Government of Papua New Guinea
National Information and Communications Technology Authority

National Information and Communications Technology Authority

UNIVERSAL ACCESS AND SERVICE (UAS)

REQUEST FOR PROPOSALS (RFP)

CONNECT OUR SCHOOLS PROJECT (CSP)

LOT 1

PROVISION OF FIXED BROADBAND CONNECTIVITY

NATIONAL INFORMATION AND COMMUNICATIONS TECHNOLOGY
UNIVERSAL ACCESS AND SERVICE (UAS)
STRATOS AVENUE
RANGEVIEW PLAZA (LVL 3)
PORT MORESBY

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SUMMARY AND BACKGROUND

National Information and Communications Technology Authority (*NICTA*) invites experienced and reputable Internet Service Providers (ISPs) to submit proposals for the supply and installation of fixed broadband Internet connectivity, including hotspot Wi-Fi, in designated schools participating in Lot 1 of 'Connect our Schools' Project (CSP). The selected ISP will play a critical role in ensuring that the schools have robust and reliable internet connectivity that can support the educational needs of students and staff.

The CSP is an initiative aimed at enhancing digital learning by providing fixed broadband internet connectivity including hotspot Wi-Fi access to students and teachers in schools across the country. The project recognizes the critical importance of digital literacy and access to online educational resources in modern education. By providing reliable internet access, the project aims to support digital learning activities by enabling access to online educational resources, e-learning platforms, and other digital tools necessary for quality education.

1. PROPOSAL GUIDELINES

This RFP is open to all qualified ISPs who can demonstrate the ability to meet the project's requirements. All submitted proposals must comply with the guidelines provided in this document. Proposals that fail to meet the requirements of this RFP will not be considered.

Proposals should be comprehensive and address all the elements listed in the scope of work, including technical specifications, project timelines, and budget. Bidders must provide detailed information about their experience, qualifications, and proposed solutions.

Proposals must be prepared and submitted using the Proposal Template that will accompany this RFP. A guideline for completing the template is also included in the same for reference.

Proposals must be received by **4pm** on **20th September 2024**. Any proposals received after this deadline will not be considered.

Proposals must be submitted electronically **ONLY** to uas@nicta.gov.pg. Any inquiries regarding this RFP should be directed to uas@nicta.gov.pg. Mr. Robert Griffin from NICTA will oversee the project and facilitate communication.

2. PROJECT PURPOSE AND DESCRIPTION

Purpose:
The primary purpose of the CSP is to enhance digital learning in schools across the country by providing the necessary infrastructure for schools to access reliable high-speed internet connectivity. This will enable students and teachers to access online educational resources, engage in e-learning, and improve overall educational outcomes.

Description:
The CSP, funded by NICTA through the Universal Access and Service Fund, aims to enhance the learning environment in schools across the country by integrating technology into education. Each selected school will be equipped with the necessary infrastructure for fixed broadband internet connectivity including hotspot Wi-Fi.

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The project involves the supply and installation of fixed broadband internet connectivity with hotspot Wi-Fi in designated schools. The successful ISP will be responsible for providing the necessary equipment, installation services, and ongoing support to ensure the network's reliability and performance.

3. PROJECT SCOPE

The scope of the project includes, but is not limited to:

- **Network Design:**
  - o Provide a network design that supports high-speed internet access with redundancy and reliability and network infrastructure that supports both WLAN (20 Desktop Computers) and Wi-Fi access across the campus.
  - o All design proposals must comply with the project requirements and specifications outlined in the RFP.

- **Fixed Broadband Internet Connectivity:**
  - o Provide an appropriate reliable and high-speed broadband internet connection to each participating school.
  - o Ensure adequate bandwidth to support the number of users at each site.

- **Network Equipment Supply:**
  - o Provide all necessary equipment, including routers, switches, modems, and Wi-Fi access points.
  - o Ensure equipment is durable, energy-efficient, and appropriate for the local environment.

- **Hotspot Wi-Fi Installation:**
  - o Install and configure Wi-Fi hotspots in key areas within the school premises to provide wireless internet access to students and staff.
  - o Ensure coverage and signal strength is sufficient for all users.

- **Installation and Configuration:**
  - o Install and configure all equipment to ensure optimal performance.
  - o Provide basic training for designated school staff on the operation and maintenance of the installed systems.

- **Ongoing Support and Maintenance:**
  - o Provide a support plan that includes remote and on-site assistance as needed.
  - o Ensure timely responses to connectivity issues and equipment failures.
  - o Offer maintenance services to ensure the system's longevity and reliability.

  - **Monitoring and Reporting:**

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- o Implement monitoring tools to provide regular reports on network performance and usage statistics.

- **Training:**
  - o Provide training for school staff on the use and basic management of the hotspot system as well as administering the WLAN.
  - o Offer ongoing technical support and maintenance services to ensure the longevity and reliability of the installations.

4. PROJECT TIMELINE

Request for Proposal Timeline:

All proposals are to be submitted by **4pm on 20th September 2024** via email ONLY to uas@nicta.gov.pg with the Subject *Proposal for CSP - LOT 01 Provision of Fixed Broadband Connectivity*.

Evaluation of proposals will be conducted within two weeks from the deadline of the submission. If additional information or discussions are needed with any bidders during this two-week window, the bidder(s) will be notified.

The selection decision for the winning bidder will be made two weeks after the evaluation of the proposals. Upon notification, the contract negotiation with the winning bidder will begin.

Notifications to bidders who were not selected will be done after the completion of the evaluation.

Project Timeline:

The project timeline for the delivery and installation of services will commence upon the signing of the project agreement. For locations with easy accessibility, the timeline shall not exceed 1 month from the agreement date. For sites situated in remote areas where logistics and access present challenges, the timeline shall be extended to a maximum of 2 to 3 months.

5. PROJECT MANAGEMENT AND COMMUNICATION

Regular communication and updates between NICTA and the successful ISP are expected throughout the project's duration. Mr. Robert Griffin from NICTA will oversee the project and facilitate communication.

6. PROJECT BUDGET

The project will be funded by NICTA through the UAS Fund. A project amount of **K160,000.00** *(GST incl.)* has been set aside for this project. Cost efficiency will be a key evaluation criterion.

7. BIDDERS QUALIFICATION

To qualify for consideration, bidders must meet the following criteria:

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- Must be a NICTA licensee and possess the necessary licenses to operate as an Internet Service Provider. Alternatively, an innovative entrepreneur may form a Joint Venture (JV) with an existing licensed ISP that holds the required NICTA licenses and operational permits, ensuring compliance with all regulatory requirements.

- Provide copies of valid licenses from NICTA.

- Demonstrated experience in providing and installing fixed broadband internet connectivity, particularly in educational settings in remote or challenging areas.

- Demonstrated technical capability in the installation and maintenance of fixed broadband internet and Wi-Fi systems.

- A proven track record in managing and executing successful projects of similar scope or scale.

- Strong technical expertise and operation capacity to complete the project within the stipulated timeframe.

- Capability to provide ongoing technical support and maintenance.

- Compliance with all relevant laws and regulations.

- Have IPA Certificates to conduct business in PNG.

- Provide TIN Certificate.

8. PROPOSAL EVALUATION CRITERIA

Price will be a significant factor in our evaluation, but not the sole factor. We are looking for an ISP that delivers the best value with respect to investment. Proposals should demonstrate a clear understanding of project objectives and how their pricing structure aligns with those objectives. NICTA will evaluate the proposals based on the following criteria:

- **Compliance:** Adherence to the RFP requirements and compliance with relevant standards and regulations.

- **Technical Approach:** The quality and feasibility of the proposed technical solution proposed.

- **Experience and Qualifications:** Relevant experience, past performance, and qualifications of the bidder.

- **Cost-effectiveness:** Competitiveness and clarity of the cost proposal and value for money.

- **Project Timeline:** Delivery timeline and ability to meet project deadlines.

- **Support and Maintenance:** Capability to provide ongoing support and maintenance.

- **Innovation and Value-Added Service:** Any additional value-added services or innovative approaches proposed.

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9. CHANGE MANAGEMENT

Any proposed changes to the project scope, schedule, or budget will be submitted in writing and approved by both parties.

10. CONFIDENTIALITY

All information submitted in proposals will be treated as confidential.

ANNEXURE

A. Project Sites

a) List of Schools in Lot 1:

Name	Province	District	Budget
Boera Primary School	Central	Hiri-Koiari	K40,000
Papa Junior High School	Central	Hiri-Koiari	K40,000
Tubusereia Junior High School	Central	Hiri-Koiari	K40,000
Kiriwina Secondary School	Milne Bay	Kiriwina-Goodenough	K40,000

Note: *NICTA reserves the right to change the recipient school without prior notice.*

B. Technical Specifications

The fixed broadband internet connectivity and network equipment must adhere to NICTA's technical specifications, ensuring compatibility and reliability for fixed broadband internet connectivity.

1. Fixed Broadband Connectivity

- **Bandwidth:** Minimum 10 Mbps download and 3 Mbps upload.
- **Latency:** < 600 ms.
- **Coverage:** Ensure complete coverage at each school.
- **Reliability:** 99.5% uptime to accommodate critical operations.
- **Subscription:** **24 months** broadband subscription.

2. Network Equipment

i. FortiGate Firewall

- **Interfaces:** 2 Gigabit Ethernet ports for WAN, 5-10 Gigabit Ethernet ports for LAN, DMZ and Management Ports.
- **Security Features:** IPS, Antivirus, Web Filtering, Application Control, Email Filtering and SSL Inspections.
- **QoS:** Quality of Service (QoS) capabilities to prioritize traffic and manage bandwidth effectively.
- **Power Consumption:** Maximum of 20W to 30W depending on model and usage.

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ii. **Router**

- **Ethernet Ports:** 5 to 10 Gigabit Ethernet ports for connecting to the internet device, access points, and other network devices.
- **Wireless Support:** Optional dual-band 2.4/5 GHz Wi-Fi (802.11b/g/n/ac) for local wireless connectivity.
- **USB Port:** USB 3.0 port for external storage or 3G/4G/LTE modem connectivity as a backup link.
- **QoS:** Quality of Service (QoS) capabilities to prioritize traffic and manage bandwidth effectively.
- **Power Supply:** 24V DC input with support for Passive PoE (up to 57V).
- **Power Consumption:** Maximum of 20W to 30W depending on model and usage.

iii. **Indoor and Outdoor Wireless Access Points (WAP)**

- **Frequency Band:** Dual-band support (2.4 GHz and 5 GHz) for wider compatibility and better performance.
- **Data Rate:** Minimum of 1.3 Gbps (5 GHz) and 400 Mbps (2.4 GHz) for optimal throughput for outdoor WAP. Indoor WAP should have a minimum of 4.8 Gbps (5GHz) and 450 Mbps (2.4 GHz)
- **Antenna Type:** Integrated high-gain omnidirectional antennas.
- **Antenna Gain:** Minimum of 2dBi for 2.4GHz and 5dBi for 5GHz for indoor WAP. A Minimum of 8 dBi for 2.4 GHz and 14 dBi for 5 GHz for outdoor WAP.
- **Transmit Power:** Adjustable transmit power up to 30 dBm for extended range and penetration.
- **Range:** Capable of covering distances of 100m for indoor WAP and up to 1 kilometer for outdoor WAP, with potential for extended range using external antennas or repeaters.
- **Ethernet Ports:** Gigabit Ethernet ports with PoE (Power over Ethernet) support for easy installation and reduced cabling.
- **Power Supply:** 240Vac or 802.3af/at compliant PoE injector.
- **Weatherproofing:** IP67-rated enclosure for protection against harsh environmental conditions, including dust, rain, and extreme temperatures.

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- **Mounting Options:** Pole, wall, or tower mounting brackets included for flexible installation options.
- **MIMO Technology:** Support for 2x2 or 3x3 MIMO for enhanced data throughput and improved signal quality.
- **Management:** Cloud-based or centralized management platform with real-time monitoring, remote configuration, and firmware updates.
- **Standards:** IEEE 802.11ac/n/a/g/b, compliant with international standards for wireless communication.

iv. **Rack Unit (RU):**

- **Total Rack Units:** 18RU (Rack Units).
- **Height:** Approximately 31.5 inches (800.1 mm).
- **Width:** Standard 19 inches (482.6 mm) width to fit industry-standard equipment.
- **Depth:** Options ranging from 600 mm to 800 mm, depending on equipment size and cabling requirements.
- **Static Load Capacity:** Typically, up to 500 lbs (227 kg) ro more, depending on the model and mounting method.
- **Ventilation:** Perforated or vented top and side panels for passive cooling.
- **Grounding:** Pre-drilled grounding points with grommets for organised cable routing
- **Front Door:** Lockable front door (perforated or solid).
- **Side Panels:** Removable and lockable side panels for easy access while maintaining security.
- **Rear Door:** Optional or integrated rear door, usually with a locking mechanism.

v. **Hotspot:**

- **User Capacity:** Supporting at least 20-30 devices connected simultaneously without significant degradation in performance. Ability to manage traffic across connected devices to ensure optimal performance for all users for load balancing.
- **Security:** Deploy the latest standard for Wi-Fi security such as WPA3 Encryption.

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- **Pricing and Plans:** Setup data bundles and pricing for the Wi-Fi voucher for hotspot users. Consult schools to establish pricing.
- **Token Printer:** Thermal Receipt Printer with high-speed printing suitable for voucher printing.

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