

## Terms of Reference (ToR)

### Local Consultant: Software Developer for the CBY Fintech Sandbox

#### Vacancy information

<b>Project Title</b>	Yemen Fintech Sandbox Project (YFSP)
<b>Position</b>	Local Consultant - Software Developer
<b>Duty Station</b>	Aden, Yemen (embedded at CBY premises)
<b>Duration</b>	7 months
<b>Level</b>	NPSA 3 through a third-party contracting firm
<b>No. of positions</b>	1
<b>Supervisor</b>	Administrative: UNDP Fintech Sandbox Project Manager. Day-to-day technical direction: International Senior Technical Advisor (Fintech Sandbox). Substantive technical supervision: designated CBY Sandbox Unit focal point.

#### Background

UNDP is launching the Fintech Sandbox as a new initiative for the Central Bank of Yemen (CBY) to facilitate fintech innovation. The Fintech Sandbox supports financial inclusion by developing pilot tools and assisting fintech entities to develop and pilot their solutions for the financial sector under CBY's oversight. The Fintech Sandbox serves as the foundational step toward launching a full Regulatory Sandbox in Yemen.

The initiative focuses on three core operational pillars:

- Enhancing the Fintech Sandbox operating environment in CBY: establishing the structural governance, operational manuals, and secure IT infrastructure (including enterprise servers and a digital Lab Portal) required to safely manage and monitor sandbox participants.
- Developing technologies: designing and launching targeted pilot technologies such as Unified QR standards and SoftPOS solutions that support the use and operation of Yemen's broader payments infrastructure.
- Organizing a Fintech Hackathon: cultivating local innovation by hosting a competitive hackathon to train local entrepreneurs, test new ideas, and pilot the winning financial solutions through the Fintech Sandbox.

Through this intervention, UNDP ensures the new initiative complements and adds strategic value to the World Bank-funded Yemen Financial Market Infrastructure and Inclusion Project (FMIIP), which is also implemented by UNDP for CBY.

#### Objective of the role

The objective of this assignment is to engage a Software Developer, embedded at the CBY Fintech Sandbox Lab, to provide technical development and integration support to CBY across Sandbox operations. The developer supports both internally led initiatives (for example Unified QR, SoftPOS) and externally facilitated solutions brought in by fintech startups and Hackathon winners. The developer operates under the day-to-day technical direction of the International Senior Technical Advisor and the substantive technical supervision of the CBY Sandbox Unit. Decision-making authority on technical standards, integration requirements, and pilot parameters remains with CBY.

#### Scope of work

All technical activities under this assignment are undertaken in support of the Central Bank of Yemen (CBY) and under its direct technical authority. Day-to-day technical direction is provided by the International Senior Technical Advisor (Fintech Sandbox). The consultant does not exercise decision-making authority over regulatory, supervisory, or financial sector matters. All technical outputs, testing activities, onboarding decisions, and pilot parameters are subject to validation, approval, and oversight by the CBY Sandbox Unit and relevant CBY departments.

Within this framework, the developer carries out the following activities:

##### 1. Technical development and integration support

- Support CBY in developing, configuring, and deploying internal software tools, APIs, and programs required for Sandbox operations, in line with CBY-defined standards.
- Provide programming and technical integration support to CBY for pilot technologies including Unified QR and SoftPOS solutions.

- Assist CBY in the technical administration, configuration, and continuous improvement of the Sandbox Portal used to monitor participants.
- Support IT environment readiness and baseline setup by assisting with the configuration of the local development environment at CBY and supporting the setup, testing, and operational readiness of the Sandbox Portal infrastructure.
- Provide technical development, coding, and integration support for internal solutions and pilot technologies, including SoftPOS and Unified QR pilots, in accordance with CBY technical requirements.

## **2. Sandbox Lab technical support and testing**

- Act as the technical point of contact for external fintech entities, supporting them to upload, connect, and configure their solutions within the CBY Lab environment in accordance with CBY technical and integration requirements.
- Support CBY in conducting technical testing and quality assurance of solutions deployed within the Sandbox, against CBY-defined standards for data flows and API integration.
- Assist CBY in diagnosing and resolving technical issues, server errors, and software bugs encountered during live testing phases.
- Support external solution testing by assisting with solution uploads, API integration, configuration, live testing, troubleshooting, and technical validation within the CBY Sandbox environment.

## **3. Hackathon technical facilitation**

- Support CBY in preparing the Lab's technical infrastructure to receive prototypes and Minimum Viable Products from the Fintech Hackathon.
- Provide technical support and code-level assistance to winning Hackathon teams, enabling their MVPs to meet CBY technical requirements for live testing.
- Provide Hackathon MVP technical support, including technical guidance, code review, troubleshooting, integration assistance, and readiness support for live testing in line with CBY-approved technical requirements.

## **4. Coordination with the technical team**

- Coordinate with the Infrastructure, Security and DevOps Analyst on application hosting, deployment, and access provisioning.
- Coordinate with the Database Administrator on data models, API access to databases, and pilot integration requirements, under the technical direction of the International Senior Technical Advisor.
- Coordinate with the wider technical team to ensure that application hosting, deployment, database access, API integration, and pilot testing requirements are aligned with the overall Sandbox technical architecture and CBY-approved procedures.

## **5. Documentation, validation, and reporting**

- Maintain documentation for internally developed code, API endpoints, and system architectures, for CBY review and retention.
- Support CBY in reviewing and validating technical readouts (architecture, integrations, data flows, security) submitted by external vendors and Hackathon participants.
- Submit monthly progress reports on development activities, testing outcomes, and technical risks to the UNDP Project Manager, the International Senior Technical Advisor, and the CBY Sandbox Unit focal point.
- Prepare and maintain codebase documentation, API documentation, technical testing reports, validation records, system architecture notes, and monthly progress updates for CBY review, retention, and handover purposes.

All pilot activities, onboarding decisions, testing protocols, and validation processes remain under the authority of CBY. The consultant's role is limited to technical assistance, coordination, and facilitation.

## **Payment modality and schedule (monthly)**

The assignment is remunerated on a monthly basis at a fixed monthly fee, payable in arrears, subject to satisfactory performance during the month.

Monthly payment is processed upon:

- submission of a monthly invoice or payment request by the consultant;
- submission of a monthly progress report summarizing activities performed, results achieved, key issues and risks, and the workplan for the following month;

- submission of a monthly timesheet or attendance record, if required under the applicable contract modality;
- written certification of satisfactory performance by the UNDP supervisor in coordination with the CBY focal point.

Payments may be withheld or deferred if the required monthly documentation is not submitted or if performance is assessed as unsatisfactory, until corrective actions are completed and accepted. The monthly fee is prorated for any partial month worked.

## Institutional arrangement

The consultant works under the administrative supervision of the UNDP Fintech Sandbox Project Manager. Day-to-day technical direction is provided by the International Senior Technical Advisor (Fintech Sandbox). Substantive technical supervision and validation of work products are exercised by the designated CBY Sandbox Unit focal point, in line with CBY institutional standards and supervisory requirements. The consultant applies and promotes results-based management and a client-oriented approach consistent with UNDP rules and regulations.

## Competencies

### Core competencies

- Achieve results: delivers quality outputs, plans resources efficiently, and ensures accountability.
- Think innovatively: proposes practical technical solutions in support of CBY priorities.
- Learn continuously: seeks learning proactively and shares knowledge.
- Engage and partner: practices teamwork and builds collaborative networks.

### Technical competencies

- Software engineering and architecture: full-stack development, API design, and system architecture for financial technologies.
- Systems integration and testing: software testing, debugging, and quality assurance within secure environments.
- Data security and privacy: data governance, encryption standards, and privacy-by-design principles relevant to the financial and banking sector.
- Fintech and payment systems: digital payment flows, QR code standards, SoftPOS, and banking IT infrastructures.

## Required qualifications

### Education

- University degree (Bachelor's or Master's) in Computer Science, Software Engineering, Information Technology, or a closely related technical field.

### Experience

- Professional experience in software development, systems integration, or IT engineering.
- Track record in developing or supporting financial sector applications, payment gateways, mobile wallets, or core banking integrations.
- Experience working within secure IT environments and managing API integrations.
- Experience working with or within regulatory bodies (experience with CBY is an advantage).

### Skills

- High proficiency in modern programming languages and frameworks (for example Java, Python, Node.js, React) and database management.
- Fluent in Arabic and English, with strong technical writing skills in both languages.
- Strong problem-solving skills and ability to operate full-time within government premises (CBY).

Mahir Chekkoury

Project Manager

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*Mahir Chekkoury*

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