1. **Integration of External Systems** Could you kindly provide the exact number and a comprehensive list of external information systems intended for integration into the Water Management Information System (WMIS)?

**Answer:**  The exact list of external systems and associated equipment intended for integration is currently unavailable. A more detailed response will be provided following the completion of the initial development phase, titled “System Business Analysis.”

2. **Data Types and Monitoring Parameters** Is there an existing catalog of data types and models that the system should support? Beyond the specified parameters (pH, salinity, turbidity, and microbial contamination), are there additional water quality parameters required for monitoring? Clarification on this would assist in accurate technical and financial evaluations.

**Answer:**  At this stage, water quality data is expected to be manually entered into the platform by specialists. However, future phases will include provisions for automation through the integration of specialized equipment.

**3. Open-Source vs. Proprietary Solutions** Should the system be built on open-source solutions, or is a proprietary, closed-source alternative acceptable? What specific licensing requirements must the project adhere to?

**Answer:** System should be on open-source codes. System must be without license requirements. It means infinity use.

1. **Hosting Assumptions** The Terms of Reference (ToR) specify virtual servers and hardware infrastructure requirements. We assume hosting will be managed by a centralized provider (e.g., Uzinfocom or Sanepidcom), with regular hosting fees covered by the Operating Beneficiary. Could you confirm this assumption, particularly in reference to Deliverable 2.1?

**Answer:** System must install on Uzinfocom or Sanepid data servers and will be controlled by beneficiary of system.

1. **Disaster Management and Data Mirroring** Should a mirrored hosting setup for disaster recovery and data synchronization be included in the project scope?

**Answer:** In accordance with the Law of the Republic of Uzbekistan “On Cybersecurity of State Information Systems,” the system must be hosted exclusively on data servers owned by state organizations. Data backups must also be conducted solely within the country, and the transfer of any data outside the borders of the Republic of Uzbekistan is strictly prohibited.

1. **Integration of External Data Sources**

**-** What type and quantity of sensors are expected to be integrated?

- Are existing IoT data aggregator platforms available for field sensors, or will direct sensor connection to the WMIS be required?

- Are laboratory systems currently operational or under development?

- If so, could you provide details on their status?

- What level of satellite imagery processing and analysis is anticipated?

- Are there any design sketches or detailed functional requirements for the platform?

-Should any existing software structure or functionality be replicated?

**Answer:** Currently, no IoT data aggregator platforms are available. The plan is to establish a centralized database to consolidate data. The exact number and types of sensors are also unknown at this stage. These details will be determined during the initial development phase, titled “System Business Analysis.”

1. **IoT Sensor Deployment**

* 1. - For real-time water quality monitoring (e.g., pH, salinity, turbidity, microbial contamination), do you anticipate the supply of sensors and associated data transfer devices? **Answer:** Exactly we don’t know about it. All kind questions we should know in the first phase of development “System Business Analysis”
  2. If sensors are already deployed, could you share their technical specifications and data transfer configurations (e.g., cellular transfer, protocols, frequency)? - **Answer:** We don’t have more information about this. All kind questions we should know in the first phase of development “System Business Analysis”

1. **8. Notification Systems and Mobile Applications** 
   1. - Should the proposed solution include a mobile application for notifications and monitoring? **Answer:** – No requirements to develop mobile app.
   2. - Should the application be limited to monitoring, or should it also support data entry features? **Answer:** Not limited to monitoring. It should also support features for data entry.
   3. Is support for both iOS and Android platforms required? - No requirement to develop mobile app.
   4. We assume the Customer will provide App Store and Google Play accounts for app publishing. Could you confirm this? – No need for such action.
   5. Additionally, we assume that SMS message fees will be borne by the Customer or Operating Beneficiary. Can you confirm? – No need for such action.

9. **Authorization and Authentication**

* 1. What authentication methods are expected (e.g., login/password only, or integration with centralized Single Sign-On platforms such as OneID or Uzinfocom's SSO)? **– Answer:** At the initial stage, login and password only would be sufficient. At later stages, the authentication method could be on Uzinfocom SSO

10. **Deliverable 1.1: Business Analysis and Development**

* 1. The ToR specifies: “Develop a system based on the development of the ToR. Make a business analysis of WMIS.” Could you clarify if this deliverable includes both system development and business analysis, or solely a business analysis report?

1. **Answer:** It includes both, system development and business analysis.

**11. Deliverable 1.2: Standards and Approvals**

* 1. The ToR mentions the preparation of SRS and SDS documents and alignment with government standards (e.g., O'zDsT 1986:2018). We assume that agency fees for approvals from the Ministry of Digitalization and the "Cybersecurity Center" will be covered by the Client or Operating Beneficiary. Could you confirm this?

**Answer:** The approval of the “Technical Requirements” documentation by the Cybersecurity Center is to be funded by the contractor. However, obtaining a compliance certificate for the developed code from the Cybersecurity Center is not included in the scope of this tender. Approval from the Ministry of Digitalization of Uzbekistan is free.

**12. Deliverable 2.6: CMS Development**

* 1. Could you elaborate on the type of CMS required and its intended purpose within the WMIS?

**Answer:** The primary requirement for the CMS is to ensure that both system administrators and users can easily navigate the admin panel and efficiently add or manage information within the system.

**13. Submission Deadline Extension**

* 1. Considering the upcoming Christmas and New Year holidays, we kindly request an extension of the submission deadline.
  2. Answer: Unfortunately, it is not possible considering the short project implementation cycle. The overall bids publication covers 20 calendar days. Deadline is 13.01.2025 18:00 (GMT+5:00)