



***Request for Quotation (RFQ) for the supply of TVWS  
Radio Sets, Outdoor Wi-Fi Access Points and WISP Billing  
and Back Office Service Subscription for a period of 12  
Months for the CSIR based in Pretoria  
CSIR RFQ No. 9249/05/10/2020***

Date of issue	Monday, 21/09/2020
Closing Date and Time :	Monday, 05/10/2020 at 16:30
Contact details	For submission of all quotations or any other enquiries: send your mail to: <a href="mailto:tender@csir.co.za">tender@csir.co.za</a>
Category	Equipment
CSIR Business Hours	08h00 - 16h30

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## 1 INVITATION FOR QUOTATION

Quotations are hereby invited for the supply of TVWS Radio Sets, Outdoor Wi-Fi Access Points and WISP Billing and Back Office Service Subscription for a period of 12 Months for the CSIR based in Pretoria

## 2 QUOTATION REQUIREMENTS

The following items and services are required for the CSIR for the TVWS Network Operator Programme

1. TVWS Radio Sets (4 Base Stations and 20 Client Stations),
2. 60 x Outdoor Wi-Fi Access Points, and
3. 4 x WISP Billing and Back Office Service Subscription for 12 Months, as specified in Annexures 1, 2 and 3 respectively

The required goods must meet the specifications provided in Annexures 1, 2 and 3.

All quotations must be accompanied by detailed specifications of the product offered.

## 3 EVALUATION CRITERIA

- 3.1 Selection of suppliers will be based on the **80/20** preference point system.
- 3.2 Indicate CSD number (National Treasury Central Supplier Database) on quotation. If not registered yet on CSD, use [www.csd.gov.za](http://www.csd.gov.za) to register.
- 3.3 No order will be issued or no contract will be signed without a valid CSD number.
  - Provide valid original or certified copy of the B-BBEE Certificate issued by an accredited verification agency and bearing a SANAS logo; **or**
  - Valid sworn affidavits made on dti designed templates; **or**
  - dti issued sworn affidavit; **or**
  - CIPC issued B-BBEE certificate.

- 3.4 No deviation from the above specification is permitted.
- 3.5 **Completion of Compliance Checklist in Annexures 1, 2 and 3 is compulsory. A 100% compliance across all three annexures is mandatory. Incomplete Compliance Checklist(s) will result in exclusion from the bidding process.**

#### **4 PRICING QUOTATION**

- 4.1 Price needs to be provided in South African Rand (excl. VAT), with details on price elements that are subject to escalation and exchange rate fluctuations clearly indicated.
- 4.2 Price should include additional cost elements such as freight, insurance until acceptance, duty where applicable, etc.
- 4.3 Payment will be according to the CSIR Payment Terms and Conditions.

#### **5 OTHER TERMS AND CONDITIONS**

- 5.1 The supplier shall under no circumstances offer, promise or make any gift, payment, loan, reward, inducement, benefit or other advantage, which may be construed as being made to solicit any favour, to any CSIR employee or its representatives. Such an act shall constitute a material breach of the Agreement and the CSIR shall be entitled to terminate the Agreement forthwith, without prejudice to any of its rights.
- 5.2 A validity period of 90 days will apply to all quotations except where indicated differently on the quote.

- 6 **No goods and/or services should be delivered to the CSIR without an official CSIR Purchase order. CSIR purchase order number must be quoted on the invoice. Invoices without CSIR purchase order numbers will be returned to supplier.**

- 7 **Note: This is not a Purchase Order.**

## ANNEXURE 1

### Compliance Checklist – TVWS Radio Set (4 Base stations and 20 Client Stations)

**Failure to complete, sign and submit this Compliance Checklist along with your quotation, will result in your quotation being excluded from the evaluation process. Please mark Comply or Do Not Comply with a clear “X”.**

Item	Specification	Value	Comply	Do Not Comply
1	Number of TVWS Base Stations	4		
2	Minimum Sector Radios per Base Station	3		
3	Number of TVWS Client Stations	20		
4	Supported Wireless Protocol Standards	IEEE 802.11 af		
5	Estimated Coverage Area Radius	10 km – 15 km		
6	Symmetrical (Downlink/Uplink) Throughput per 8 MHz Channel	14 Mbps - 32 Mbps		
7	Supported Frequency Band	470 MHz to 694 MHz		

8	ETSI Compliance	<ul style="list-style-type: none"> <li>- EN 301 598</li> <li>- EN 301 498</li> <li>- IEC/EN 60950 or 62368-1</li> </ul>		
9	Minimum Security	WPA2		
10	ICASA TVWS Type Approval Certification	Full TA Certificate (Approved Base Station must correspond to the supported Client Stations)		
11	Supported Input Power Rating	Voltage over AC: 100-240, Frequency: 50-60 Hz Voltage over DC Range: 12 - 48 VDC		
12	Operating Temperature	Minus 25 deg to Positive 50 deg		
13	Minimum Ruggedness (Weatherproof and Anti vibration protection)	IP 67 or Equivalent		
14	Power over Ethernet Connector	RJ 45		

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15	Antenna Connector	Female, F-Type ,75 Ohm		
16	Each Base Station Must Include the Following Accessories	<ul style="list-style-type: none"> <li>- 3 x 120 deg Sector Panel Antenna</li> <li>- 1 x PoE Injector</li> <li>- 1 x RF Surge Protector</li> <li>- 3 x PoE Surge Protector</li> <li>- 3 x Connectors: (PVC Jacket, 2 m RG6, Trishield and F-Type Connectors)</li> <li>- 1 x 30 m Outdoor Cat 5 Shielded Cable</li> <li>- 1 x Wall/Tower/Pole Mount Brackets</li> </ul>		
17	Each Client Station Must Include the Following Accessories	<ul style="list-style-type: none"> <li>- 1 x Log `Periodic Antenna</li> <li>- 1 x PoE Injector</li> </ul>		

		<div>- 1 x PoE Surge Protector</div> <div>- 1 x RF Surge Protector</div> <div>- 1 x Connectors: PVC Jacket, 2 m RG6, Trishield and F-Type Connectors)</div> <div>- 1 x 15 m Outdoor Cat5 Shielded Cable</div> <div>- 1 x Wall/Tower/Pole Mount Brackets</div>		
18	Mounting Type	Wall/Pole/Tower		

Signature (for Compliance Checklist)

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Print Name

.....

Date

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Company Name

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BBBEE Level

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CSD Number

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VAT Registered (Yes or No)

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## ANNEXURE 2

### Compliance Checklist – 60 x Outdoor Wi-Fi Access Points

**Failure to complete, sign and submit this Compliance Checklist along with your quotation, will result in your quotation being excluded from the evaluation process. Please mark Comply or Do Not Comply with a clear “X”.**

Item	Specification	Value	Comply	Do Not Comply
1	Minimum Number of Radios per AP	- 1 x 2.4 GHz Radio - 1 x 5 GHz Radio		
2	WLAN Minimum Number of Concurrent Supported Client Association per AP	256		
3	Channel Range	Channel Numbers: 1-13, 32-48, 159-165		
4	Bandwidth	20 MHz, 40 MHz, 80 MHz, 160 MHz		
4	IEEE 802.11 Wireless Protocol Standards	- a/b/g/n/ac/wave 2 - Support ax will be an added advantage		

5	Minimum MIMO Support	2 X 2		
6	Estimated Coverage Radius	Up to 1 km		
7	Minimum Throughput	- 400 Mbps per 2.4 GHz Radio  - 1000 Mbps per 5 GHz Radio		
8	Frequency Band	- 2.4 GHz  - 5 GHz		
9	ETSI Certification	- CE  - EN 60601-1-2  - IEC60950		
10	ICASA Type Approval Compliance Certification	Full TA Certificate		
11	Power over Ethernet Standards	802.3af or 802.3a		
12	Power Input	Voltage over DC Range: 12 - 48		
13	Operating Temperature	Minus 25 deg to Positive 50 deg		

14	Ruggedness (Weatherproofing) Support	IP 67		
15	Ethernet Connector	RJ 45		
16	Antenna Type and Configuration	Omni (Inbuilt or External)		
17	Supported SSID Security	WPA PSK, WPA2, WPA EAP, EAP-TLS, PEAP, EAP-TTLS, EAP-MD5, Open		
18	Supported Carrier Grade Authentication, Accounting, Authorisation (AAA) Server Protocol	RADIUS		
19	Bandwidth Access Controller	4 x Units each Supporting up to 256 Concurrent Users		
20	Mounting Type	Wall/Pole/Tower		
21	Must Include Accessories	<ul style="list-style-type: none"> <li>- AC/DC Adapters</li> <li>- Cables and Connectors</li> <li>- Wall/Tower/Pole Mount Brackets</li> </ul>		

Signature (for Compliance Checklist)	.....
Print Name	.....
Date	.....
Company Name	.....
BBBEE Level	.....
CSD Number	.....
VAT Registered (Yes or No)	.....

### ANNEXURE 3

#### Compliance Checklist – 4 x WISP Billing and Back Office Service Subscription for 12 Months

**Failure to complete, sign and submit this Compliance Checklist along with your quotation, will result in your quotation being excluded from the evaluation process. Please mark Comply or Do Not Comply with a clear “X”.**

Item	Specification	Value	Comply	Do Not Comply
1	Minimum Number of WISPs Supported Including Customisable Interface per WISP	4		
2	Minimum Number of Users Supported per WISP	5000		
3	Supported Carrier Grade Authentication, Accounting, Authorisation (AAA) Server Protocol	RADIUS		
4	Minimum Interface Features	- Database: Access, MySql and Sql Server		

		<ul style="list-style-type: none"> <li>- Billing: Pre-paid, Post-paid, Subscription, Free</li> <li>- Automatic Recharges using Paypal/Credit/Debit Card</li> <li>- Security: Firewall on ports, URL, IP and Keywords, Enable/Disable Users</li> <li>- Bandwidth Limitation for Uploads/Downloads</li> <li>- Rates Plan and Control: Hourly or Step Rates</li> <li>- Exporting of User Activity Data in Excel and Text Format</li> <li>- Customisable User Voucher Printing</li> <li>- Backup: Manual or Automatic</li> <li>- Receipt Management</li> <li>- Checkout Management</li> <li>- Automatic Management of Recharge and Subscription Renewals</li> </ul>		
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		- Usage Statistics - User Manual		
5	Provision Type	Hosted		
6	Minimum Service Availability	99.5% Uptime		

Signature (for  
Compliance  
Checklist)

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Print Name

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Date

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Company Name

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BBBEE Level

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CSD Number

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VAT Registered (Yes or No)

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## DECLARATION BY TENDERER

**Only tenderers who completed the declaration below will be considered for evaluation.**

**RFP No: 9249/05/10/2020.**

I hereby undertake to render services described in the attached tendering documents to CSIR in accordance with the requirements and task directives / RFQ specifications stipulated in RFQ No. **9249/05/10/2020** at the price/s quoted. My offer/s remains binding upon me and open for acceptance by the CSIR during the validity period indicated and calculated from the closing date of the RFQ.

I confirm that I am satisfied with regards to the correctness and validity of my quotation; that the price(s) and rate(s) quoted cover all the services specified in the RFQ documents; that the price(s) and rate(s) cover all my obligations and I accept that any mistakes regarding price(s) and rate(s) and calculations will be at my own risk.

I accept full responsibility for the proper execution and fulfilment of all obligations and conditions devolving on me under this proposal as the principal liable for the due fulfilment of this proposal.

I declare that I have no participation in any collusive practices with any tenderer or any other person regarding this or any other request for quotations.

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I accept that the CSIR may take appropriate actions, deemed necessary, should there be a conflict of interest or if this declaration proves to be false.

I confirm that I am duly authorised to sign this proposal.

NAME (PRINT) .....

CAPACITY .....

SIGNATURE .....

NAME OF FIRM .....

DATE .....

WITNESSES	
1	.....
2	.....