

Terms of Reference (ToR)

International Consultant: Senior Technical Advisor for the Establishment of the Fintech Sandbox at the Central Bank of Yemen (CBY)

Vacancy information

Project Title	Yemen Fintech Sandbox Project (YFSP)
Position	International Consultant - Senior Technical Advisor (Fintech Sandbox)
Duty Station	Home-based
Duration	7 months
Level	ICS-10 through a third-party contracting firm
Supervisor	Administrative: UNDP Fintech Sandbox Project Manager. Substantive technical supervision: designated CBY Sandbox Unit focal point. The consultant provides day-to-day technical direction to the local Fintech Sandbox team.

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 consultancy

The objective of this consultancy is to engage an International Senior Technical Advisor to support CBY in the establishment of the Fintech Sandbox. The consultant provides technical advisory services with a focus on translating Sandbox priorities into functional systems, including secure lab infrastructure, portal architecture, API-based integration, pilot solution design, testing environments, and operational workflows. The consultant also serves as day-to-day technical lead for the local Fintech Sandbox consultancy team (Ecosystem Liaison, Software Developer, Database Administrator, and Infrastructure, Security and DevOps Analyst). The consultant operates in an advisory capacity. Decision-making authority on regulatory, supervisory, and pilot parameters remains with CBY at all times.

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 supervision. 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.

The assignment requires the ability to bridge financial-sector requirements with secure software architecture, legacy system constraints, API-based integration, and practical pilot testing within a regulated institutional environment.

Within this framework, the consultant supports CBY across six main areas:

1. IT infrastructure, Lab Portal, and technical architecture

- Support CBY in defining the Sandbox technical architecture, including data flows, API integration layers, user roles, access control, audit trails, and operational reporting requirements.
- Support the design of the Sandbox Portal as an operational platform for application intake, participant management, test monitoring, documentation, and reporting.
- Provide technical advice on data structuring, interoperability, and integration between Sandbox components and existing CBY systems, including legacy environments where relevant.
- Support CBY in drafting the technical specifications and operational requirements for the Sandbox Enterprise Server. Participate, where requested by CBY and UNDP, in the technical evaluation committee.
- Support CBY in developing the Terms of Reference for the procurement of the Sandbox Portal.
- Provide technical assistance to CBY and UNDP during the IT development phases, including review and quality assurance of vendor outputs through design, development, pilot testing, and launch.
- Prepare and support the development of the Sandbox technical architecture document, covering data flows, API integration, user roles, access control, audit trails, reporting requirements, and interoperability arrangements for CBY review.
- Support the preparation of IT procurement packages, including technical specifications for the Enterprise Server and Terms of Reference for the Sandbox Portal, SoftPOS software, and related technical components required for Sandbox operations.
- Support the launch readiness of the Sandbox Portal by reviewing vendor outputs, supporting quality assurance, and ensuring that the Portal is aligned with CBY-approved technical and operational requirements.

2. Sandbox structure, governance, and regulatory alignment

- Provide senior technical advisory services to CBY across all Sandbox activities.
- Support CBY in designing and documenting the organizational structure of the Fintech Sandbox within CBY.
- Assist CBY in developing operational manuals covering admission, testing, monitoring, and exit protocols for participating fintech firms, for CBY review and approval.
- Support CBY in conducting a rapid legal review of the operational manuals and planned pilots against existing regulations, and in the preparation of draft regulatory instruments, exemption circulars, or technical notes for CBY review and issuance.
- Support the preparation of the Sandbox governance and legal framework, including the Sandbox structure, operational manuals, and draft regulatory instruments, for CBY review, validation, and approval.

3. Pilot products and use cases

- Support CBY in translating priority use cases (e.g. Unified QR, SoftPOS) into technical pilot designs, including system architecture, data flows, user journeys, integration requirements, testing scenarios, and validation criteria.
- Support CBY in drafting the Terms of Reference for the procurement or licensing of Unified QR and SoftPOS software.
- Assist CBY in coordinating the design, development, pilot implementation, and market launch of these solutions through the Sandbox, in line with CBY-approved parameters.
- Prepare pilot design packages for Unified QR and SoftPOS, covering architecture, data flows, user journeys, test scenarios, integration requirements, validation criteria, and implementation arrangements for CBY review.
- Support vendor quality assurance review, CBY staff training, and the launch of the SoftPOS pilot under CBY supervision and in line with CBY-approved pilot parameters.

4. Fintech Hackathon

- Support CBY in conceptualizing and designing the structure and activities of the Fintech Hackathon.
- Facilitate technical working group meetings with ecosystem players (commercial banks, microfinance institutions, telecom companies) under CBY supervision.
- Serve on the technical evaluation panel reviewing pitches and supporting CBY in the selection of winning solutions.
- Support CBY in assessing the technical feasibility, architecture quality, and integration readiness of proposed solutions during evaluation and post-hackathon onboarding.
- Provide technical guidance to CBY on the onboarding and live piloting of winning solutions within the Sandbox environment.
- Support Hackathon execution by facilitating ecosystem working groups, delivering entrepreneur training, supporting mentorship activities, participating in technical evaluation, and assisting CBY in the selection and onboarding of winning solutions.

- Support the integration readiness of Hackathon winning solutions by reviewing their technical feasibility, architecture quality, data flows, and compatibility with Sandbox technical requirements.

5. Technical leadership of the local Fintech Sandbox team

- Provide day-to-day technical direction to the four local consultants (Ecosystem Liaison, Software Developer, Database Administrator, and Infrastructure, Security and DevOps Analyst), ensuring coherence of technical workstreams.
- Define joint technical workplans, task assignments, and review cycles for the local team in coordination with the UNDP Project Manager and the CBY Sandbox Unit focal point.
- Review the technical work products of the local team prior to submission to CBY for substantive validation.
- Facilitate technical cross-team coordination between the Sandbox infrastructure layer, the database layer, the application layer, and the ecosystem-facing workstream.
- Prepare and maintain a joint technical workplan for the local team in coordination with UNDP and CBY, including task assignments, review timelines, coordination arrangements, and workstream dependencies.
- Conduct monthly review cycles of local team outputs to ensure technical coherence, quality assurance, and alignment with CBY-approved Sandbox priorities before submission for CBY validation.

6. Capacity building, monitoring, and reporting

- Conduct hands-on training and knowledge-transfer sessions for CBY Sandbox Unit staff on Sandbox operations, application evaluation, and live test monitoring through the Lab Portal.
- Deliver preparatory workshops and specialized training to participating fintech entrepreneurs during the Hackathon.
- Submit standard UNDP project documentation: Inception Report, monthly progress reports, and a Final Consultancy Completion Report capturing lessons learned.
- Submit the Inception Report and support the preparation of progress documentation covering technical milestones, pilot development, vendor quality assurance, training activities, testing outcomes, risks, and the workplan for the following month.
- Deliver CBY staff training and knowledge-transfer sessions related to Sandbox operations, application evaluation, Lab Portal use, pilot monitoring, and live testing procedures.
- Submit the Final Consultancy Completion Report, capturing key activities completed, results achieved, lessons learned, technical recommendations, and considerations for the continued operation of the CBY Fintech Sandbox.

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 and under the substantive technical supervision of the designated CBY Sandbox Unit focal point. The consultant provides day-to-day technical direction to the local Fintech Sandbox consultancy team (Ecosystem Liaison, Software Developer, Database Administrator, and Infrastructure, Security and DevOps Analyst). Technical direction, validation of work

products, and operational priorities are set in coordination with CBY counterparts to ensure alignment 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, secure technical solutions while respecting regulatory boundaries.
- Learn continuously: seeks learning proactively and shares knowledge.
- Engage and partner: practices teamwork and builds collaborative networks across institutions.

Cross-functional competencies

- Strategic thinking, business acumen, and effective decision-making.
- Knowledge generation, facilitation, and capacity building design and delivery.
- Project management, partnerships management, risk management, and monitoring.

Technical competencies

- Fintech sandbox and regulated innovation environments: understanding of testing frameworks and compliance constraints in financial systems.
- Payments and digital acceptance: QR payments, SoftPOS, merchant onboarding, and transaction flows.
- Software architecture and system integration: API design, platform architecture, data flows, interoperability, and integration across heterogeneous systems.
- IT infrastructure for financial systems: server architecture, secure deployment, portal design, and vendor oversight.
- Data and reporting systems: dashboards, monitoring tools, audit trails, and operational reporting.
- Knowledge transfer to central bank and supervisory authorities.

Required qualifications

Education

- Advanced university degree (Master's or equivalent) in Computer Science, Software Engineering, Information Systems, Finance, Financial Law, Economics, or a closely related field.

Experience

- Minimum 5 years of international experience in digital finance, fintech regulation, payment systems, software architecture, or financial technology platforms.
- Strong experience in designing or implementing enterprise or government platforms involving workflows, user management, reporting systems, and secure access control is required.
- Experience advising central banks, financial regulators, or regulated financial institutions is highly desirable.
- Strong technical background in assessing IT infrastructure requirements for financial systems and supporting central banks in vendor oversight (portals, servers, SoftPOS, QR standards).
- Experience with legacy-to-modern system integration, data migration, or interoperability between institutional systems is an advantage.
- Experience leading multidisciplinary technical teams and providing day-to-day technical direction to local consultants or developers is required.

Skills

- Strong ability to translate business and regulatory requirements into system architecture, data models, and functional platform designs.
- Experience designing and reviewing digital platforms with user management, workflow automation, role-based access control, and audit trails.
- Solid understanding of API-based integration and interoperability between systems (e.g. payments, core banking, portals, and external services).
- Experience working with databases, data structuring, and reporting layers, including performance considerations and data integrity in transactional systems.

- Ability to assess and guide vendor technical outputs across system design, development, testing, and deployment phases.
- Practical experience with legacy system environments and their integration with modern platforms.
- Strong analytical and problem-solving skills in complex, multi-stakeholder technical environments.
- Ability to communicate technical concepts clearly to both technical and non-technical stakeholders, including central bank counterparts.
- Experience delivering hands-on technical guidance and knowledge transfer to institutional teams.
- Experience working on financial systems, microfinance platforms, insurance systems, or public-sector digital infrastructure is an advantage.
- Fluent in English. Working knowledge of Arabic is a significant advantage given the working context with CBY.

Confidentiality

The consultant shall maintain strict confidentiality regarding all documents, data, technical materials, systems, institutional information, meeting discussions, and any other information accessed or produced during the assignment. This includes information related to UNDP, the Central Bank of Yemen, sandbox operations, fintech participants, payment systems, procurement documents, technical specifications, and pilot activities.

Mahir Chekkoury

Project Manager

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