmware programmer/debuggers, Diploma with 8 years' experience (C)

23.7 Tenderers are required to complete **Annexure F** with the details.

23.8 A detailed CV for each one of the proposed key personnel for the project shall be supplied with the tender submission. (M)

Compliance statement		
Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
23.1	Comply	
23.2	Comply	
23.3	Comply	
23.4	Partial	See attached schedule 12
23.5	Comply	
23.6	Comply	
23.7	Comply	
23.8	Comply	

24. EXPERIENCE

24.1 Preference shall be given for tenderers having the following relevant experience and shall be scored as per the evaluation criteria:

- 24.1.1 Fleet tracking and management for a fleet of 6 000 vehicles or more. (C)
- 24.1.2 In vehicle RFID asset tracking and Management systems for 100 000 assets or more (C)

24.1.3 Interfacing such an infrastructure to SAP HR, AM and PM

24.1.4 In vehicle Local Area Network installations using: (C)

- 24.1.4.1 3G
- 24.1.4.2 W-Fi Access points
- 24.1.4.3 TETRA
- 24.1.4.4 RS232
- 24.1.4.5 Ethernet

24.1.5 In vehicle Mobile Data Terminal installations (C)

24.1.6 In Vehicle CCTV Installations

24.2 Tenderers are required to complete **Annexure G** with the details (M)

Compliance statement		
Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
24.1	Comply	
24.2	Comply	

25. SERVICE LEVEL AGREEMENT

- 25.1 The successful tenderer must undertake to conform to the conditions of a SLA (Service Level Agreement) with Key Performance Indicators (KPI's) as per **Annexure C**.
- 25.2 The successful tenderer shall record all faults, incidents, call outs, repair times, up times on the system for all components in order to provide monthly statistics to the City in order to monitor the SLA and reliability/availability parameters. These reports must be auditable by the City. Tenderers to describe fully how this will be implemented.
- 25.3 The City will have the right to cancel the contract or portions thereof if the successful tenderer does not meet the SLA requirements and after negotiations, lack of remedial action is not forthcoming after 3 month period.(M)
- 25.4 Tenderers must include the costs required to achieve these service levels in their pricing in the pricing schedule.
- 25.5 Tenderers shall accept responsibilities for penalties in cases where the service levels are not met as per Annexure C.(M)
- 25.6 The following shall be applicable for SLA reporting on vehicles:
- 25.6.1 Total Fleet (TF) is the total number of vehicles for which orders are placed for services

- 25.6.2 Out Of Service fleet (OOSF) is the portion of TF that is not available due to faulty vehicles, in for service, etc. Further if a service fails on a vehicle and the tenderer makes an appointment with the fleet coordinator for repairs and the vehicle do not show, then the tenderer has the right to place that vehicle in the OOS fleet until a new appointment is made by the fleet coordinator.
- 25.6.3 SLA fleet (SLAF) is what the tenderer will be monitored on for compliance to Service Levels.
- 25.6.4 SLAF = TF - OOSF

Compliance statement		
Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
25.1	Comply	
25.2	Comply	
25.3	Comply	
25.4	Comply	
25.5	Comply	
25.6	Comply	

26. TRAINING

For each type of equipment offered, for which training has not being received for in the past, the tenderer must provide the following minimum training in Cape Town:

26.1 In field training

26.1.1 The training program must include training of staff on all operational features and operation of the equipment to enable them to provide training to all the users'. (Train-the-trainer)

26.1.2 Council will provide the venue of the training session. Training materials must be borne by the tenderer. Provision must be made to train a minimum of 10 staff per training course and refresher training each year for the duration of the contract.

26.2 Web reporting/management/operational application training

26.2.1 The training program must include training of staff on all aspects of the web reporting application in order for staff to undertake all required actions such as reports, viewing of vehicle positions, correcting or capturing of data, etc.

26.2.2 Council will provide the venue of the training session. Training materials must be borne by the tenderer. Provision must be made to train a minimum of 10 staff per training course and refresher/additional training each month or as demand dictates for the duration of the contract.

26.3 The cost for the training shall be included in the tender pricing.

Compliance statement		
Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
26.1	Comply	
26.2	Comply	
26.3	Comply	

27. HEALTH AND SAFETY

- 27.1 The tenderer shall be registered as an employer under the Occupational Health Act and to comply with the legislation and to complete, prior to commencement of services, a Form of Undertaking issued by the City.(C)
- 27.2 Tenderers shall provide documentation of their Health and Safety policy and procedures together with staff safety training certification.
- 27.3 The tenderer shall comply to correct disposal of all electronic waste generated i.e. battery disposal, inactive SIM card disposal. Proof of such disposal certificates must be made available as and when required. The tenderer is expected to keep records of all legislative certificates while this tender is in place.
- 27.4 Proof of disposal process and correct certification must be made available upon award of tender .
- 27.5 Tenders shall complete the Health and Safety contract as per schedule 10 and shall include an appropriate Health and Safety plan to schedule 10.

Compliance statement		
Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
27.1	Comply	
27.2	Comply	
27.3	Comply	
27.4	Comply	
27.5	Comply	

28. COMPLIANCE WITH SPECIFICATION

- 28.1 Tenderers must complete and submit with their tenders the compliance statements after each paragraph or sub paragraph of this technical specification, listing clause by clause the specific technical details indicating compliance, partial compliance or non-compliance with the requirements of the specification.

28.2 Failure to comply with the requirements of this section may render the tender invalid. (M)

28.3 For evaluation purposes the following conventions shall apply:

- Mandatory (M) – Should one of these clauses not be met, the relevant tender will be declared non responsive
- Critical (C) – Should one of these clauses not be met, three(3) out of (5) point will be deducted for the relevant section
- Minor (no indication) – For the balance of clauses, if not met, one(1) out of (5) points will be deducted for the relevant section
- See evaluation subsection for details

Compliance statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
28.1	Comply	
28.2	Comply	
28.3	Comply	

29. NON DISCLOSURE AGREEMENT

29.1 Tenderers shall be required to enter into a non disclosure agreement with the city to safeguard the city's data as well as software development undertaken for the city.

Compliance statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
29.1	Comply	

30. SECURITY CLEARANCE

30.1 Tenderers shall be required to submit their staff and sub contractors to security clearances as required by the city

Compliance statement

Item nr	Comply/Partially comply/ do not comply	Detail of non-compliance or partial compliance
29.1	Comply	

ANNEXURE A
SCHEDULE OF TECHNICAL DATA

ITEM NO	DESCRIPTION	SPECIFIED REQUIREMENTS	EQUIPMENT OFFERED
Item 1: Vehicle On Board Computer OBC			
1.	General		
1.1	Make and model of equipment	Tenderer to state	
1.2	Software description and version	Tenderer to state	
2.	Applicable standards		
2.1	GSM standard(C)	ETSI 101 344, 101 348, 101 356	
2.2	Wi-Fi(C)	Comply with SA Regulatory requirements	
2.3	Ethernet	tenderer to state	
2.4	Power over USB	Tenderer to state	
3.	Hardware Requirements		
3.1	GSM antenna (M)	Tenderer to state	
3.2	Wi-Fi antenna (M)	Tenderer to state	
3.3	Peripheral Interface Equipment (M)	RS22 with DB9 connector	
3.4	Power and input/output connector (M)	DB25 connector	
3.5	Digital inputs (M)	Four (4)	
3.6	Analogue inputs (M)	Two (2)	
3.7	Ethernet port (M)	One (1)	
3.8	USB port (M)	One(1)	
3.9	Dallas tag reader and input (M)	One(1)	
3.10	Panic button and input (M)	One(1)	
3.11	Battery Voltage monitoring (M)	One(1)	
3.12	Starter inhibitor (M)	One(1)	
3.13	RPM monitor (M)	One(1)	
3.14	Maximum dimensions	100x75x50 mm	
3.15	Maximum weight	350 grams	
3.16	Enclosure	Sealed metal, epoxy coated box	
4.	Technical Requirements		
4.1	GPS receiver (C)	50 channel GPS LI Frequency or better	
4.2	GPS horizontal position accuracy (C)	<2.5 m	
4.3	GPS time to first lock	< 1sec for Hot start	
4.4	Internal 3G modem (C)	Tenderer to state	
4.5	Power supply (C)	9 to 36 VDC with overvoltage, reverse polarity protection as per ISO7637-1/2	

ITEM NO	DESCRIPTION	SPECIFIED REQUIREMENTS	EQUIPMENT OFFERED
4.6	Maximum Power consumption (C)	Active (Tx) 120mA@12Vdc	
4.7	Maximum Power consumption (C)	Idle (Rx) 40mA@12Vdc	
4.8	Maximum Power consumption (C)	Sleep 10mA@12Vdc	
4.9	Wi-Fi APN functionality (M)	Capable, module upgrade	
4.10	Installation (C)	OEM certification required	
5.	Functionality		
5.1	GSM 3G modem (M)	Yes	
5.2	GSM dual SIM (M)	Capable, module upgrade	
	Wi-fi functionality (M)	Capable, module upgrade	
5.3	TETRA functionality (M)	ETSI TETRA PEI to subscriber	
5.4	Provide GPS data to external device	Yes	
5.5	GPS reporting on time (C)	1sec to 24 hours	
5.6	GPS reporting on distance (C)	10 m to 10 km	
5.7	GPS reporting on turn (C)	15 to 360 degrees	
5.8	GPS reporting on poll (C)	Request from web application	
5.9	Least cost routing (C)	TETRA versus GSM vs Wi-Fi	
5.10	Status reporting to infrastructure	Speed, battery level, GPS lock, embed button	
5.11	Mobile information to infrastructure (C)	Driver info, vehicle info	
5.12	Receive manual GPS polling request (C)	Yes	
6.	Environmental		
6.1	Temperatures	EIS 300 019	
6.2	Operational temperatures	-20 to +55 degree C	
6.3	Humidity	EIA/TIA 603 (95%)	
6.4	Dust and water (C)	IP 61	
Item 2: Wireless RF unit			
1	General		
1.1	Make and model of equipment	Tenderer to state	
1.2	Software description and version	Tenderer to state	
2	Applicable standards		
2.1	ICASA Approval (C)	Yes	
3	Hardware Requirements		
3.1	RF antenna	Tenderer to state	
3.2	Maximum dimensions	100x75x50 mm	
3.3	Maximum weight	350 grams	
3.4	Enclosure	Sealed metal, epoxy coated box	
4	Technical Requirements		
4.1	Rf frequency range	Tenderer to state	

ITEM NO	DESCRIPTION	SPECIFIED REQUIREMENTS	EQUIPMENT OFFERED
4.2	RF receiver sensitivity	Tenderer to state	
4.3	RF power output	Tenderer to state	
4.4	Operate on internal power (C)	>12 hours minutes	
4.5	Installation (C)	OEM certification required	
5	Functionality		
5.1	Dormant system, activated by external RF signal (M)	Yes	
5.2	Unit to be traceable by mobile RF direction finder (M)	Yes	
6	Environmental		
6.1	Temperatures	ETS 300 019	
6.2	Operational temperatures	-20 to +55 degree C	
6.3	Humidity	EIA/TIA 603 (95%)	
6.4	Dust and water (C)	IP 61	
Item 3: In vehicle storage device			
1	General		
1.1	Make and model of equipment	Tenderer to state	
1.2	Software description and version	Tenderer to state	
2	Applicable standards		
2.1	Safety	EN60950	
2.2	EMC	EN50081-1 and EN50082-14.3	
3	Hardware Requirements		
3.1	Hard Disk Type (M)	Solid State	
3.2	Storage capacity (M)	4 GBytes	
4	Technical Requirements		
4.1	Interface to OBC or LAN device (M)	USB	
5	Functionality		
5.1	Required to store data securely from Mobile Data Terminal or CTV cameras (M)	Yes	
6	Environmental		
6.1	Temperatures	ETS 300 019	
6.2	Operational temperatures	-20 to +55 degree C	
6.3	Humidity	EIA/TIA 603 (95%)	
6.4	Dust and water (C)	IP 61	
Item 4: In Vehicle LAN			
1.	General		
1.1	Make and model of equipment	Tenderer to state	

ITEM NO	DESCRIPTION	SPECIFIED REQUIREMENTS	EQUIPMENT OFFERED
1.2	Software description and version	Tenderer to state	
2.	Applicable standards		
2.1	Safety	EN60950	
2.2	EMC	EN50081-1 and EN50082-14.3	
2.3	GSM standard	ETSI 101 344, 101 348, 101 356	
2.4	Wi-Fi	SA Regulator approval certificates to be provided	
2.5	Ethernet	Tenderer to state	
2.6	Power over USB	Tenderer to state	
3.	Hardware Requirements		
3.1	GSM antenna type	Tenderer to state	
3.2	Wi-Fi antenna type	Tenderer to state	
3.3	Removable power unit (M)	Yes	
3.4	Power supply for a Tablet device	Yes	
3.5	Intelligent vehicle battery monitoring/protection device (M)	Yes	
3.7	Ethernet port (M)	One (1)	
3.8	Power over USB ports (M)	Four (4)	
3.9	Capability of 3G modem antenna and SIM (M)	Yes, Modular option	
3.10	Maximum dimensions	150x 100x75 mm	
3.11	Maximum weight	350 grams	
3.12	Enclosure	Sealed metal, epoxy coated box	
4.	Technical Requirements		
4.1	Power supply (M)	9 to 36 VDC with overvoltage, reverse polarity protection as per ISO7637-1/2	
4.2	Removable power unit (M)	Removable, rechargeable and capacity for powering LAN for 8 hours	
5.	Functionality		
5.1	Least cost routing between GSM and Wi-Fi	Yes	
5.2	LAN function between OBC, USB, Wi-Fi and Ethernet devices, (M)	Yes	
6.	Environmental		
6.1	Temperatures	ETS 300 019	
6.2	Operational temperatures	-20 to +55 degree C	
6.3	Humidity	EIA/TIA 603 (95%)	
6.4	Dust and water (C)	IP 61	
Item 5: Mobile Data Terminal bracket and cradle			
1.	General		

ITEM NO	DESCRIPTION	SPECIFIED REQUIREMENTS	EQUIPMENT OFFERED
1.1	Make and model of equipment	Tenderer to state	
1.2	Software description and version	Tenderer to state	
2.	Applicable standards		
2.1	Safety	EN 60950	
3.	Hardware requirements		
3.1	Bracket	Metal epoxy coated or similar	
3.2	Method of fixture to vehicle (M)	Noninvasive (No damage to vehicle for resale)	
3.3	Cradle	Epoxy coated metal sheet with softened edges or hardened plastic	
3.4	Cradle capacity for tablets	5 to 13 inch	
3.5	Tablet security	Individual lock on cradle	
3.6	Tablet connectivity	Provision for USB and power connections whilst tablet is in cradle	
4.	Technical Requirements		
4.1	Provide side screens for light protection (C)	Yes	
4.2	Allow safe locking of tablet in cradle (C)	Yes	
Item 6: Bin Counting and tag reading system			
1.	General		
1.1	Make and model of equipment	Tenderer to state	
1.2	Software description and version	Tenderer to state	
2.	Applicable standards		
2.1	Safety	EN60950	
2.2	EMC	EN50081-1 and EN50082-14.3	
2.3	GSM standard	ETSI 101 344, 101 348, 101 346	
2.4	RFID emissions	ETSI EN302-208-2, ETSI EN300-320, EN501-489	
2.5	Wi-Fi equipment	SA Regulator approval certificates to be provided	
2.6	RFID equipment	SA Regulator approval certificates to be provided	
3.	Hardware requirements		
3.1	Hardware requirements as per item1: OBC	Yes	
3.2	RFID receiver antenna (M)	One (1) per unit	
3.3	Bin lift counter sensor (M)	One (1) per unit	
3.4	Flashing light (M)	One (1) per unit	
3.5	Buzzer (M)	One (1) per unit	

ITEM NO	DESCRIPTION	SPECIFIED REQUIREMENTS	EQUIPMENT OFFERED
3.6	Additional Dallas tag reader (M)	One (1) per unit	
3.7	Hermetically sealed box (M)	Yes	
3.8	Tamper proof box (M)	Yes	
3.9	Dry contact to lifting mechanism (C)	One (1) per unit	
3.10	Analogue input for mass reading (C)	One (1) per unit	
4.	Technical Requirements		
4.1	RFID receiver reading sensitivity (M)	0 to 100mm maximum	
4.2	Reading of existing rfid tags (M)	Yes	
4.3	Buffering of lifting data (M)	5 days	
5.	Functionality		
5.1	Functionality as per item1: OBC	Yes	
6.	Environmental		
6.1	Temperatures	ETS 300 019	
6.2	Operational temperatures	-20 to +55 degree C	
6.3	Humidity	EIA/TIA 603 (95%)	
6.4	Dust and water (M)	IP 61	
Item 7: Portable toilet and tag counting and tag reading system			
1.	General		
1.1	Make and model of equipment	Tenderer to state	
1.2	Software description and version	Tenderer to state	
2.	Applicable standards		
2.1	Safety	EN60950	
2.2	EMC	EN50081-1 and EN50082-14.3	
2.3	GSM standard	ETSI 101 344, 101 348, 101 356	
2.4	RFID emissions	ETSI EN302-208-2, ETSI EN300-320, EN301-489	
2.5	Wi-Fi equipment	SA Regulator approval certificates to be provided	
2.6	RFID equipment	SA Regulator approval certificates to be provided	
3.	Hardware requirements		
3.1	Hardware requirements as per item1: OBC	Yes	
3.2	RFID receiver antenna (M)	One (1) per unit	
3.3	Receiver construction antenna (C)	In container with epoxy resin or equivalent and ability to wear on arm or on clothing	
3.4	Buzzer (M)	One (1) per unit	

ITEM NO	DESCRIPTION	SPECIFIED REQUIREMENTS	EQUIPMENT OFFERED
3.5	Hermetically sealed boxes (M)	Yes	
3.6	Power requirements (C)	Rechargeable 12VDC battery in sealed container	
4.	Technical Requirements		
4.1	RFID receiver reading sensitivity (M)	0 to 100mm maximum	
4.2	Reading of existing rfid tags (M)	Yes	
4.3	Buffering of data (C)	5 days	
5.	Functionality		
5.1	Functionality as per Item1: OBC	Yes	
6.	Environmental		
6.1	Temperatures	ETS 300 849	
6.2	Operational temperatures	-20 to +55 degree C	
6.3	Humidity	EIA/TIA 608 (95%)	
6.4	Dust and water (M)	IP 64	
Item 8: Portable RFID reader Basic			
1.	General		
1.1	Make and model of equipment	Tenderer to state	
1.2	Software description and version	Tenderer to state	
2.	Applicable standards		
2.1	Safety	EN60950	
2.2	EMC	EN50081-1 and EN50082-14.3	
2.4	RFID emissions	ETSI EN302-208-2, ETSI EN300-320, EN301-489	
3.	Hardware requirements		
3.1	Rechargeable battery operation (M)	Yes	
3.2	Built in RFID reader (M)	Yes	
3.3	Basic display (M)	Yes	
3.4	Led indication of successful read (M)	Yes	
3.5	Mode switch for count/code display (M)	Yes	
4.	Technical Requirements		
4.1	Small and light weight	Tenderer to state	
5.	Functionality		
5.1	Allow reading and display of RFID code	Yes	
5.2	Allow reading and display number of RFID reads	Yes	
5.3	Allow reading of existing RFID tags (M)	Yes	

ITEM NO	DESCRIPTION	SPECIFIED REQUIREMENTS	EQUIPMENT OFFERED
6.	Environmental		
6.1	Tenderer to state	Tenderer to state	
Item 9: Portable RFID reader – Field use			
1.	General		
1.1	Make and model of equipment	Tenderer to state	
1.2	Software description and version	Tenderer to state	
2.	Applicable standards		
2.1	Safety	EN60950	
2.2	EMC	EN50081-1 and EN50082-14.3	
2.3	GSM standard	ETSI 101 344, 101 348, 101 356	
2.4	RFID emissions	ETSI EN302-208-2, ETSI EN300-320, EN301-489	
3.	Hardware requirements		
3.1	Rechargeable and removable battery operation (M)	Yes	
3.2	Built in RFID reader (M)	Yes	
3.3	Built in 3G modem, internal antenna and SIM holder (M)	Yes	
3.4	LED and Buzzer (M)	Yes	
3.5	Built in GPS modem, and antenna (M)	Yes	
4.	Technical Requirements		
4.1	GPS receiver (C)	50 channel GPS LI Frequency or better	
4.2	GPS horizontal position accuracy	<2.5 m	
4.3	GPS time to first lock	< 1sec for Hot start	
4.4	Internal 3G modem (M)	Tenderer to state	
5.	Functionality		
5.1	Allow reading and display of RFID code	Yes	
5.2	Allow reading and display number of RFID reads	Yes	
5.3	Allow reading of existing RFID tags (M)	Yes	
5.4	Allows transmission of RFID codes and GPS to IECS via 3G (M)	Yes	
6.	Environmental		
6.1	Rating (C)	IP65	
Item 10: Portable RFID reader - Executive			
1.	General		

ITEM NO	DESCRIPTION	SPECIFIED REQUIREMENTS	EQUIPMENT OFFERED
1.1	Make and model of equipment	Tenderer to state	3
1.2	Software description and version	Tenderer to state	
2.	Applicable standards		
2.1	Safety	EN60950	
2.2	EMC	EN50081-1 and EN50082-14.3	
2.3	GSM standard	ETSI 101 344, 101 348, 101 356	
2.4	RFID emissions	ETSI EN302-208-2, ETSI EN300-320, EN301-489	
3.	Hardware requirements		5
3.1	Rechargeable and removable battery operation (M)	Yes	
3.2	Built in RFID reader (M)	Yes	
3.3	Built in 3G modem, internal antenna and SIM holder (M)	Yes	
3.4	LED and Buzzer (M)	Yes	
3.5	Built in GPS modem, and antenna (M)	Yes	
3.6	Display and Keypad (M)	Yes	
4.	Technical Requirements		2
4.1	GPS receiver (C)	50 channel GPS L1 Frequency or better	
4.2	GPS horizontal position accuracy	<2.5 m	
4.3	GPS time to first lock	< 1sec for Hot start	
4.4	Internal 3G modem	Tenderer to state	
5.	Functionality		
5.1	Allow reading and display of RFID code	Yes	
5.2	Allow linking of RFID codes to GPS and erf data via keypad	Yes	
5.3	Allow reading of existing RFID tags (M)	Yes	
5.4	Allows transmission of RFID codes, erf info and GPS to IECS via 3G	Yes	
5.5	Local storing of data on device (M)	Yes	
5.6	Visually and audibly indicate successful reads	Yes	
6.	Environmental		
6.1	Tenderers to state	Tenderers to state	
Item 11: GPS antenna			
1.	General		
1.1	Make and model of equipment	Tenderer to state	
1.2	Software description and	Tenderer to state	

ITEM NO	DESCRIPTION	SPECIFIED REQUIREMENTS	EQUIPMENT OFFERED
	version		
2.	Applicable standards		
2.1	GSM standard	ETSI 101 344, 101 348, 101 356	
3.	Hardware Requirements		
3.1	Magnetic metal base	Yes	
3.2	Plastic Radome	Yes	
3.3	5m Coaxial Cable	Yes	
3.4	SMB female connector	Yes	
4.	Technical Requirements		
4.1	Frequency	LI Band - 1575 Mhz	
4.2	Antenna Element Gain	4.0 dBic typ @ zenith	
4.3	Axial Ratio	3 Db typical @ zenith	
4.4	Polarization	RHCP	
4.5	Output VCWR	1.5:1 typ, 2:1 max	
4.6	Filter / LNA (-3dB bandwidth)	1575.42 +/- 9 MHz typical	
4.7	Voltage	+3 +/- 0.5 VDC	
4.8	Current	20 mA typ @ 3 VDC	
4.9	LNA Gain	28 dB +/- 2 dB	
4.10	Noise figure	1.5 dB max	
4.11	Compression @ L1	+1 dB @ LNA output	
4.12	Total Gain	21 dBic min	
4.13	Out of Band Filter Attenuation	25 DB +/- 50 MHz typical	
5.	Functionality		
5.1	Compatible with items 1	Yes	
6.	Environmental		
6.1	Operating temperature	-40c to + 95c	
6.2	Operating humidity	40-95% RH (rain proof)	
6.3	Chemical resistance	Oil, fuel, detergents	
6.4	Salt	5% NaCl @ 35c	
6.5	Electrostatic Discharge	RC Surge protection on PCB	
7.	Interoperability		
7.1	Compatible with items 2 and 3	Yes	
Item 12: Wi-Fi antenna			
1.	General		
1.1	Make and model of equipment	Tenderer to state	
2.	Applicable standards		
2.1	Wi-fi standard	Comply with SA Regulatory requirements	

ITEM NO	DESCRIPTION	SPECIFIED REQUIREMENTS	EQUIPMENT OFFERED
3.	Hardware Requirements	Tenderer to state	
3.1	Suitable for in dashboard installation and operation	Yes	
4.	Technical Requirements		
4.1	Frequency	Tenderer to state	
4.2	Antenna Element Gain	Tenderer to state	
5.	Functionality		
5.1	Compatible with items 1	Yes	
6.	Environmental		
6.1	Operating temperature	-40c to + 95c	
6.2	Operating humidity	40-95% RH (rain proof)	
6.3	Chemical resistance	Oil, fuel, detergents	
6.4	Salt	55 NaCl @ 35c	
6.5	Electrostatic Discharge	RC Surge protection on PCB	
7.	Interoperability		
7.1	Compatible with items 1	Yes	
Item 13: GSM antenna			
1.	General		
1.1	Make and model of equipment	Tenderer to state	
2.	Applicable standards		
2.1	GSM standard	ETSI 101 344, 101 348, 101 356	
3.	Hardware Requirements	Tenderer to state	
3.1	Suitable for in dashboard installation and operation (M)	Yes	
4.	Technical Requirements		
4.1	Frequency	Tenderer to state	
4.2	Antenna Element Gain	Tenderer to state	
5.	Functionality		
5.1	Compatible with items 1	Yes	
6.	Environmental		
6.1	Operating temperature	-40c to + 95c	
6.2	Operating humidity	40-95% RH (rain proof)	
6.3	Chemical resistance	Oil, fuel, detergents	
6.4	Salt	55 NaCl @ 35c	
6.5	Electrostatic Discharge	RC Surge protection on PCB	

ITEM NO	DESCRIPTION	SPECIFIED REQUIREMENTS	EQUIPMENT OFFERED
7.	Interoperability		
7.1	Compatible with items 1	Yes	
Item 14: On Board Computer looms			
1.	General		
1.1	Make and model of equipment	Tenderer to state	
2.	Hardware Requirements		
2.1	Connector RS232 cable	female DB9	
2.2	Connector power, digital and analogue cables	Female DB25	
2.3	Data and power cable lengths	3 or 5 meters	
5.	Environmental		
5.1	Temperatures	ETS 300 019	
5.2	Operational temperatures	-20 to +55 degree C	
5.3	Humidity	EIA/TIA 603 (95%)	
5.4	Dust and water	IP 54	
6.	Interoperability		
6.1	Interoperable with items 1	Yes	
Item 15: On Board Computer looms (SCADA)			
1.	General		
	Make and model of equipment	Tenderer to state	
2.	Hardware Requirements		
2.1	Connector RS232 cable	RJ45	
2.2	Connector power and programming cables	Female DB25	
2.3	Data and power cable lengths	5 meters	
5.	Environmental		
5.1	Temperatures	ETS 300 019	
5.2	Operational temperatures	-20 to +55 degree C	
5.3	Humidity	EIA/TIA 603 (95%)	
5.4	Dust and water	IP 54	
6.	Interoperability		
6.1	Interoperable with items 2 and 3	Yes	
Item 16: Bin counting and tag reading looms			
1.	General		
	Make and model of equipment	Tenderer to state	
2.	Hardware Requirements		
2.1	Provision for power, communication and all	Yes	

ITEM NO	DESCRIPTION	SPECIFIED REQUIREMENTS	EQUIPMENT OFFERED
	ancillary devices		
2.2	Moulded plugs	Yes	
2.3	Installation method	In conduits or in vehicle chassis to avoid damage and tampering	
5.	Environmental		
5.1	Temperatures	ETS 300 019	
5.2	Operational temperatures	-20 to +55 degree C	
5.3	Humidity	EIA/TIA 603 (95%)	
5.4	Dust and water	IP 54	
6.	Interoperability		
6.1	Interoperable with items 6	Yes	
Item 17: Portable toilet and tap counting and tag reading looms			
1.	General		
	Make and model of equipment	Tenderer to state	
2.	Hardware Requirements		
2.1	Provision for power, communication and all ancillary devices	Yes	
2.2	Moulded plugs (C)	Yes	
2.3	Installation method	Tenderer to state	
5.	Environmental		
5.1	Temperatures	ETS 300 019	
5.2	Operational temperatures	-20 to +55 degree C	
5.3	Humidity	EIA/TIA 603 (95%)	
5.4	Dust and water (C)	IP 54	
6.	Interoperability		
6.1	Interoperable with portable toilet unit	Yes	
item 18: RFID tags for bins and toilets			
1.	General		
1.1	Make and model of equipment	Tenderer to state	
1.2			
2.	Applicable standards		
2.1	RFID emissions	ETSI EN302-208-2, ETSI EN300-320, EN601-489	
3.	Hardware requirements		
3.1	Type (M)	Cylindrical	
3.2	Securing method (M)	Hammer into pre drilled hole with clip fitting	
4.	Technical Requirements		

ITEM NO	DESCRIPTION	SPECIFIED REQUIREMENTS	EQUIPMENT OFFERED
4.1	Type (M)	Read only	B
4.2	Frequency (M)	125 KHz	
5.	Functionality		
5.1	Reading range (M)	0 to 100mm maximum at 75 degree Celsius	
6.	Environmental		
6.1	Suitable for severe Solid Waste bin lifting and management environment (M)	Yes	
	Ingress protection (M)	IP64	
	Shock and vibration (M)	MIL-Std- 810-F	
item 19: RFID tags for taps and standpipes			
General			
Make and model of equipment	Tenderer to state		
Applicable standards			
RFID emissions	ETSI EN302-208-2, ETSI EN300-320, EN301-489		
Hardware requirements			
Type (M)	Must be suitable for harsh environment and tamper proof (M)	Tenderer to state	
Securing method (M)	Practical securing, tamperproof and easy reading (M)	Tenderer to state	
Technical Requirements			
Type (M)	Read only (M)		
Frequency (M)	125 KHz (M)		
Functionality			
Reading range (M)	0 to 100mm maximum at 75 degree Celsius (M)		
Environmental			
Suitable for severe Water and sanitation environment (M)	Yes		
Ingress protection (M)	IP64 (M)		
Shock and vibration (M)	MIL-Std- 810-F (M)		
Item 17: Dallas tag programmer			

ITEM NO	DESCRIPTION	SPECIFIED REQUIREMENTS	EQUIPMENT OFFERED
1.	General		
1.1	Make and model of equipment	Tenderer to state	
1.2	Software description and version	Tenderer to state	
2.	Applicable standards		
2.1	Tenderers to state	Tenderers to state	
2.2			
3.	Hardware requirements		
3.1	Accept current dallas tag use by city (M)	Yes	
3.2	USB interface to PC		
4.	Technical Requirements		
4.1	None		
5.	Functionality		
5.1	Interface to web application for programming of new tags		
6.	Environmental		
6.1	Tenderers to state	Tenderers to state	
Item 18: Mobile Data Terminal - Standard			
1.	General		
1.1	Make and model offered	Tenderer to state	
1.2	Software description and version	Tenderer to state	
2.	Applicable standards		
2.1	Safety	EN 60950	
2.2	Wi-Fi	Tenderer to state	
3.	Hardware Requirements		
3.1	Wi-Fi	Yes	
3.2	Cable connection to MDC	USB	
3.3	Small and light weight	Tenderer to state and provide detailed technical information	
3.4	Type	Tablet PC	
3.5	Screen	11 inch minimum	
4.	Technical Requirements		
4.1	Operating system	Windows or Android	
	Other technical requirements	Tenderer to state	
5.	Functionality		
5.1	Functional	Tenderer to provide	

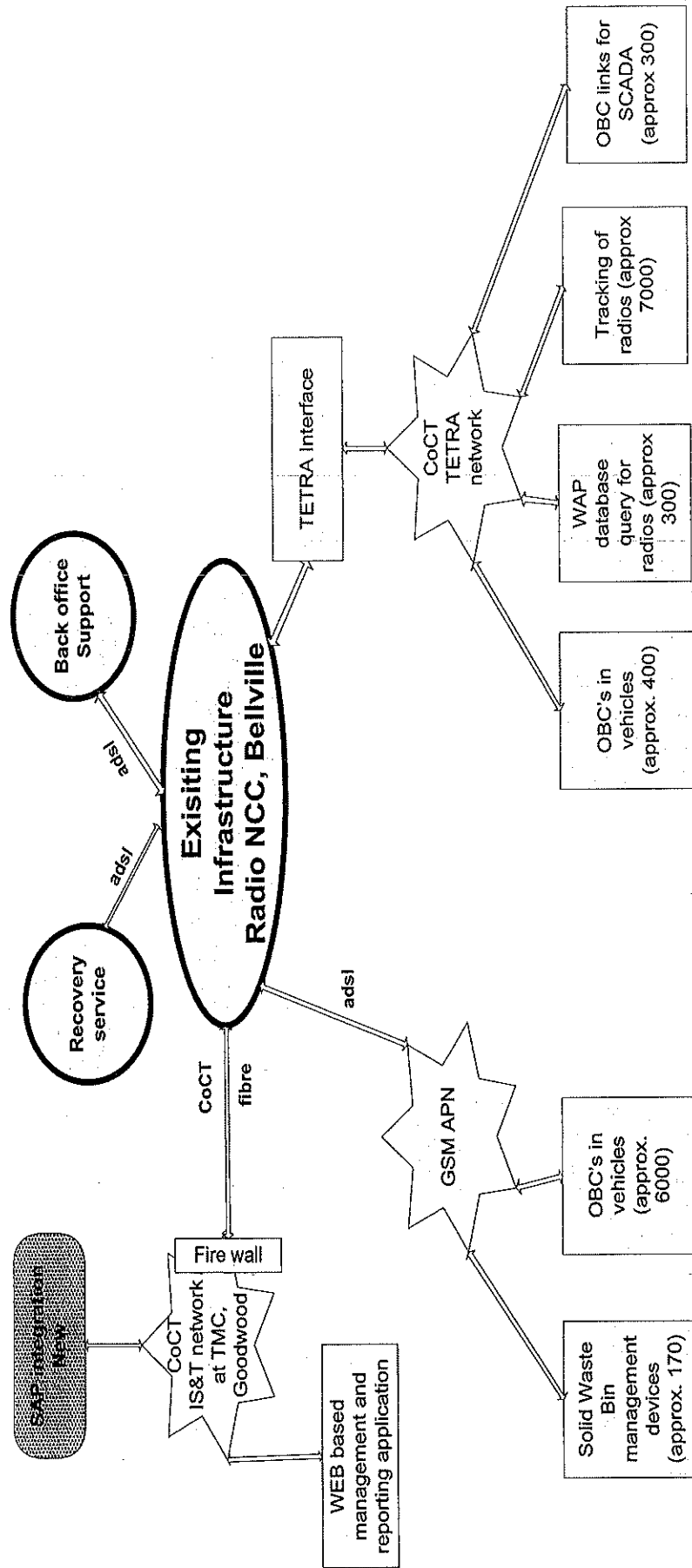
ITEM NO	DESCRIPTION	SPECIFIED REQUIREMENTS	EQUIPMENT OFFERED
		technical brochures	
6.	Environmental		
6.1	Dust and water	IP54	
6.2	Vibration	Tenderer to state	
7.	Interoperability		
7.1	Full interoperability with OBC's offered	Yes	
Item 19: Ruggedised Mobile Terminal			
1.	General		
1.1	Make and model offered	Tenderer to state	
2.	Applicable standards		
2.3	Safety	EN 60950	
2.4	Wi-Fi	Tenderer to state	
3.	Hardware Requirements		
3.1	Wi-Fi	Yes	
3.2	Cable connection to OBC/LAN	USB	
3.3	Other hardware requirements	Tenderer to state	
3.4	Type	Tablet PC	
3.5	Screen	Minimum 11 inch	
4.	Technical Requirements		
4.1	Operating system	Windows or Android	
4.2	Other technical requirements	Tenderer to state	
5.	Functionality		
5.1	Functional	Tenderer to provide technical brochures	
6.	Environmental		
6.1	Dust and water	IP 67	
6.2	Vibration	Mil standard 810 e and D	
7.	Interoperability		
7.1	Full interoperability with OBC's offered	Yes	
Item 20 : Infrastructure hardware and software			
1	Hardware		

ITEM NO	DESCRIPTION	SPECIFIED REQUIREMENTS	EQUIPMENT OFFERED
1.1	Application server	Dell 510 or equivalent	
1.2	Database server	Dell 720i or equivalent	
1.3	Router	Tenderer to state	
1.4	Firewall	SonicWALL TZ215 with dynamic support 8/5 (working hours) or equivalent	
1.5	Switch 24 port	Hp 2620-24-POE or equivalent	
1.6	Managed Switch 24 port	Hp 3500-YL-24G-POE or equivalent	
1.7	Cabinet	Datanet - 1m deep 19 inch 42U black or equivalent	
1.8	Patch panel 24 port	19 inch with brush panel	
1.9	Management terminal	Dell 2820 with 22" LED monitor or equivalent	
1.10	KVM switch 16 port	Rexton 16KVM port with IP or equivalent	
1.11	19 inch administration terminal	Mounted in cabinet with monitor, keyboard and mouse plus tray	
2	Software		
2.1	Server operating system	Windows	
2.2	Application software	Tenderer to state	
2.3	Database server software	Tenderer to state	
2.4	Pc operating software	Windows	
2.5	Web (ILS) server	Windows 2008 web server	
2.6	TETRA WAP Push	Motorola TETRA software	
Item 21 : CCTV Camera controller and video display unit			
1.	General		
1.1	Make and model offered for CCTV controller	Tenderer to state	
1.2	Make and model offered for controller	Tenderer to state	
2.	Applicable standards		
2.5	Safety	EN 60950	
3.	Hardware Requirements		
3.1	Number of Camera inputs (C)	Four	
3.2	Communication interface (M)	USB	
3.3	Monitor	Color, Tenderer to state	
3.4	Screen	10 inch minimum	
4.	Technical Requirements		
4.1	Operating system	Tenderer to state	

ITEM NO	DESCRIPTION	SPECIFIED REQUIREMENTS	EQUIPMENT OFFERED
	Other technical requirements	Tenderer to state	
5.	Functionality		
5.1		Tenderer to state	
6.	Environmental		
6.1	Dust and water (C)	IP54	
6.2	Vibration	Tenderer to state	
7.	Interoperability		
7.1	Full interoperability with OBC's offered (M)	Yes	
Item 22 : CCTV Cameras			
1.	General		
1.1	Make and model offered for CCTV dash camera	Tenderer to state	
1.2	Make and model offered for CCTV odometer camera	Tenderer to state	
1.3	Make and model offered for CCTV external camera		
2.	Applicable standards		
2.6	Safety	EN 60950	
3.	Hardware Requirements		
3.1	Fixing method dash camera	Tenderer to state	
3.2	Fixing method odometer camera	Tenderer to state	
3.3	Fixing method external camera	Tenderer to state	
3.4	Communication interface (M)	USB	
4.	Technical Requirements		
4.1	Other technical requirements Tenderer to state	Tenderer to state	
5.	Functionality		
5.1	Other functional requirements Tenderer to state	Tenderer to state	
6.	Environmental		
6.1	Dust and water- External camera (C)	IP61	
6.2	Vibration	Tenderer to state	
7.	Interoperability		
7.1	Full interoperability with OBC's and camera controller offered	Yes	

ANNEXURE B

EXISTING
INFRASTRUCTURE



ANNEXURE C

SERVICE LEVEL AGREEMENT AND PENALTIES

The Contractor must agree to meet or exceed service level agreement that ensures the high availability and reliability standards by completing the right hand column.

KPI	Description	Benchmark	Impact on business	Penalty (% of monthly service fee) Max	TENDERERS COMMENTS IN ORDER TO COMPLY WITH BENCHMARK
IECS Infrastructure					
1	The IECS and reporting platform must be monitored 24/7/365 and for any faults a technician must be on site within time frames according to severity classification(Excluding external transmission and communication system Severity 1: 4 hours to site, 24/7/365, Restore 8 hours Severity 2: 12 Hours to site, 24/7/365, Restore 12 hours Severity 3: Next working day to site, Restore next day Severity 4: Complete within 5 working days/failures):	100%	Very high	2% of total CoCT monthly invoice	Procedure to be Agreed and appointed
2	Accuracy of maps for reporting on vehicle movements, accidents, disciplinary cases or AARTO related matters must be 100% accurate and regularly updated with the latest industrial/urban/rural developments within the boundaries of the City of Cape Town.	>95%	Very high	2% of total CoCT monthly invoice	"
3	Percentage of repair and maintenance invoices not received within 14 days of job completion	<1%	Medium	0.5% of total CoCT monthly invoice	"
4	Time taken to accurately update master data from notification to completion within 24 hours.	0%	High	1% of total CoCT monthly invoice	"

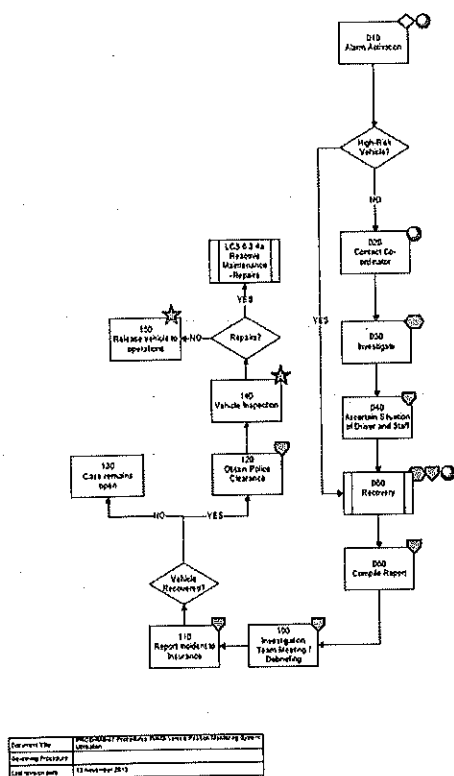
KPI	Description	Benchmark	Impact on business	Penalty (% of monthly service fee) Max	TENDERERS COMMENTS IN ORDER TO COMPLY WITH BENCHMARK
General – Infield					
1	Percentage of non-reporting vehicles or portable devices caused by faulty equipment as a percentage of the total fleet (Excluding OOS vehicles)	< 5% over month period	Very high	2% of total CoCT monthly invoice	Procedure to be agreed on appointment
2	For faulty equipment in vehicles or portable devices, a technician must make contact with relevant department within 1 hour from detected failure or notification and arrange visit within 4 hours	100%	High	100% of affected vehicle monthly invoice	
3	Any non-functionality on a vehicle shall be restored to full operation within 24 hours	100%	High	100% of affected vehicle monthly invoice	
Vehicle tracking and management specific					
	The odometer readings (vehicle tracking software) for every actual 1000 km's travelled per individual vehicle must be ≤ 6%. i.e. 60km's to ensure the vehicle span is within OEM stipulated allowance for the servicing intervals.	≤ 6%	High	100% of affected vehicle monthly invoice	Procedure to be agreed on appointment
2	Number of Group A High Risk vehicles recovery not initiated within (any alarm) ≤ 2 min (Ground and air crew mobilisation).	0%	Very High	2% of total CoCT monthly invoice	
3	Number of Group B High Risk vehicle recovery not initiated (any alarm) ≤ 2 min after client authorization has been telephonically received for recovery team mobilisation.	0%	Very High	2% of total CoCT monthly invoice	
4	Number of standard vehicle recovery not initiated (any alarm) ≤ 2 min after client authorization has	0%	High	1% of total CoCT	

KPI	Description	Benchmark	Impact on business	Penalty (% of monthly service fee) Max	TENDERERS COMMENTS IN ORDER TO COMPLY WITH BENCHMARK
	been telephonically received for recovery team mobilisation.			monthly invoice	11
In vehicle LAN system - specific					
1	% of non-functioning caused by a failure of any of the components of the In vehicle LAN system (Excluding OOS)	<5% over month period	Medium	0.5% of total CoCT monthly invoice	Procedure to be agreed on appointment
2	The functionality of the system must be monitored continuously. A notification must be sent (SMS and EMAIL) to the designated authority and a technician must make contact with relevant department within 1 hour from detected failure or notification and arrange visit within 4 hours	100%	medium	100% for specific Vehicle	11
3	Any non-functionality of an in-vehicle LAN shall be restored to full operation within 24 hours of notification	100%	medium	100% for specific Vehicle	11
SCADA system					
1	Due to static installation of SCADA OBC's and the extreme reliability required for this system a high functional reliability is required	>99% over a month period	Very High	2% of total CoCT monthly invoice	Procedure to be agreed on appointment
WEB database access					
	Update of the database shall be done within 8 hours of receiving an update (relates to no.5 VTAM).	100%	Medium	0.5% of total CoCT monthly invoice	Procedure to be agreed on appointment

Severity classification

Severity level	Description
1	• More than 10% of infield users affected • Any loss of data or data connectivity • Failure of a critical component such as data switch or operational server without backup functionality • All IS&T Web application users affected • All Radio WAP database users affected
2	• Less than 10% of infield users affected • More than 50% of IS&T Web users affected • More than 50% of radio WAP database users affected • Failure of a critical component such as data switch or component but functioning on back up • Failure of some IS&T web applications at a control centre • Serious loss of functionality (cannot operate effectively) by infield users or control centre
3	• Some infield users or IS&T Web users affected • Minimal Loss of functionality for infield users or control centres (Can still operate)
4	• Minor failures not affecting above • Routine requests for assistance or advice

Vehicle tracking system: Recovery process



LCS 6.4.18 - Vehicle Tracking System: Recovery Process	
010 – Alarm Activation Once an vehicle alarm is activated, the alarm is raised in the Vehicle Tracking Company's database. Vehicle whereabouts can be traced in an effort to establish the cause of the alarm 020 – Contact Co-ordinator Vehicle tracking company contacts vehicle coordinator to verify vehicle situation. 030 – Investigate Designated on-call contacts driver by radio or cell phone to enquire. In case of an emergency, the Coordinator will phone the Vehicle Tracking Company to initiate a search. If not an emergency or if it is a false alarm, the Vehicle Tracking Company will be contacted to inform and stand down. Contact: 0051117206 040 – Ascertain Situation of Driver and Staff Snr Tech or standby person will ascertain situation with driver and passengers. Driver to go to police for statement and take number. Driver to attend Employee Assistance Program. 050 – Recovery Vehicle Tracking Company contacts their recovery team immediately and recover vehicle [REF: IAAHM Recovery Process 2014]. Specified investigation team of COCT is notified to assist in the recovery. Srn Tech, Fleet or standby person is contacted to notify that recovery is in progress. They will notify the management structure. Vehicle Tracking Company will contact police to recover vehicle and transport to vehicle to police compound. 060 – Compile Report Report is completed with all relevant information. Requests may include information of vehicle whereabouts at a specific point of time. Any investigation anomalies, discrepancies can be done on request. The Vehicle Position Monitoring System is accessed to source: 1. Location 2. Route travelled	100 – Investigation Team Meeting/Debriefing Meeting consists of: 1. The Fleet Manager 2. The Fleet Management & Maintenance Co-ordinator 3. The Human Resource Manager 4. Supervisor/Manager of person under investigation 5. Representative of vehicle tracking company 6. Representative of Special Investigation Unit (SIU) The Vehicle Tracking Company report and the report compiled by Srn Tech is submitted at this meeting. Minutes of meeting is conveyed to Incident Committee to discuss and implement actions. 110 – Report Incident to Insurance The Srn Technician reports the incident to insurance. 120 Obtain Police Clearance The Srn Technician obtains the police clearance, providing the following documents: registration document, letter of membership, Copy of Head FPMAS ID. Copies of these documents are also submitted to the police inspector who will provide a Release Form which will be taken to the police compound to release/track the vehicle. 130 Case Remains Open If the vehicle is not recovered, the case remains open 140 Vehicle Inspection The Srn Superintendent is in charge of the workshop inspection the vehicle and determines if there is need for any repairs. 150 Release vehicle to operations The Srn Superintendent in charge of the Workshop releases the vehicle to FleetAllocators. If a replacement vehicle was issued to the cost centre involved it must be returned to the Fleet Allocations upon release of the vehicle.
Responsibilities	
Management Direct, manage resources & implement Vehicle Tracking Company Fleet Management & Maintenance Co-ordinator Investigation Officer (not a driver) Specialised Engineering Unit (Disturbance & Vehicle Management)	Lost Control Driver / Trip out Co-ordinator Driver Srn Technician (Vehicle Tracking and Repair) Srn Superintendent (in charge of Workshop) Fleet Management Clerk
Applicable Meetings	
Weekly Monthly 3 Monthly 6 Monthly Yearly	Adhoc Telephonic communication Electronic Mail Physical Delivery MS-EXCEL SAP
Notes	

ANNEXURE E**MANAGEMENT REPORTS - STANDARD**

A.1 DRIVER TRIP EXCEPTIONS Information displayed is :- • Driver name and period of report • The time that exceptions occurred • The location that exceptions occurred
A.2 DRIVER PERIOD OF AVAILABILITY (Daily) Information displayed is :- • Driver name and period of report • Driver ID tag number • Vehicle used • Shift start and end times • Total shift time • Actual drive time
A.3 DRIVER PERIOD OF AVAILABILITY (Monthly) Information displayed is :- • Driver name and period of report • Driver ID tag number • Vehicle used • Shift start and end times • Total shift time • Actual drive time • The period of availability • Total distance covered per shift • Accumulated totals per month
A.4 DRIVER SPEED / RPM GRAPH

Information displayed is :- • Driver name and period of report • Vehicle used • In graph format a comparison between the speed and revs
A.5 VEHICLE ALARMS BY DRIVER Information displayed is :- • Driver name and period of report • Vehicle used • Date / Time alarm received • Position where alarm occurred • Alarm description
A.6 DESIGNATED ROUTES Information displayed is :- • Route description • SMS notifications • Area check • Auto download on route completion • Start and end location with arrival and departure times • Tolerance for late arrival / departure • Alarm for vehicle behind schedule
A.7 LOCATION LISTING Information displayed is :- • The location name • Company ID number • Position Latitude and Longitude
A.8 DAILY VEHICLE TRIP FULL SUMMARY Information displayed is :- •

- Vehicle registration number and period of report
- Driver name
- Trip start and end time
- Trip total road time
- Drive time and idle time
- Odometer start and end of trip
- Total distance of trip
- Maximum speed
- Total distance travelled for period of report

A.9 DAILY VEHICLE TRIP SUMMARY

(AVG SPEED)

Information displayed is :-

- Vehicle registration number and period of report
- Start and end trip time
- Total road time
- Drive time and Idle time
- Odometer reading start and end of trip
- Total distance of trip
- Maximum speed and rpm
- Average speed for trip
- Total distance travelled over period of report

A.10 LATEST ODOMETER / ENGINE HOURS

Information displayed is :-

- Vehicle registration number
- Latest odometer reading
- Latest engine hours reading

A.11 OVER RPM SUMMARY

Information displayed is :-

- Vehicle registration number
- The driver / drivers for the period of report
- The RPM limit
- The time the trip started
- Trip duration
- Total distance covered in the trip
- Maximum RPM for the trip
- Location where the over rpm occurred
- The driver in the vehicle

A.12 OVERSPEED SUMMARY

Information displayed is :-

- Vehicle registration number
- Driver/s for the vehicles selected
- The RPM limit
- The time the trip started
- The duration and distance of the trip
- The maximum speed for the trip
- The driver in the vehicle
- The location where the event took place
- Speed limit of road

A.13 POSITION DETAIL

Information displayed as :-

- Vehicle registration number
- The drivers selected for the period
- The date / time stamp
- The location of the event
- The speed at the time of the event

- The rpm of the vehicle
- The driver in the vehicle
- Fuel value as %
- The event marked with an x in the relevant column

A.14 VEHICLE USAGE BY TIME RANGE

Information displayed as :-

- Vehicle registration and report period
- The usage period (working hours)
- The trip start and end time
- The trip start and end location
- The % road and drive time
- The total trip distance
- The driver at the time calculated

A.16 VEHICLE ALARMS BY VEHICLE

Information displayed as :-

- Vehicle registration no and report period
- The date / time stamp
- The location where the event took place
- The specific event description
-

A.17 VEHICLE SETTINGS LOADED

Information displayed as :-

- Vehicle master data
- Analogue inputs / outputs and their purpose i.e
 - Analogue Input 1 – RPM
 - Multiplier – 26

• Calibration max / min etc. • Digital Inputs / Outputs and their purpose • Alarms enabled and descriptions.
A.18 VEHICLE IDLING REPORT Information displayed as :- • Vehicle registration number and report period • Trip start and end time • The time start to time end of the idle time • The duration of the idle time • The vehicle the driver was using • The location of the event
A.19 VEHICLE POSITION REPORT Information displayed as :- • Vehicle registration number and report period • The status of the vehicle • The last location of the vehicle • The driver using the vehicle • The visual depiction on a map
A.20 VEHICLE SPEED / RPM GRAPH Information displayed is :- • Vehicle registration • Daily speed vs rpm graph • The speed in km/hr on the left of graph • The rpm on the right of the graph
A.21 MONTHLY / WEEKLY VEHICLE UTILISATION Information displayed as :-

• The report time period requested • The vehicle registration • A daily break down of distance, trip time and idle time over the monthly period • Activity bar indicating usage / activity • Pie chart depicting idling, driving, stopped time in location and stopped time
A.22 WEEKLY VEHICLE UTILIZATION ANALYSIS Information displayed as :- • Vehicle registration • Percentage utilisation based on engine hours over a 45 hour week

VEHICLE MANAGEMENT REPORTS CUSTOMISED

SPECIALIST REPORTS (1 of 7)

F.1 Daily Vehicle Odometer Report

Scope

The Daily Vehicle Odometer Report will provide the mileages of all vehicles as per when the user requests it. Odometer history of vehicles from commissioning to date will be available. The report will be Automated and generated at a frequency defined by the user. Odometer readings for a group or individual vehicles will be generated for a user defined date or period.

Selection based on: SAP Hierarchy as provided

Frequency: Automated as a Daily report

Purpose

To obtain vehicle tracking odometer readings that will automatically feed into SAP for Planned Maintenance scheduling. Will be used to synchronise with manually obtained odometer readings.

Daily Vehicle Odometer

3/21/2013

Created on 2013/03/15 07:52 AM

Ref #	Registration #	Fleet #	Description	Cost Center	Depot	Vehicle Odometer	Unit	Vehicle Engine Hours (Hourly Operated Equipment)	Fitted Equipment Hours (Hourly Operated Equipment)	Date	Time	Address	Longitude	Latitude
1		751		80020031	Wynberg Depot	232.8	Km	3520.8	2560	3/20/2013	13:43:02		41.25000	-120.97620
2		80		80020060	Bloenthof Depot	232567	Km	2456	1345	3/21/2013	14:15:43		-31.98000	115.84000

TENDERERS OFFER

The tenderer is to state here whether the above report is available / can be produced.

SPECIALIST REPORTS (2 of 7)**F.2 Trip Report****Scope**

The Trip report will provide detail from start location to end location based on user defined dates or time.

Report will be generated for a minimum of 6 Months or to a set time eg. 30min on a single vehicle.

Selection based on: SAP Hierarchy as provided

Purpose

To track a vehicles travelled span and average speed per trip for adherence to Job instructions. Report will trigger performance measurements and instances of vehicle abuse. Further investigation will be performed in the Movement report for details of the identified trip.

Trip report for vehicle

Wynberg Depot - 00020031

Created on 2013/03/15 07:52 AM

2013/03/19 10:00:00 to 2013/03/23 15:30:00

Start of Trip											End of Trip										
Ref #	Registration #	Fleet #	Description	Driver	Avg Speed	Unit	Address	Longitude	Latitude	Start Date	Start Time	Odometer	Unit	Address	Longitude	Latitude	Date	Time	Odometer	Unit	Span
1		557		Seap J	128	Km/h		18.49130	-33.94530	3/20/2013	13:43:02	232538	Km		18.49130	-33.94530	3/20/2013	14:43:02	232578	Km	40
2	7	557		Seap J	83	Km/h	E S	18.47550	-33.91480	3/20/2013	13:44:43	232548	Km		18.47550	-33.91480	3/20/2013	13:44:43	232548	Km	

TENDERERS OFFER

The tenderer is to state here whether the above report is available / can be produced.

SPECIALIST REPORTS (3 of 7)**F.3 Movement Report****Scope**

The vehicle movement report will provide the positioning of the vehicle at every direction change or at a given interval set by user eg. every 1 second.

Direction change refers to any change in direction more than $\pm 30^\circ$. Record location for all ignition ON or OFF signals. Speed at every event occurred.

Report will be generated for a minimum of 3 Months or to a set time eg. 30min on a single vehicle.

Selection based on: Individual Vehicle

Purpose

To track a vehicles movement and speed for adherence to Job instructions. Report will trigger performance measurements and instances of vehicle abuse.

Movement report for

Wynberg De 8E+07

2013/03/19 to 2013/03/23														Created on 2013/03/15 07:52 AM	
Ref #	Registration #	Fleet #	Description	Driver	Speed	Unit	Odometer	Unit	Date	Time	Ignition	(Vehicle location at time of Odo reading)	Longitude	Latitude	
1		557			83	Km/h	232538	Km	41353	1/0/1900	ON		18.49130	-33.94530	
2		557			67	Km/h	232548	Km	41353	1/0/1900	OFF		18.47550	-33.91480	

TENDERERS OFFER

The tenderer is to state here whether the above report is available / can be produced.

SPECIALIST REPORTS (4 of 7)**F.4 Excessive Idling****Scope**

The report will provide information on all vehicles idling for longer than a predetermined set time eg. 15min. The predetermined idling benchmarks per vehicle and/or Vehicle Class will be provided by CoCT for uploading into vehicle tracking system. Master Data changes will be controlled by CoCT.

Selection based on: SAP Hierarchy as provided

Frequency: Automated per user defined frequency

Purpose

Monitoring of excessive vehicle idling, aligned to the vehicle operational functional requirements. (reduction of fuel waste, improvement of engine life)

Excessive Idling Report

2013/03/19 to 2013/03/23

Hierarchy Selection (ie Area/ Section/ Class/ Rental Category)

Ref #	Registration #	Fleet #	Description	Cost Center	Depot	Benchmark	Count
1		751		80020031	Wynberg Depot	15	2
2		80		80020060	Bloemhof Depot	30	3

Created on 2013/03/15 07:52 AM

TENDERERS OFFER

The tenderer is to state here whether the above report is available / can be produced.

SPECIALIST REPORTS (5 of 7)**F.5 Over Speeding****Scope**

The report will provide information on all vehicles speeding over set benchmark or road speed limit. The predetermined speeding benchmarks per Vehicle and/or Vehicle Class will be provided by CoCT for uploading into vehicle tracking system. Master Data changes will be controlled by CoCT.

Selection based on: SAP Hierarchy as provided

Frequency: Automated per user defined frequency

Purpose

Monitoring of speeding. (reduction of fuel waste usage, Safe driving practices)

Over Speeding Report

2013/03/19 to 2013/03/23

2013/03/15 07:52 AM

Display SAP Hierarchy Selection (ie Area/ Section/ Class/ R Created on:

Ref #	Registration #	Fleet #	Description	Driver	Cost Center	Depot	Address (Vehicle location at time of Speeding)	Longitude	Latitude	Speed Limit (Km/hr)	Benchmark (maximum allowed speed)	Actual speed
1		751			80020031	Wynberg Depot		18.49130	-33.94530	60	85	83
2		80			80020060	Bloemhof Depot		18.47550	-33.91480	100	130	120

TENDERERS OFFER

The tenderer is to state here whether the above report is available / can be produced.

SPECIALIST REPORTS (6 of 7)**F.6 Fleet Downtime Report****Scope**

The Downtime report will provide the areas of interest a vehicle went to during a given period by the user. The user will be able to select an entire fleet or individual vehicles and all area's of Interest created or individual ones. An interval based on minutes at the area of interest will indicate for how long the vehicle was off the road in the area of interest ie Downtime of the vehicle.

Selection based on: SAP Hierarchy as provided

Purpose

The report will ascertain which vehicles for a selected fleet was off the road at predetermined area's of interest, within a specified period. This will be used to determine fleet downtime based on Maintenance/repair work.

Fleet Downtime Report

2013/03/19 to 2013/03/23						Created on 2013/03/15 07:52 AM					
Ref #	Registration #	Fleet #	Cost Center	Depot	AOI	Arrival Date	Arrival Time	Departure Date	Departure Time	Interval Total Minutes	Interval Total Days
1		557	J 80020031	Wynberg Depot		3/20/2013	9:15:15	3/20/2013	13:43:02	265.83	0.18
2		557	80020031	Wynberg Depot		3/21/2013	10:35:12	3/23/2013	15:27:32	3175.33	2.21
3		80	80020060	Bloemhof Depot		3/19/2013	8:37:23	3/22/2013	16:37:35	4802.00	3.33

TENDERERS OFFER

The tenderer is to state here whether the above report is available / can be produced.

SPECIALIST REPORTS (7 of 7)**F.7 Downtime Summary Report****Scope**

The Downtime summary report will provide a summary of the total downtime for all vehicles within the users filtering criteria. This is based on the area's of interest selected. Report will be generated for a minimum of 3 years or to a set time.

Selection based on: SAP Hierarchy as provided

Frequency: User defined period.

Purpose

The report will ascertain the accumulated downtime for a specified vehicle or section based on SAP Hierarchy. Downtime is measured according to time spent within area's of interest selected.

Downtime Summary Report

2013/03/19 to 2013/03/23

Display SAP Hierarchy Selection (ie Area/ Section/ Class/ Rental Category)				Created on		2013/03/15 07:52 AM	
Ref #	Registration #	Fleet #	Description	Cost Center	Depot	Total Downtime Minutes	Total Downtime Days
1		557		80020031	Wynberg Depot	265.83	0.18
2		80	C	80020060	Bloemhof Depot	4802.00	3.33

TENDERERS OFFER

The tenderer is to state here whether the above report is available / can be produced.

SPECIALIST REPORTS (8 of 11)**F.8 Schedule Attainment****Scope**

The Schedule Attainment report will establish the adherence to planned maintenance schedule. The user will be able to select an entire fleet or individual vehicles and all area's of Interest created or individual ones. The plan for scheduled arrival and departure as provided by the user will be measured against the actual arrival and departure.

Selection based on: Input sheet into vehicle tracking software or Web browser link. SAP Hierarchy as provided

Frequency: Will be determined by the user. Report will be generated Ad-Hoc when schedule adherence needs to be determined.

Purpose

To establish successful completion of Planned maintenance against the actuals.

Schedule Attainment

Schedule Attachment

Created on 2013/03/15 07:52 AM

2013/03/19 to 2013/03/23

Ref #	Registration #	Fleet #	Description	Planned AOI	Actual AOI	AOI Status	PLANNED ARRIVAL		ACTUAL ARRIVAL		Interval		Arrival Status		PLANNED DEPARTURE		ACTUAL DEPARTURE		Departure Status	
							Date	Time	Date	Time	Total Minutes	Date	Time	Date	Time	Date	Time	Total Minutes	Date	Time
1		557				TRUE	3/19/2013	9:00	3/19/2013	9:23:37	29.17	Late	3/20/2013	15:00	3/21/2013	10:21:27	11:55:50	Late	39.50	Late
		80				FALSE	3/20/2013	9:00	3/20/2013	8:30:21	-26.50	Early	3/22/2013	14:00	3/22/2013	14:36:21	39.50	Late		

Input Sheet

Registration #	Fleet #	AOI	Planned Arrival Date	Planned Arrival Time	Planned Departure Date	Planned Departure Time
557			3/19/2013	9:00	3/20/2013	15:00
80			3/20/2013	9:00	3/22/2013	14:00

TENDERERS OFFER

The tenderer is to state here whether the above report is available / can be produced.

SPECIALIST REPORTS (9 of 11)

F.9 Efficiency, Availability and Utilisation Report

Scope

The report will provide efficiency, availability and Utilization data for the Fleet and Hourly operated vehicles as defined by the user's selection criteria, SAP Hierarchy. Availability is determined by Total available hours (24hours per day) against actual downtime of the vehicle (time spent off road for repairs and maintenance). User must be able to select start and finish hours and specified days of the week ie Monday - Friday or whole week. The user will select any period over the life of the vehicle. Business hours and After hour will be user defined ie Business. Hrs 8hrs and After. Hrs 16hrs

Selection based on: SAP Hierarchy as provided

Frequency: It will be generated AD-Hoc or automated as a Monthly report with selections defined by the user.

Purpose

The report will determine the availability of the fleet as a percentage of Total Hours against Actual Downtime Hours (time off the road for repairs/ Maintenance ie area's of interest). The Utilization section will determine as per SAP Hierarchy the actual utilization of the Fleet.

Efficiency, Availability and Utilisation Report

2013/03/01 09:45:45 AM to 2013/03/27 09:45:45 AM

Display SAP Hierarchy Selection (ie Area/ Section/ Class/ Rental Category)

Total Business Hrs	171	% Operational Efficiency	67%	Life to Date	72%
Total Available Hrs	672	% Availability	92%		89%
		Utilisation (Km)	369.00		21329.87

Created on 2013/03/15 07:52 AM

Ref #	Registration #	Fleet #	Description	Cost Center	Depot	% Availability	BUSINESS HOURS			AFTER HOURS		
							Total Travel Time (Hrs)	Travel Time (Hrs)	Operational Efficiency	Span (Km)	Time (Hrs)	% Efficiency
1	5	578		80020031	Wynberg Depot	84%	7.09	7.09	4.15%	201.33	0.00	0.00%
2		458		80020060	Bloemhof Depot	92%	38.87	23.87	13.96%	548.67	15.00	8.77%

Hourly Vehicles

Total Business Hrs	171	% Operational Efficiency	67%	Life to Date	80%
Total Available Hrs	672	% Availability	92%		95%
		Utilisation (Hrs)	43.00		876.89

Ref #	Registration #	Fleet #	Description	Cost Center	Depot	% Availability	BUSINESS HOURS			AFTER HOURS		
							Total Time Engine in Operation (Hrs)	Operation Time (Hrs)	% Operational Efficiency	Vehicle Span (Km)	Operation Time (Hrs)	% Efficiency
3		578		80020031	Wynberg Depot	84%	7.09	7.09	4.15%	201.33	0.00	0.00%
4		458		80020060	Bloemhof Depot	92%	38.87	23.87	13.96%	548.67	15.00	8.77%

TENDERERS OFFER

The tenderer is to state here whether the above report is available / can be produced.

SPECIALIST REPORTS (10 of 11)

F.10 Driver Scorecard

Scope

Driving behaviour based on set standards:

Over RPM, harsh braking, excessive idling, harsh acceleration, speeding (measured against legislated road speed). Each category has been weighted and factored into the calculation of performance.

Category	Weight
Idling	20%
Speed	30%
Harsh Braking	30%
Acceleration	20%
Performance %	$(\text{Idling} \times 20\%) + (\text{Speed} \times 30\%) + (\text{Braking} \times 30\%) + (\text{Acceleration} \times 20\%)$

Selection based on: SAP Hierarchy for Cost Center (all drivers) or individual selection

Frequency: Automated as a Monthly report (past months date period) per Cost Center

Purpose

Managing of CoCT staff driving behaviour to aid reduction of vehicle maintenance, fuel consumption, accident/incident rate, Demerit points (AARTO/RTMS)

Driver Score Card

Wynberg Depot - 80020031

2013/03/19 to 2013/03/23

Created on 3/15/2013 7:52

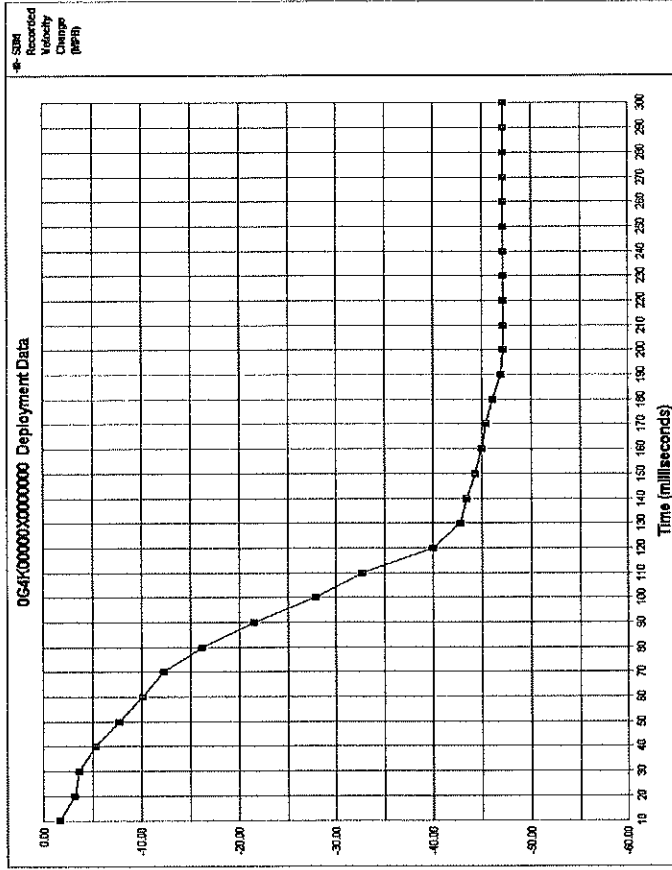
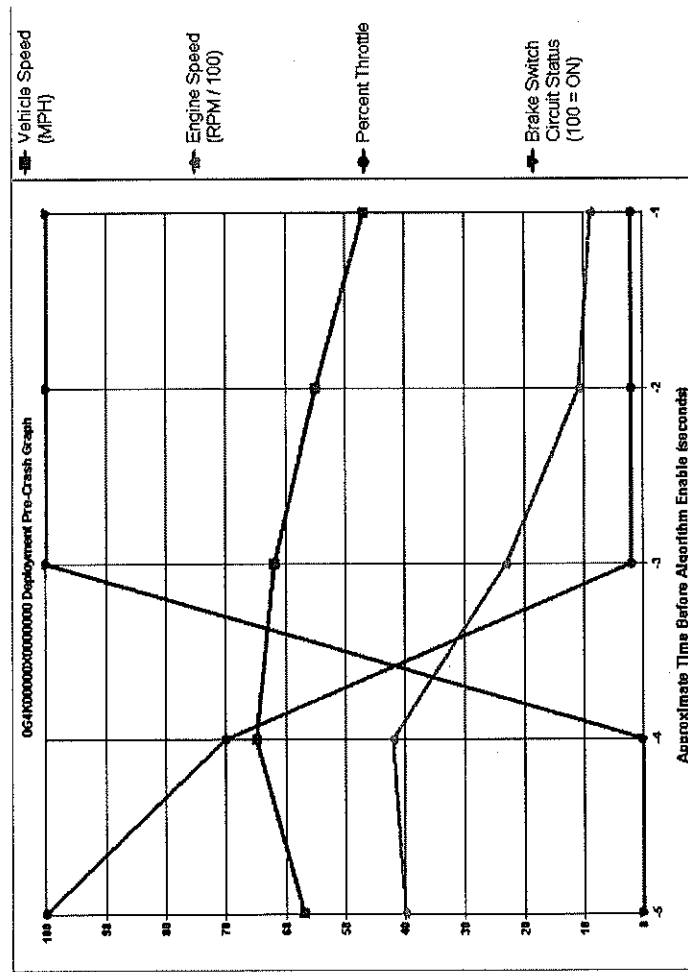
Ref #	Driver	Staff ID #	Idling weight - 20%	Speed weight - 30%	Harsh Braking weight - 30%	Acceleration weight - 20%	Performance %
1		1	3	4	2	4	3.2
2			2	2	6	2	3.2
3			1	2	2	1	1.6

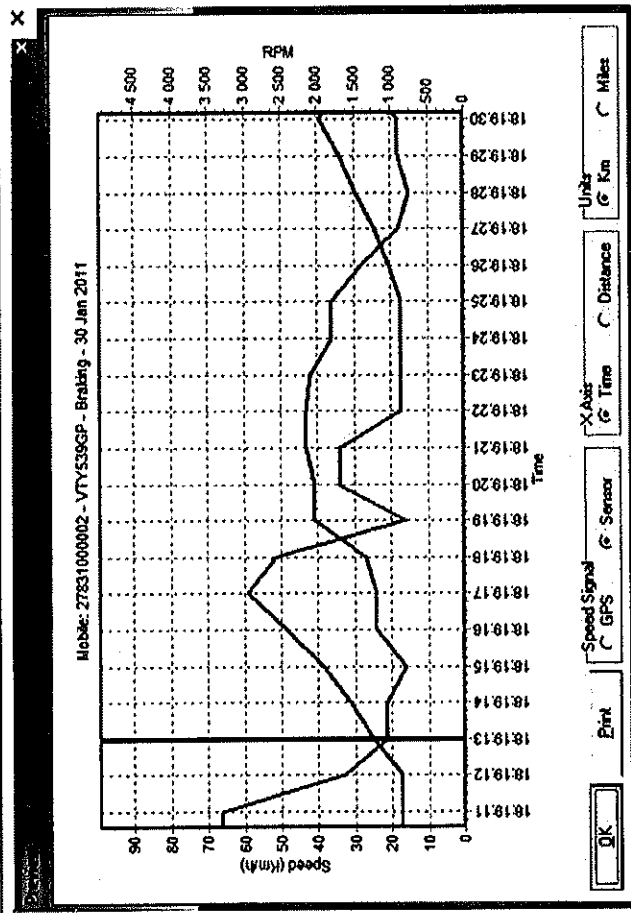
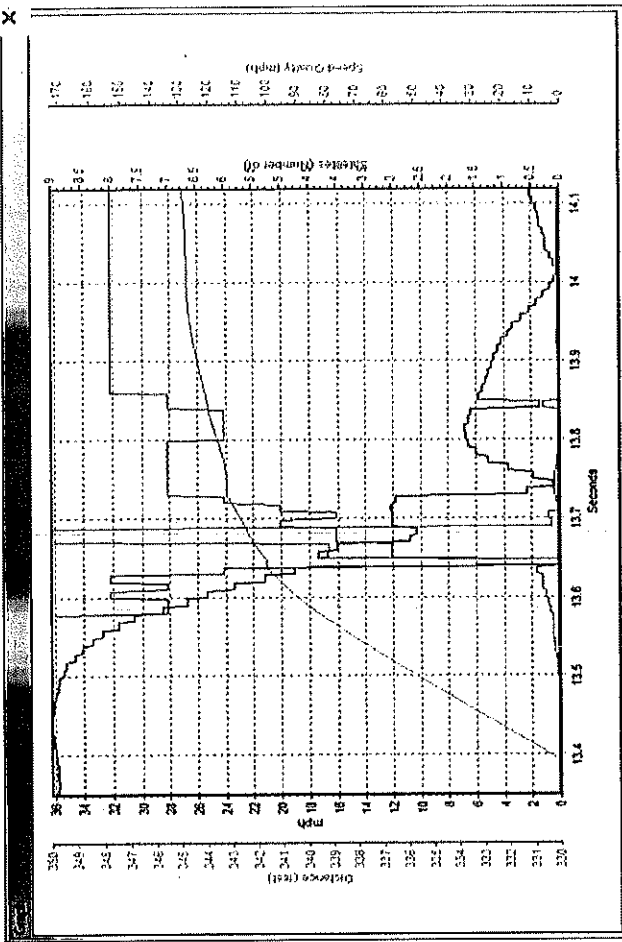
TENDERERS OFFER

The tenderer is to state here whether the above report is available / can be produced.

SPECIALIST REPORTS (11 of 11)

F.11 Accident Reports Graphs





TENDERERS OFFER

The tenderer is to state here whether the above report is available / can be produced.

ANNEXURE F

RESOURCE REQUIREMENTS

Description	Name	Staff number	Qualification	Relevant years' experience	CV attached
Project Manager			See Schedule 13	- Sect 58	
Electronic Engineer			See Schedule 13	- Sect 58	
Mechanical engineer			See Schedule 13	- Sect 58	
GIS specialist			See Schedule 13	- Sect 58	
IT Network Engineer			See Schedule 13	- Sect 58	
IT Sequel database programmer			See Schedule 13	- Sect 58	
IT application programmer			See Schedule 13	- Sect 58	
IT application programmer			See Schedule 13	- Sect 58	
IT firmware programmer/debugger			See attached agreement		
IT firmware programmer/debugger			See Schedule 13	- Sect 58	
Technician			See Schedule 13	- Sect 58	
Technician			See Schedule 13	- Sect 58	
Technician			See Schedule 13	- Sect 58	
Technician			See Schedule 13	- Sect 58	
Technician			See Schedule 13	- Sect 58	
Technician			Contractor	3 yrs	

Description	Name	Staff number	Qualification	Relevant years' experience	CV attached
Technician		CONSTRUCTOR		3 yrs	
Technician		CONSTRUCTOR		2 yrs	
Technician		CONSTRUCTOR		2 yrs	
Technician		CONSTRUCTOR		1 yr	

CV's of all staff to be appended to Annexure F (M)

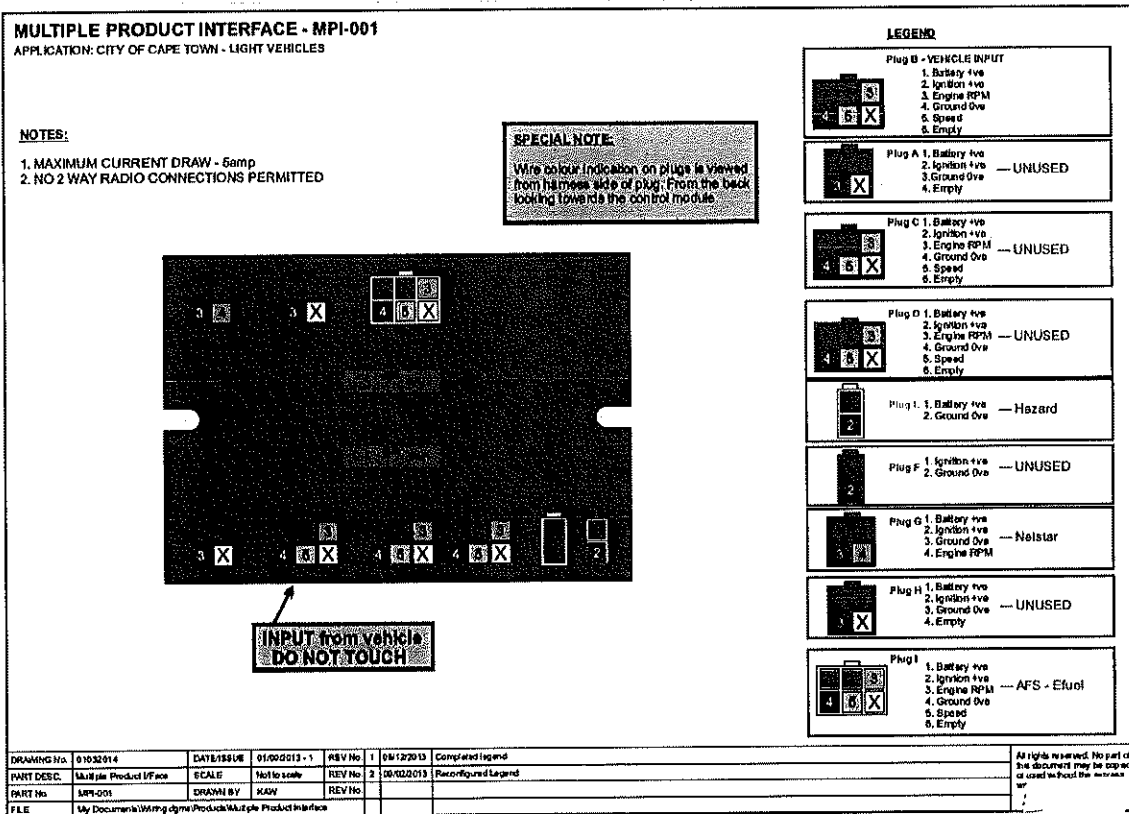
ANNEXURE G

EXPERIENCE

Description	Client details	Contact info	Details of experience	Value of contract	Dates
	CoCT				
Fleet tracking and management	• STS • Electricity • Water • Solid Waste		2010 - 2016 16500 Vehicles	5049	2010 - 2016
In vehicle RFID asset tracking and Management	CoCT Solid Waste	-	173 Compactors	5049	2014 - 2016
Interfacing to SAP HR, AM and PM	CoCT IT		Workflow Integration	5049	
In vehicle Local Area Network installations using 3G	CoCT		Is seems	5049	2007
In vehicle Local Area Network installations using Wi-Fi	CoCT		EPIC	5049	2016
In vehicle Local Area Network installations using TETRA	CoCT		Water Refriculation Is seems	5049	2008
In vehicle Local Area Network installations using RS232	CoCT		EPIC Is seems	5049	2016 2007
In vehicle Local Area Network installations using Ethernet	CoCT		EPIC	5049	2016
In vehicle Mobile Data Terminal installations	CoCT • FIRE • Metro Police • Traffic		1 Fire Vehicle 23 Traffic/Metro Police	5049	2016
In Vehicle CCTV installations	CoCT SILU		Special Investigations Unit - Vehicle	5049	2015 - 2016

ANNEXURE H

MPI INTERFACE



ANNEXURE I

BIN COUNTING AND TAG READING REPORTS

- **Fleet Status Reports**

A choice of either daily or weekly graphic, showing colour- coded bar- graphs with information of the bin lifting performance at different times of the day or week.

While moving the mouse cursor over the bar graphs, the bin location addresses must also be displayed. At the times that there are no bin lifts, the colour coding must indicate whether the truck was in its depot, at a tip site, in transit between points, stationary at a repair workshop, or stationary at an undefined location

- **Fleet Location Report**

A map must show the locations of all the trucks in the fleet, with colour coding to show the bin lifting activity.

A table must show the number of lifts done for the day, the current number of bins onboard the truck, the overnight depot name with time of exit, the current location and the entry time into the current location. An earlier day and time must be able to be selected for analysis.

- **Fleet Weekly Activity Report**

A table of data for all the trucks, in a selected fleet, for a selected week.

The number of bins lifted, per truck, per day must be shown in sortable columns. It must also indicate the time period the truck was lifting, which must be used to calculate the rate of bins collected per hour. Alternatively, the time period outside the depot must be displayed.

- **Fleet Extended Status Report**

A combination of the three reports listed above. For a day view, the Fleet Status and Fleet Location must be combined on one web page. When selecting a week view, the Fleet Status must be shown together with the Fleet Weekly Activity Report on the web page.

- **Fleet Collected (in) Area Report**

This must be a facility to analyse a selected geographic area and week to find out which truck lifted how many bins on which particular day of the week. This tool must also show the total number of bins in a given geographical selection. It must also have the functionality to be used to view several of weeks at a time.

- **Truck Status and History Report**

A graphic, showing a daily colour- coded bar- graphs with information of the bin lifting performance at different times of the day.

While moving the mouse cursor over the bar graphs, the bin location addresses must also be displayed. At the times that there are no bin lifts, the colour coding must indicate whether the truck was in its depot, at a tip site, in transit between points, stationary at a repair workshop, or stationary at an undefined location.

- **Truck Daily Session Report**

The initial view must show a map of the significant points covered by a truck on a selected day during which bins were lifted. The map must be able to be zoomed in to see the exact times and places where bins were lifted, with a resolution of 10 meters. There must also be detailed tables of statistics at different levels - overall, per session and per individual lifting batch.

*Various **Tools** such as the following, but not limited to, are required to be available on Ramm Explorer on the corporate network:*

- **Manage Other Users (limited)**

A facility for the "admin" user of a fleet to manage the other users. Ability to add, delete, and allocate certain rights.

Ability to decide if user can read-only, or whether user can add/modify geo-fences in Location Manager.

- **Location Manager**

Facility to draw and name geo-fences around specific locations and allocate colour-codes to them. This must set the colours used in the bar-graph time reports.

- **Diagnostic viewer**

Must view the raw data transmitted by a particular BLCS unit. It must be able to be used for fault finding and tracking.

- **Fault Report**

Must show which sensors within a BLCS have not reported within a specified time period.

- **Tag Tracer**

This must provide a facility for listing a group of RFID tag numbers and then displaying the most recent sighting of each tag on a map and table.

- **Tag Watcher**

After selecting an area of interest, the report must display all RFID tag numbers that have been seen over last 90 days in 2 locations more than 50 meters apart. This must be displayed on both map and in table. i.e. bins not serviced at properties to which they were issued or linked.

(5) CONDITIONS OF TENDER

ALL TENDER CONDITIONS AND/OR INSTRUCTIONS SET OUT BELOW MUST BE STRICTLY ADHERED TO, FAILING WHICH THIS TENDER SUBMISSION MAY BE DECLARED NON-RESPONSIVE.

- 5.1 No tender will be considered unless submitted on this CCT tender document.
- 5.2 Any portion of the tender document not completed will be interpreted as 'not applicable'. Notwithstanding the foregoing, failure to complete any compulsory portion of the tender document may result in the tender being declared non-responsive.
- 5.3 Tenders must be properly received and deposited in the designated tender box (as detailed on the front page of this tender document) on or before the closing date and before the closing time, in the relevant tender box at the Tender Submission Office situated on the 2nd floor, Concourse Level, Civic Centre, 12 Hertzog Boulevard, Cape Town. If the tender submission is too large to fit in the allocated box, please enquire at the public counter for assistance.
- 5.4 The CCT reserves the right to accept:
 - 5.4.1 or reject any variation, deviation, tender offer, or alternative tender offer, and may cancel the tender process and reject all tender offers at any time before the formation of a contract. The CCT shall not accept or incur any liability to a tenderer for such cancellation and rejection, but will give written reasons for such action upon receipt of a written request to do so.
 - 5.4.2 a tender offer which does not in the CCT's opinion materially and/or substantially deviate from the terms, conditions and specifications of the tender document.
 - 5.4.3 the whole tender or part of a tender or any item or part of any item, or to accept more than one tender (in the event of a number of items being offered), and the CCT is not obliged to accept the lowest or any tender.
- 5.5 The CCT shall not consider tenders that are received after the closing date and time for such a tender (late tenders).
- 5.6 The CCT will not be held responsible for any expenses incurred by tenderers in preparing and submitting tenders.
- 5.7 The CCT may, after the closing date, request additional information or clarification of tenders in writing.
- 5.8 A tenderer may request information, after the closing date, in accordance with the Promotion of Administrative Justice Act, Act 3 of 2000, and the Promotion of Access to Information Act, Act 2 of 2000.
- 5.9 A tenderer may request in writing, after the closing date, that the tender offer be withdrawn. Such withdrawal will be permitted or refused at the sole discretion of the CCT after consideration of the reasons for the withdrawal, which shall be fully set out by the tenderer in such written request for withdrawal.
- 5.10. Should the tender offer be withdrawn in contravention of 5.9 above, the tenderer agrees that:
 - 5.10.1 it shall be liable to the CCT for any additional expense incurred or losses suffered by the CCT in having either to accept another tender or, if new tenders have to be invited, the additional expenses incurred or losses suffered by the invitation of new tenders and the subsequent acceptance of any other tender;
 - 5.10.2 the CCT shall also have the right to recover such additional expenses or losses by set-off against monies which may be due or become due to the tenderer under this or any other tender or contract or against any guarantee or deposit that may have been furnished by the tenderer or on its behalf for the due fulfilment of this or any other tender or contract. Pending the ascertainment of the amount of such additional expenses or losses, the CCT shall be entitled to retain such monies, guarantee or deposit as security for any such expenses or loss.
- 5.11 The tenderer agrees that this tender and its acceptance shall be subject to the terms and conditions contained in the CCT's Supply Chain Management Policy ('SCM Policy') and Combating of Abuse of the Supply Chain

Management System Policy ('Abuse Policy').

- 5.12 Notwithstanding any requests for confirmation of receipt of notices issued to the tenderers, the tenderer shall be deemed to have received such notice if the CCT can show proof of transmission thereof via electronic mail, facsimile or registered post.
- 5.13 Unless otherwise stated in this tender document, all information submitted by the tenderer contained in other documents for example, cover letters, brochures, catalogues etcetera submitted with the tender offer, will not be considered during evaluation unless such documents have been recorded and referenced in **Schedule [13]: List of Other Documents Attached by Tenderer.**
- 5.14 The CCT Town's representative for the purpose of this tender shall be:

[Name:]

Email

5.15 Resolutions and Authorities

A tender submitted:

- 6.15.1 by a registered company may not be considered unless accompanied by a resolution by the Directors of the company authorising the tender to be made and the signatory to sign the tender on the company's behalf (**Schedule 1** to be completed);
- 6.15.2 by a registered close corporation may not be considered unless accompanied by written authority from all the members of the close corporation authorising the tender to be made and the signatory to sign the tender on the close corporation's behalf (**Schedule 1** to be completed);
- 6.15.3 by a partnership/joint venture/consortium may not be considered unless accompanied by written authority from all parties to the partnership/joint venture/consortium authorising the tender to be made and the signatory to sign the tender on the partnership/joint venture/consortium's behalf (**Schedule 2** to be completed).

5.16 Partnerships/Joint Ventures(JV's)/Consortiums

In the case of partnerships/joint ventures/consortiums, a copy of the partnership/joint venture/ consortium agreement must be submitted with the tender document. All parties/partners to the partnership/joint venture/consortium agreement must be registered on the City of Cape Town Vendor Database ('CCT Vendor Database').

5.17 Validity Period

- 5.17.1 A tender submitted shall remain valid, irrevocable and open for acceptance by CCT for 120 (one hundred and twenty) days.
- 5.17.2 A tender submitted shall further be deemed to remain valid after the expiry of the above mentioned 120 day period, until formal acceptance by CCT, unless the CCT is notified in writing by the tenderer of anything to the contrary (including any further conditions the tenderer may introduce).
- 5.17.3 Any further conditions that the tenderer may introduce will be considered at the sole discretion of the CCT.

5.18 City of Cape Town Vendor Database

- 5.18.1 No awards will be made to a tenderer who is not registered on the CCT's Vendor Database.
- 5.18.2 Tenderers must be registered within 7 (seven) days of being requested to do so. Registration forms may be:
- collected from the Supplier Management Unit located within the Tender Distribution Office, 2nd

Floor, (Concourse Level), Civic Centre, 12 Hertzog Boulevard, Cape Town (Tel 021 400 9242/3/4/50; or

- requested by fax from 086 546 1881; or
- can be downloaded from www.capetown.gov.za (follow the links: 'Supply Chain Mngt' – 'Supplier Registration' – 'application form').

- 5.18.3 It is each vendor's responsibility to keep all the information on the CCT Vendor Database updated. If any information required (e.g. tax clearance certificate, proof of CIDB registration, etc.) is not valid or has expired, all transactions with the vendor may, in the sole discretion of the CCT, be suspended until such time as the correct, verified information is received.

5.19 Tax clearance

- 5.19.1 Tenderers shall be registered and in good standing with the South African Revenue Service (SARS). In this regard, it is the responsibility of the tenderer to submit to the CCT documentary evidence in the form of an **original** valid Tax Clearance Certificate issued by SARS. Tax Clearance certificates must be delivered to the Supplier Management Unit located within the Tender Distribution Office, 2nd Floor, (Concourse Level), Civic Centre, 12 Hertzog Boulevard, Cape Town (Tel 021 400 9242/3/4/5).
- 5.19.2 Each party to a Partnership/Joint Venture/Consortium shall submit a separate Tax Clearance Certificate.
- 5.19.3 Tenderers are to note that the CCT will not award a contract to a tenderer whose taxmatters are not in order.

5.20 Broad-based Black Economic Empowerment

- 5.20.1 The number of preference points shall be determined from the B-BBEE status level certificates submitted in terms of **Schedule 4: Preference Schedule**, using the status as at the closing date for submission of tender offers.
- 5.20.2 Tenderers that sub-contract more than 25% of the value of the contract to sub-contractors that do not have an equal or higher B-BBEE status level than the tenderer, unless the intended sub-contractors are exempted micro enterprises that have the capability and ability to execute the sub-contract work, will forfeit preference points. Refer to Schedule 4 of this tender document.

5.21 COIDA

Tenderers must attach proof of registration/insurance in terms of the Compensation for Occupational Injuries and Disease Act, Act 130 of 1993, to **Schedule 13**. This can either take the form of a certified copy of a valid Letter of Good Standing Issued by the Compensation Commissioner, or proof of insurance with a licenced compensation insurer, from either the tenderer's broker or the insurance company itself (see **Schedule 12: Contract Documents- Annex 6** for a pro forma version).

5.22 Procurement above R10 million (VAT included)

If the value of the transaction is expected to exceed R10 million (VAT included), a Tenderer shall complete **Schedule 3** and attach the required documents, including audited financial statements (where applicable).

5.23 Independent Bid Determination

- 5.23.1 Tenderers must complete, sign and submit, together with their tender or upon being requested to do so in writing, a certificate of independent bid determination (**Schedule 11** hereto) failing which the tender offer may be declared non-responsive.
- 5.23.2 Tenders may also be declared non-responsive if it is determined on reasonable grounds or evidence that the tenders are submitted by tenderers:
- (a) who (notwithstanding having submitted duly completed certificates of independent tender determination) are nevertheless deemed to have knowledge of the contents of any other tenderer's offer and/or has submitted a certificate which is not true and correct in every respect;

- (b) in a horizontal relationship which has the effect of substantially preventing or lessening competition in a market, subject to the exceptions as set out in section 4(1)(a) of the Competitions Act, 89 of 1998;
- (c) who are presumed to be firms engaged in a restrictive horizontal practice as contemplated in section 4(1)(b) read with section 2 of the Competitions Act, 89 of 1998;
- (d) in a vertical relationship which has the effect of substantially preventing or lessening competition in a market, subject to the exceptions as set out in section 5(1) of the Competitions Act, 89 of 1998.

5.24 Inducements, rewards, gifts and other abuses of the Supply Chain Management System

5.24.1 No person who is a supplier or prospective supplier of goods or services, or a recipient or prospective recipient of goods disposed or to be disposed of may either directly or through a representative or intermediary promise, offer or grant:

- a) any inducement or reward to the CCT for or in connection with the award of a contract; or
- b) any reward, gift, favour or hospitality to any official or any other role player involved in the implementation of the supply chain management policy.

Any contravention of the above will be dealt with in accordance with the provisions of the CCT's Policy.

5.25 Declarations and authorisation

Tenderers are required to complete all declarations and authorisations in the schedules attached to this tender document, failing which the tender may be declared non-responsive.

5.26 Samples

If the Specification (**Section 5**) requires the tenderer to provide samples, these shall be provided strictly in accordance with the instructions set out in the Specification.

5.27 Alternative tender offers

5.27.1 Alternative bids can be submitted provided that an acceptable bid, which complies with the bid conditions and specifications and submitted strictly in accordance with the bid documents, is also submitted.

5.27.2 An alternative bid shall be submitted on a separate complete set of bid documents or in accordance with such conditions as may be set out in the bid document and shall be clearly marked "Alternative Bid" to distinguish it from the acceptable bid referred to above.

5.27.3 All acceptable bids (excluding alternative bids) shall first be evaluated in accordance with the bid conditions and ranked. Only the alternative of the highest ranked acceptable bid (that is, submitted by the same bidder) may be considered, and if appropriate, recommended for award.

5.27.4 Alternative bids of any but the highest ranked acceptable tender, shall not be considered.

5.27.5 If the alternative bid of the highest ranked acceptable tender is considered to have merit, then the alternative bid shall be ranked along with all of the acceptable tenders received.

5.27.6 An alternative of the highest ranked acceptable tender that is priced higher than the first ranked tender may be recommended for award, provided that the ranking of the alternative bid is higher than the ranking of the next ranked acceptable tender.

5.27.7 The City however will not be bound to consider alternative bids.

5.28 Awards to tenderers who are not the highest ranked

The tenderer that scores the highest number of adjudication points must be recommended for acceptance unless objective criteria justify the acceptance of another tender. Such objective criteria include whether the recommended tenderer:

- 5.28.1 has demonstrated that it has the necessary resources and skills required to fulfil its

- obligations in terms of the tender document;
- 5.28.2 poses any commercial or legal risk to the CCT;
- 5.28.3 is currently subject to action in accordance with the Abuse Policy.

5.29 Objections, complaints, queries and disputes/ Appeals in terms of Section 62 of the Systems Act/ Access to court

5.29.1 Disputes, objections, complaints and queries

In terms of Regulations 49 and 50 of the Local Government: Municipal Finance Management Act, 56 of 2003 - Municipal Supply Chain Management Regulations (Board Notice 868 of 2005):

- a) Persons aggrieved by decisions or actions taken by the City of Cape Town in the implementation of its supply chain management system, may lodge within 14 days of the decision or action, a written objection or complaint or query or dispute against the decision or action.
- b) Objections, complaints, queries and disputes must be submitted in writing to the Manager: Statutory Compliance (Compliance and Auxiliary Services: Legal Services) 20th Floor, Tower Block, Civic Centre, 12 Hertzog Boulevard, Cape Town or posted to Private Bag X9181, Cape Town, 8000 or faxed to (021) 400 5830.

5.29.2 Appeals

- a) In terms of Section 62 of the Local Government: Municipal Systems Act, 32 of 2000 a person whose rights are affected by a decision taken by the City in the implementation of its supply chain management system, may appeal against that decision by giving written notice of the appeal and reasons to the City Manager within 21 days of the date of the notification of the decision.
- b) An appeal must contain the following:
 - i) Reasons and/or grounds for the appeal
 - ii) The way in which the appellants rights have been affected
 - iii) Remedy sought by appellant
- c) Appeals must be submitted in writing to the Manager: Statutory Compliance (Compliance and Auxiliary Services: Legal Services), 20th Floor, Tower Block, Civic Centre, 12 Hertzog Boulevard, Cape Town or posted to Private Bag X9181, Cape Town, 8000 or faxed to (021) 400 5830.

5.29.3 Right to approach the courts and rights in terms of Promotion of Administrative Justice Act, 3 of 2000 and Promotion of Access to Information Act, 2 of 2000

The sub- clauses above do not influence any affected person's rights to approach the High Court at any time or its rights in terms of the Promotion of Administrative Justice Act and Promotion of Access to Information Act.

- a) All legal process and pleadings must be served on the Administrative Manager, (Compliance and Auxiliary Services: Legal Services), 20th Floor, Tower Block, Civic Centre, 12 Hertzog Boulevard, Cape Town.
- b) All requests in terms of PAJA and PAIA must be submitted in writing to the Manager: Statutory Compliance (Compliance and Auxiliary Services: Legal Services) 20th Floor, Tower Block, Civic Centre, 12 Hertzog Boulevard, Cape Town or faxed to (021) 400 5830 or email to access2info.act@capetown.gov.za.

(6) EVALUATION CRITERIA**6.1 Evaluation of Tenders**

All tenders received shall be evaluated in accordance with the Municipal Finance Management Act, Act 56 of 2003 (read with its accompanying Supply Chain Management Regulations), the CCT's SCM and Abuse Policies, and the Preferential Procurement Policy Framework Act, Act 5 of 2000 (read with its accompanying regulations).

6.2 Invalid Tenders

The Bid Evaluation Committee shall consider the bids received and shall note for inclusion in the evaluation report a tenderer whose tender is considered by the Bid Evaluation Committee to be invalid and eliminated from further evaluation for any of the following reasons:

- 6.2.1 the tender, including the tender amount, where applicable, is not submitted on the official Form of Offer (**Section 2, Part A**)
- 6.2.2 the tender document is not completed in non-erasable handwritten, or printed, ink or toner;
- 6.2.3 the Form of Offer has not been signed with an original signature (unless an e-Procurement system is used);
- 6.2.4 the Form of Offer (**Section 2, Part A**) is signed, but the name of the tenderer is not stated, or is indecipherable;

6.3 Non-Responsive Tenders

6.3.1 Valid tenders will be declared non-responsive and eliminated from further evaluation if:

- a) The tenderer has been listed on the National Treasury's Register for Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act, Act 12 of 2004, or has been listed on the National Treasury's List of Restricted Suppliers and who is therefore prohibited from doing business with the public sector.
- b) The tenderer is prohibited from doing business with the CCT in terms of the Abuse Policy.
- c) The tender does not comply with the Specification(s) (**Section 4**).
- d) The tender does not comply with the instructions as contained in the Price Schedule (**Section 3**) and/or **Schedule 9: Contract Price Adjustment and Rate of Exchange Variation** (where applicable).
- e) The tenderer has not achieved the minimum functionality scoring/points as set out in the tender document (.
- f) The tenderer is a person, advisor or corporate entity involved with the Bid Specification Committee or director/member of such a corporate entity and is therefore prohibited from tendering for any resulting contracts.

6.3.2 Tenders will be declared non-responsive if the tenderer fails to adhere to a written request (within the specified period set out in such request) to:

- a) Comply with the general conditions applicable to tenders as set out in the CCT's SCM Policy;
- b) Comply with one or more of the provisions contained in the Conditions of Tender (**Section 5**);
- c) Comply with any other terms and conditions of the tender as contained in the tender document;
- d) Complete and/or sign any declarations and/or authorisations;
- e) Register on the CCT's Vendor Database;
- f) Submit an original and valid tax clearance certificate from the South African Revenue Services (SARS) certifying that the taxes of the tenderer are in order;
- g) Comply with any applicable Bargaining Council agreements;
- h) Submit the information/complete **Schedule 3** in respect of transaction values exceeding R10 million (see Conditions of Tender).

Clause 6.3.2 above is not a closed list, and requests may include – but are not limited to – the items referred to in a) to h) above.

6.4 Negotiations with preferred bidders

- 6.4.1 The City Manager (or his delegated authority) may authorise the negotiation of the final terms of a contract with tenderers identified through a competitive bidding process as preferred tenderer provided that such negotiation:
- a) does not allow any preferred tenderer a second or unfair opportunity;
 - b) is not to the detriment of any other tenderer; and
 - c) does not lead to a higher price than the tender as submitted.
- 6.4.2 Minutes of such negotiations must be kept for record purposes.
- 6.4.3 If negotiations fail to result in acceptable contract terms, the City Manager (or his delegated authority) may terminate the negotiations and invite the next ranked tenderer for negotiations. The original preferred tenderer should be informed of the reasons for termination of the negotiations. Once negotiations are commenced with the next ranked tenderer, earlier negotiations may not be reopened by the CCT.
- 6.4.4 The provisions of clauses 6.4.1 to 6.4.3 shall apply to the invitation to negotiate of the next ranked tenderer, mutatis mutandis.

6.5 Points for price and preference

6.5.1 Points for price will be allocated in accordance with the formula set out in clause 6.5.4 below based on the tender sum / amount as set out in the **Price Schedule (Part 3)**.

6.5.2 Points for preference will be allocated in accordance with the provisions of **Schedule 4: Preference Schedule** and the formula set out in clause 6.5.4 below

6.5.3 The terms and conditions of **Schedule 4** as it relates to preference shall apply in all respects to the tender evaluation process and any subsequent contract.

6.5.4 Applicable formula

90/10

The following formula must be used to calculate the points for price in respect of bids with a Rand value above R1 000 000 (all applicable taxes included):

$$Ps = 90 [1 - \frac{(Pt - Pmin)}{Pmin}]$$

Pmin

Where :

Ps = Points scored for comparative price of the tender under consideration;

Pt = Comparative price (corrected, if applicable, exclusive of VAT) of the tender under consideration; and

Pmin = Comparative price (corrected, if applicable, exclusive of VAT) of lowest responsive tender.

Points for preference must be awarded to Exempted Micro Enterprises or to Tenderers having attained a B-BBEE status level of contribution in accordance with the tables below.

B-BBEE Status Level of Contributor	Number of Points for Preference
1	10
2	9
3	8
4	5

5	4
6	3
7	2
8	1
Non-compliant contributor	0

or, in respect of Exempted Micro Enterprises (EMEs)

Black Ownership of EME	Deemed B-BBEE Status Level of Contributor	Number of Points for Preference
> 50%	3	8
≤ 50%	4	5

The points for preference scored by a tenderer in terms of the above table must then be added to the points for price (Ps) in order to obtain the total number of adjudication points scored for each responsive tender.

6.6 Functionality Scoring

6.6.1 Tenders that are valid and responsive in terms of the afore-going clauses will be evaluated for functionality on the following criteria:

Evaluation Area	Evaluating Criteria	Weighting
Functional compliance		For example if weighting=15 then score achieved is multiplied by 3
Par 4 and 5-Hardware requirements	5 = Fully compliant 3 = Non-compliant - minor issues 1 = Non-compliant - critical issues(C) 0= Non-compliant, No response or mandatory issue(M)	20
Par 6 and 7- Technical requirements		10
Par 8- Functionality		10
Par 9 - Services		10
Par 10&11- Maintenance services		10
Par 18- Inspect demo and test		10
Par 22- Technical support		10
Par 23- Resource requirements		10
Par 24- Experience		10
Total		100

6.6.2 No tender will be regarded as an acceptable tender/responsive if it fails to achieve the minimum qualifying score for functionality of 60 out of a maximum of 100.

6.6.3 Tenderers shall ensure that all relevant information has been submitted with the tender offer in the prescribed format to ensure optimal scoring of functionality points for each Evaluation Criteria

6.6.4 Tenders that have achieved the minimum qualifying score for functionality shall be evaluated further in terms of the preference point systems prescribed in clause 6.5 above.

CONDITIONS OF CONTRACT

(7) SPECIAL CONDITIONS OF CONTRACT

THESE SPECIAL CONDITIONS OF CONTRACT (SCC) SUPPLEMENT AND MUST BE READ WITH THE CORRESPONDING PROVISIONS OF THE GENERAL CONDITIONS OF CONTRACT (GCC) ISSUED BY THE NATIONAL TREASURY.

WHENEVER THERE IS A CONFLICT BETWEEN THE SCC AND THE GCC, THE PROVISIONS OF THE SCC -SHALL PREVAIL.

7.1 Standards

Failure to comply with the standards and Specification as set out in the tender document shall constitute a material breach of this Contract, in which case the CCT reserves the right to cancel the Contract.

7.2 Copyright

Copyright of copyright works prepared for this Contract shall vest with the Purchaser.

7.3 Guarantee /Performance Security – Clause 7 of the GCC

Not applicable, disregard schedule 12: Annexure 1

7.4 Insurance – Clause 11 of the GCC

7.4.1 Without limiting the obligations of the supplier in terms of this Contract, the supplier shall effect and maintain the following insurances:

a)Public liability insurances, in the name of the supplier, covering the supplier and the CCT against liability for the death of or injury to any person, or loss of or damage to any property, arising out of or in the course of this Contract, in an amount not less than **R20 million**

b)Any [goods supplied to the CCT by the supplier in terms of this Contract shall be fully and adequately insured by the supplier against any loss or damage incidental to manufacture or acquisition, transportation, storage, delivery, installation and other activities related to the supply.

c)]Professional indemnity insurance providing cover in an amount of not less than R5 million in respect of each and every claim during the contract period.

7.4.2 The supplier shall be obliged to furnish the CCT with proof of such insurance as the CCT may require from time to time for the duration of this Contract. Evidence that the insurances have been effected in terms of clause 7.4, shall be in the form of an insurance broker's warranty worded precisely as per **Schedule 12: Annex 6- Insurance Broker's Warranty**.

7.5 Payment – Clause 16 of the GCC

7.5.1 A monthly payment cycle will be the norm. All invoices received for goods and services which are dated on or before the 20th of a particular month will typically be paid between the 23rd and 26th of the following month. The actual payment run dates will be dependent on the number of days in the month and the influence of public holidays.

7.6 Purchase Orders

The CCT will issue official purchase orders for the goods required under this Contract. No work should be undertaken without an official purchase order that is addressed to the successful tenderer. The relevant **purchase order number** must be reflected on every invoice. No payments will be processed without an official purchase order

7.7 Prices/Price Adjustment – Clause 17 of the GCC

The Contract Price shall be subject to contract price adjustment

7.8 Penalties – Clause 22 of the GCC

The following penalties shall be applicable to this contract as described in detail in the tender specification and Annexure C:

KPI	Description	Benchmark	Impact on business	Penalty (% of monthly service fee) Max
IECS Infrastructure				
1	The IECS and reporting platform must be monitored 24/7/365 and for any faults a technician must be on site within time frames according to severity classification(Excluding external transmission and communication system Severity 1: 4 hours to site, 24/7/365, Restore 8 hours Severity 2: 12 Hours to site, 24/7/365, Restore 12 hours Severity 3: Next working day to site, Restore next day Severity 4: Complete within 5 working daysfailures):	100%	Very high	2% of total CoCT monthly invoice
2	Accuracy of maps for reporting on vehicle movements, accidents, disciplinary cases or AARTO related matters must be 100% accurate and regularly updated with the latest industrial/urban/rural developments within the boundaries of the City of Cape Town.	>95%	Very high	2% of total CoCT monthly invoice
3	Percentage of repair and maintenance invoices not received within 14 days of job completion	<1%	Medium	0.5% of total CoCT monthly invoice
4	Time taken to accurately update master data from notification to completion within 24 hours.	0%	High	1% of total CoCT monthly invoice
General - Infield				
1	Percentage of non-reporting vehicles or portable devices caused by faulty equipment as a percentage of the total fleet (Excluding OOS vehicles)	< 5% over month period	Very high	2% of total CoCT monthly invoice
2	For faulty equipment in vehicles or portable devices, a technician must make contact with relevant department within 1 hour from detected failure or notification and arrange visit within 4 hours	100%	High	100% of affected vehicle monthly invoice

KPI	Description	Benchmark	Impact on business	Penalty (% of monthly service fee) Max
3	Any non-functionality on a vehicle shall be restored to full operation within 24 hours	100%	High	100% of affected vehicle monthly invoice
Vehicle tracking and management specific				
1	The odometer readings (vehicle tracking software) for every actual 1000 km's travelled per individual vehicle must be $\leq 6\%$. i.e.60km's to ensure the vehicle span is within OEM stipulated allowance for the servicing intervals.	$\leq 6\%$	High	100% of affected vehicle monthly invoice
2	Number of Group A High Risk vehicles recovery not initiated within (any alarm) ≤ 2 min (Ground and air crew mobilisation).	0%	Very High	2% of total CoCT monthly invoice
3	Number of Group B High Risk vehicle recovery not initiated (any alarm) ≤ 2 min after client authorization has been telephonically received for recovery team mobilisation.	0%	Very High	2% of total CoCT monthly invoice
4	Number of standard vehicle recovery not initiated (any alarm) ≤ 2 min after client authorization has been telephonically received for recovery team mobilisation.	0%	High	1% of total CoCT monthly invoice
In vehicle LAN system - specific				
1	% of non-functioning caused by a failure of any of the components of the In vehicle LAN system (Excluding OOS)	<5% over month period	Medium	0.5% of total CoCT monthly invoice
2	The functionality of the system must be monitored continuously. A notification must be sent (SMS and EMAIL) to the designated authority and a technician must make contact with relevant department within 1 hour from detected failure or notification and arrange visit within 4 hours	100%	medium	100% for specific Vehicle
3	Any non-functionality of an in-vehicle LAN shall be restored to full operation within 24 hours of notification	100%	medium	100% for specific Vehicle
SCADA system				
1	Due to static installation of SCADA OBC's and the extreme reliability required for this system a high functional reliability is required	>99% over a month period	Very High	2% of total CoCT monthly invoice
WEB database access				
	Update of the database shall be done within 8 hours of receiving an update (relates to no.5 VTAM).	100%	Medium	0.5% of total CoCT monthly invoice

7.9 Death of Sole Proprietor/Member

Upon the death of the supplier who was a Sole Proprietor, or a sole member of a Close Corporation, the contract will terminate forthwith. The Purchaser shall pay to the tenderer's estate any money which it considers due under the contract.

7.10 Settlement of Disputes – Clause 27 of the GCC

7.10.1 Should the parties fail to resolve any dispute by way of mutual consultation as contemplated in clause 27.1 of the GCC, either party shall be entitled to refer the matter for mediation before an independent and impartial person appointed by the City Manager in accordance with regulation 50(1) of the Local Government: Municipal Finance Management Act, Act 56 of 2003 – Municipal Supply Chain Management Regulations (Notice 868 of 2005). Such referral shall be done by way of notice to the other party in accordance with clause 27.2 of the GCC. The mediator's ruling shall become final and binding on the parties only to the extent that it is correctly recorded as being agreed by the parties in writing.

7.10.2 Save for reference to any portion of any settlement or decision which has been agreed to be final and binding on the parties, no reference shall be made by or on behalf of either party, in any subsequent court proceedings, to any outcome of an amicable settlement by mutual consultation, or to the fact that any particular evidence was given, or to any submission, statement or admission made in the course of amicable settlement by mutual consultation or mediation.

7.10.3 Should it not be possible to settle a dispute by means of mediation, it shall be settled in a South African court of law as contemplated in clause 27.3 of the GCC.

7.11 Limitation of Liability- Clause 28 of GCC

7.11.1 Without detracting from, and in addition to, any of the other indemnities in this Contract, the supplier shall be solely liable for and hereby indemnifies and holds the CCT harmless against all claims, charges, damages, costs, actions, liability, demands and/or proceedings and expense in connection with:

- a) personal injury or loss of life to any individual;
- b) loss of or damage to the property of any individual;

arising from, out of, or in connection with the provision by the supplier in terms of this Contract, save to the extent caused by the gross negligence or wilful misconduct of the CCT.

7.11.2 The supplier and/or its employees, agents, concessionaires, suppliers, contractors or customers shall not have any claim of any nature against the CCT for any loss, damage, injury or death which any of them may directly or indirectly suffer, whether or not such loss, damage, injury or death is caused through the negligence of the CCT or its agents or employees.

7.11.3 Notwithstanding anything to the contrary contained in this Contract, under no circumstances whatsoever, including as a result of its negligent (including grossly negligent) acts or omissions or those of its servants, agents or contractors or other persons for whom in law it may be liable, shall any party or its servants (in whose favour this constitutes a *stipulatio alteri*) be liable for any indirect, extrinsic, special, penal, punitive, exemplary or consequential loss or damage of any kind whatsoever (whether the loss was actually foreseen or reasonably foreseeable) sustained by the other party, its directors and/or servants, including but not limited to any loss of profits, loss of operation time, corruption or loss of information and/or loss of contracts.

7.12 Applicable Law – Clause 30 of the GCC

7.12.1 The supplier, by completing **Schedule 10**, hereby indemnifies the CCT in respect of the provisions of the Occupational Health and Safety Act, Act 85 of 1993 ('OHAS Act'), in accordance with the provisions of the OHAS Act.

- 7.12.2 The supplier shall ensure compliance with the provisions of the OHAS Act and all applicable regulations, by all employees of the supplier and other contractors on the site. The supplier shall provide a suitable health and safety plan appropriate for the contract tendered for.
- 7.12.3 The supplier shall comply with all laws relating to wages and conditions generally governing the employment of labour in the Cape Town area and any applicable Bargaining Council agreements.
- 7.12.4 If the supplier is an employer as defined in the Compensation for Occupational Injuries and Diseases Act, Act 130 of 1993 ('COIDA'), the supplier shall attach proof of registration/insurance in terms of COIDA. This may take the form of either a certified copy of a valid Letter of Good Standing issued by the Compensation Commissioner, or proof of insurance with a licenced compensation insurer, from either the supplier's broker or the insurance company itself.

7.13 Notices – Clause 31 of the GCC

The CCT will inform a successful tenderer in writing of the award. No rights accrue to the successful tenderer until such time as the acceptance part (**Section B**) of the Form of Offer and Acceptance has been signed by the CCT. The CCT will provide a signed copy of the Form of Offer and Acceptance upon request by the supplier.

7.14 Value Added Tax – Clause 32 of the GCC

- 7.14.1 Where a supplier, in the course of carrying on business, delivers taxable supplies exceeding R1 million, the supplier must be registered with the South African Revenue Service for value added tax (VAT) purposes. The supplier's attention is drawn to section 23 of the Value Added Tax Act, Act 89 of 1991. Failure to comply with Act 89 of 1991 shall constitute a material breach of the Contract.
- 7.14.2 It is a requirement of this Contract that the amount of VAT must be shown clearly on each invoice. The supplier's attention is drawn to section 40 of the Value Added Tax Act, Act 89 of 1991.
- 7.14.3 The **VAT registration** number of the City of Cape Town is
- 7.14.4 Suppliers shall be registered and in good standing with the South African Revenue Service (SARS). In this regard, it is the responsibility of the supplier to submit documentary evidence in the form of an original valid Tax Clearance Certificate issued by SARS to the CCT at the Supplier Management Unit located within the Tender Distribution Office, 2nd Floor (Concourse Level), Civic Centre, 12 Hertzog Boulevard, Cape Town (Tel 021 400 9242/3/4/5).

7.15 Reporting Obligations.

7.16. 1 The supplier shall complete, sign and submit with each invoice, the following:

- a) Project Labour Report (**Schedule 14: Annex 3**).
- b) B-BBEE Sub-contract Expenditure Report (**Schedule 14: Annex 4**).
- c) Joint Venture Expenditure Report (**Schedule 14 : Annex 5**).

- 7.15.2 (a) The Project Labour Report must include details of all labour (including that of sub-contractors) that are South African citizens earning less than R270 per day, (as adjusted from time to time and excluding any benefits), who are employed on a temporary or contract basis on this contract.
- (b) In addition to the Project Labour Report the supplier shall furnish the CCT with copies of the employment contracts entered into with such labour, together with copies of identification documents as well as evidence of payments to such labour in the form of copies of payslips or payroll runs. These documents shall be submitted simultaneously. If the worker is paid in cash or by cheque, this information must be recorded on the envelope and the worker must acknowledge receipt of payment by signing for it and proof of such acknowledgement shall be furnished to the CCT.
- (c) Project Labour Reports shall be completed and submitted in accordance with the instructions therein.

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- 7.15.3 The B-BBEE Sub-contract Expenditure Report is required for monitoring the supplier's compliance with condition b) of Section 2 of **Schedule 4 (Preference Schedule)** where preferences are granted in respect of B-BBEE contribution. In the aforesaid schedule, where the supplier has declared in Section 5 that *"I/we **DO NOT** intend sub-contracting more than 25% of the value of the contract to sub-contractor's that do not qualify for at least the points that I/we as supplier qualify for"*, the supplier shall be monitored and is required to submit the aforesaid expenditure report.
- 7.15.4 The Joint Venture Expenditure Report is required for monitoring the joint venture's/consortium/partnership compliance with the percentage contributions of the partners as tendered, where the joint venture/consortium/partnership has been awarded preference points in respect of its consolidated B-BBEE scorecard.

(9) GENERAL CONDITIONS OF CONTRACT

(National Treasury - General Conditions of Contract (revised July 2010))

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1. Definitions

1. The following terms shall be interpreted as indicated:

1.1 'Closing time' means the date and hour specified in the bidding documents for the receipt of bids.

1.2 'Contract' means the written agreement entered into between the purchaser and the supplier, as recorded in the contract form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.

1.3 'Contract price' means the price payable to the supplier under the contract for the full and proper performance of his or her 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 in which an enterprise abroad is subsidised 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 recognised 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 with 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's store or to his site' means delivered and unloaded in the specified store or depot or on the specified site in compliance with the conditions of the contract or order, the supplier bearing all risks and charges involved until the supplies are so delivered and a valid receipt is obtained.
- 1.11 'Dumping' occurs when a private enterprise abroad markets its goods on its own initiative in the RSA at lower prices than that of the country of origin, and which action has the potential to harm the local industries in the RSA.
- 1.12 'Force majeure' means an event beyond the control of the supplier, not involving the supplier's fault or negligence, and not foreseeable. Such events may include, but are not restricted to, acts of the purchaser in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes.
- 1.13 'Fraudulent practice' means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of any bidder, and includes collusive practice among bidders (prior to or after bid submission) designed to establish bid prices at artificial, non-competitive levels and to deprive the bidder of the benefits of free and open competition.
- 1.14 'GCC' means the General Conditions of Contract.
- 1.15 'Goods' means all of the equipment, machinery, and/or other materials that the supplier is required to supply to the purchaser under the contract.
- 1.16 'Imported content' means that portion of the bidding price represented by the cost of components, parts or materials which have been or are still to be imported (whether by the supplier or his subcontractors) and which costs are inclusive of the costs abroad, plus freight and other direct importation costs such as landing costs, dock dues, import duty, sales duty or other similar tax or duty at the South African place of entry as well as transportation and handling charges to the factory in the Republic where the supplies covered by the bid will be manufactured.
- 1.17 'Local content' means that portion of the bidding price which is not included in the imported content, provided that local manufacture does take place.
- 1.18 'Manufacture' means the production of products in a factory using labour, materials, components and machinery, and includes other, related value-adding activities.
- 1.19 'Order' means an official written order issued for the supply of goods or works or the rendering of a service.
- 1.20 'Project site', where applicable, means the place indicated in bidding documents.

- 1.21 'Purchaser' means the organisation purchasing the goods.
- 1.22 'Republic' means the Republic of South Africa.
- 1.23 'SCC' means the Special Conditions of Contract.
- 1.24 'Services' means those functional services ancillary to the supply of the goods, such as transportation and any other incidental services, such as installation, commissioning, provision of technical assistance, training, catering, gardening, security, maintenance, and other such obligations of the supplier covered under the contract.
- 1.25 'Written' or 'in writing' means handwritten in ink or any form of electronic or mechanical writing.

2. Application

- 2.1 These general conditions are applicable to all bids, contracts and orders, including bids for functional and professional services, sales, hiring, letting and the granting or acquiring of rights, but excluding immovable property, unless otherwise indicated in the bidding documents.
- 2.2 Where applicable, special conditions of contract are also laid down to cover specific supplies, services or works.
- 2.3 Where such special conditions of contract are in conflict with these general conditions, the special conditions shall apply.

3. General

- 3.1 Unless otherwise indicated in the bidding documents, the purchaser shall not be liable for any expense incurred in the preparation and submission of a bid. Where applicable, a non-refundable fee for documents may be charged.
- 3.2 With certain exceptions, invitations to bid are only published in the Government Tender Bulletin. The Government Tender Bulletin may be obtained directly from the Government Printer, Private Bag X85, Pretoria 0001, or accessed electronically from www.treasury.gov.za.

4. Standards

- 4.1 The goods supplied shall conform to the standards mentioned in the bidding documents and specifications.

5. Use of contract documents and information; inspection.

- 5.1 The supplier shall not, without the purchaser's prior written consent, disclose the contract, or any provision thereof, or any specification, plan, drawing, pattern, sample, or information furnished by or on behalf of the purchaser in connection therewith, to any person other than a person employed by the supplier in the performance of the contract. Disclosure to any such employed person shall be made in confidence and shall extend only so far as may be necessary for the 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 the use of the goods or any part thereof by the purchaser.

7. Performance Security

7.1 Within 30 (thirty) 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 the 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 30 (thirty) days following the date of completion of the supplier's performance obligations under the contract, including any warranty obligations, unless otherwise specified in the SCC.

8. Inspections, tests and analyses

8.1 All pre-bidding testing will be for the account of the bidder.

8.2 If it is a bid condition that supplies to be produced or services to be rendered should at any stage during production or execution or on completion be subject to inspection, the premises of the bidder or contractor shall be open, at all reasonable hours, for inspection by a representative of the Department or an organisation acting on behalf of the Department.

8.3 If there are no inspection requirements indicated in the bidding documents and no mention of such is made in the contract, but during the contract period it is decided that inspections shall be carried out, the purchaser shall itself make the necessary arrangements, including payment arrangements with the testing authority concerned.

8.4 If the inspections, tests and analyses referred to in clauses 8.2 and 8.3 show the supplies to be in accordance with the contract requirements, the cost of the inspections, tests and analyses shall be defrayed by the purchaser.

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

- 8.6 Supplies and services which are referred to in clauses 8.2 and 8.3 and which do not comply with the contract requirements may be rejected.
- 8.7 Any contract supplies may on or after delivery be inspected, tested or analysed and may be rejected if found not to comply with the requirements of the contract. Such rejected supplies shall be held at the cost and risk of the supplier, who shall, when called upon, remove them immediately at his own cost and forthwith substitute them with supplies which do comply with the requirements of the contract. Failing such removal, the rejected supplies shall be returned at the suppliers cost and risk. Should the supplier fail to provide the substitute supplies forthwith, the purchaser may, without giving the supplier further opportunity to substitute the rejected supplies, purchase such supplies as may be necessary at the expense of the supplier.
- 8.8 The provisions of clauses 8.4 to 8.7 shall not prejudice the right of the purchaser to cancel the contract on account of a breach of the conditions thereof, or to act in terms of Clause 23 of the GCC.

9. Packing

- 9.1 The supplier shall provide such packing of the goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in the contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit, and open storage. Packing, case size and weights shall take into consideration, where appropriate, the remoteness of the goods' final destination and the absence of heavy handling facilities at all points in transit.
- 9.2 The packing, marking, and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the contract, including additional requirements, if any, specified in the SCC, and in any subsequent instructions ordered by the purchaser.

10. Delivery and documents

- 10.1 Delivery of the goods shall be made by the supplier in accordance with the terms specified in the contract. The details of shipping and/or other documents to be furnished by the supplier are specified in the SCC.
- 10.2 Documents to be submitted by the supplier are specified in the SCC.

11. Insurance

- 11.1 The goods supplied under the contract shall be fully insured, in a freely convertible currency, against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery in the manner specified in the SCC.

12. Transportation

- 12.1 Should a price other than an all-inclusive delivered price be required, this shall be specified in the SCC.

13. Incidental Services

- 13.1 The supplier may be required to provide any or all of the following services, including additional services (if any) specified in the SCC:
- (a) performance or supervision of on-site assembly, and/or commissioning of the supplied goods;
 - (b) furnishing of tools required for the assembly and/or maintenance of the supplied goods;
 - (c) furnishing of a detailed operations and maintenance manual for each appropriate unit of the supplied goods;
 - (d) performance or supervision or maintenance and/or repair of the supplied goods, for a period of time agreed by the parties, provided that this service shall not relieve the supplier of any warranty obligations under this contract; and
 - (e) training of the purchaser's personnel, at the supplier's plant and/or on-site, in assembly, start-up, operation, maintenance, and/or repair of the supplied goods.
- 13.2 Prices charged by the supplier for incidental services, if not included in the contract price for the goods, shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the supplier for similar services.

14. Spare parts

- 14.1 As specified in the SCC, the supplier may be required to provide any or all of the following materials, notifications, and information pertaining to spare parts manufactured or distributed by the supplier:
- (a) such spare parts as the purchaser may elect to purchase from the supplier, provided that this election shall not relieve the supplier of any warranty obligations under the contract; and
 - (b) in the event of termination of production of the spare parts:
 - (i) Advance notification to the purchaser of the pending termination, in sufficient time to permit the purchaser to procure needed requirements; and
 - (ii) following such termination, furnishing at no cost to the purchaser, the blueprints, drawings, and specifications of the spare parts, if requested.

15. Warranty

- 15.1 The supplier warrants that the goods supplied under the contract are new, unused, of the most recent or current models, and that they incorporate all recent improvements in design and materials unless provided otherwise in the contract. The supplier further warrants that all goods supplied under this contract shall have no defect arising from design, materials, or workmanship (except when the design and/or material is required by the purchaser's specifications), or from any act or omission of the supplier, that may develop under normal use of the supplied goods in the conditions prevailing in the country of final destination.
- 15.2 This warranty shall remain valid for 12 (twelve) 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 18 (eighteen) months after the date of shipment from the port or place of loading in the source country, whichever period concludes earlier, unless specified otherwise in the SCC.
- 15.3 The purchaser shall notify the supplier promptly, in writing, of any claims arising under this warranty.
- 15.4 Upon receipt of such notice, the supplier shall, within the period specified in the SCC and with all reasonable speed, repair or replace the defective goods or parts thereof, without costs to the purchaser.
- 15.5 If the supplier, having been notified, fails to remedy the defect(s) within the period specified in the SCC, the purchaser may proceed to take such remedial action as may be necessary, at the supplier's risk and expense and without prejudice to any other rights which the purchaser may have against the supplier under the contract.

16. Payment

- 16.1 The method and conditions of payment to be made to the supplier under this contract shall be specified in the SCC.
- 16.2 The supplier shall furnish the purchaser with an invoice accompanied by a copy of the delivery note and upon fulfilment of any other obligations stipulated in the contract.
- 16.3 Payments shall be made promptly by the purchaser, but in no case later than 30 (thirty) days after submission of an invoice or claim by the supplier.
- 16.4 Payment will be made in Rand unless otherwise stipulated in the SCC.

17. Prices

- 17.1 Prices charged by the supplier for goods delivered and services performed under the contract shall not vary from the prices quoted by the supplier in his bid, with the exception of any price adjustments authorized in the SCC or in the purchaser's request for bid validity extension, as the case may be.

18. Contract Amendments

- 18.1 No variation in or modification of the terms of the contract shall be made except by written amendment signed by the parties concerned.

19. Assignment

- 19.1 The supplier shall not assign, in whole or in part, its obligations to perform under the contract, except with the purchaser's prior written consent.

20. Subcontracts

- 20.1 The supplier shall notify the purchaser in writing of all subcontracts awarded under this contract 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 the 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 or her discretion extend the supplier's time for performance, with or without the imposition of penalties, in which case the extension shall be ratified by the parties by amendment of contract.
- 21.3 No provision in a contract shall be deemed to prohibit the obtaining of supplies or services from a national department, provincial department, or a local authority.
- 21.4 The right is reserved to procure, outside of the contract, small quantities of supplies; or to have minor essential services executed if an emergency arises, or the supplier's point of supply is not situated at or near the place where the supplies are required, or the supplier's services are not readily available.
- 21.5 Except as provided under GCC Clause 25, a delay by the supplier in the performance of its delivery obligations shall render the supplier liable to the imposition of penalties, pursuant to GCC Clause 22, unless an extension of time is agreed upon pursuant to GCC Clause 21.2 without the application of penalties.
- 21.6 Upon any delay beyond the delivery period in the case of a supplies contract, the purchaser shall, without cancelling the contract, be entitled to purchase supplies of a similar quality and up to the same quantity in substitution of the goods not supplied in conformity with the contract and to return any goods delivered later at the supplier's expense and risk, or to cancel the contract and buy such goods as may be required to complete the contract and, without prejudice to his other rights, be entitled to claim damages from the supplier.

22. Penalties

- 22.1 Subject to GCC Clause 25, if the supplier fails to deliver any or all of the goods or to perform the services within the period(s) specified in the contract, the purchaser shall, without prejudice to its other remedies under the contract, deduct from the contract price, as a penalty, a sum calculated on the delivered price of the delayed goods or unperformed services, using the current prime interest rate, calculated for each day of the delay until actual delivery or performance. The purchaser may also consider termination of the contract pursuant to GCC Clause 23.

23. Termination for default

- 23.1 The purchaser, without prejudice to any other remedy for breach of contract, by written notice of default sent to the supplier, may terminate this contract in whole or in part:
- (a) if the supplier fails to deliver any or all of the goods within the period(s) specified in the contract, or within any extension thereof granted by the purchaser pursuant to GCC Clause 21.2;
 - (b) if the supplier fails to perform any other obligation(s) under the contract; or
 - (c) if the supplier, in the judgment of the purchaser, has engaged in corrupt or fraudulent practices in competing for or in executing the contract.
- 23.2 In the event the purchaser terminates the contract in whole or in part, the purchaser may procure, upon such terms and in such manner as it deems appropriate, goods, works or services similar to those undelivered,

and the supplier shall be liable to the purchaser for any excess costs for such similar goods, works or services. However, the supplier shall continue performance of the contract to the extent not terminated.

- 23.3 Where the purchaser terminates the contract in whole or in part, the purchaser may decide to impose a restriction penalty on the supplier by prohibiting such supplier from doing business with the public sector for a period not exceeding 10 years.
- 23.4 If a purchaser intends imposing a restriction on a supplier or any person associated with the supplier, the supplier will be allowed a time period of not more than 14 (fourteen) days to provide reasons why the envisaged restriction should not be imposed. Should the supplier fail to respond within the stipulated 14 (fourteen) days the purchaser may regard the intended penalty as not objected against and may impose it on the supplier.
- 23.5 Any restriction imposed on any person by the Accounting Officer/Authority will, at the discretion of the Accounting Officer/Authority, also be applicable to any other enterprise or any partner, manager, director or other person who wholly or partly exercises or exercised or may exercise control over the enterprise of the first-mentioned person, and with which enterprise or person the first-mentioned person is or was, in the opinion of the Accounting Officer/Authority, actively associated.
- 23.6 If a restriction is imposed, the purchaser must, within 5 (five) 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, Act 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 of not less than five years and not more than 10 years. The National Treasury is empowered to determine the period of restriction, and each case will be dealt with on its own merits. According to section 32 of the Act the Register must be open to the public. The Register can be perused on the National Treasury website.

24. Anti-dumping and countervailing duties and rights

- 24.1 When, after the date of bid, provisional payments are required, or 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 subsidised import, the State is not liable for any amount so required or imposed, or for the amount of any such increase. When, after the said date, such a provisional payment is no longer required or any such anti-dumping or countervailing right is abolished, or where the amount of such provisional payment or any such right is reduced, any such favourable difference shall, on demand, be paid forthwith by the contractor to the State, or the State may deduct such amounts from moneys (if any) which may otherwise be due to the contractor in regard to supplies or services which he or she 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 or her.

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 notify the purchaser promptly, 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 such dispute or difference amicably, by mutual consultation.
- 27.2 If, after 30 (thirty) days, the parties have failed to resolve their dispute or difference by such mutual consultation, then either the purchaser or the supplier may give notice to the other party of his intention to commence with mediation. No mediation in respect of this matter may be commenced unless such notice is given to the other party.
- 27.3 Should it not be possible to settle a dispute by means of mediation, it may be settled in a South African court of law.
- 27.4 Mediation proceedings shall be conducted in accordance with the rules of procedure specified in the SCC.
- 27.5 Notwithstanding any reference to mediation and/or court proceedings herein,
 (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 to the supplier.

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 in the SCC.

31. Notices

- 31.1 Every written acceptance of a bid shall be posted to the supplier concerned by registered or certified mail, and any other notice to him shall be posted by ordinary mail, to the address furnished in his bid or to the address notified later by him in writing; and such posting shall be deemed to be proper service of such notice.
- 31.2 The time mentioned in the contract documents for performing any act after such aforesaid notice has been given, shall be reckoned from the date of posting of such notice.

32. Taxes and Duties

- 32.1 A foreign supplier shall be entirely responsible for all taxes, stamp duties, licence fees, and other such levies imposed outside the purchaser's country.

32.2 A local supplier shall be entirely responsible for all taxes, duties, licence fees, etc., incurred until delivery of the contracted goods to the purchaser.

32.3 No contract shall be concluded with any bidder whose tax matters are not in order. Prior to the award of a bid the Department must be in possession of a tax clearance certificate submitted by the bidder. This certificate must be an original issued by the South African Revenue Services.

33. National Industrial Participation (NIP) Programme

33.1 The NIP Programme administered by the Department of Trade and Industry shall be applicable to all contracts that are subject to the NIP obligation.

34 Prohibition of Restrictive practices

34.1 In terms of section 4 (1) (b) (iii) of the Competition Act, Act 89 of 1998, as amended, an agreement between or concerted practice by firms, or a decision by an association of firms, is prohibited if it is between parties in a horizontal relationship and if a bidder(s) is/are or a contractor(s) was/were involved in collusive bidding (or bid rigging).

34.2 If a bidder(s) or contractor(s), based on reasonable grounds or evidence obtained by the purchaser, has/have engaged in the restrictive practice referred to above, the purchaser may refer the matter to the Competition Commission for investigation and possible imposition of administrative penalties as contemplated in the Competition Act, Act 89 of 1998.

34.3 If a bidder(s) or contractor(s) has/have been found guilty by the Competition Commission of the restrictive practice referred to above, the purchaser may, in addition and without prejudice to any other remedy provided for, invalidate the bid(s) for such item(s) offered, and/or terminate the contract in whole or part, and/or restrict the bidder(s) or contractor(s) from conducting business with the public sector for a period not exceeding 10 (ten) years and/or claim damages from the bidder(s) or contractor(s) concerned.

Schedule 2: Certificate of Authority for Partnerships/ Joint Ventures/ Consortiums

This schedule is to be completed if the tender is submitted by a partnership/joint venture/ consortium.

1. We, the undersigned, are submitting this tender offer as a partnership/ joint venture/ consortium and hereby authorize Mr/Ms _____, of the authorised entity _____, acting in the capacity of Lead Partner, to sign all documents in connection with the tender offer and any contract resulting from it on the partnership/joint venture/ consortium's behalf.

2. By signing this schedule the partners to the partnership/joint venture/ consortium:
 - 2.1 warrant that the tender submitted is in accordance with the main business and objectives of the partnership/joint venture/ consortium;
 - 2.2 agree that the CCT shall make all payments in terms of this Contract into the following bank account of the Lead Partner:

Account Holder: _____
 Financial Institution: _____
 Branch Code: _____
 Account No.: _____
 - 2.3 agree that in the event that there is a change in the partnership/ joint venture/ consortium and/or should a dispute arise between the partnership/joint venture/ consortium partners, that the CCT shall continue to make any/all payments due and payable in terms of the Contract into the aforesaid bank account until such time as the CCT is presented with a Court Order or an original agreement (signed by each and every partner of the partnership/joint venture/ consortium) notifying the CCT of the details of the new bank account into which it is required to make payment.
 - 2.4 agree that they shall be jointly and severally liable to the CCT for the due and proper fulfilment by the successful tenderer/supplier of its obligations in terms of the Contract as well as any damages suffered by the CCT as a result of breach by the successful tenderer/supplier. The partnership/joint venture/ consortium partners hereby renounce the benefits of excussion and division.

SIGNED BY THE PARTNERS OF THE PARTNERSHIP/ JOINT VENTURE/ CONSORTIUM		
NAME OF FIRM	ADDRESS	DULY AUTHORISED SIGNATORY
Lead partner		Signature..... Name..... Designation.....
		Signature..... Name..... Designation.....
		Signature..... Name..... Designation.....
		Signature..... Name..... Designation.....

Note: A copy of the Joint Venture Agreement shall be appended to Schedule [13].

Schedule 3: Declaration for Procurement above R10 million (All applicable taxes included)

If the value of the transaction is expected to exceed R10 million (VAT included) the tenderer shall complete the following questionnaire, attach the necessary documents and sign this schedule:

1. Are you by law required to prepare annual financial statements for auditing? (Please mark with X)

YES	☒	NO	
-----	-------------------------------------	----	--

- 1.1 If YES, submit audited annual financial statements:

- (i) for the past three years, or
(ii) since the date of establishment of the tenderer (if established during the past three years)

By attaching such audited financial statements to **Schedule [13]**.

2. Do you have any outstanding undisputed commitments for municipal services towards the CCT or other municipality in respect of which payment is overdue for more than 30 (thirty) days? (Please mark with X)

YES		NO	☒
-----	--	----	-------------------------------------

- 2.1 If NO, this serves to certify that the tenderer has no undisputed commitments for municipal services towards any municipality for more than three (3) (three) months in respect of which payment is overdue for more than 30 (thirty) days.

- 2.2 If YES, provide particulars:

3. Has any contract been awarded to you by an organ of state during the past five (5) years? (Please mark with X)

YES	☒	NO	
-----	-------------------------------------	----	--

- 3.1 If YES, insert particulars in the table below including particulars of any material non-compliance or dispute concerning the execution of such contract. Alternatively attach the particulars to **Schedule 13** in the same format as the table below:

Organ of State	Contract Description	Contract Period	Non-compliance/dispute (if any)
City of Cape Town	5049/2012/2013	36 months	

4. Will any portion of the goods or services be sourced from outside the Republic, and if so, what portion and whether any portion of payment from the CCT is expected to be transferred out of the Republic? (Please mark with X)

YES		NO	X
-----	--	----	---

4.1 If YES, furnish particulars below

The tenderer hereby certifies that the information set out in this schedule and/or attached hereto is true and correct, and acknowledges that failure to properly and truthfully complete this schedule may result in steps being taken against the tenderer, the tender being disqualified, and/or (in the event that the tenderer is successful) the cancellation of the contract and/or steps in terms of the Abuse Policy.

Signature _____
 Print name _____
 On behalf of _____ rer (duly authorised)

Date

2016-08-10

Schedule 9: Contract Price Adjustment and/or Rate of Exchange Variation

9. Pricing Instructions:

- 9.1 The Contract Price Adjustment mechanism and/or provisions relating to Rate of Exchange Variation, contained in this schedule is compulsory and binding on all tenderers.
- 9.2 Failure to complete this schedule or any part thereof may result in the tender offer being declared non-responsive.
- 9.3 Tenderers are not permitted to amend, vary, alter or delete this schedule or any part thereof unless otherwise stated in this schedule, failing which the tender offer shall be declared non-responsive.
- 9.4 Tenderers are not permitted to offer firm prices except as provided for in the Price Schedule, and if the tenderer offers firm prices in contravention of this clause the tender offer shall be declared non-responsive.

9.5 Items 1 – 9

The values of A, B, C and D shall total 100%. The tenderer shall indicate below the (%) values of B to D he intends using for the duration of the Contract. Complete columns 1 to 5 if value of D is greater than 0%. More lines to be added for items 7 to 9 if required.

Item no	DESCRIPTION	A Fixed (Min 10%)	B Labour South African CPI	C Manufactures Pricelist (complete Clause 10.6)	D Exchange rate (complete clause 10.5)	Total (100%)	(1) Unit amount and denomination of foreign currency required	(2) Rate of exchange as at 14 days prior to date of tender	(3) Equivalent in Rand, of foreign currency content (columns 1&2)	(4) Unit Amount of South African Content	(5) Total unit amount (equivalent in Rand of columns 3+4) (Excl. VAT)
1.1.1	Basic OBC	(%)	(%)	(%)	(%)	100			(R)	(R)	(R)
1.1.2	Dual SIM upgrade for OBC					100					
1.1.3	Wi-Fi upgrade for OBC					100					
1.1.4	Wireless RF tracking unit upgrade for OBC					100					
1.1.5	Movement sensor upgrade for OBC					100					
1.1.6	Proximity sensor upgrade for OBC					100					
1.1.7	CAN BUS upgrade for OBC					100					
1.1.8	MPI upgrade for OBC					100					
1.1.9	In Vehicle storage device for OBC					100					
1.2.1	Mobile Data Terminal bracket and cradle					100					
1.2.2	Basic in vehicle LAN					100					
1.2.3	3G modem and SIM upgrade for LAN					100					
1.2.4	CCTV camera for odometer reading upgrade					100					
1.2.5	Sound microphone upgrade					100					
1.2.6	CCTV Dash camera upgrade					100					
1.2.7	CCTV external camera upgrade					100					

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Item no	DESCRIPTION	A Fixed (Min 10%)	B Labour South African CPI	C Manufactures Pricelist (complete Clause 10.6)	D Exchange rate (complete clause 10.5)	Total (100%)	(1) Unit amount and denomination of foreign currency required	(2) Rate of exchange as at 14 days prior to date of tender	(3) Equivalent in Rand, of foreign currency content (columns 1&2)	(4) Unit Amount of South African Content	(5) Total unit amount (equivalent in Rand of columns 3+4) (Excl. VAT)
1.2.8	Mobile Data terminal - Standard	(%)	(%)	(%)	(%)	100		13	(R)	(R)	(R)
1.2.9	Mobile Data Terminal- Ruggedised					100		13			
1.3.1	One Bin counting and tag reading unit(1 of 2 for dual lifting truck)					100		13			
1.3.2	One external CCTV camera control and video display unit (4 x power over USB camera inputs, 10 inch display)					100		13			
1.3.3	One external CCTV camera (USB)					100		13			
1.3.4	Portable RFID reader - Basic store use					100		13			
1.3.5	Portable RFID reader - Field use					100		13			
1.3.6	Portable RFID reader - Executive use					100		13			
1.4.1	SCADA Unit					100		13			
1.5.1	One Portable toilet/rap counting and tagging unit					100		13			
2.1.1	GPS antenna					100		13			
2.1.2	GSM antenna					100		13			
2.1.3	Wi-Fi antenna					100		13			
2.1.4	Dallas tag reader					100		13			
2.1.5	Dallas tag reader with tag clip lock					100		13			
2.1.6	Starter inhibitor relay					100		13			
2.1.7	Emergency button					100		13			
2.1.8	Voltage sensor					100		13			

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2.1.9	RPM sensor	(%)	(%)	(%)	(%)	100				(R)	(R)
2.1.10	CAN BUS interface					100					
2.1.11	Dallas tag programmer					100					
2.1.12	OBC loom - 3meters					100					
2.1.13	OBC loom - 5 meters					100					
2.2.1	100 x RFID tags					100					
2.2.2	1000 x RFID tags					100					
2.2.3	10 000 x RFID tags					100					
2.2.4	RFID reader for truck					100					
2.2.5	Buzzer for truck					100					
2.2.6	Flashing light for truck					100					
2.2.7	Loom for truck unit (1 of 2)					100					
2.3.1	Loom					100					
2.3.2	GPS antenna					100					
2.3.3	GSM antenna					100					
2.4.1	100 x RFID tags for toilets					100					
2.4.2	1000 x RFID tags for toilets					100					
2.4.3	10 000 x RFID tags for toilets					100					
2.4.4	100 x RFID tags for standpipes					100					
2.4.5	100 x RFID tags for taps					100					
2.4.6	1000 x RFID tags for standpipes					100					
2.4.7	1000 x RFID tags for taps					100					
2.4.8	RFID tag reader for portable unit					100					

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2.4.9	Battery for portable unit	(%)	(%)	(%)	(%)	100					
3.1	Install OBC in vehicle					100					
3.2	De install OBC from vehicle					100					
3.3	Install one bin lifting and tag reading unit in truck (1 of 2 for dual lifting truck)					100					
3.4	De install one bin lifting and tag reading unit in truck (1 of 2 for dual lifting truck)					100					
3.5	Install in vehicle bracket and cradle					100					
3.6	De install in vehicle bracket and cradle					100					
3.7	Install in vehicle LAN					100					
3.8	De install in vehicle LAN					100					
3.9	Install RFID tag in a refuse bin					100					
3.10	Install RFID tag in chemical toilets					100					
3.11	Install RFID tag in containerised toilets					100					
3.12	Install RFID tag in portable flush toilets tanks					100					
3.13	Install RFID tag in full flush					100					
3.14	Install RFID tag in pitliners toilets					100					
3.15	Install RFID tag in modified Afrikan toilets					100					
3.16	Install RFID tag in and pour flush toilets					100					
3.17	Install RFID tag in Mobisean toilets					100					

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3.18	Install RFID tag on standpipes	(%)	(%)	(%)	(%)	100			(R)	(R)	(R)
3.19	Install RFID tag on taps					100					
4.1.1	Maintenance of OBC in vehicle					100					
4.1.2	Maintenance Wireless RF tracking unit					100					
4.1.3	Maintenance in vehicle storage device					100					
4.2.1	Maintenance of In vehicle LAN					100					
4.2.2	Maintenance of CCTV camera					100					
4.2.3	Maintenance of sound microphone					100					
4.3.1	Maintenance of one (5in counting and tag reading unit(1 of 2 for dual lifting truck)					100					
4.3.2	Maintenance of one external CCTV camera/control and video display/unit (45 power over USB camera inputs/10 inch display)					100					
4.3.3	Maintenance of one external CCTV camera (USB)					100					
4.3.4	Maintenance of Portable RFID reader - Basic store use					100					
4.3.5	Maintenance of Portable RFID reader - Field use					100					
4.3.6	Maintenance of Portable RFID reader - Executive use					100					
4.4.1	Maintenance of portable toilet/tap counting and tag reading unit					100					
5.1	Project Manager					100					
5.2	Electronic Engineer					100					

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5.3	Mechanical engineer	(%)	(%)	(%)	(%)	100			(R)	(R)	(R)
5.4	GIS specialist					100					
5.5	IT Network Engineer					100					
5.6	IT Sequel database programmer					100					
5.7	IT firmware programmer/debugger					100					
5.8	Technician					100					
6.1	Radio GPS tracking service per radio per month					100					
6.2	Field asset tracking service, cost per scan					100					
6.3	Solid Waste Bin counting and tag reading system, cost per successful lift					100					
6.4	In vehicle LAN service per unit installed per month					100					
6.5	SCADA service					100					
6.6	Fleet management service per unit per month					100					
6.7	Vehicle recovery service per unit per month					100					
6.8	WAP database access service per radio per month					100					
6.9	25MB per month data only package on GSM APN					100					
6.10	Toilet counting and tag reading system, cost per successful service (scan)					100					
6.11	Tap counting and tagging system, cost per successful service (scan)					100					

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6.12	50MB per month data only package on GSM APN	(%)	(%)	(%)	(%)	100			(R)	(R)	(R)
6.13	100MB per month data only package on GSM APN					100					
6.14	250MB per month data only package on GSM APN					100					
6.15	500MB per month data only package on GSM APN					100					
6.16	1GB per month data only package on GSM APN					100					
6.17	5GB per month data only package on GSM APN					100					
6.18	10GB per month data only package on GSM APN					100					
6.19	100GB per month data only package on GSM APN					100					
7.1						100					
7.2						100					
7.3						100					
7.4						100					
8.1						100					

Item no	DESCRIPTION	A Fixed (Min 10%)	B Labour South African CPI	C Manufactures Pricelist (complete Clause 10.6)	D Exchange rate (complete clause 10.5)	Total (100%)	(1) Unit amount and denomination of foreign currency required	(2) Rate of exchange as at 14 ~~days~~ prior to date of tender	(3) Equivalent in Rand, of foreign currency content (columns 1&2) (R)	(4) Unit Amount of South African Content (R)	(5) Total unit amount (equivalent in Rand of columns 3+4) (Excl. VAT)
8.2		(%)	(%)	(%)	(%)	(%)					
8.3						100					
8.4						100					
						100					
9.1						100					
9.2						100					
9.3						100					
9.4						100					

- 9.6 The City will **not allow** any escalation in respect of **Foreign CPI Indices**.
- 9.7 Pricing will be fixed for the first year with respect to CPI. Thereafter annual CPI adjustments will be allowed based on previous 12 months average CPI increase.
- 9.8 **Rate of exchange**

Where the tender prices quoted are Subject to Adjustment the following shall apply:

Exchange Rate/s on which tender is based

Name of Bank. .

End date applicable for variation (i.e.) Date of shipment received (waybill), in terms of Forward Cover Contract, etc:

the supplier must immediately make appropriate arrangements to take out Forward Cover to avoid further fluctuations in the Rand value of the contract.

9.15 In the event of clause 5 above, the supplier must ensure that the Director : Supply Chain Management is furnished with a full set of supporting documents(e.g. Bill of Entry, Proof of Purchase of Foreign Exchange from Bank) and Foreign Invoice – before payment for the imported goods can be claimed.

9.16 This condition may be varied by a written instruction attached to the Form of Offer and Acceptance, which will be signed on confirmation of the contract award to the successful tenderer.

10 **Tenderers Who Are Not Manufacturers: Supplier Price List**

The tender price shall be subject to adjustment based on Supplier's Price Lists.

Supplier: _____

Date of Price List/Quotation upon which tenderer is based _____

Price List/Quotation Reference Number _____

N.B.

- The above information must be provided for each item supplied to the Tenderer.
- Copies of price lists on which tender prices are based must be enclosed for all items.
- Tenderers will be entitled to claim only the difference between the cost of the product at the time of tendering and the new cost. Documentation to this effect must be submitted with each claim.

11 Notwithstanding anything to the contrary contained in the Council's Conditions of Tender, Memorandum of Agreement or the Price Schedule, any claim for an increase in the Tender prices herein quoted shall be submitted in writing to the City Manager, City of Cape Town, P O Box 655, Cape Town, 8000, in the form of a written letter (not in form of an invoice or a general circular) **before** the said increase is to become effective. This is possible, as the original Tender itself may be based on three-month-old indices, and escalations may likewise be based on three-month-old revised indices. The Council reserves the right to withhold payment of any escalation while only provisional figures is available until the final (revised) figures are issued by the Government's Central Statistical Services.

When submitting any such claim, the Tenderer shall indicate the actual amount claimed for each item. A mere notification of a claim for an increase without stating the new price claimed for each item shall, for the purpose of this clause, not be regarded as a valid claim.

Schedule 11: Certificate of Independent Tender Determination

I, the undersigned, in submitting this tender **387G/2015/16 Supply, Install and Maintain Integrated Engineering Communications System**
in response to the tender invitation made by THE CITY OF CAPE TOWN, do hereby make the following statements, which I certify to be true and complete in every respect:

I certify, on behalf of:

____ (Name of tenderer)

That:

1. I have read and I understand the contents of this Certificate;
2. I understand that this tender will be disqualified if this Certificate is found not to be true and complete in every respect;
3. I am authorised by the tenderer to sign this Certificate, and to submit this tender, on behalf of the tenderer;
4. Each person whose signature appears on this tender has been authorised by the tenderer to determine the terms of, and to sign, the tender on behalf of the tenderer;
5. For the purposes of this Certificate and this tender, I understand that the word 'competitor' shall include any individual or organisation other than the tenderer, whether or not affiliated with the tenderer, who:
 - (a) has been requested to submit a tender in response to this tender invitation;
 - (b) could potentially submit a tender in response to this tender invitation, based on their qualifications, abilities or experience; and
 - (c) provides the same goods and services as the tenderer and/or is in the same line of business as the tenderer.
6. The tenderer has arrived at this tender independently from and without consultation, communication, agreement or arrangement with any competitor. However, communication between partners in a joint venture or consortium¹ will not be construed as collusive price quoting.
(¹ Consortium: 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.)
7. In particular, without limiting the generality of paragraphs 5 and 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 tender;
 - (e) the submission of a tender which does not meet the specifications and conditions of the tender; or
 - (f) tendering with the intention not to win the contract.
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 tender invitation relates.
9. The terms of this tender have not been and will not be disclosed by the tenderer, directly or indirectly, to any competitor, prior to the date and time of the official tender 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 tenders and contracts, tenders that are suspicious will be reported to the Competition Commission for investigation, possible imposition of administrative penalties in terms of section 59 of the Competition Act, Act 89 of 1998, and/or 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 10 (ten) years in terms of the Prevention and Combating of Corrupt Activities Act, Act 12 of 2004, or any other applicable legislation.

Signature
Print name
On behalf of

(authorised)

Date

2016-08-10

Schedule 12: Contract Documents

ANNEXURE 1: Form of Guarantee / Performance Security

FORM OF GUARANTEE / PERFORMANCE SECURITY

GUARANTOR DETAILS AND DEFINITIONS

"Guarantor" means:

Physical address of Guarantor:

"Supplier" means:

"Contract Sum" means: The accepted tender amount (INCLUSIVE OF VAT) of R.....

Amount in words:

"Guaranteed Sum" means: The maximum amount of R.....

Amount in words:

"Contract" means: The agreement made in terms of the Form of Offer and Acceptance for tender no 387G/2015/16 and such amendments or additions to the contract as may be agreed in writing between the parties.

1. The Guarantor's liability shall be limited to the amount of the Guaranteed Sum.
2. The Guarantor's period of liability shall be from and including the date of issue of this Guarantee/Performance Security up to and including the termination of the Contract or the date of payment in full of the Guaranteed Sum, whichever occurs first.
3. The Guarantor hereby acknowledges that:
 - 3.1 any reference in this Guarantee/Performance to "Contract" is made for the purpose of convenience and shall not be construed as any intention whatsoever to create an accessory obligation or any intention whatsoever to create a suretyship;
 - 3.2 its obligation under this Guarantee/Performance Security is restricted to the payment of money.
4. Subject to the Guarantor's maximum liability referred to in 1, the Guarantor hereby undertakes to pay the City of Cape Town the sum due and payable upon receipt of the documents identified in 4.1 to 4.3:
 - 4.1 A copy of a first written demand issued by the City of Cape Town to the Supplier stating that payment of a sum which is due and payable has not been made by the Supplier in terms of the Contract and failing such payment within seven (7) calendar days, the City of Cape Town intends to call upon the Guarantor to make payment in terms of 4.2;
 - 4.2 A first written demand issued by the City of Cape Town to the Guarantor at the Guarantor's physical address with a copy to the Supplier stating that a period of seven (7) days has elapsed since the first written demand in terms of 4.1 and the sum has still not been paid.
5. Subject to the Guarantor's maximum liability referred to in 1, the Guarantor undertakes to pay to the City of Cape Town the Guaranteed Sum or the full outstanding balance upon receipt of a first written demand from the City of Cape Town to the Guarantor at the Guarantor's physical address calling up this Guarantee / Performance Security, such demand stating that:
 - 5.1 the Contract has been terminated due to the Supplier's default and that this Guarantee/Performance Security is called up in terms of 5; or

- 5.2 a provisional or final sequestration or liquidation court order has been granted against the Supplier and that the Guarantee/Performance Guarantee is called up in terms of 5; and
- 5.3 the aforesaid written demand is accompanied by a copy of the notice of termination and/or the provisional/final sequestration and/or the provisional liquidation court order.
6. It is recorded that the aggregate amount of payments required to be made by the Guarantor in terms of 4 and 5 shall not exceed the Guarantor's maximum liability in terms of 1.
7. Where the Guarantor has made payment in terms of 5, the City of Cape Town shall upon the termination date of the Contract, submit an expense account to the Guarantor showing how all monies received in terms of this Guarantee/Performance Security have been expended and shall refund to the Guarantor any resulting surplus. All monies refunded to the Guarantor in terms of this Guarantee/Performance Security shall bear interest at the prime overdraft rate of the City of Cape Town's bank compounded monthly and calculated from the date payment was made by the Guarantor to the City of Cape Town until the date of refund.
8. Payment by the Guarantor in terms of 4 or 5 shall be made within seven (7) calendar days upon receipt of the first written demand to the Guarantor.
9. Payment by the Guarantor in terms of 5 will only be made against the return of the original Guarantee/Performance Security by the City of Cape Town.
10. The City of Cape Town shall have the absolute right to arrange its affairs with the Supplier in any manner which the City of Cape Town may deem fit and the Guarantor shall not have the right to claim his release from this Guarantee /Performance Security on account of any conduct alleged to be prejudicial to the Guarantor.
11. The Guarantor chooses the physical address as stated above for the service of all notices for all purposes in connection herewith.
12. This Guarantee/Performance Security is neither negotiable nor transferable and shall expire in terms of 2, where after no claims will be considered by the Guarantor. The original of this Guarantee / Performance Security shall be returned to the Guarantor after it has expired.
13. This Guarantee/Performance Security, with the required demand notices in terms of 4 or 5, shall be regarded as a liquid document for the purposes of obtaining a court order.
14. Where this Guarantee/Performance Security is issued in the Republic of South Africa the Guarantor hereby consents in terms of Section 45 of the Magistrate's Courts Act No 32 of 1944, as amended, to the jurisdiction of the Magistrate's Court of any district having jurisdiction in terms of Section 28 of the said Act, notwithstanding that the amount of the claim may exceed the jurisdiction of the Magistrate's Court.

Signed at

Date

Guarantor's signatory (1)

Capacity

Guarantor's signatory (2)

Capacity

Witness signatory (1)

Witness signatory (2)

Schedule 12: Contract Documents**ANNEXURE 1: Form of Guarantee / Performance Security**

The following financial institutions are currently (as at 23 August 2013) approved for issue of contract guarantees to the City:

National Banks:

International Banks (with branches in SA):

Insurance companies:

1.

Schedule 12: Contract Documents
NOT APPLICABLE
ANNEXURE 2: Form of Advance Payment Guarantee

ADVANCE PAYMENT GUARANTEE**GUARANTOR DETAILS AND DEFINITIONS**

"Guarantor" means:

Physical address of guarantor:

"Supplier" means:

"Contract Sum" means: The accepted tender amount (INCLUSIVE of VAT) of R

Amount in words:

"Contract" means: The agreement made in terms of the Form of Offer and Acceptance and such amendments or additions to the Contract as may be agreed in writing between the parties.

"Plant and materials" means: The Plant and materials in respect of which an advance payment prior to manufacture is required, which the City of Cape Town has agreed may be subject to advance payment, such Plant and materials being listed in the Schedule of Plant and materials.

"Schedule of Plant and materials" means: A list of Plant and materials which shows the value thereof to be included in the Guaranteed Advance Payment Sum.

"Guaranteed Advance Payment Sum" means: The maximum amount of R

Amount in words:

1. The Guarantor's liability shall be limited to the amount of the Guaranteed Advance Payment Sum.
2. The Guarantor's period of liability shall be from and including the date of issue of this Advance Payment Guarantee and up to and including the termination of the Contract or the date of payment in full of the Guaranteed Advance Payment Sum, whichever occurs first.
3. The Guarantor hereby acknowledges that:
 - 3.1 any reference in this Advance Payment Guarantee to the Contract is made for the purpose of convenience and shall not be construed as any intention whatsoever to create an accessory obligation or any intention whatsoever to create a suretyship;
 - 3.2 its obligation under this Advance Payment Guarantee is restricted to the payment of money.
4. Subject to the Guarantor's maximum liability referred to in 1, the Guarantor hereby undertakes to pay the City of Cape Town the sum advanced to the Supplier upon receipt of the documents identified in 4.1 to 4.3:
 - 4.1 A copy of a first written demand issued by the City of Cape Town to the Supplier stating that payment of a sum advanced by the City of Cape Town has not been repaid by the Supplier in terms of the Contract ("default") and failing such payment within seven (7) calendar days, the City of Cape Town intends to call upon the Guarantor to make payment in terms of 4.2;
 - 4.2 A first written demand issued by the City of Cape Town to the Guarantor at the Guarantor's physical address with a copy to the Supplier stating that a period of seven (7) calendar days has elapsed since the first written demand in terms of 4.1 and the sum advanced has still not been repaid by the Supplier.
5. Subject to the Guarantor's maximum liability referred to in 1, the Guarantor undertakes to pay to the City of Cape Town the Guaranteed Advance Payment Sum or the full outstanding balance not repaid upon receipt of a first written demand from the City of Cape Town to the Guarantor at the Guarantor's physical address calling up this Advance Payment Guarantee, such demand stating that:
 - 5.1 the Contract has been terminated due to the Supplier's default and that this Advance Payment Guarantee is called up in terms of 5; or
 - 5.2 a provisional or final sequestration or liquidation court order has been granted against the Supplier and that the Advance

Payment Guarantee is called up in terms of 5; and

- 5.3 the aforesaid written demand is accompanied by a copy of the notice of termination and/or the provisional/final sequestration and/or the provisional liquidation court order.
6. It is recorded that the aggregate amount of payments required to be made by the Guarantor in terms of 4 and 5 shall not exceed the Guarantor's maximum liability in terms of 1.
7. Payment by the Guarantor in terms of 4 or 5 shall be made within seven (7) calendar days upon receipt of the first written demand to the Guarantor.
8. Payment by the Guarantor in terms of 5 will only be made against the return of the original Advance Payment Guarantee by the City of Cape Town.
9. The City of Cape Town shall have the absolute right to arrange its affairs with the Supplier in any manner which the City of Cape Town may deem fit and the Guarantor shall not have the right to claim his release from this Advance Payment Guarantee on account of any conduct alleged to be prejudicial to the Guarantor.
10. The Guarantor chooses the physical address as stated above for the service of all notices for all purposes in connection herewith.
11. This Advance Payment Guarantee is neither negotiable nor transferable and shall expire in terms of 2, whereafter no claims will be considered by the Guarantor. The original of this Guarantee shall be returned to the Guarantor after it has expired.
12. This Advance Payment Guarantee, with the required demand notices in terms of 4 or 5, shall be regarded as a liquid document for the purposes of obtaining a court order.
13. Where this Advance Payment Guarantee is issued in the Republic of South Africa the Guarantor hereby consents in terms of Section 45 of the Magistrate's Courts Act No 32 of 1944, as amended, to the jurisdiction of the Magistrate's Court of any district having jurisdiction in terms of Section 28 of the said Act, notwithstanding that the amount of the claim may exceed the jurisdiction of the Magistrate's Court.

Signed at

Date

Guarantor's signatory (1)

Capacity

Guarantor's signatory (2)

Capacity

Witness signatory (1)

Witness signatory (2)

Schedule 12: Contract Documents

NOT APPLICABLE

Advance Payment Schedule

This Advance Payment Schedule is to be read in conjunction with clause 7.5.3 in the SCC. The purpose of this schedule is to itemise specific plant and materials for which the CCT is prepared to make advance payment to the supplier, subject to the conditions below.

The items of plant and materials which have been identified by the CCT as being suitable for advance payment in terms of the Contract are listed in the table below. Should an item or items be added to the list at tender stage by a tenderer, such item(s) will not be binding on the CCT.

Plant and materials which have been manufactured and are stored by the supplier	Plant and materials yet to be manufactured and for which a deposit with order is required from the supplier by a third party manufacturer/supplier, and which may be stored by the supplier:
DRAFTER TO LIST: Steel gantries for overhead signage	Imported ductile iron pipes
Closed circuit television equipment for road traffic surveillance	Pipes and valves for large diameter pipelines
Precast concrete beams	
Conditions: 1) The supplier can only rely on advance payment being permitted by the CCT in respect of the plant and materials listed in the table above. The CCT may, however, permit advance payment for other plant and materials in exceptional circumstances and at its sole discretion, during the course of the Contract, and upon reasonable request from the supplier. 2) Advance payment for the purposes of deposits will only be provided up to a limit of [DRAFTER TO SELECT PERCENTAGE: %] of the value of any one item being claimed. 3) The supplier shall provide the CCT with documentary evidence of the terms and conditions for which a deposit with order is required by a third party manufacturer/supplier, together with the advance payment guarantee. 4) The supplier will also be permitted to obtain advance payment for the balance of the value of the plant and materials in respect of which he has paid a deposit, for an item which after manufacture is stored by the supplier. The supplier shall, in respect of such payment, provide an advance payment guarantee, either for such balance or, if the advance payment guarantee in respect of the deposit is to be returned by the CCT upon request, for the whole value of the item.	

Schedule 12: Contract Documents

ANNEXURE 3: Monthly Project Labour Report (Example)

ANNEX 1

CITY OF CAPE TOWN MONTHLY PROJECT LABOUR REPORT

Instructions for completing and submitting forms

General

- 1 The Monthly Project Labour Reports must be completed in full, using typed, capital letter characters; alternatively, should a computer not be available, handwritten in black ink.
- 2 Incomplete / incorrect / illegible forms will not be accepted.
- 3 Any conditions relating to targeted labour stipulated in the Contract (in the case of contracted out services or works) shall apply to the completion and submission of these forms.
- 4 This document is available in Microsoft Excel format upon request from the City's EPWP office, tel 021 400 9406, email EPWPLR@capetown.gov.za.

Project Details

- 5 If a field is not applicable insert the letters: NA
- 6 Either a Contract (in the case of contracted out services or works) or a Works Project (in the case of direct employment by the City) name and number must be inserted. The name of the contract or works project may be abridged if necessary. In the case of term tenders the contract name and number must reflect the term tender as advertised.
- 7 On completion of the contract or works project the anticipated end date must be updated to reflect the actual end date.

Beneficiary Details and Work Information

- 8 Care must be taken to ensure that beneficiary details correspond accurately with the beneficiary's ID document.

- 9 A new beneficiary is one in respect of which a new employment contract is signed in the current month.
- 10 Was the beneficiary sourced from the City's job seeker database?
- 11 The contract end date as stated in the beneficiary's employment contract.
- 12 "On the job" training shall be included in the number of days worked. Where a beneficiary has not worked in a particular month, the beneficiary's name shall not be reflected on this form at all for the month in question.
- 13 Workers earning more than the maximum daily rate (currently R270 excluding any benefits) shall not be reflected on this form at all.

Submission of Forms

- 14 Signed hardcopy forms must be scanned and submitted to the City's project manager in electronic (.pdf) format, together with the completed form in Microsoft Excel format.
- 15 Scanned copies of all applicable supporting documentation must be submitted along with each monthly project labour report. Copies of employment contracts and ID documents are only required in respect of new beneficiaries.
- 16 If a computer is not available hardcopy forms and supporting documentation will be accepted.

PROJECT DETAILS

Numbers in cells below e.g. (6) refer to the relevant instruction above for completing and submitting forms

CONTRACT OR WORKS					CONTRACT OR WORKS										
PROJECT NAME: (6)					PROJECT NUMBER: (6)										
DIRECTORATE: TRANSPORT, ROADS AND STORMWATER					DEPARTMENT: ROADS AND STORMWATER										
CONTRACTOR OR VENDOR NAME:					CONTRACTOR OR VENDOR E-MAIL ADDRESS: (type email address here)										
CONTRACTOR OR VENDOR CONTACT PERSON:					CONTRACTOR OR VENDOR TEL. NUMBER:										
PROJECT LABOUR REPORT CURRENT MONTH (mark with "X")					CELL WORK										
JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR (insert last 2 digits)	2	0	3
							X								

ACTUAL START DATE (yyyy/mm/dd)					ANTICIPATED / ACTUAL END DATE (yyyy/mm/dd) (7)				
TOTAL PROJECT EXPENDITURE / VALUE OF WORK DONE TO DATE (INCLUDING ALL COSTS BUT EXCLUDING VAT)									
R									

Schedule 12: Contract Documents

ANNEXURE 3: Monthly Project Labour Report (cont)

Date

ANNEX 1 (continued)

CITY OF CAPE TOWN

MONTHLY PROJECT LABOUR REPORT

BENEFICIARY DETAILS AND WORK INFORMATION

SHEET 1 OF 1

YEAR AND MONTH (e.g. AUG): 2 0 1 3 AUG.

CONTRACT OR WORKS PROJECT NUMBER: 1230/2013/14

B in columns below stands for Beneficiary

No.	First name (8)	Surname (8)	ID number (9)	New B (Y/N)	Gender (M/F)	Dis- abled (Y/N)	Job seeker data - base (Y/N)	B contract start date (DDMMYY)	B contract end date (DDMMYY)	No. days worked this month (excl. training) (12)	Rate of pay per day (R - c) (13)
1	FIRST NAME	SURNAME	1 2 3 4 5 6 7 8 9 10 11 12 13	Y	M	Y	Y	1 2 3 4 5 6	1 2 3 4 5 6	12	1 2 3 - 4 5
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											

Numbers in header row e.g (8) refer to the relevant instruction for completing and submitting forms

Declared by Contractor or
Vendor to be true and correct:

(name).....

(signature).....

Date:

Received by Employer's Agent /
Representative:

(name).....

(signature).....

Date:

ANNEXURE 4: BBBEE Sub-Contract Expenditure Report (Pro Forma)

TENDER NO. AND DESCRIPTION: 387G/2015/16 Supply, Install and Maintain Integrated Engineering Communications System

SUPPLIER: _____

B-BBEE SUB-CONTRACT EXPENDITURE REPORT

Rand Value of the contract (as defined in Schedule 4: Preference Schedule) (P*)

R

B-BBEE Status Level of Prime Contractor

Name of Sub-contractor (list all)	B-BBEE Status Level of supplier ¹	Total value of Sub-contract (excl. VAT) ¹	Value of Sub-contract work to date (excl. VAT) ¹	Value of Sub-contract work to Sub-contractors with a lower B-BBEE Status Level than supplier
Sub-contractor A		R	R	R
Sub-contractor B		R	R	R
Sub-contractor C		R	R	R
¹ Documentary evidence to be provided				Total: R Expressed as a percentage of P* %

Signatures

Declared by supplier to be true and correct:

Date: _____

Verified by CCT Project Manager:

Date: _____

Schedule 12: Contract Documents

ANNEXURE 5: Partnership/ Joint Venture (JV) / Consortium/ Expenditure Report (Pro Forma)

TENDER NO. AND DESCRIPTION: 387G/2015/16 Supply, Install and Maintain Integrated Engineering Communications System

SUPPLIER: _____

PARTNERSHIP/ JOINT VENTURE (JV)/ CONSORTIUM EXPENDITURE REPORT

Rand value of the contract (as defined in Schedule 4: Preference Schedule) (P*)	R	B-BBEE Status Level of Partnership/ Joint Venture (JV)/ Consortium	
---	---	--	--

Name of partners to the Partnership/ JV / Consortium (list all)	B-BBEE Status Level of each partner at contract award	Percentage contribution of each partner as per the Partnership/ JV/ Consortium Agreement ¹	Total value of partner's contribution (excl. VAT) ¹ $B = A\% \times P^*$	Value of partner's contribution to date (excl. VAT) ¹ C	Value of partner's contribution as a percentage of the work executed to date $D = C/P^* \times 100$
A					
Partner A		%	R	R	%
Partner B		%	R	R	%
Partner C		%	R	R	%

¹Documentary evidence to be provided

Signatures

Declared by
supplier to be
true and
correct:

Date: _____

Verified by
CCT Project
Manager:

Date: _____

Schedule 12: Contract Documents

ANNEXURE 6: Insurance Broker's Warranty (Pro Forma)

26 July 2016

CITY OF CAPE TOWN
City Manager
Civic Centre
12 Hertzog Boulevard
Cape Town
8000

Dear Sir

TENDER NO:

TENDER DESCRIPTION: Supply, Install and Maintain Integrated Engineering Communications System

NAME OF SUPPLIER:

Section: Public Liability

Sum Insured: R 20 000 000 (Products Liability – R 2 500 000)

I, the undersigned, do hereby confirm and warrant that all the insurances required in terms of the abovementioned contract have been issued and/or in the case of blanket/umbrella policies, have been endorsed to reflect the interests of the CITY OF CAPE TOWN with regard to the abovementioned contract, and that all the insurances and endorsements, etc, are all in accordance with the requirements of the contract.

I furthermore confirm that all premiums in the above regard have been paid.

Yours faithfully

SCHEDULE 13**LIST OF DOCUMENTATION**

SECTION	TITLE OF DOCUMENT	TENDER CLAUSE
0		SCHEDULES
1	Resolution by Directors	Schedule 1 : Resolution
1	Vendor Registration	Schedule 1 : Resolution
1	VAT Clearance	Schedule 1 : Resolution
1	Covering Letter	Schedule 1 : Resolution
1	Company Profile	Schedule 1 : Resolution
1	Motorola Certification	Schedule 1 : Resolution
1	Microsoft Certification	Schedule 1 : Resolution
1	Safe Disposal Certificate	Schedule 1 : Resolution
1	Accedited Certification	Schedule 1 : Resolution
1	Fitment Warranty	Schedule 1 : Resolution
2		Schedule 2 : Partnerships
2		Schedule 2 : Partnerships
2		Schedule 2 : Partnerships
2		Schedule 2 : Partnerships
2		Schedule 2 : Partnerships
3	Financials 2014	Schedule 3 : Procurement > R 10 Million
3	Financials 2015	Schedule 3 : Procurement > R 10 Million
3	Financials 2016	Schedule 3 : Procurement > R 10 Million
4	BBBEEE	Schedule 4 : Preference Schedule
5	-	Schedule 5 : Declaration of Interest
6	-	Schedule 6 : Conflict of interest
7	-	Schedule 7 : Declaration of Past Supply Chain Practice
8	-	Schedule 8 : Authorisation to Deduct
9	ROE Schedule	Schedule 9 : Contract Price Adjustment
10	Certificate	Schedule 10 : Occupational Health and Safety
10	Safety Plan	Schedule 10 : Occupational Health and Safety
11	-	Schedule 11 : Certificate of Independence
12	-	Schedule 12 : Performance Gaurantee
12	-	Schedule 12 : Advance Payment
12	-	Schedule 12 : Monthly Project Labour Report
12	-	Schedule 12 : BBBEE Sub-Contractor Expenditure
12	-	Schedule 12 : Partnership Expenditure
12	-	Schedule 12 : Insurance Broker Warranty
13	-	Schedule 13 : Supporting Documents
14		PRICE LIST
15	Price List	Price List
16		IN FIELD EQUIPMENT
17	-	Vehicle on Board Computer (OBC)
17	OBCU Units	
17	GSM Modules	
17	GPS Modules	High Precision
17	Wifi Modules	
17	LTE Module	

17	Movement Sensor	
17	Proximity Sensor	
17	Beame - RF Beacon unit	
17	Early Warning Autowatch	
17	ODBII Explained	
17	CAN Bus	
17	MPI	
17	iButton Reader	
17	iButton Clip and Hold Reader	
17	GPS Antenna	
17	GSM Antenna	
17	Fleet Harness	
17	iButton Tag Programmer	
17	iButton Tags	
18	-	Network Storage Device
18	Overview of Solution	Refer to 58
18	SD Cards	
18	Portable Drives	
18	Solid State Drive	
18	Hard Drive	
19	-	In vehicle LAN
19	Over view of Solution	Refer to 58
	Basic In vehicle LAN	Kit with M10
20	MDT Vehicle Bracket	
20	Frame Design	
20	Frame	
20	Bracket Design	
20	Bracket	
21	Tablets	Must state OS
21	3 " Tablet	
21	5 " Tablet	
21	7" Tablet	
21	10" Tablet	
21	12" Tablet	
21	15" Tablet	
22	Ruggerdised Tablets	
22	4" Tablet	
22	5 " Tablet	
22	7" Tablet	
22	10" Tablet	
22	12" Tablet	
22	15 " Tablet	

23	Router	
23	M10 Unit	
23	M10 - GSM Module	
23	M10 - LTE Module	
23	M10 - Wifi Module	
24	Switch / APN	
24	USB Hub	
24	4 Port Ethernet	
24	4 Port POE	
24	4 Port APN	
24	GSM APN	
25	USB Dash / Body Camera Solution	Refer to 58
25	WebCam	
25	DashCam	
25	BodyCam	
25	USB Camera Solution	
25	S/C Mount Camera	
25	Lens - Wide Angle	
25	Lens - Normal Angle	
25	Lense - Zoom	
26	CCTV Camera Solution	
26	DVR	
26	Monitor Screen	
26	Inside Camera	
26	Outside Camera	
26	POE Camera Solution	
26	DVR	
26	Monitoring Screen	
26	Inside Camera	
26	Outside Camera	
27	USB Barcode Scanners	
27	1 D Scanner	
27	2 D Scanner	
27	2 D / RFID Scanner	
28	Vehicle Battery Protection	
28	Battery Buddy	
28	MicroDot Kit	
29	Invertor	
29	100W	

29	150W	
29	300W	
30	Lion Battery Packs	
30	10 Amp Hour	
30	16 Amp Hour	
30	20 Amp Hour	
31	-	Bin Counting and Tag Reading System
31	Overview of Solution	Refer to 58
32	Compactor Bin Reader	Refer to 58
32	Logger	Refer to 58
32	RFID Reader	Refer to 58
32	Lift Sensor	Refer to 58
32	RFID Reader Cable	Refer to 58
32	Lift Sensor Cable	Refer to 58
32	Power Cable	Refer to 58
32	Power Hose	Refer to 58
32	LED Buzzer Module	Refer to 58
33	RFID Readers	
33	Witrak - nano	
33	Witrak - standard	
33	PTR	Refer to 58
33	PTR - Battery Pack	Refer to 58
33	PTR - Survey Pole	
33	H2R2 Reader	
33	Tyre Tag Reader	
33	RFID Safety Vest	
34	RFID Tags	
34	Nail Tag	
34	Rivet Tag	
34	Flat Tag	
34	Card Tag	
34	KeyRing Tag	
34	Disc Tag	
34	Bracket Tag	
34	Metal Tag	
34	Brick Wall Tag	
34	Tyre Tag	
34	StandPipe Tag	

35	433Mhz Active Tag Readers	
35	Wavetrend RX50	
35	Wavetrend RX210	
35	Wavetrend RX211	
35	Wavetrend RX1510	
35	Wavetrend Antenna	
36		
36		
37	Wifi Tags	
39	-	SCADA
39	Overview of Solution	Refer to 58
40	Scada Field Equipment	
40	Spectrum PLC	Cost connectors and Power Supply
40	Mishubishi PLS	
40	M7 Harness	
40	GPS Extension Cable	
40	Scada Software	
40	Androit	
41		INFRASTRUCTURE
41	Understanding	Refer to 58
42	Server	
	Dell 530	
	Dell 720	
43	Router / Firewall	
	SonicWall	
	ADSL	
44	Switch - Unmanaged	
	HP 2620	
45	Switch - Managed	
	HP3500	
46	Server Cabinet	
	Datanet 43 U	
47	Patch Panel	

	19" Brush Panel	
48	Management Terminal	
	DHKV-10 / DHKS - 10	
49	In Rack Administration Terminal	
	19" Terminal	
50	KVM Switch - 16 Port	
	Rextron 16 KVM	
51	Server Operating System	
	Microsoft	
52	Application Software	
	RAMM Switch	
	RAMM Database Manager	
	RAMM Webservice	
	Anti-virus (Symantic)	
53	Wifi Access Points	
	Access Point, Antenna & power supply	
54	Ethernet Convertor	
	Convertors	
55	NAS - Network Access Storage	
	RAMM Nas	
	Dell NX400	
	Dell PowerEdge VRTX	
	WD Red Pro	
	WD Elements	
56	TOC - Technical Operations Centre	
	Laptops	
	Screens	
57	Library	
	Library Solution	
	Library Tag	
	Library Tag Reader	
58		SERVICES
	Solution	

	Structure to Deliver	
	RAMM Training	
	RAMM Reports	
	In Vehicle Installation Manual	
	Early Warning In Vehicle Installation Manual	
59	In Field Services	Refer to 58
	Vehicle CAN	
	ODBII - Implementation	
	Fleet	Refer to 58
	Camera	Refer to 58
	SCADA	Refer to 58
	Battery Management	Refer to 58
	Tyre Management	Refer to 58
60	Bureau Services	Refer to 58
	Fleet Service	Refer to 58
	Recovery Service	Refer to 58
	Street Car	Refer to 58
	SCADA	Refer to 58
	Battery Management	Refer to 58
	Tyre Management	Refer to 58
	Toilet Cleaning Management	Refer to 58
	Water Network Management	Refer to 58
	Pavement Furniture Management	Refer to 58
	Bin Tagging	Refer to 58
	Data Voice Service	Refer to 58



CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

FINANCE
SUPPLY CHAIN MANAGEMENT

Supply Chain Management

T:

E:

18 July 2019

Email: _____

Dear Sir/Madam

TENDER NUMBER: 387G/2015/16

DESCRIPTION: SUPPLY, INSTALL AND MAINTAIN INTEGRATED ENGINEERING COMMUNICATIONS SYSTEM

I refer to your **email** dated **7 June 2019**.

The above-mentioned contract's prices have been adjusted in terms of the conditions of the contract with effect from **1 July 2019** as follows:

ITEM NO:	DESCRIPTION	Rate (Excl. VAT)
1.	IN FIELD EQUIPMENT	
1.1	Vehicle On Board Computer (OBC)	
1.1.1	Basic OBC	R4 327.68
1.1.2	Dual SIM upgrade for OBC	R103.96
1.1.3	Wi-Fi upgrade for OBC	R685.75
1.1.4	Wireless RF tracking unit upgrade for OBC	R90.69
1.1.5	Movement sensor upgrade for OBC	R309.53
1.1.6	Proximity sensor upgrade for OBC	R1 373.17
1.1.7	CAN BUS upgrade for OBC	R732.58
1.1.8	MPI upgrade for OBC	R1 283.66
1.1.9	In Vehicle storage device for OBC	R4 378.09
1.2	In vehicle LAN	
1.2.1	Mobile Data Terminal bracket and cradle	R2 170.29
1.2.2	Basic in vehicle LAN	R3 324.75
1.2.3	3G modem and SIM upgrade for LAN	R1526.69
1.2.4	CCTV camera for odometer reading upgrade	R358.00
1.2.5	Sound microphone upgrade	R358.00
1.2.6	CCTV Dash camera upgrade	R1 680.71
1.2.7	CCTV external camera upgrade	R826.08

CIVIC CENTRE IZIKO LOLUNTU BURGERSENTRUM
12 HERTZOG BOULEVARD CAPE TOWN 8001 P O BOX 655 CAPE TOWN 8000
www.capetown.gov.za

Making progress possible. Together.

ITEM NO:	DESCRIPTION	Rate (Excl.VAT)
1.2.8	Mobile Data terminal – Standard	R10 925.61
1.2.9	Mobile Data Terminal- Ruggedised	R17 553.12
1.3	<u>Bin counting and tag reading system</u>	
1.3.1	One Bin counting and tag reading unit(1 of 2 for dual lifting truck)	R18 238.50
1.3.2	One external CCTV camera control and video display unit (4 x power over USB camera inputs, 10 inch display)	R16 233.46
1.3.3	One external CCTV camera (USB)	R854.56
1.3.4	Portable RFID reader – Basic store use	R3 190.00
1.3.5	Portable RFID reader – Field use	R4 707.44
1.3.6	Portable RFID reader - Executive use	R5 291.52
1.4	<u>SCADA devices</u>	
1.4.1	SCADA unit	R3 321.24
1.5	<u>Toilet and tap counting and tag reading system</u>	
1.5.1	One Portable toilet/tap counting and tagging unit	R4 707.44
2	IN FIELD SPARES	
2.1	<u>Basic OBC</u>	
2.1.1	GPS antenna	R185.24
2.1.2	GSM antenna	R74.63
2.1.3	Wi-Fi antenna	R163.17
2.1.4	Dallas tag reader	R112.25
2.1.5	Dallas tag reader with tag clip lock	R203.90
2.1.6	Starter inhibitor relay	R48.20
2.1.7	Emergency button	R24.73
2.1.8	Voltage sensor	R1.46
2.1.9	RPM sensor	R79.24
2.1.10	CAN BUS interface	R732.58
2.1.11	Dallas Tag Programmer	R844.38
2.1.12	OBC loom – 3meters	R364.44
2.1.13	OBC loom - 5 meters	R413.03
2.2	<u>Bin lifting and tagging</u>	
2.2.1	100 x RFID tags	R2 351.75
2.2.2	1000 x RFID tags	R23 313.00
2.2.3	10 000 x RFID tags	R224 950.00
2.2.4	RFID reader for truck	R4159.84
2.2.5	Buzzer for truck	R225.73
2.2.6	Flashing light for truck	R225.73
2.2.7	Loom for truck unit (1 of 2)	R321.42
2.3	<u>SCADA</u>	
2.3.1	Loom	R89.52
2.3.2	GPS antenna	R185.24
2.3.3	GSM antenna	R74.63
2.4	<u>Toilet and tap counting and tagging</u>	

ITEM NO:	DESCRIPTION	Rate (Excl.VAT)
2.4.1	100 x RFID tags for toilets	R2 350.60
2.4.2	1000 x RFID tags for toilets	R23 301.60
2.4.3	10 000 x RFID tags for toilets	R224 840.00
2.4.4	100 x RFID tags for standpipes	R3041.75
2.4.5	100 x RFID tags for taps	R3041.75
2.4.6	1000 x RFID tags for standpipes	R30 153.00
2.4.7	1000 x RFID tags for taps	R30 153.00
2.4.8	RFID tag reader for portable unit	R4 546.56
2.4.9	Battery for portable unit	R683.97
3	INSTALLATIONS	
3.1	Install OBC in vehicle	R864.77
3.2	De install OBC from vehicle	R461.21
3.3	Install one bin lifting and tag reading unit in truck (1 of 2 for dual lifting truck)	R2 027.22
3.4	De install one bin lifting and tag reading unit in truck (1 of 2 for dual lifting truck)	R1 081.18
3.5	Install in vehicle bracket and cradle	R1 308.81
3.6	De install in vehicle bracket and cradle	R698.03
3.7	Install in vehicle LAN	R1 308.81
3.8	De install in vehicle LAN	R698.03
3.9	Install RFID tag in a refuse bin	R18.71
3.1	Install RFID tag in chemical toilets	R29.11
3.11	Install RFID tag in containerised toilets	R29.11
3.12	Install RFID tag in portable flush toilets tanks	R29.11
3.13	Install RFID tag in full flush toilets	R29.11
3.14	Install RFID tag in pitliners toilets	R29.11
3.15	Install RFID tag in modified Afrisan toilets	R29.11
3.16	Install RFID tag in and pour flush Toilets	R29.11
3.17	Install RFID tag in Mobisan toilets	R29.11
3.18	Install RFID tag on standpipes	R33.27
3.19	Install RFID tag on taps	R33.27
4	MAINTENANCE – IN FIELD	
4.1	<u>In vehicle OBC installation</u>	
4.1.1	Maintenance of OBC in vehicle	R139.32
4.1.2	Maintenance Wireless RF tracking unit	R80.71
4.1.3	Maintenance in vehicle storage device	R23.06
4.2	<u>In vehicle LAN installation</u>	
4.2.1	Maintenance of In vehicle LAN	R23.06
4.2.2	Maintenance of CCTV camera	R23.06
4.2.3	Maintenance of sound microphone	R23.06
4.3	<u>Bin counting and tag reading system</u>	

ITEM NO:	DESCRIPTION	Rate (Excl.VAT)
4.3.1	Maintenance of one Bin counting and tag reading unit(1 of 2 for dual lifting truck)	R370.13
4.3.2	Maintenance of one external CCTV camera control and video display unit (4 x power over USB camera inputs, 10 inch display)	R139.32
4.3.3	Maintenance of one external CCTV camera (USB)	R23.06
4.3.4	Maintenance of Portable RFID reader – Basic store use	R23.06
4.3.5	Maintenance of Portable RFID reader – Field use	R46.12
4.3.6	Maintenance of Portable RFID reader - Executive use	R23.06
4.4	<u>Toilet and tap counting and tag reading system</u>	
4.4.1	Maintenance of portable toilet/tap counting and tag reading unit	R66.87
5	LABOUR RATES	
5.1	Project Manager	R772.42
5.2	Electronic Engineer	R617.52
5.3	Mechanical engineer	R617.52
5.4	GIS specialist	R449.11
5.5	IT Network Engineer	R392.97
5.6	IT Sequel database programmer	R392.97
5.7	IT firmware programmer/debugger	R280.69
5.8	Technician	R224.55
6	SERVICES	
6.1	Radio GPS tracking service per radio per month	R45.26
6.2	Field asset tracking service, cost per scan	R0.58
6.3	Solid Waste Bin counting and tag reading system, cost per successful lift	R0.20
6.4	In vehicle LAN service per unit installed per month	R138.29
6.5	SCADA service	R93.00
6.6	Fleet management service per unit per month	R138.29
6.7	Vehicle recovery service per unit per month	R80.71
6.8	WAP database access service per radio per month	R93.00
6.9	25MB per month data only package on GSM APN	R4.46
6.1	<u>Toilet counting</u> and tag reading system, cost per successful service (scan)	R0.58
6.11	<u>Tap counting</u> and tagging system, cost per successful service (scan)	R0.58
6.12	50MB per month data only package on GSM APN	R8.92
6.13	100MB per month data only package on GSM APN	R17.84
6.14	250MB per month data only package on GSM APN	R44.59
6.15	500MB per month data only package on GSM APN	R89.18
6.16	1GB per month data only package on GSM APN	R182.63
6.17	5GB per month data only package on GSM APN	R913.17
6.18	10GB per month data only package on GSM APN	R1 826.33
6.19	100GB per month data only package on GSM APN	R17 565.08

ITEM NO:	DESCRIPTION	Rate (Excl.VAT)
7	Optional items that are applicable to the product	
7.1	Vehicle On Board Computer	
	LTE Module	R1819.52
	GPS - High Precision	R1 407.45
	RPM Module	R79.24
	iButton - Driver	R73.46
	iButton - Crew or Material	R21.10
	M7 CAP BATTERY	R163.46
	M8-M11 Harness	R117.07
	1 M8 GSM GPS	R2 644.03
	MPI Product	R1 132.77
	MPI Harness	R234.14
	1 M11 Kit	R771.23
	OBD Harness - RS232 - J1962	R345.08
	J1962 Breakout cable	R175.61
	1 12V 30A Relay with Diode	R48.20
	1 24V 30A Relay with Doide	R70.02
7.2	Network Storage Service - NAS	
	Micro SD Card - 8 Gb	R60.33
	Micro SD Card - 16 Gb	R75.41
	Micro SD Card - 32 Gb	R122.97
	Micro SD Card - 64 Gb	R261.03
	SD Card - 8 Gb	R80.05
	SD Card - 16 Gb	R90.49
	SD Card - 32 Gb	R168.22
	SD Card - 64 Gb	R319.03
	Dell SSD- 120gb	R4 627.87
	Dell SSD- 200gb 1	R10 695.80
	Dell SSD- 200gb 2	R20 274.36
	Dell SSD- 200gb 3	R26 121.62
	Dell SSD- 400gb	R41 020.33
	Dell SSD- 800gb	R75 207.30
	Dell SSD- 1600gb	R146 397.06
	Samsung SSD - 512gb	R5 154.97
	Samsung SSD - 1Tb	R9 301.14
	Samsung SSD -2Tb	R18 827.99
	External Inclosure - 2.5"	R504.40
	SATA Drive - 1 Tb	R2 075.61
	SATA Drive - 2 Tb	R2 075.61
	SATA Drive - 3 Tb	R2 394.64
	Seagate 500gb Wifi Drive	R2 239.54

ITEM NO:	DESCRIPTION	Rate (Excl.VAT)
	Seagate 1 Tb Wifi Drive	R2 380.77
	Seagate 2 Tb Wifi Drive	R4 201.65
	Portable NAS - 2 bay- no drives	R6 640.43
	Portable NAS - 4 Bay - no drives	R9 448.67
7.3	In Vehicle LAN	
	LTE Module	R1 785.00
	Router - RB411U	R1 432.49
	USB A MALE TO USB A MALE - 1 METER	R61.85
	USB A MALE TO USB A MALE - 1 .5 METER	R74.22
	USB A MALE TO USB A MALE - 1 .8 METER	R86.59
	USB A MALE TO USB A MALE - 2 METER	R94.83
	USB A MALE TO USB MINI FEMALE L - 1 METER	R72.16
	USB A MALE TO USB MINI FEMALE L - 1.8 METER	R92.77
	USB A MALE TO USB MICRO MALE L - 1 METER	R72.16
	USB A MALE TO USB MICRO MALE L - 1.8 METER	R92.77
	USB Cable - 1.0m Power	R61.85
	USB Cable - 1.5m Power	R74.22
	USB Cable - 1.8m Power	R86.59
	USB - Ethernet Adaptor	R498.10
	USB Hub - Ethernet Adaptor	R693.55
7.4	MDT Vehicle Bracket	
	Frame Prototype	R18 193.00
	HARNESS - POWER + USB	R445.61
	LOCK - ABUS 30MM	R116.17
	LOCK - JAGUAR 40MM	R132.29
7.5	Tablets	
	15 " Tablet	R23 268.17
	12 " Tablet	R28 865.80
	BOR - 10" Tablet	R6 845.72
	MOR - 10" Tablet	R10 925.61
	TOR - 10" Tablet	R24 074.41
	7 " Tablet	R3 228.16
	5 " Tablet	R3 241.88
	4.5 " Tablet	R2 431.41
	Case for 7" tablet	R240.90
	Keyboard - USB	R221.63
	Keyboard - Wifi	R1 572.52
	Keyboard - Bluetooth	R1 088.29
	Keyboard - Bluetooth TOR	R3 437.99
	Mouse - Wireless	R240.90
	Mouse - USB	R164.64

ITEM NO:	DESCRIPTION	Rate (Excl. VAT)
	Mouse - Blue tooth	R483.01
	Carry Case 1 Tablet 10"	R361.96
	Carry Case 2 - Laptop	R1 332.99
	1 TOR -10" Tablet Dock	R4 002.96
7.6	Ruggerdised Tablets	
	10" Tablet	R17 553.12
	Windows 10" Tablet	R17 553.12
	7" Tablet	R8 524.36
	5" Tablet	R8 196.50
	4.7 " Tablet	R7 868.64
7.7	Router	
	M10 Unit	R3 324.75
	M10 - GSM Module	R1 526.69
	M10 - LTE Module	R1 777.19
	M10 - Wifi Module	R793.40
7.8	Switch / APN	
	4 Port USB Power Hub	R341.64
	8 Port POE	R7 843.42
	4 Port POE	R4 481.59
	4 Port APN	R704.90
	GSM APN	R587.95
	Mifi gsm hotspot	R1 511.94
7.9	Dash / Body Camera	
	WEBCAM - MICROSOFT VX-800 1,3MP	R380.16
	WEBCAM - MICROSOFT HD-3000 4MP	R567.75
	WEBCAM - LOGITECH C170 1.3MP	R296.27
	WEBCAM - LOGITECH C270 HD 3MP	R423.70
	WEBCAM - LOGITECH C310 HD 5MP	R657.31
	DASHCAM - EAGLEYE - SINGLE LENS	R1 390.93
	DASHCAM - QVIA - SINGLE LENS - WIFI	R3 813.26
	DASHCAM RMOR - QVIA - DOUBLE LENS - WIFI	R5 429.36
	DASHCAM RTOR - QVIA - DOUBLE LENS - WIFI	R6 518.87
	DASHCAM RMOR - LUKAS - DOUBLE LENS - WIFI	R5 429.36
	DASHCAM RTOR - LUKAS - DOUBLE LENS - WIFI	R6 034.64
	BODYCAM - MV-DBC-PRO	R9 561.95
	BODYCAM - REPLACEMENT CLIP	R1 146.59
	BODYCAM - OPTIONAL REMOTE MINI CAMERA	R1 777.74
	BODYCAM - REPLACEMENT BACKUP BATTERY	R3 881.58
	GO-PRO HERO4 BLACK	R10 441.08
	GO-PRO HERO4 SILVER	R9 280.95
	GO-PRO HERO SESSION	R4 988.50

ITEM NO:	DESCRIPTION	Rate (Excl.VAT)
	GO-PRO OMNI 360	R102 601.01
	GO-PRO JAWS FLEX CLAMP	R833.38
	GO-PRO GOOSNECK MOUNT	R333.26
	GO-PRO CHEST HARNESS	R666.67
	GO-PRO SUCTION CUP MOUNT	R666.67
	GO-PRO LOW PROFILE SWIVEL MOUNT	R499.97
	GO-PRO SMART REMOTE	R1 333.51
	Eguard - Location	R4 539.60
	Eguard - Camera	R9 613.86
7.10	USB Camera	
	S / C Mount Board Camera	R3 513.85
	S Mount Lense	R810.89
	C Mount Lense	R2567.81
7.11	RCA Camera	
	SCREEN - 7" - RCA	R949.33
	SCREEN - 7" - RCA 4CH QUAD SPLIT	R1315.02
	SCREEN - 7" - HDMI	R891.99
	DVR - 4 CH CAR DVR (2 X 32GB SD CARDS)	R6 303.74
	DVR - 4 CH CAR DVR (SUPPORT 2,5" HDD)	R7 564.74
	CAMERA - HEAVY DUTY CAR - CCD IR - FRONT/REAR	R700.66
	CAMERA - HEAVY DUTY CAR - AHD IR - FRONT/REAR	R876.19
	CAMERA - DAY/NIGHT CAR - CC IR - FRONT/REAR	R378.85
	CAMERA - REAR VIEW ONLY (IMAGE FLIPPED) CAR	R378.85
	CAMERA - 30X ZOOM - HAD CCD RS485-232	R1 461.30
	CAMERA - AHD 960P - PINHOLE SPY CAM	R876.19
7.12	POE Camera	
	DVR - 4 CH 720P HD	R1 834.70
	DVR - 8 CH 720P HD	R1 834.70
	DVR - 16 CH 720P HD	R3 539.58
	DVR - 4 CH 1080P FULL HD	R1 703.56
	DVR - 8 CH 1080P FULL HD	R2 621.57
	DVR - 16 CH 1080P FULL HD	R4 457.58
	NVR - 8 CH	R2 883.86
	NVR - 16 CH	R4 195.30
	CAMERA - DOME WEATHERPROOF 720P	R654.41
	CAMERA - DOME WEATHERPROOF 960P	R851.12
	CAMERA - BULLET WEATHERPROOF 720P	R785.55
	CAMERA - BULLET WEATHERPROOF 960P	R851.12
	CAMERA - DOME WEATHERPROOF 1080P PTZ	R8 472.71
	CAMERA - DOME WEATHERPROOF 2MP 1080P PTZ	R10 893.83
	CAMERA - DOME WEATHERPROOF 3MP 1080P PTZ	R13 314.95

ITEM NO:	DESCRIPTION	Rate (Excl.VAT)
	CAMERA - 720P HD WIFI + LAN - PAN + TILT INDOOR	R1 572.42
	CAMERA - LPR - 720P WITH WALL MOUNT	R1 572.42
	CAMERA - LPR - 1080P WITH WALL MOUNT	R3 933.01
	CAMERA - 27X DAY/NIGHT CAR MOUNT PTZ SLIMLINE	R10 712.25
	CAMERA - 27X DAY/NIGHT CAR MOUNT PTZ	R15 662.23
	CAMERA - 36X DAY/NIGHT CAR MOUNT PTZ	R22 999.43
	LENS - CS MOUNT RBOR	R129.83
	LENS - CS MOUNT RMOR	R326.55
	LENS - CS MOUNT RTOR	R719.98
7.13	USB Barcode Scanners	
	1D wired usb	R1 967.16
	2D wired usb	R3 737.60
	2D wireless	R9 003.04
7.14	Vehicle Battery Protection	
	Battery Buddy - 12 VOLT	R2 573.91
	Battery Buddy - 24 VOLT	R2 706.06
7.15	Vehicle Invertor	
	100W 12V/24V - MODIFIED SINEWAVE	R588.74
	150W 12V/24V - MODIFIED SINEWAVE	R615.84
	300W 12V/24V - MODIFIED SINEWAVE	R878.19
	200W - PURE SINEWAVE	R2 548.35
	400W - PURE SINEWAVE	R2 677.67
	1000W - PURE SINEWAVE	R5 650.95
7.16	Lion Battery Packs	
	10 Amp Hour	R436.71
	16 Amp Hour	R632.11
	20 Amp Hour	R918.01
7.17	Compactor Bin Reader - CBR	
	Logger	R10 613.13
	RFID Reader	R4 090.68
	Lift Sensor	R742.15
	Lift Sensor Cable	R321.42
	Power Cable (Pigtail)	R213.59
	Power Cable (Per Meter)	R6.56
	Power Hose (Per Meter)	R62.96
	LED Buzzer Module	R224.18
	L-Mount Kit	R662.26
7.18	RFID Readers	
	125 Khz Readers	R0.00
	Witrak - Nano	R3 190.00
	Witrak - Pro	R7 494.93

ITEM NO:	DESCRIPTION	Rate (Excl.VAT)
	TagPro Reader	R5 236.08
	PTR	R4 433.56
	PTR - Battery Pack	R683.97
	PTR - Battery Pack Charger	R193.09
	PTR - T Cable	R96.23
	PTR - Antenna	R139.52
	PTR - BACKPACK	R252.49
	PTR - High Precision GPS (PTR Only)	R5 802.46
	PTR - High Gain Antenna	R1 770.54
	PTR - Survey Pole	R944.29
	H2R2 Reader	R210.10
	Battery - 12Volt 7Ah	R264.26
	Battery - 12Volt 1.2Ah	R144.21
	Safety Vest	R276.51
	RFID Glove	R97.15
	Chest Rig - Design Fee	R4 020.12
	Chest Rig	R971.53
	BackPack	R298.93
	Tool Belt	R269.04
	900 MHz Readers	R0.00
	UHF Reader BOR	R19 703.39
	UHF Reader TOR	R46 214.04
7.19	RFID Tags	
	125 Khz Tags	R0.00
	Nail Tag	R23.52
	Rivet Tag	R23.51
	Wrist Tag	R35.26
	Cable Tie Tag	R23.51
	Card Tag	R23.51
	KeyRing Tag	R23.51
	Disc Tag	R23.51
	Bracket Tag	R23.51
	Metal Tag	R23.51
	Brick Wall Tag	R31.85
	StandPipe Tag	R34.17
	Rubber Tag	R38.69
	900 MHz Tags	R0.00
	UHF Tag OMNIA 001	R36.79
	UHF Tag OMNIA 002	R37.71
	UHF Tag OMNIA 003	R38.63
	UHF Tag OMNIA 004	R39.55

ITEM NO:	DESCRIPTION	Rate (Excl.VAT)
	UHF Tag OMNIA 005	R60.00
7.20	433Mhz Active Tag Readers and Hardware	
	Stub Antenna - SMA	R316.89
	Whip Antenna - BNC	R347.95
	Stub Antenna - BNC	R316.89
	Long Range Whip Antenna - BNC	R416.30
	External omni Antenna - cable req.	R934.01
	Harsh environment omni Antenna - cable req.	R2 464.75
	Long range harsh env omni Antenna - cable req.	R3 307.54
	Circularly Polarised Patch Antenna - c/w cable	R7 207.60
	9dBic Circularly Polarised Patch Antenna - cable req.	R6 752.03
	Low loss coax cable - priced on required length	R34.50
	Antenna - WiFi	R215.73
	Reader - Solo RS232	R2 472.95
	Reader - Solo RS232 (Unhoused)	R2 311.40
	Reader - Serial	R4 597.95
	Reader - Access	R7 791.67
	Reader - Network	R11 059.94
	Reader - Psion Teklogix End-Cap	R6 710.53
	Mains Adaptor (local power cord reqd)	R805.76
	Intelligent Power Supply	R4 548.25
	Programmer Activ Tags hardware and software	R39 766.08
	Tag Programming, per tag	R12.43
	TGM Tag Attachment Kit 10 per pack	R447.37
	TGM Anti Tamper Attachment Kit 10 per pack	R571.64
	TGP Tag Attachment Kit 10 per pack	R932.02
	TGP Anti Tamper Attachment Kit 10 per pack	R1 068.71
	TGA Tag Attachment Kit 10 per pack	R1 242.69
	TGA Anti Tamper Attachment Kit 10 per pack	R1 366.96
7.21	433Mhz Active Tags	
	Tag - Personnel	R36.16
	Tag - Personnel with Motion Sensor	R795.32
	Tag - Personnel with Accelerometer	R1 217.84
	Tag - Personnel with Temperature & Humidity	R1 391.81
	Tag - Personnel G2 Enabled	R671.05
	Tag - Key Fob with Push Button	R944.44
	Tag - Industrial Asset Enviro IP67	R994.15
	Tag - Industrial Asset with Motion Sensor	R1 143.27
	Tag - Industrial Asset with Accelerometer	R1 192.98
	Tag - Asset Wrist	R745.61
	Tag - Asset Temperature Sensor	R1 263.82

ITEM NO:	DESCRIPTION	Rate (Excl.VAT)
	Tag - Indoor Asset	R745.61
	Tag - Indoor Asset with Accelerometer	R1 093.57
	Tag - Micro	R651.17
	Tag - Micro with Motion Sensor	R795.32
	Tag - Micro Wrist	R651.17
	Tag - Custom Sensor	R1 043.86
	Tag - Personnel Hazard	R882.31
	Tag - Asset Hazard	R1 118.42
7.23	SCADA Field Equipment	
	Mitshubisi FX5 PLC	R11 305.62
	Mitshubisi M2M GSM Router	R2 017.60
	Mitshubisi PLC Programming Software	R5 013.74
	Mitshubisi PLC Programming Cable	R4 272.27
	M7 Unit	R2 843.02
	M7 - GSM Module	R548.08
	M7 Harness	R89.52
	GPS Extension Cable	R697.89
	Data Modem - Scada	R2 740.39
7.24	GSM SMS Bundles	
	Bundle 1,000	R384.65
	Bundle 10,000	R3 430.68
	Bundle 50,000	R16 113.80
	Mobile Bundle 100	R88.37
	Mobile Bundle 200	R93.56
7.25	Infrastructure - Server	
	Dell R430 2.5in	R166 697.54
	Dell R430 3.5in	R154 538.88
	Dell R630 2.5in	R198 303.85
7.26	Infrastructure - Router / Firewall	
	Dell SonicWALL Network Security Appliance 2601	R56 320.50
	Dell SonicWALL NSA 3600	R90 166.75
	Dell SonicWALL NSA 4600	R126 251.52
7.27	Infrastructure - Switches	
	Managed - 24 port	R10 590.99
	Managed - 48 port	R22 796.26
	Managed - 24 port Gigabit	R29 952.48
	Managed - 48 port Gigabit	R42 058.89
	Managed - 24 port Gigabit POE	R71 261.43
	Managed - 48 port Gigabit POE	R142 969.15
	UnManaged - 24 port	R3 842.92
	UnManaged - 48 port	R4 414.91

ITEM NO:	DESCRIPTION	Rate (Excl.VAT)
7.28	Infrastructure - Server Cabinets	
	43 U	R9 319.90
7.29	Patch Panel	
	24 Port	R684.98
7.30	Management Terminal	
	Rectron	R23 499.59
7.31	KVM Switch	
	16 Port	R11 647.40
7.32	Server Software	
	Windows 2012 R2	R14 068.52
	Ramm IIS / Webservice software	R51 980.00
	Ramm Database software	R51 980.00
7.33	Wifi Access Points	
	Access Point BOR	R2 060.57
	Access Point MOR	R4 601.34
	Access Point TOR	R28 246.40
	Mounting Pole	R2 910.88
	Mounting Bracket	R245.35
7.34	Ethernet Convertors	
	Fibre to Ethernet	R1 765.40
7.35	Network Access Storage - NAS	
	Nas chassis	R264 697.01
	630 compute node	R164 711.82
	ethernet kit	R5 212.87
	fibre kit	R9 461.13
	DRIVE 200gb ssd for vrtx node	R13 770.12
	DRIVE 400gb ssd for vrtx node	R14 874.55
	DRIVE 2tb 3.5in for Vrtx node	R3 848.57
7.36	Technical Operations Centre	
	Workstation - All in one	R22 460.73
	Workstation - Desktop	R13 180.58
	Workstation - Laptop 15.6" - i3	R17 349.75
	Workstation - Laptop 15.6" - i5	R23 268.17
	Workstation - Laptop 15.6" - i7	R37 526.15
	Workstation - Laptop 14" - i5	R31 204.61
	Workstation - Laptop 14" - i7	R40 216.01
	Workstation - Laptop ultra book adapter	R3 934.32
	Workstation - Laptop 12" - M5	R28 865.80
	Workstation - Laptop 13" - M5	R32 280.79
	HDMI Screen - 23 "	R2 352.12
	HDMI Screen - 24 "	R3 146.25

ITEM NO:	DESCRIPTION	Rate (Excl.VAT)
	HDMI Screen - 27 "	R8 472.71
	HDMI Screen - 34 "	R10 893.83
	HDMI Screen - 48 "	R9 683.27
	HDMI Screen - 55 "	R36 315.59
	HDMI Screen - 65 "	R72 632.39
	Screen Wall Mount	R543.54
	Screen Wall Mount - Tiling	R2 056.74
	IP PABX	R62 431.61
	IP Phone 1	R1 405.26
	IP Phone 2	R4 229.90
	USB Headsets	R605.28
7.37	Library Tag Solution Hardware	
	Single Aisle (2 Pedestal) RFID Book Security System	R92 804.09
	Hand Held RFID Reader Complete with Software	R44 288.45
	Tagtron Inventory Management Software (Inc. Conversion) - Annual License per Library	R4 930.51
	Staff Circulation Unit (Full-Shielded Staff Antenna USB) Complete with Software	R64 643.22
	Patron Self Check-In Check-Out	R209 975.92
	Automated Book Return - Basic without sort facility	R690 677.44
	Delivery, Installation, Setup & Staff Training (Hardware & Software)	R31 078.06
	Annual Maintenance & Support (Hardware & Software) per Library	R119 124.09
7.38	Library Tags	
	Book Conversion: Price quoted per book for conversion of books, inclusive of 50x50mm RFID Book Label	R8.59
7.39	In Field Services	
	OBCU - Extended Warranty	R70.69
	Camera	R93.00
	StreetCar - per month	R249 504.00
7.40	Bureau Services	
	Active Tag Monitoring	R62.38
	SCADA Monitoring and Support Service	R363.86
	Battery Management	R10.40
	Tyre Management	R20.79
	Toilet Cleaning Management	R93.00
	Flow and Valve Management	R93.00
	Pavement Furniture Management	R93.00
	NPR License	R3 781.55
	NPR Service	R93.00
	Workflow	R93.00

ITEM NO:	DESCRIPTION	Rate (Excl.VAT)
	Eguard - Location	R393.43
	Eguard - Camera	R514.49
7.41	GSM Services	
	Vodacom Private APN	R0.00
	SIM Card Activation - Vodacom	R103.96
	SIM Monthly Subscription excl Data	R20.79
	MTN Private APN	R0.00
	SIM Monthly Subscription excl Data	R20.79
	SIM Card Activation - MTN	R103.96
	Data Bundle - 25Mb	R4.46
	Data Bundle - 50Mb	R8.92
	Data Bundle - 100Mb	R17.84
	Data Bundle - 250Mb	R44.59
	Data Bundle - 500Mb	R89.18
	Data Bundle - 1GB	R182.63
	Data Bundle - 5GB	R913.17
	Data Bundle - 10GB	R1 826.33
	Data Bundle - 100GB	R17 565.08
7.42	Network Services	
	ADSL - 5 Mbps Setup	R1 004.25
	ADSL - 5 Mbps Monthly Subscription	R871.81
	ADSL - Data per Mb	R0.39
	Fibre - 5 Mb Setup	R2 027.22
	Fibre - 5 Mb Monthly Subscription	R2 162.37
	Fibre - 10 Mb Setup	R2 027.22
	Fibre - 10 Mb Monthly Subscription	R4 122.01
	Fibre - 50 Mb Setup	R6 861.36
	Fibre - 50 Mb Monthly Subscription	R8 514.32
	LTE - 5 Mb Setup	R1 038.56
	LTE - 5 Mb Monthly Subscription	R2 659.71
	LTE - Data per Mb	R0.39
7.43	Barcode Labels	
	Barcode Labels - TESA - 26 labels per sheet	R625.13
	Barcode Labels - 5 x 400 NUMBERS	R361.78
7.44	Consultancy Rates	
	Architect - Expert	R1 559.40
	Architect - Senior	R1 403.46
	Architect - Intermediate	R1 122.77
	Architect - Junior	R935.64
	Architect - Trainee	R748.51
	Business Analyst - Expert	R1 497.02

ITEM NO:	DESCRIPTION	Rate (Excl.VAT) -
	Business Analyst - Senior	R1 122.77
	Business Analyst - Intermediate	R898.21
	Business Analyst - Junior	R748.51
	Business Analyst - Trainee	R598.81
	Project Manager - Expert	R1 029.20
	Project Manager - Senior	R771.90
	Project Manager - Intermediate	R617.52
	Project Manager - Junior	R514.60
	Project Manager - Trainee	R411.68
	Data Analyst - Expert	R748.51
	Data Analyst - Senior	R561.38
	Data Analyst - Intermediate	R449.11
	Data Analyst - Junior	R374.26
	Data Analyst - Trainee	R288.00
	Developer - Expert	R654.95
	Developer - Senior	R491.21
	Developer - Intermediate	R392.97
	Developer - Junior	R327.47
	Developer - Trainee	R261.98
	Administrator - Expert	R374.26
	Administrator - Senior	R280.69
	Administrator - Intermediate	R224.55
	Administrator - Junior	R187.13
	Administrator - Trainee	R149.70
	Tester - Expert	R374.26
	Tester - Senior	R280.69
	Tester - Intermediate	R224.55
	Tester - Junior	R187.13
	Tester - Trainee	R149.70
	Operator - Expert	R187.13
	Operator - Senior	R140.35
	Operator - Intermediate	R112.28
	Operator - Junior	R93.56
	Operator - Trainee	R72.00
	Technician - Senior	R280.69
	Technician - Intermediate	R224.55
	Technician - Junior	R187.13
	Technician - Trainee	R149.70
7.45	Water Management Service	
	Enterprise License - Year One	R3 784 144.00
	Enterprise License - Year Two	R5 239 584.00

ITEM NO:	DESCRIPTION	Rate (Excl.VAT)
	Enterprise License - Year Three	R5 239 584.00
	Water Network Management - Per Km	R46.78
7.46	Data Voice Service	
	30 Channel License	R207 836.83
	60 Channel License	R302 411.32
	90 Channel License	R45 723.69
	30 Channel Support Service - Annual	R79 382.56
	60 Channel Support Service - Annual	R99 246.71
	90 Channel Support Service - Annual	R99 246.71
8	Spares that are applicable to the product	
8.1	Autowatch - Replacement Unit + Remotes	R789.89
	Autowatch - Bonnet Switch	R19.38
	Autowatch - Ultra Sonic Sensor	R160.90
	Autowatch - Remote (Each)	R152.86
	Autowatch - High & Low Looms (Each)	R83.67
	Autowatch - Remote Batteries	R39.76
9	Accessories that are applicable to the product	
9.1	USB Camera	R0.00
	Visor Mount	R1 053.19
	Screen Mount	R1 832.37
	Roof Suction Mount - Small	R1 832.37
	Roof Suction Mount - Large	R2 007.83
	Dash Mount	R2 486.69
	Bracket Mount	R3 218.07
	Tripod	R11 994.63
	RFID Mount	R10.24
	Scanner Mount	R19.02
	Cigarette Lighter Charger	R29.26
	Wall Charger	R46.81
	DVR PC CARD - 8 CH	R9 442.37
	DVR PC CARD - 16 CH	R11 147.24
	3 CH VIDEO SHARING KIT	R1 256.51
	4 CH VIDEO SHARING KIT	R1 680.71
	5 CH VIDEO SHARING KIT	R2 192.68
	RS485 DISTRIBUTION BOX - 4 PORT	R2 192.68
	BALUN - VIDEO TRANSCIEVER OVER CAT-5	R144.81
	BNC - CONNECTORS	R4.08
	BNC - T-CONNECTOR	R8.76
	BNC - 1M CABLE M2M	R21.94
	DC SUPPLY CABLE - 1(F) INTO 4 (M)	R43.88
	RCA - 5M CABLE	R43.88

ITEM NO:	DESCRIPTION	Rate (Excl.VAT)
	WIRELESS CONVERSION KIT - CAR CAM & LCD	R364.23
	CONVERTER - 24V TO 12V FOR CAR CAM	R159.44
	CABLE - VIDEO + POWER P/METER	R6.14
	CABLE - VIDEO + POWER + AUDIO 30M	R188.70
	8 CH - VIDEO SIGNAL BOOSTER 0-1200M	R2 046.40
	16 CH - VIDEO SIGNAL BOOSTER 0-1200M	R2 777.78
	WEATHERPROOF HOUSING + MOUNT	R261.83
	WEBCAM - DOME	R419.66
	CCTV GRADE CAT-5E CABLE P/METER	R5.11
	HDMI TO 3 RCA CONVERTER - 1.5M	R73.28
	HDMI TO 5 RCA CONVERTER - 5M	R210.71
	HDMI TO 3 RCA - BOX	R565.99
	HDMI TO 3 RCA - BOX	R483.16
	HDMI TO RCA & VGA - BOX	R739.08
	USB EXTENDER - UP TO 50M WITH CAT-5	R378.85
	POE SPLITTER - INJECTOR & SPLITTER	R86.30
	NANO STATIONS - MAKE WIRED CAMS WIRELESS	R3 801.71

Please note that this letter does not constitute a change in the conditions of contract number 387G/2015/16, but merely confirms the implementation of the price adjustments.

Yours faithfully,

Director: Supply Chain Management