**Request for Proposal (RFP) for Wi-Fi Infrastructure Deployment**

1. Introduction
Cartu Bank invites proposals from qualified vendors for the supply, installation, and maintenance of Wi-Fi access points, PoE access switches, and collapsed core switches. The objective is to enhance our network infrastructure with a robust, high-performance, and centrally managed Wi-Fi system.

2. Scope of Work
The selected vendor shall provide the following:

* Supply and installation of Wi-Fi access points, PoE access switches, and collapsed core switches.
* Integration with a centralized management system.
* Provision of licenses and technical support for three years.
* Compliance with security and high-availability standards.
* Warranty and maintenance services.

# 3. Technical Requirements

## Wi-Fi Access Points – 50 pcs

Radio Capabilities:

* Tri-band support (2.4/5/6 GHz) with dual-band operation options.
* Dedicated third radio for network monitoring, location services, security, and spectrum analysis.

Wi-Fi Standards:

* 802.11ax (Wi-Fi 6E) with full backward compatibility.
* Support for OFDMA, MU-MIMO, TWT, and Spatial Frequency Reuse (BSS Coloring).

IoT & Security Features:

* Omni Antenna
* AD user authentication, MAC-based device restrictions, and rogue AP scanning.
* Configurable SSID broadcast and guest access time limits.

Internal Antennas

* Two 2.4 GHz omnidirectional antennas with 4 dBi peak gain
* Two 5 GHz omnidirectional antennas with 5 dBi peak gain
* Two 6 GHz omnidirectional antennas with 5 dBi peak gain

Performance & Connectivity:

* Data rates: 2400 Mbps (6 GHz), 1200 Mbps (5 GHz), 575 Mbps (2.4 GHz).
* 1 x 100/1000/2500 Base-T RJ45 uplink port with PoE 802.3af support.
* USB 2.0 interface.

Mounting & Power:

* Universal indoor mounting bracket (wall, ceiling, junction box).

Management & Features:

* Single-Click Onboarding and Zero-Touch Provisioning
* Automated deployment, configuration, operation, and monitoring
* Dynamic packet capture for event correlation and troubleshooting
* Anomaly detection and automatic Radio Resource Management
* Open APIs for Third-Party Integrations
* Pre-defined and customizable Service Level Expectations for metrics: Time to Connect, Successful Connects, Throughput, Roaming, Coverage, Capacity, AP Uptime

Nice to have

 AI-driven proactive remediation and self-driving network features

Operating Conditions

* Operating Temperature: 0° to 40° C
* Operating Humidity: 10% to 90% maximum relative humidity, non-condensing

Warranty & Licensing:

* Limited lifetime manufacturer warranty (minimum 3 years post-discontinuation notice).
* Three-year licenses with full software and hardware support.

## PoE Access Switches – 6 pcs

Physical & Hardware Specifications:

* 1RU form factor with 4GB memory and 1.7 GHz CPU.

Port Density & Power Supply:

* 24x10/100/1000BASE-T PoE/PoE+ ports.
* 4x1GbE/10GbE SFP and 4x10GbE/25GbE uplink/stacking ports.
* Hot-swappable 920W AC PSU (dual PSU support optional).
* PoE budget: 740W (1 PSU) / 1440W (2 PSUs).

Cooling

* 2 x Field-replaceable fans

Stacking

* Virtual Chassis interconnects with possibility to combine up to 9 units as a single logical device

Backplane

* 200 Gbps Virtual Chassis interconnect
* L2/L3 Throughput

244 Mpps

Performance & Security:

* Switching capacity: 164 Gbps unidirectional / 328 Gbps bidirectional.
* 802.1X authentication, MAC-based security, ACL, DoS protection
* VLAN support (1-4094), DHCP snooping, IGMP snooping.

Management & AI Features:

* Centralized platform with API integrations.

Nice To have

* AI-based analytics for network optimization.

## Collapsed Core Switches – 2 pcs

Physical & Hardware Specifications:

* 1RU chassis with 4GB memory.

Port Density & Power Supply:

* 24x1/10GbE SFP+, 2x100GbE/40GbE uplink/stacking.
* Extension module support.
* Hot-swappable 550W AC dual redundant PSU.

Performance & Security:

* 540 Gbps switching capacity (unidirectional) / 1080 Gbps (bidirectional).
* Layer-3 routing with IPv4/IPv6 support, OSPF, BGP, IS-IS, VRRP.
* VLAN-based ACLs, DoS Protection, MAC security, DHCP snooping.
* High availability with Virtual Chassis and nonstop bridging/routing.

Management & Features:

* Wi-Fi, wired, routing, and WAN assurance.

Nice to have

* AI-driven network automation and security monitoring

Wireless Controller – 2

**Hardware & Performance:**

* High-performance appliance supporting at least 500 concurrent APs.
* Redundant power supply and failover support.
* 1/10/40GbE connectivity with modular expansion support.
* Built-in storage for logging and analytics.

# 4. General Requirements

* All devices must be from the same manufacturer and managed through a centralized platform.
* Must support monitoring and email notifications.