TERMS OF REFERENCE
AND TECHNICAL SPECIFICATIONS

I. General information

Assignment name	Designing and Implementing IT infrastructure and Server room for the Central Service Board (CSB)
Beneficiary	Expertise France Lebanon
Country	Lebanon
Expected delivery	October 30th, 2024

II. Context and justification of the need

Expertise France (EF) is a public agency created on the 1st of January 2015, and it has joined AFD Group as of January 1, 2022. EF offers program engineering and technical assistance by developing and implementing international cooperation actions worldwide. Expertise France is the French public agency for international technical assistance.

Project: Supporting progress in key areas of public administration reform in Lebanon

Since 2019, Lebanon has been facing one of the worst economic crisis globally since the mid-nineteenth century according to the World Bank , with 2 major events intensifying its impact, the COVID-19 pandemic and the Beirut port explosion in 2020. As the financial and economic situation unfolds, the downfall can be seen in all of the country's aspects, from the availability of state services to the functioning of public administrations. Understanding the extent of this downfall requires an overview of several key facts that could represent Lebanon's new reality.

Lebanon has also been facing political and economic crises for several years. The country has a complex political system that is based on power-sharing arrangements among its religious sects. However, this system has led to political gridlock, corruption, and a lack of accountability, which has resulted in a deteriorating economic situation and social unrest. The political deadlock in Lebanon refers to the ongoing inability of the country's political leaders to form a functioning government. This deadlock has been repetitive and has always persisted for multiple months and sometimes years.

The country's worsening context has severe consequences on all sectors, with Lebanese public administrations being the most affected due to the reduction of available public funds. This has affected the core of public services and the basic functioning of administrations.

Needs justification

Albeit the financial crisis, almost all Lebanese public administration entities have suffered from budget cuts that affected negatively on their IT infrastructure and IT systems spending. The complications have multiplied with the financial crisis and political gridlock in the country, leaving most public administrations in dire need of support.

The project aims to support the IT and Capacity building needs of several public entities.

III. Objectives and desired results

1) General objective

The objective of the assignment is designing and delivering the IT Infrastructure of CSB including cabling, switching, VoIP Telephony, Redundant Power supply, WIFI Hot spots, Internet connection cabling and a state-of-the-art Server room.

2) Specific objectives

a. Empower CSB in conducting its leading and focal role in supporting public administrations.
b. Provide a modern and stable infrastructure much needed for the smooth operations within the Central Service Board.

3) Anticipated results

Delivery of the required needed infrastructure and equipment by September 30th , 2024.

IV. Deliverables

1) Scope of Work

1.1. Network Infrastructure
- Design and deploy a structured cabling system based on industry standards.
- Provide and install high-quality network switches and related hardware.
- Ensure scalability for future expansion.
- Implement redundancy and failover mechanisms.
- Conduct testing and optimization for optimal performance.

1.2. Server Room
- Design and build a state-of-the-art Server Room facility.
- Install and configure servers, storage systems, and backup solutions.
- Implement virtualization technologies.
- Set up environmental monitoring, cooling, and power distribution systems.
- Ensure compliance with industry standards and regulations.

1.3. Security
- Integrate intrusion detection/prevention systems, and antivirus solutions.
- Implement access controls, encryption protocols, and secure network communication.
- Conduct regular security audits and vulnerability assessments.
- Develop and implement an incident response and disaster recovery plan.

2) Technical Requirements

2.1. Cabling
- Cat6 or higher structured cabling for data and voice.
- Power cables
- Proper labeling and documentation of cabling infrastructure.
- Compliance with TIA/EIA standards.

2.2. Network Switches
- Gigabit Ethernet Managed switches with PoE capabilities + dedicated UPS for each
- VLAN support and QoS features.
- Redundant power supplies and high availability features.
- Web-based or command-line interface (CLI) for easy configuration and management
- Operating temperature range suitable for the installation environment

2.3. Server Room Equipment

1. Infrastructure
- Purpose-built facility with redundant power and cooling systems.
- High-security physical access controls, including biometric authentication.
- Fire suppression systems compliant with industry standards.

2. Power Distribution
- Redundant power supply that can support the Server Room for 15 to 30 minutes of downtime.
- Uninterruptible Power Supply (UPS) systems for short-term power backup.

3. Cooling Systems
- Precision air conditioning systems to maintain optimal temperature and humidity levels.
- Redundant cooling units for failover and efficiency.

4. Security
- Multi-layered security protocols, including 24/7 surveillance, access logs, and intrusion detection systems.
- Biometric access controls and secure access zones.

5. Rack and Cabinet Specifications
- Standardized server racks with cable management and airflow optimization.
- Dual power feeds and redundant network connections for each rack.
- Environmental monitoring sensors within each rack.

6. Real-time monitoring of temperature, humidity, and air quality
- Automated alerts for environmental anomalies.
- Integration with Building Management System (BMS) for centralized control.

7. Fire Detection and Suppression
- Early detection systems for smoke and heat.
- Fire suppression systems using gas or other industry-approved methods.

8. Servers
- **1** Enterprise-grade server supporting 4 VMs

- VM 1: Active Directory (To be installed and configured by the Service provider). Service provider will be expected to work with CSB on creating users, the right groups and their RBAC)
- VM 2: File Server with local shared folders (To be installed and configured by the Service provider, CSB will advise on the needed shared folders and their permissions)
- VM 3: IP Telephony server (To be installed and configured by the Service provider)
- VM4: IP Cameras monitoring server (To be installed and configured by the Service provider)
- Virtualization platform for resource optimization.
- Microsoft Windows 2016 server license is available at CSB thus advanced Windows Server OS Licenses hence required are to be within the provider offer. Please justify any new license purchase.

CSB would like to peruse the currently available server thus, service providers are responsible for upgrading and updating its use to fit in within the new IT infrastructure.

The current server specifications are:

- Intel Xeon CPU E5-2650 -2.00 GHZ (2 processors)
- 32 GB RAM
- 1.3 TB HDD
- Operating System: MS Windows 2016 Server installed

9. Backup

- Backup strategy for all the VMs including complete and incremental scheme with the collaboration of CSB staff.
- Enterprise backup tool is desired as optional within the Service provider offering.
- 5 TB RAID 5 NAS storage

10. Antivirus/ Anti-SPAM protection

- Kaspersky is currently installed at CSB premises, yet its subscription has expired with no budget to renew it. A suitable quotation for 50 users is to be included for a 3-years renewal. Hence the provider has an alternative protection provider with more suitable price, please feel free to include an alternative offer with the same number of seats (20)

2.4. LAN Access points

- 50 LAN access points distributed over 3 floors occupied by CSB. The access points location and distribution will be delivered upon contracting.
- Each access point should fall under the category of a "Smart" or "Intelligent" outlet, which refers to outlets that go beyond traditional power supply by having LAN (RJ45), VoIP Telephony, USB-C (USB Type-C) , Power, and UPS outlets.

2.5. IP Telephony System

Devices: 50 to be provided.

The desired IP Telephony system should support the following:

1. **Protocols and Standards**
   - SIP (Session Initiation Protocol) and H.323 for call signaling.
   - RTP (Real-time Transport Protocol) for voice packet transmission.
   - LDAP (Lightweight Directory Access Protocol) for directory services.
   - HTTPS for secure web-based administration.
2. **Call Control**
   - Centralized call control managed by a dedicated server for efficient call routing, call setup, and tear-down.
   - Support for features like call forwarding, call waiting, call transfer, and call hold.
3. **Voicemail and Messaging**
   - Voicemail system with customizable greetings, message storage, and retrieval.
   - Integrated messaging platform for voice, email, and fax.
4. **Conferencing**
   - Multi-party conferencing capabilities with support for ad-hoc and scheduled conferences.
   - Secure and encrypted conferencing options for sensitive discussions.
5. **Quality of Service (QoS)**
   - Prioritization of voice traffic through the implementation of Quality-of-Service protocols.
   - Bandwidth management to ensure optimal voice quality.
6. **Security**
   - Encryption of signaling and voice traffic to prevent eavesdropping.
   - Authentication mechanisms for user access and device registration.
   - Firewall compatibility for secure external communication.
7. **Scalability**
   - Ability to scale the system horizontally by adding additional servers and endpoints.
   - Support for a growing number of users and devices without compromising performance.
8. **Integration**
   - Seamless integration with existing IT infrastructure, including LDAP directories, CRM systems, and other business applications.
   - API support for custom integrations with third-party software.
9. **Redundancy and High Availability**
   - Redundant server configurations to ensure continuous operation in case of hardware or software failures.
   - Failover mechanisms for uninterrupted service during planned or unplanned outages.
10. **Management and Monitoring**
    - Web-based administration interface for easy configuration and monitoring.
    - Real-time monitoring tools for tracking system performance, call quality, and user activity.

The selected provider should integrate the provided IP telephony system with the existing CSB OGERO line.

2.6 Wi-Fi Hotspots

1. **Location**
   - CSB has no Wi-Fi network thus the service provider will be responsible to design and install Wi-Fi hotspots in the 3 floors occupied by CSB.
2. **Infrastructure Requirements**
   - Propose and install the necessary infrastructure for the Wi-Fi hotspots, including access points, controllers, switches, and any other required hardware.
   - Compatibility and integration with new network infrastructure should be ensured.
3. **Coverage and Capacity**
   - Design the Wi-Fi network to provide seamless coverage in the all the 3 floors areas.
   - Ensure sufficient capacity to support the expected number of concurrent users.
4. **Network Security**
   - Implement robust security measures, including encryption, firewalls, and intrusion detection, to safeguard the Wi-Fi network and users' data.
5. **Authentication and Access Control**
   - The solution must support various authentication mechanisms for users accessing the Wi-Fi network including public users limited access.
   - Implement access controls to restrict unauthorized access.
6. **Quality of Service (QoS):**
   - Implement QoS policies to prioritize and optimize network traffic, ensuring a high-quality user experience.
7. **Remote Management:**
   - Provide a remote management system for monitoring, troubleshooting, and configuration adjustments.

2.7 Capacity Building

Service provider is responsible for organizing onsite at CSB capacity building sessions for the IT Staff on the following solution components:
   - Installing and configuring VMs using the provided virtualization environment
   - Managing AD users, roles and groups.
   - Managing the switches using Web based interface and CLI
   - Managing the installed VOIP solution.
   - Managing the installed Wi-Fi solution.

Dates and time are to be agreed on with CSB IT staff and based on their availability.

3) General Requirements

- All proposed equipment must be available in stock or within 3-4 weeks of the onsite delivery time frame.
- Proposed equipment must have at least 5 years end of life (EOL)

- The suggested solution might require civil works to be conducted such as wall painting, false ceiling, electrical works, ….. , Service Providers should accommodate this and should include it within their suggested technical and commercial proposal.
- Software licenses including OS and others must be perpetual, no SaaS licenses are accepted.
- The proposed solution must include 3 years' onsite maintenance and support with a proper SLA.
- Maintenance and Support must be conducted in Lebanon and onsite at CSB. Remote support is not acceptable.
- Service Provider is supposed to deliver and at the implementation a detailed Network Infrastructure map showing all the cabling, switching, WIFI Hot spots, cameras and their supporting equipment in AutoCAD and image format.
- Delivery is onsite at Central Service Board (CSB) premise located in Beirut - Verdun– Lebanon (location: https://maps.app.goo.gl/wDzfvf3SAUTMFoAc9).
- None of the overall solution components can be installed or delivered remotely. All must be installed onsite and in presence and collaboration with CSB IT Staff.
- CSB working hours are Monday to Friday from 800 AM – 3:00 PM excluding public holidays as depicted by the Republic of Lebanon, all related works must be conducted within this timeframe. Extra working hours work are not possible.
- Daily onsite presence of the service provider staff must be coordinated with the CSB IT Staff and focal point, no service provider staff is expected to be onsite without the consent, presence, and the approval of the CSB focal point.

4) How to Participate

Interested qualitied service providers should send an email to Lebanon.procurement@expertisefrance.fr before 10th of June 2024 COB stating their interest to participate in this call for tender. Any email received post this date will not be considered under any circumstances.

5) Service Level Support

The Supplier shall describe the support procedures that are to be during & followed the end of the Warranty period, according to the below table summarizing the levels of severity and corresponding Response/Resolution times.

Level of urgency & specification	Response time
Priority A Failure of software and hardware that causes service interruption	within 4-6 hours
Priority B Error or problem that has caused loss of some functionality and/or may lead to service interruption	Within 1-2 Business days
Priority C Problem during live operation that is clearly due to faulty behaviour; problem that shall have a long-term effect on production, although it shall not lead to immediate service failure	Less than 2-3 Business days

Priority D Technical Queries from the Customer not related to a System fault and not affecting the operation and functionality of the system	Within 5 business days

6) Site Visit

Interested Service Providers will be invited to participate in a mandatory site visit as part of these Terms of Reference (TOR) for the Server Room and Infrastructure project. The site visit shall be scheduled to provide potential Service Providers with an in-depth understanding of the existing infrastructure, physical layout, and environmental conditions of the needed solution. This on-site experience will enable Service Providers to assess the current facilities, evaluate spatial considerations, and gain insights. The visit scheduled shall take place between on the 12th of June 2024 at 10:00 am. Specific date/time will be communicated by email, 1 week ahead.

Service Providers are requested to confirm their attendance by email 2 days in advance. Detailed information regarding the agenda will be communicated upon confirmation of participation. We are unable to organize any additional/alternative site visits thus potential Service Providers are kindly requested to plan themselves accordingly.

Any site visit0, requested by the service provider, outside the aforementioned and directly with CSB staff will automatically disqualify them from the bidding process.

Attendance at the site visit is mandatory to be eligible to apply for the call.

7) Service providers questions

Questions are possible at any time before the 17th of June 2024 COB and will be answered within 2 to 3 business days. Answers will be sent to all participating service providers. Please send all your questions, by email, to Lebanon.procurement@expertisefrance.fr solely using the provided MS Excel template "Questions & Answers.XLSX". No Phone or personal contact questions will be answered. Your email should be titled "CSB - IT infrastructure Questions". Any inquiry that does not follow the mentioned template and the stated above title will be ignored. Furthermore, any inquiry after aforementioned date will be ignored.

8) Evaluation Criteria

The best value for money is established by weighing technical quality against price on a **60/40** basis. The quality of each technical and financial offer will be evaluated in accordance with the following award criteria and the weighting:

CRITERIA	WEIGHTS
Quality	**60**
Experience & References	(10)
Methodology Capabilities	(20)
Proposed equipment specifications	(20)
Proposed delivery timeline	(10)

Price (including TCO)	40

Tenders will be appraised and given a score up to 100 points according to these criteria.

NB:

• Only tenders with scores of at least 45 points on technical evaluation qualify for the financial evaluation.

• No other award criteria will be used. The award criteria will be examined in accordance with the requirements indicated in the Terms of Reference.

9) Confidentiality

The entire evaluation procedure is confidential, subject to Expertise France's legislation on access to documents. The Evaluation Committee's decisions are collective, and its deliberations are held in closed session. The members of the Evaluation Committee are bound to secrecy. The evaluation reports and written records are for official use only and may be communicated neither to the tenderers nor to any party other than Expertise France.

V. Place, duration, and terms of performance.

1) Onsite at **Central Service Board (CSB)**

2) Start date: 10/7/2024.

3) Delivery date: 30/10/2024

VI. Required expertise and profile.

1. The service provider must be a Lebanese registered company with at least of 10 years of proven experience in delivering similar IT Infrastructure and Data Centers.
2. Proven track record in designing, building, and maintaining Server rooms and IT infrastructure.
3. Successful completion of similar projects, preferably in industries with high standards for reliability, security, and scalability.
4. Financial stability and capacity to manage the costs associated with the project.
5. 2 references from previous clients who have undertaken similar projects.
6. Previous experience in working with local NGOs and/or other international organizations is desirable.

VII. How to apply

The proposal should include:
- Technical proposal (in MS Word format) that strictly follows Annex I skeleton.
- Commercial proposal with a filled priced BOQ in MS Excel format (format is provided)
- 2 Letters of reference signed and stamped by 2 different customers that have undertaken a similar solution in the last 5 years. The references should clearly state the entity/company name, focal point to contact (Phone and email) and the work that has been undertaken.
- A copy of the VAT Certificate
- A copy of the Company Registration document
- A copy of a recent commercial circular (إذاعة تجارية)

Please send your proposal by email to Mr. Rayan Merheb at the following address:
Lebanon.procurement@expertisefrance.fr

Submission deadline

All proposals must be submitted no later than 25th of June 2024, 5 PM.

VIII. Annex 1 – Technical Proposal

1. **Executive Summary**
2. **Project Scope and Objectives**
3. **Proposed Architecture**
   - Detailed architectural diagrams illustrating the proposed IT infrastructure and Server Room design. Include components such as servers, storage, networking equipment, virtualization, and disaster recovery mechanisms.

4. **Hardware and Software Specifications**
   - Provide a comprehensive list of all hardware and software components included in the proposal. Include specifications, models, quantities, and product sheets!
5. **Network Design**
   - Outline the network architecture, including routers, switches, firewalls, and any other networking devices. Specify the design for local area network and WIFI connectivity.
6. **Storage Solution**
   - Detail the proposed storage infrastructure, NAS, capacity, redundancy, and scalability. Discuss data backup and recovery strategies.
7. **Server Infrastructure**
   - Specify the server hardware, virtualization platform, and server management solutions. Discuss server redundancy, load balancing, and scalability.
8. **Security Measures**
   - Describe the security features and protocols, including access controls, encryption, intrusion detection/prevention systems, and antivirus solutions.
9. **Environmental Controls**
   - Detail the measures in place for environmental monitoring and control, such as precision cooling systems, humidity control, and fire suppression.
10. **Scalability and Future-Proofing**
    - Discuss how the proposed solution accommodates future growth, technology advancements, and scalability requirements.
11. **Disaster Recovery and Business Continuity**
    - Outline the disaster recovery plan, including backup procedures, recovery time objectives (RTO), and recovery point objectives (RPO).
12. **Monitoring and Management**
    - Detail the tools and systems in place for monitoring the health, performance, and security of the IT infrastructure and Server Room. Discuss remote management capabilities.
13. **Compliance and Standards**
    - Highlight how the proposed solution complies with industry standards, regulations, and best practices.
14. **Implementation Plan**
    - Provide a detailed timeline and roadmap for the implementation including milestones, dependencies, and resource requirements.
15. **Training and Documentation**
    - Discuss plans for training staff on the new infrastructure and provide documentation that outlines configurations, procedures, and troubleshooting guidelines.
16. **Cost Estimate**
    - Breakdown of costs associated with the proposed solution, including hardware, software, labor, and ongoing maintenance. Provide a clear and transparent pricing structure.
17. **References and Case Studies**
    - Include references from previous clients with similar project scopes and any relevant case studies that demonstrate successful implementation.