

## **TERMS OF REFERENCES**

### **Short-term expert mission**

#### **IT consultancy “Support for the structuring and technical implementation of TURAR Healthcare's digital hospital planning and investment tools”**

### **Context and justification of the mission**

Under the FEXTE Kazakhstan project, funded by the French Development Agency (AFD), Expertise France (EF) provides technical assistance to the Ministry of Health of the Republic of Kazakhstan and its implementing agencies, notably TURAR Healthcare.

TURAR Healthcare is the national operator responsible for supporting the planning, structuring and implementation of public healthcare investment projects. In this capacity, TURAR plays a central role in hospital infrastructure development, technical programming, investment appraisal and coordination of project implementation at national and regional levels.

The objective of the FEXTE project is to strengthen institutional and technical capacities in hospital investment planning and public health infrastructure management, in alignment with Kazakhstan's national health development strategy.

Within this framework, EF supports TURAR through methodological assistance, knowledge transfers and institutional capacity building. The project does not aim to substitute national structures, but to reinforce their ability to autonomously design, analyse and manage hospital investment projects according to international standards.

Since 2024, the cooperation has led to the identification of three structural digital tools intended to support public hospital investment engineering:

- a tool for planning healthcare needs and capacities;
- a tool for functional structuring and surface area sizing;
- a tool for analysing costs and investments.

The methodological and functional guidelines for these tools are defined jointly with EF experts, who act as methodological and functional advisors.

The IT development of the tools is to be carried out by or for TURAR Healthcare.

However, technical discussions have highlighted the need to strengthen TURAR's capacity to:

- translate business and methodological requirements into robust technical specifications;
- structure a coherent and interoperable tool architecture;
- communicate effectively with IT development teams;
- secure the testing, validation and production phases.

In this context, the purpose of this consultancy is to engage an IT consultant to provide technical structuring and implementation support to TURAR and its development teams, without replacing them.:-

## Mission objectives

The overall objective of the mission is to support TURAR Healthcare in translating the functional and methodological requirements defined with EF experts into a suitable technical architecture and IT specifications, and to assist with the technical implementation of digital tools with a view to transferring skills.

The specific objectives of the mission are to:

- support TURAR focal points in understanding the technical requirements arising from the defined methodologies;
- support the translation of functional specifications into usable technical specifications;
- structure a coherent, scalable and interoperable technical architecture for digital tools;
- facilitate operational dialogue between:
  - business and methodological experts (ANAP, EF),
  - TURAR IT teams and developers,
  - local technical and organizational constraints;
- support the testing, validation and production phases of the tools.

## Tasks Description

The consultant will mainly be involved in the following activities:

### 1. Support for technical ownership by TURAR

- Support for understanding the technical requirements set out in the functional specifications;
- Clarification of key technical concepts with TURAR focal points;
- Identification, with TURAR, of technical reinforcement or adaptation needs.

### 2. Structuring of the technical architecture

- Support for defining the overall architecture of the tools (application logic, interoperability, data flows);
- Support for defining interfaces (APIs), data exchange and security rules;
- Taking into account the existing constraints of TURAR's information systems.

### 3. Functional-technical translation

- Contribution to the translation of functional specifications into detailed technical specifications;
- Support for the formalisation of calculation rules and IT processing;
- Support for the structuring of databases and data models.

#### 4. Support for development, testing and validation

- Support for TURAR's IT development teams (or their service providers);
- Support for the organisation of development cycles (agile approach);
- Support for the definition and implementation of test protocols;
- Contribution to the technical and functional validation phases.

### Deliverables expected

- Summary notes and technical clarifications for TURAR;
- Documents structuring the technical architecture of the tools;
- Documented contributions to the technical specifications of the digital tools;
- Reports on IT workshops and technical meetings;
- Capitalisation note on TURAR's technical appropriation and maintenance capacity for the tools.

### Terms and conditions of implementation

- Approximate duration: 10 months
- Estimated volume: 62 days
- Modality: short term, intermittent
- Terms and conditions: based in Astana (with flexibility depending on needs)
- Supervision : Expertise France

The mobilization schedule will be defined progressively based on project needs and specific terms of reference issued for each intervention phase.

### Profile requirements

- Higher education in computer science, information systems or software engineering;
- Between 6 and 15 years of professional experience in IT systems design, application architecture or software engineering;

- Proven experience in designing application architectures and information systems;
- Demonstrated experience in translating business requirements into technical solutions;
- Knowledge of agile development methods appreciated;
- Proven ability to work in institutional support and skills transfer.
- Full command of Russian and English.
- Knowledge of Kazakh and French is an advantage.