

Annex 1 - Task Description - Development of a centralized Digital Platform of WBL

Development of a centralized Digital Platform of Work-Based Learning (WBL) opportunities in Bosnia and Herzegovina

1. Background

Bosnia and Herzegovina is in the process of strengthening and modernizing its system of Work-Based Learning (WBL) in order to improve the relevance and quality of vocational education and training (VET), as well as to enhance cooperation between schools, companies, chambers, and competent institutions.

Currently, there is no unified digital system that consolidates verified information on companies participating in WBL, certified mentors, available practical training offers, and institutional oversight across different administrative units. Existing records are fragmented, partially maintained in spreadsheets or internal databases, and differ in structure and quality across institutions.

In order to ensure transparency, consistency, and better coordination among stakeholders, a centralized cloud-based Digital Platform is to be developed. The system will connect companies, schools, chambers, administrative authorities, and other relevant institutions through a single digital platform.

The overall vision of the Digital Platform for WBL includes:

- structured registration and verification of companies
- management of WBL offers
- tracking of mentor eligibility
- recording of institutional oversight
- centralized reporting and monitoring at the administrative and national level

The Digital Platform for WBL is planned as a **multi-phase initiative**.

First phase: Core Operational Platform (Subject of this ToR)

Task focuses on establishing a fully functional and operational core system that enables:

- user registration and role-based access management
- definition of administrative units and institutional responsibilities
- structured data import (including standardized Excel templates)
- creation and verification of company profiles
- registration of mentors within company profiles
- publication and administration of WBL offers
- recording of contractual relationships between schools and companies (without document upload)
- real-time basic statistical indicators
- Excel data export per administrative unit and national level
- basic event-based notifications
- backup, security, and production deployment

At the end of the assignment, the system must be fully usable and operational for institutional oversight, company participation, and basic monitoring of WBL activities across BiH administrative units.

The assignment does not include advanced analytics, configurable certification criteria engines, complex workflow automation, or extended BI dashboards. These elements are reserved for future expansion.

Second Phase – Extended Governance and Advanced Functionality (Future Procurement)

The Second Phase will build upon the established core system and is expected to introduce advanced functionalities, including but not limited to:

- configurable certification criteria per administrative unit
- advanced workflow management and status automation
- graphical dashboards and trend analytics
- extended mentor lifecycle tracking
- advanced reporting and filtered analytical views
- centralized institutional supervision modules
- archival logic and performance optimization

The second phase will be subject to a separate procurement procedure and is not part of this Request for Quotation. However, assignments under this ToR must be designed in a way that technically allows future expansion without structural redesign of the system.

2. Objectives

The **overall objective** of this assignment is to design, develop, and deploy a centralized, operational Digital Platform for Work-Based Learning (WBL) in Bosnia and Herzegovina that ensures structured participation of companies, institutional oversight, and transparent monitoring of WBL activities across administrative units.

Within the scope of the assignment, the **specific objectives** are as follows:

SO1: Establishment of a Centralized Digital Infrastructure

To create a secure, cloud-based digital platform that consolidates information related to companies participating in WBL, their mentors, WBL offers, and institutional oversight into a single, standardized, and structured system accessible to authorized stakeholders across administrative units. The system must replace fragmented and spreadsheet-based records with a unified digital registry that supports consistency, traceability, and institutional coordination.

SO2: Structured Registration and Role-Based Governance

To enable controlled user registration and role-based access management for all relevant stakeholders, including companies, administrative institutions, chambers, and supervisory bodies. The system shall ensure that each administrative unit operates within its defined constitutional jurisdiction, while allowing aggregated national-level oversight. Institutional actors must be able to verify, approve and monitor company participation within their respective competencies.

SO3: Standardized Data Collection and Import Mechanisms

To introduce a standardized data structure for the Platform and enable the controlled import of existing records through predefined templates. The objective is to ensure that historical and partially structured data can be harmonized and integrated into the centralized system while maintaining data quality and validation standards. This includes providing user-friendly tools for data upload, validation feedback, and structured correction before final integration into the Platform.

SO4: Company Profile Management and Verification

To enable companies to create and maintain structured digital profiles containing essential information relevant to WBL participation, including operational data, declared training capacities, and mentor information. The system must support institutional verification of company profiles before they become fully active participants in the WBL ecosystem. This ensures compliance with each administrative unit requirements and provides transparency regarding the eligibility status of each company.

SO5: Management of Work-Based Learning Offers

To allow verified companies to publish and manage WBL offers in a structured format that clearly defines the scope, duration and capacity of WBL opportunities. The system shall support institutional visibility and oversight of published offers, enabling competent authorities to monitor active opportunities within their administrative jurisdiction.

SO6: Recording of Institutional Relationships

To enable structured recording of formal relationships between schools and companies for the implementation of WBL activities. Although document upload of contracts is not included within this assignment, the system must provide a mechanism to record and trace the existence of such relationships, including the period of implementation and the number of participating learners. This ensures institutional traceability without introducing complex document management functionalities at this stage.

SO7: Basic Monitoring and Real-Time Indicators

To provide real-time, system-generated numerical indicators reflecting the overall state of the WBL ecosystem, including the number of companies present at the Platform, active offers, administrative units, and ongoing training engagements. The system shall allow export of structured data for reporting purposes at both administrative units and the state level, supporting transparency and evidence-based decision-making.

SO8: Foundational System Reliability and Security

To ensure that the Platform operates under secure access control, structured data protection standards, and regular backup procedures. The objective is to establish a stable and reliable production environment that can serve as the long-term digital foundation for future expansion under the second phase.

3. Scope of work

The Contractor shall design, develop, test and deploy the Digital Platform for Work-Based Learning (WBL), covering the core operational components required to establish a functional and institutionally governed system.

Hosting and maintenance of the Platform will be subject of another contract.

The assignment shall **include the following modules and functional components:**

1. System Architecture and Foundational Setup

The Contractor shall establish the core system architecture and production-ready cloud environment required for the operation of the Digital Platform. This includes:

- Database structure aligned with the defined Platform model
- User authentication framework
- Basic system logging (audit trail of activities)
- Backup and recovery mechanisms
- Preparation of a production environment

The system must be scalable and structured in a way that allows future functional expansion under the second phase without structural redesign.

2. User Management and Administrative Governance Module

The Contractor shall implement a structured user registration and role management system. The module shall enable:

- Registration and authentication of users
- Password recovery and account management
- Role-based access control
- Definition of administrative units
- Assignment of institutional users to specific administrative units
- Territorial jurisdiction management

Before populating the register, each competent authority within its administrative unit shall designate the responsible entity for populating, managing, and supervising data entries on the Platform within its jurisdiction, while a central authority shall retain aggregated oversight at the level of Bosnia and Herzegovina.

The Contracting Authority shall be responsible for ensuring the designation of the responsible entities for populating the database.

3. Data Standardization and Import Module

The Contractor shall develop a standardized data structure for the Digital Platform and provide tools for structured data import. This module shall include:

- Development of an official Excel template for data submission
- Built-in data validation rules during upload
- Structured import interface within the system
- Error reporting and feedback during upload
- Initial population of the system with available structured records

The system must ensure that imported data meets structural integrity requirements before final confirmation.

4. Company Profile Management Module

The Contractor shall develop a comprehensive company profile management interface. The system shall enable:

- Creation and editing of company profiles
- Structured upload of legal and operational information and documents that meets criteria for conducting WBL in accordance with the law and by-laws on VET
- Declaration of WBL capacity
- Entry of mentor-related information within the company profile
- Upload of supporting metadata required for administrative review

Where partial data already exists in the system, company profiles may be pre-generated and require completion upon first login. As part of the company profile, the system shall include a dedicated mentor section where the company must declare the existence of at least one qualified mentor responsible for practical training. The company shall be required to upload supporting documentation confirming mentor eligibility (e.g., certificate, proof of qualification or institutional approval).

5. Institutional Verification Module

The Contractor shall implement a verification workflow that enables competent administrative institutions to:

- Review newly Platformed company profiles
- Approve or reject company eligibility
- Monitor certification status
- Record verification decisions

Only verified companies shall be allowed to publish WBL offers within the system. Company verification shall be conditional upon the review of the prescribed documents submitted by the company, including mentor-related documentation. The institution designated by the education authority shall review these materials and record the verification decision within the system.

6. WBL Offer Management Module

The Contractor shall develop functionality enabling verified companies to create and manage WBL offers. The module shall include:

- Structured creation of WBL offers
- Editing and deactivation of offers
- Definition of training period and capacity
- Visibility of WBL offers to relevant institutional actors, students, and their parents
- Institutional monitoring of published offers

The system must ensure traceability of each offer and its associated company profile.

7. Institutional Relationship Recording Module

The Contractor shall implement a structured mechanism for recording the existence of formal cooperation between schools and companies. This module shall:

- Record the existence of a WBL agreement (without document upload)
- Search specific occupational profiles offered by VET schools and link them with their demand within the administrative unit
- Define the implementation period
- Record the number of participating learners
- Enable institutional oversight of active and historical engagements

This functionality ensures traceability without introducing document management complexity at this stage.

8. Basic Analytics and Reporting Module

The Contractor shall develop real-time numerical indicators displayed within the system. The module shall provide:

- Total number of Platformed companies
- Total number of administrative units
- Total number of active WBL offers
- Total number of active WBL engagements
- Aggregated overview at the BiH and administrative unit levels

In addition, the system shall allow export of structured data in Excel format with filtering by administrative unit and overall scope at the BiH level. Advanced graphical dashboards and complex analytical filtering are excluded from this assignment and may be subject to the second phase.

9. Notification Mechanism (Basic Event-Based)

The Contractor shall implement a basic notification mechanism. The system shall generate automated notifications when:

- A company expresses interest for a new WBL place
- A company profile is submitted for verification
- A verification decision is recorded
- A new institutional relationship is Platformed

Notifications shall be event-based and limited to core operational triggers. Advanced automated scenarios are excluded from this assignment.

10. Testing, Training and Deployment

The Contractor shall:

- Conduct functional testing prior to launch
- Provide basic user training sessions
- Deliver user guidance documentation
- Deploy the system into a live production environment
- Provide post-launch stabilization support

The system shall be considered operational once institutional users can register at the Platform, verify companies, record relationships and monitor basic indicators in real time.

11. Language Requirements

The system developed under this assignment shall be delivered in one of the official languages of Bosnia and Herzegovina, as agreed with the Contracting Authority prior to implementation.

Multi-language support is not included within the scope of this assignment. However, the system architecture shall be designed in a manner that allows future expansion to additional official languages of Bosnia and Herzegovina.

Any implementation of additional language versions may be considered under a separate procurement procedure or within the second phase.

4. Deliverables

Under this assignment, the Contractor shall deliver the Digital Platform for Work-Based Learning (WBL) as a fully functional and operational system, together with all accompanying documentation and support materials necessary for institutional deployment.

The deliverables under this assignment shall include the following:

Assignment	Deliverable	Deadline
Task A: Inception phase and functional validation		
<ul style="list-style-type: none"> • Kick-off meeting • Confirmation of functional specification 	1. <u>Functional Specification Document</u>	6 weeks after the signature of the

<ul style="list-style-type: none"> • Validation of data structure • Agreement on institutional roles and governance mode 	<p>A structured and approved functional specification document shall be prepared at the beginning of the assignment.</p> <p>This document shall describe the agreed system structure, user roles, workflows, data architecture, and module boundaries under this assignment.</p> <p>2. <u>System Design and Data Structure Model:</u></p> <p>Logical data model of the Platform Description of user roles and institutional hierarchy Defined data import structure and validation logic</p> <p>The documents must be validated by the Contracting Authority prior to development</p>	<p>Contract</p>
<p>Task B: System Development</p>		
<ul style="list-style-type: none"> • Backend and database development • User interface implementation • Import tool integration • Verification workflow implementation • Notification mechanism implementation • Real-time indicators and export functionality <p>The solution must be production-ready and hosted in a secure cloud environment.</p> <p>Data integrity and validation mechanisms must be operational at the time of deployment.</p>	<p>1. <u>Fully developed and operational Digital Platform covering all functionalities defined, including source code.</u> The system must:</p> <ul style="list-style-type: none"> • Be accessible through a secure web interface • Support multi-user access with role-based permissions • Enable company registration, verification and WBL offer publication • Allow recording of institutional cooperation • Provide real-time numerical indicators • Enable structured Excel data export • Implementation of the standardized Excel template • Import of available structured data • Initial population of the system with approved datasets 	<p>14 weeks after validation of Task A</p>
<p>Task C- Testing and Data Migration</p>		
<ul style="list-style-type: none"> • Perform functional testing • Resolve identified defects 	<p>1. <u>Testing and Quality Assurance Report</u></p>	<p>6 weeks after validation of Task B</p>
<p>Task D – Documentation and Trainings</p>		
<ul style="list-style-type: none"> • Develop User Documentation 	<p>1. <u>Administrative user manual</u> 2. <u>Institutional user guide</u></p>	<p>4 weeks after validation of Task</p>

Documentation must be delivered in one of the official languages in BiH	3. <u>Company user guidance</u>	B
Training sessions for: <ul style="list-style-type: none"> • Authorised institutional administrators • Designated system operators Training may be delivered in-person or online and must ensure operational readiness of key stakeholders.	4. <u>Attendance list</u>	4 weeks after validation of Task C
Task E – Final deployment		
<ul style="list-style-type: none"> • Production deployment • Post-launch stabilization 	Final Implementation Report including: <ul style="list-style-type: none"> • Activities performed • Delivered modules • System configuration overview • Recommendations for the second phase • Source code 	4 weeks after completion of Task D

5. Timeframe

The assignment is to be conducted between 15/04/2026 and 31/12/2026.

The final timeline shall be confirmed upon contract signature and may be adjusted depending on institutional feedback cycles and availability of structured data inputs.

6. Reporting and Governance

The Contractor shall work under the supervision of the Contracting Authority or its designated representative.

A kick-off meeting shall be organized at the beginning of the assignment.

The Contractor shall provide:

- Bi-weekly progress updates
- Milestone validation meetings
- Written status reports upon completion of each implementation phase

All key deliverables must be formally reviewed and approved before proceeding to the next stage.

Communication shall be conducted in English unless otherwise agreed.

7. Intellectual Property Rights

All intellectual property rights related to the developed system under this assignment shall be transferred to the Contracting Authority upon final payment.

This includes:

- Source code
- Database structure
- Documentation
- System architecture documentation
- User manuals

The Contractor shall ensure that the system is delivered without restrictions that would prevent further development, modification, or integration.

No vendor lock-in mechanisms shall be introduced.

8. Confidentiality and Data Protection

The Contractor shall treat all information obtained during the assignment as confidential.

The Contractor shall:

- Comply with applicable data protection regulations
- Ensure secure handling of institutional data
- Prevent unauthorized access or disclosure

Where applicable, data processing agreements may be required.

The Contractor shall implement appropriate technical and organizational measures to ensure data security.