Enabel

Term of Reference (ToR)

“Pathways to Employment in Palestine”

Service Procurement Contract “MOL Computerized Vocational Training Management System Implementation”

Reference #: PSE22003-10063

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Abbreviations

Abbreviation	Definition
AI	Artificial Intelligence
API	Application Programming Interfaces
CMS	Content Management System
CS	Computer Science
DBA	Database Administrator
DBMS	Database Management System
DL	Deliverable
DOCX	Word Document Format (suffix)
ERD	Entity-Relationship Diagram
ETL	Extract, Transform, Load
IEEE	Institute of Electrical and Electronics Engineers
ISO	International Organization for Standardization
JSON	JavaScript Object Notation
KPI	Key Performance Indicators
LMIS	Labor Market Information System
LTS	Long-Term Support
MFA	Multi-Factor Authentication
MoL	Ministry of Labor
OS	Operating System
OWASP	Open Web Application Security Project
PII	Personal Identifiable Information
QA	Quality Assurance
RBAC	Role-Based Access Control
RDB	Relational Database
RTL	Right-to-Left
SDLC	Software Development Lifecycle
SE	Software Engineering

SLA	Service Level Agreement
SOA	Service-Oriented Architecture
SoW	Scope of Work
SQL	Structured Query Language
SRS	Software Requirements Specifications
TLS	Transport Layer Security
ToR	Terms of Reference
ToT	Training of Trainers
TVET	Technical and Vocational Education and Training
UAT	User Acceptance Testing
UI	User Interface
UX	User Experience
VTMS	Vocational Training Management System
WBL	Work-Based Learning
WBS	Work Breakdown Structure
WCAG	Web Content Accessibility Guidelines
XML	Extensible Markup Language
YEP	Youth Economic Empowerment in Palestine

1 Assignment

1.1 Background of the assignment

The Palestinian Technical and Vocational Education and Training (TVET) sector faces significant challenges, including fragmented service delivery, inconsistent quality assurance mechanisms, limited coordination among training providers, and the absence of a centralized data management system. These challenges hamper effective planning, monitoring, and evaluation of TVET training services.

The Ministry of Labor (MoL) is implementing a comprehensive digital transformation initiative through the development of the Vocational Training Management System (VTMS) in order to resolve these challenges. This initiative is being supported by Enabel as part of the " Pathways to Employment in Palestine (PEP)" program. This system is intended to serve as the foundation for enhanced governance and sector-wide modernization.

The system aims to streamline and automate key processes including licensing and renewal of private training centers, course accreditation, student enrolment management, supervisory functions, and certificate issuance, while providing robust analytics and reporting capabilities to support evidence-based decision-making.

The system -VTMS- will be integrated with various systems and platforms developed to support digital transformation. This includes the National Platform for Technical and Vocational Education and Training (e-TVET), which hosts e-learning courses and training programs, and allows trainees to create accounts. In this context, the platform will act as the primary registration gateway to the system, while the system itself will also provide registration capabilities and synchronize data with the platform. Furthermore, integration will be established with other government systems such as the Hukumati platform, civil registry services from the Ministry of Interior, and electronic payment services accredited by the Palestine Monetary Authority.

1.2 The assignments

▪ Assignment overall goal

The VTMS aims to improve the effectiveness, transparency, and quality of the Palestinian TVET sector by serving as a centralized platform that enhances coordination, streamlines service delivery, and supports evidence-based decision-making.

▪ VTMS Objectives

The specific objectives for the development of the VTMS are to:

1. Develop a User-Centric Platform: Create an intuitive, accessible (WCAG 2.1 compliant), and multilingual (Arabic and English) platform tailored to diverse user groups, including MoL staff, training center managers, trainers, students, and other stakeholders.
2. Build a User-Centric Platform: Provide an intuitive, accessible, and multilingual system for all stakeholders, including MoL staff, training centers, trainers, and students.
3. Enable Comprehensive Management: Support licensing, course accreditation, enrollment, trainer certification, and certificate issuance.
4. Strengthen Data Integration: Ensure secure, high-quality data management aligned with national and international standards.
5. Deliver Actionable Insights: Offer advanced reporting and analytics dashboard to inform policy and improve training and employment outcomes.
6. Ensure Scalability and Sustainability: Design a future-ready system managed by local technical teams.
7. Promote Stakeholder Collaboration: Facilitate communication and coordination across all TVET actors.
8. Support System Integration: Connect seamlessly with government databases, identity verification, and related platforms.

1.3 Scope of Work (SoW)

▪ Overall Assignment Scope

Phase 1 focuses on reviewing and refining the foundational requirements of the VTMS system to ensure clarity, alignment, and completeness before moving forward. This phase includes the System Requirements Specification (SRS), which defines the detailed functional and non-functional requirements; the System Design Document, providing comprehensive mockups for all system pages and actions; and the Database Design Document, outlining the data structures, entity-relationship diagrams, and data dictionary. Together, these deliverables establish a clear and shared understanding of the system's scope, design, and data framework, minimizing ambiguities and guiding subsequent development phases.

Phase 2 of the VTMS initiative builds upon the foundational deliverables established in Phase 1 (Annex 1,2,3), transitioning from design and specification to full-scale system development. In this phase, the Contractor is responsible for developing the complete VTMS, including:

- System Development and Implementation
- Data Migration and System Integration
- Comprehensive Testing and Quality Assurance
- Deployment and Go-Live Support
- Training and Knowledge Transfer
- Manuals and documentation.
- Post-Deployment Support and Maintenance

▪ Key Deliverables (High-Level):

The high-level deliveries by contractor include:

- A fully functional, tested, and deployed VTMS integrating all required modules and functionalities.
- Comprehensive technical documentation including system architecture, database design, and API specifications.
- User and Technical manuals for all system features and administrative functions in Arabic and English.
- Full documented source code and all related development
- Training materials and sessions for system administrators and end-users.
- Twelve-month post-deployment support and warranty.

▪ In-Scope Activities and Features:

The scope of work encompasses the development and implementation of the following core features and functionalities based on the approved Phase 1 documents (Annex 1,2,3):

1.3.1.1 Database Implementation:

Creating all tables, relationships, indexes, and ensuring data integrity constraints are enforced based on the approved Database Design Document, Annex 3. Optimize database performance for expected loads.

1.3.1.2 User Interface (UI) and User Experience (UX) Finalization and Development:

Based on the validated Phase 1 mockups, Annex 2, develop a modern, intuitive, and highly responsive UI. The UI must adhere to WCAG accessibility guidelines and provide full support for both Arabic (RTL) and English.

1.3.1.3 System Core Modules:

- **User Management and Role-Based Access Control (RBAC) Module:** For creating and managing diverse user accounts (e.g., System Administrator, MoL Officer, Training Centre Manager, Trainer, Student, Funder, WBL, ...etc.) and configuring granular, role-based access permissions
- **Training Centre Management Module:** Handling the entire lifecycle of training centers, including online applications for new licenses and renewals; management of center profiles (contacts, infrastructure, equipment, ...etc. (Annex 5); secure document upload facility; and a configurable workflow engine for MoL review and approval.
- **Course Management Module:** Managing all aspects of training courses, including online submission for new accreditation and renewals; detailed definition of course parameters (curriculum, objectives, hours, prerequisites, ...etc. (Annex 5); and management of course schedules, attendance, and status.
- **Trainer Management Module**: Secure registration and detailed profiling of trainers (qualifications, experience); a formal process for MoL accreditation; functionality to associate accredited trainers with specific courses; and managing student assessments and examination scheduling.
- **Student Enrolment and Management Module:** Self-service student account creation (including SSO); advanced search and filtering for available courses; streamlined online application submission; and real-time notifications and application status tracking.

- **Automated Notifications and Alerts Module:** A system-wide module for generating and delivering automated SMS, email, and in-app notifications regarding key events (e.g., status changes, deadlines, pending tasks).
- **Reporting, Analytics, and Business Intelligence Module:** Generation of pre-defined standard reports; functionality for MoL users to create custom/ad-hoc reports; and development of interactive KPI dashboards.
- **Content Management System (CMS) Module:** A simple CMS for MoL staff to manage public-facing content (announcements, news, FAQs).

1.3.1.4 System Integration with External and Internal Systems:

The VTMS must be fully interoperable with relevant internal MoL systems and external government platforms. The Contractor will be responsible for planning, developing RESTful APIs (based on global standards), testing, and validating all necessary integration points in coordination with MoL and other relevant agencies. This includes specifying data exchange formats (JSON, XML), frequencies, security protocols, and error handling

Key integration points include:

- MoL's internal Human Resources system (Newsoft): To allow authorized logins, calculate task delays from attendance data, revoke access upon transfer, and assign permissions based on the organizational hierarchy.
- UXP platform for identity verification: To retrieve citizen information from the Ministry of Interior upon entering an ID number during account creation if no record exists.
- Hukumati e-Government platform: To enable access to VTMS services and e-payments (e.g., issuing replacement certificates, center licensing).
- E-SADA: All paid services shall be processed through ESADAD, the official government e-payment gateway.
- Job Matching Platform: To automatically add a student's completed training courses to their platform profile. During VTMS registration, the system shall verify if a student account already exists on the job matching platform and import the record; otherwise, it shall create a new account in both systems.

1.3.1.5 Comprehensive Data Migration:

- This task involves the careful transfer of existing relevant data from legacy systems (databases, spreadsheets, etc.) into the new VTMS.
- Data Migration Strategy, Planning, and MoL Approval: Develop a comprehensive and detailed data migration strategy and execution plan. This plan must address data source identification, data extraction methods, data mapping from source to target schemas, data transformation rules, and a rollback strategy. MoL is responsible for data cleansing, data validation procedures, and review and approval of the plan before execution.
- Data Migration Execution and Monitoring: Execute the approved data migration plan, carefully transferring existing data from legacy systems (which includes databases, spreadsheets, APIs, or other digital formats) into VTMS.

1.3.1.6 Rigorous System Testing (Multi-Phased):

The Contractor shall undertake a structured system testing process adhering to international standards (IEEE 829 and ISO/IEC/IEEE 29119). MoL will provide the testing environment meeting production specifications

- Comprehensive Test Plan: The Contractor must prepare a detailed system test plan (outlining strategy, scope, resources, schedule, environments, test cases, and acceptance criteria) for MoL approval.
- Execution of Diverse Testing Phases: The Contractor must conduct and document a comprehensive suite of testing activities, including:
    - Unit Testing
    - Integration Testing (internal modules and external systems)
    - System Testing (end-to-end verification against the SRS)
    - Performance and Load Testing (to ensure stability and scalability under peak load)
    - Security Testing (vulnerability assessments, penetration testing, compliance with OWASP Top 10)
    - User Acceptance Testing (UAT): The Contractor must facilitate and provide full support for UAT conducted by MoL staff and end-users, addressing all issues promptly.

1.3.1.7 System Deployment, Commissioning, and Go-Live:

This task ensures the VTMS is fully operational, accessible to end-users, and supported during initial usage. All activities must follow best practices for production readiness and comply with ISO/IEC 27001 (Information Security Management) and MoL's internal IT governance policies.

- **Production Environment Setup and Configuration:** Prepare and configure the production server environment(s) in line with industry standards (e.g., CIS Benchmarks, NIST SP 800-53). This environment will be on MoL-designated physical servers, strictly adhering to national data sovereignty regulations and MoL's IT security policies.
- **System Deployment to Production:** Deploy the fully tested, UAT-approved, and quality-assured version of the VTMS software and database to the configured production environment.
- **Intensive Go-Live Support and Hypercare:** Provide intensive on-site and remote technical and functional support during the initial go-live period (hyper-care period, duration: 8-10 weeks) to address any immediate issues, assist users, and ensure smooth running the system.

▪ Out-of-Scope Activities

The following activities are explicitly excluded from the scope of this contract:

- Procurement of any hardware infrastructure (servers, network equipment, etc.), as the system will be hosted in MoL's data center.
- Procurement of core software licenses for the mandatory technology stack (Windows Server, MS SQL Server), which are assumed to be provided by MoL.
- Primary data cleansing of legacy data; this responsibility lies with MoL, though the contractor must support the validation process.
- Development or modification of the external systems required for integration (e.g., MoL HR system, Hukumati, UXP, or the LMIS). The Contractor is only responsible for developing the VTMS side of the integration (APIs).

1.4 Deliverables

All deliverables shall be completed, submitted, reviewed, and formally approved by the Ministry of Labor (MoL) and Enabel team within a strict overall timeline not **exceeding nine (9) calendar months from** the contract commencement date. This timeline includes review cycles and required revisions.

Deliverables DL5, DL6, DL9, DL10, and DL11 must be updated and submitted twice: once after system acceptance and again at the end of the support period. All manuals shall be submitted in editable DOCX format.

The Contractor shall provide the following deliverables:

DL	Title	Description
1	Inception Report	Detailed project execution plan and a refined work breakdown structure (WBS)
2	Fully Functional and Tested VTMS Software	All modules will be provided in a sequential manner following a stacked delivery model, starting with a user management module.
3	Complete Test Documentation and Reports	Master Test Plan, Detailed Test Reports (for all phases), MoL-Signed User Acceptance Testing (UAT) Report
4	Data Migration Report	A detailed report documenting the entire data migration process, including the methodology used, data mapping, transformation rules applied, tools utilized, and final outcomes.
5	User Manuals	Detailed operational manuals for all distinct user roles (e.g., MoL administrators, staff, training center managers, trainers, students), provided in both Arabic and English.
6	System Administration Manual	Specific manual for system administrators covering configuration, routine maintenance, backup/recovery procedures, user management, and troubleshooting (Arabic and English).
7	Training Materials	High-quality training materials (presentations, guides, practical exercises, reference sheets, video tutorials) for all training programs (Arabic and English).
8	Training Delivery Reports.	Reports summarizing each training session, including dates, topics, participant lists/attendance, and consolidated feedback.
9	API Documentation	Detailed documentation covering all APIs developed for or integrated within the VTMS (endpoints, request/response structures, authentication, usage guidelines).
10	Source code	Extremely well-documented source code (adhering to industry best practices for clarity and maintainability), sufficient for a competent developer to understand the logic. The source code, along with documentation for any third-party libraries, controls, or components, must be made available to the Ministry of Labor (MoL) upon request at any time
11	Database Schema and Design Document	The final physical database structure, data dictionary, and any specific configurations
12	Post-Implementation Support and Maintenance Plan	A detailed plan for the warranty period support and options for post-warranty support/maintenance (including SLAs, support channels, escalation procedures).
13	Final Project Completion Report	Comprehensive report summarizing all activities, achievements against objectives, deliverables,

		challenges, lessons learned, and including the final MoL sign-off for project closure.

1.5 Ownership and Data Privacy

- All deliverables under this ToR, including source code and documentation, are the exclusive property of the Ministry of Labour (MoL) and shall not be used, shared, or repurposed for any other project or party without written approval from MoL, the Contractor shall ensure that all team members working on this project sign a Privacy and Data Protection Declaration prior to engagement.
- A Source Code Confidentiality Declaration must also be provided, confirming that the code will not be published, reused, or disclosed for any other purpose.
- The system must be free from any external licenses or usage restrictions that may prevent or hinder its operation. Furthermore, no limitations shall be imposed on the number of users or on the ability to transfer and operate the system in a similar environment.
- The Contractor shall disclose all third-party libraries, components, and their associated licenses used in the system to ensure transparency and compliance with licensing requirements, and shall bear all licensing fees, if any, without imposing any cost on MoL.
- The Contractor is responsible for maintaining strict confidentiality and ensuring full compliance with MoL's data protection requirements.
- MoL have full rights to use, modify, extend, and enhance the system without restrictions or additional costs or approvals from the Contractor.
- MoL has full ownership of all related data, algorithms, and models, including any training, operational, or derived outputs, if artificial intelligence (AI) or machine learning components are used in the system.
- Unless otherwise approved in writing by MoL, all software deliverables shall be governed by a perpetual, royalty-free license in favor of the Ministry. The Contractor shall not impose any form of vendor-specific restrictions, usage limits, or mandatory service contracts that hinder MoL's ability to independently operate, extend, or migrate the system in full.

1.6 Training and Capacity Building

Ensuring MoL staff and others can effectively use and manage the (VTMS) is vital. Here's a breakdown of the training requirements:

- Fine-tune Training Needs: The Contractor will work with MoL to precisely identify who needs what training, based on the final system design and different user roles.
- Custom Training Programs: Tailored training must be designed and delivered for:
- Tech Staff & Admins: In-depth technical skills (system architecture, troubleshooting, security).
- MoL End-Users: Practical, role-based training on using system modules (e.g., processing applications, reporting, etc.).
- Training Centre Users: How to use the system for licensing, course accreditation, certificates issuance request, reporting, etc.
- Public/Students (Possibly): Simple guides and videos for using the public portal.
- Train-the-Trainer: Equip selected MoL staff to conduct future training, ensuring long-term self-sufficiency.
- Quality Training Materials: The Contractor must provide comprehensive, easy-to-understand materials (manuals, guides, videos) in both Arabic and English, tailored for each group, and in editable formats for MoL.

- Training Delivery & Logistics: The Contractor shall propose how training will be delivered (e.g., in-person, online, or a mix) and detail the logistics like the number and length of sessions and class sizes, facilities.
- Training Delivery Report: A Survey on Training Quality shall be designed to cover trainee satisfaction across all training topics, and the completed survey results shall be attached to the training delivery report.

1.7 Technical Requirements

The VTMS must adhere to the following technical requirements to ensure its robustness, security, scalability, and maintainability, in addition to the detailed SRS, Annex 1:

▪ Technology Stack Considerations:

- **Guiding Principles**: Preference will be given to solutions built using modern, proven, secure, and highly scalable technologies. The use of open-source technologies is strongly encouraged where technically feasible and appropriate, to minimize licensing costs, avoid Contractor lock-in, and promote long-term sustainability. Crucially, the system must be free of any third-party components that require annual or recurring subscription fees for its core functionality to operate. If any commercial third-party components are deemed essential, they must be acquirable through a one-time perpetual license fee, the cost of which must be clearly itemized in the financial proposal. However, if MoL has existing standard technologies or platforms, compatibility with these may be required and should be clearly justified by the Contractor.
- **Programming Languages & Development Frameworks**: The Contractor is required to propose specific programming languages and development frameworks that align with the Ministry of Labor's existing IT infrastructure and internal technical expertise. The proposed stack should include .NET C# with ASP.NET Core for backend development and the Angular framework for the frontend, latest LTS version for both.
- **Database Management System (DBMS):** The Contractor shall propose specifically Microsoft SQL Server, to ensure full compatibility with the Ministry of Labor's existing infrastructure, technical capacity, and licensing preferences. The proposed solution must support high availability, load balancing, data integrity, and performance optimization in line with enterprise database standards (e.g., ACID compliance, SQL Server Security Best Practices).
- **Server Operating System**: The proposed server OS shall be Windows Server 2019+, to be compatible with MoL's existing server infrastructure. The Contractor shall provide hardware specifications for testing and production environments. The system will be hosted in MoL's data center

▪ System Architecture Principles:

- **Web-Based and Multi-Tier Architecture**: The system must be entirely web-based, accessible via standard web browsers, and should ideally follow a multi-tier architectural pattern (e.g., presentation tier, application/business logic tier, data tier, payment gateways like ESADAD) to promote modularity, scalability, and maintainability. Adherence to principles outlined in ISO/IEC/IEEE 42010 for architectural descriptions is encouraged.
- **Responsive and Adaptive Design**: The user interface must employ responsive web design principles to ensure optimal viewing and interaction experience across a wide range of devices, including desktops, laptops, tablets, and smartphones, and across all

commonly used modern web browsers. Compliance with W3C Web Content Accessibility Guidelines (WCAG 2.1 AA) is required to promote inclusivity and accessibility for all users, for example: Screen Reader Compatibility, Keyboard Navigation, High Contrast Mode, Text Resizing & Zoom, Captions & Transcripts, Language Simplicity Tools, Voice Input Support, Accessible Forms and Error Feedback.

Stringent Security Standards:

- **Adherence to Security Best Practices**: The system design and development must strictly adhere to internationally recognized security best practices and guidelines, such as the OWASP Top Ten vulnerabilities, and secure coding principles.
- **Robust Authentication and Authorization**: Implement strong, multi-layered authentication mechanisms (e.g., username/password with complexity rules, Mandatory for multi-factor authentication (MFA) for administrative users). Authorization must be role-based (RBAC) to ensure users can only access data and functionalities relevant to their roles.
- **Data Encryption**: All sensitive data (e.g., personal identifiable information (PII), passwords) must be encrypted both at rest (in the database) and in transit (using protocols like TLS 1.2 or higher for all communications).
- **Regular Security Audits and Vulnerability Management**: The system should be designed to facilitate regular security audits. The Contractor shall conduct vulnerability assessments and penetration testing before final deployment. A clear process for addressing identified vulnerabilities must be in place.

Performance, Scalability, and Reliability:

- **Performance Benchmarks**: The system must be optimized to handle a significant number of concurrent users and large datasets with minimal latency. Specific benchmarks such as average page load times (<2 seconds under load), API response times, and transaction throughput defined in the validated SRS and must be met. Performance testing shall follow standards such as ISO/IEC 25010 for software quality. In addition, the system shall sustain at least 2000 concurrent active sessions without performance degradation and achieve a batch processing throughput of no less than 4000 records per minute. Comprehensive load and stress testing must be conducted during UAT to validate these benchmarks.
- **Scalability for Future Growth**: The system architecture must be inherently scalable, allowing for future growth in the number of users, data volume, and functional complexity without requiring major re-engineering. This includes both vertical and horizontal scalability options.
- High Availability and Reliability: The system should be designed for high availability to minimize downtime, with considerations for redundancy where appropriate.

Interoperability and Data Exchange Standards:

- **Designed for Integration**: The system must be designed with interoperability as a core principle. It should utilize widely accepted standard protocols, data formats, and interface mechanisms (e.g., RESTful APIs, JSON, XML, SOAP if necessary) to facilitate seamless and secure integration with other existing or future government systems as specified by the MoL.

Comprehensive Bilingual (Arabic/English) Support:

- **Full UI and Content Localization**: The system must provide full and equivalent support for both Arabic (including right-to-left (RTL) layout and text rendering) and

English languages throughout the entire user interface, including all labels, messages, forms, and generated reports.

1.8 Assignment Implementation

▪ Project Management and Governance:

The Contractor must provide:

- **Dedicated and Experienced Project Manager**: The Contractor needs to provide a dedicated Project Manager with strong track record of successfully managing similar IT projects to be the main contact for (MoL).
- **Regular Progress Reporting and Communication**: The Contractor must provide regular progress updates through written reports (e.g., weekly/bi-weekly) covering activities, issues, and risks, and hold regular review meetings with the MoL team.
- **Clear Communication Protocols**: Define clear communication protocols by designating specific contacts for various matters, defining preferred communication channels (like email or chat), and outlining escalation paths to ensure issues are resolved promptly.
- **Proactive Risk Management Plan**: Develop and regularly update a risk management plan that identifies potential risks (technical, operational, logistical), assesses their likelihood and impact, and outlines strategies to prevent or manage them.
- **Quality Assurance (QA) Plan**: Outline the QA processes and procedures that will be implemented throughout the project lifecycle to ensure the quality of all deliverables, including code, documentation, and the final system.

▪ MoL Involvement and Responsibilities:

The MoL is committed to the success of this project and will actively participate throughout its lifecycle. The MoL will:

- Establish a dedicated project team or designate key focal points who will work closely with the Contractor 's project team.
- Provide timely access to all necessary information, documentation (including Phase 1 deliverables), and relevant stakeholders.
- Participate actively in all review sessions, validation workshops, testing phases (especially UAT), and training programs.
- Ensure timely decision-making and provision of feedback to the Contractor to avoid project delays.
- Facilitate coordination with other government ministries or agencies for system integration purposes.
- Data Cleansing: Helping to identify and correct or remove inaccurate, incomplete, or irrelevant data from existing records.
- Data Validation: Setting the rules to ensure data is accurate, consistent, and usable, and likely reviewing the outcomes of these validation processes.

1.9 Support and Maintenance

▪ Warranty Period and Services:

- **Duration**: The Contractor shall provide a comprehensive warranty period of at least **twelve (12) months**, commencing from the date of final system acceptance and formal sign-off by the MoL.

- **Scope of Warranty**: During this warranty period, the Contractor will be fully responsible for promptly rectifying any bugs, errors, defects, or performance issues in the delivered system software that are attributable to the Contractor 's design or development, at no additional cost to the MoL. This includes providing necessary patches, updates, and technical support.
- **Service Level Agreements (SLAs) during Warranty**: The Contractor shall maintain the following minimum SLAs during the warranty period, to be agreed with MoL before go-live:

Priority	Example Impact	Max Response Time	Max Resolution Time
P1 – Critical	Full system outage, all users	1 hr (24×7)	8 hrs
P2 – High	Major function impaired	4 business hrs	2 business days
P3 – Medium	Non-critical, workaround exists	1 business day	5 business days
P4 – Low	Cosmetic/minor issue	2 business days	10 business days

Penalties: 1% of the total contract value per missed Critical/High SLA, capped at 30% of contract value.

- **Post-Warranty Support and Maintenance Agreement Options:**

The Contractor shall, at the end of the post-warranty period, submit the following deliverables via email and flash drive, and shall work in close coordination with the MoL technical team to verify and confirm that the correct version is being delivered:
Updated Source Code: The latest version of the system's source code, including any fixes or improvements made.
Updated Manuals: The latest updated user and technical guides revised to reflect the latest state of the system in word DOCX format.
Proposal for Ongoing Support: Contractors are required to propose detailed costs for a three (3)-year post-warranty support and maintenance agreement. This proposal should clearly outline:
The scope of services to be provided (e.g., ongoing bug fixing, technical assistance, helpdesk support, minor enhancements, preventative maintenance, support for new OS/browser versions).
Proposed SLAs for the post-warranty period based on TOR requirements.
Procedures for requesting and receiving support.
Any options for different tiers of support (e.g., basic, standard, premium).
This information will allow MoL to plan for the long-term sustainability and operational costs of the VTMS.

1.10 Assignment Timeline and Milestones

- **Overall Assignment Duration and Phasing:**

The project phases are expected to be completed by nine (9) calendar months of the awarding. Vendors should propose a detailed project timeline as part of their technical proposal, broken down into the following indicative phases. The Contracting Authority is open to agile approaches with iterative deliveries.

Phase	DL	Indicative Duration	Key Focus
Phase 1 DL	1	3 weeks	Phase 1 Deliverables Review to clarify any ambiguities
Development & Iterative Releases	2	24 weeks	Development & API creation
System Testing & QA	2	Overlaps with Dev.	Unit, integration, system, performance, security testing.
User Acceptance Testing (UAT)	3	4 weeks	Client validation of the integrated platform with bug fixes.
Data Migration	4	4 weeks	Analysing Data sources, importing and validating
Deployment and Go-Live	4	2 Weeks in parallel	Production deployment of platform
Documentations (manuals, training materials, etc) in Arabic and English	5-6	4 weeks in parallel	Providing the all-user categories documentations
Training	7-9	2 weeks (Concurrent)	MoL administrators, MoL staff, training center managers, trainers for platform
Post-Deployment Support (Included in the price offer)	10-12	12 months	Warranty, bug fixing, and support.
Final report	13	1 week	Final report

2 Tenderer Qualifications and Experience

To be considered for this important project, Contractors must clearly show they have the necessary qualifications and a proven history of success.:

2.1 Legal and Financial Standing:

- Official Legal Registration: Provide verifiable proof of official legal registration as a business entity and possession of a valid license to operate in Palestine. Alternatively, if an international firm, provide proof of a formal, legally binding partnership with a reputable and legally registered local Palestinian entity.

2.2 Technical Experience and Expertise:

The Vendor/Contractor shall submit all relevant supporting documents to substantiate the claimed experience. These may include, but are not limited to, project completion certificates, client reference letters, signed contracts, official invoices, or any other verifiable evidence related to the following areas:

- **Track Record in Complex Systems**: Provide evidence of a proven track record, with a minimum of ten (10) years of demonstrable experience, in successfully designing, developing, implementing, and supporting complex, enterprise-grade

web-based information management systems of similar scale, scope, and technical complexity.

- **Relevant Sector Experience**: The Contractor must demonstrate specific and verifiable experience in the design, development, and proven successful deployment of at least two (2) web-based information systems within the technical and vocational education and training (TVET) sector, in the last three (3) years.
- **Expertise in Data Migration and System Integration**: Provide evidence of substantial experience in planning and executing data migration projects from diverse legacy sources, and in successfully integrating new systems with multiple existing disparate platforms using various integration technologies.
- **Client References for Similar Projects**: Submit at least two (2) detailed client references for similar projects that have been successfully completed within the last three (3) years. Each reference must include the client organization's name, a detailed project description, project value, project duration, the role of the Contractor , and verifiable contact details (name, title, email, mobile number) of a representative from the client organization who can be contacted by MoL.
- **Company Profile:** Provide company profile and with a summary table arranged in chronological order, beginning with the most recent entry as the following:

2.3 Proposed Project Team Composition & Key Personnel:

The Contractor must propose a well-structured project team with clearly defined roles and responsibilities. The team must possess the collective expertise and experience necessary to successfully deliver all aspects of this ToR. The following outlines the minimum key positions required, their expected qualifications, and the suggested number of personnel. Contractors may propose additional roles or a different distribution if they can justify its effectiveness and efficiency in their technical proposal.

▪ Project Manager (1 Position)

- Responsibilities:
  Holds overall responsibility for meticulous project planning, efficient execution, continuous monitoring, rigorous control, and successful closure. Acts as the primary dedicated point of contact for the Ministry of Labor (MoL) and Enabel. Effectively manages project scope, timeline, resources, risks, and all stakeholder communications. Ensures strict compliance with all Enabel and MoL requirements, standards, and reporting protocols.
- Qualifications:
  - Minimum of a bachelor's degree in computer science, Information Technology, Business Administration, Project Management, or a closely related field.
  - A minimum of ten (10) years of proven, hands-on experience in successfully managing complex IT software development projects, with a strong preference for experience with web-based systems developed for public sector entities or educational institutions.
  - Demonstrated experience managing projects of similar budgetary scale, team size, and technical complexity, ideally within donor-funded environments.
  - Exceptional leadership, interpersonal, communication (written and verbal), negotiation, and advanced problem-solving skills.
  - Proficient in both Agile methodologies (such as Scrum or Kanban) and traditional Waterfall project management methodologies and tools.
  - Complete fluency in written and spoken English and Arabic is mandatory.

- **Lead Software Architect / Senior Systems Analyst (1 Position)**

  - Responsibilities:
    Leads the comprehensive technical design and overarching architecture of the VTMS. Takes primary responsibility for the in-depth review, and refinement of the Phase 1 ERD. Ensures the developed system is inherently scalable, robustly secure, highly performant, and easily maintainable. Defines and enforces development standards and best practices and provides technical guidance and mentorship to the development team.
  - Qualifications:
    - Minimum of a Bachelor's degree in Computer Science, Software Engineering, Information Systems, or a closely related technical field. A Master's degree is highly preferred.
    - Proven professional experience of a minimum of five (5) years of extensive professional experience in software architecture, systems analysis, and the detailed design of complex, multi-tier web-based applications
    - Strong, demonstrable understanding of the full Software Development Lifecycle (SDLC), various architectural patterns such as (Microservices, SOA), software design patterns, API design principles (e.g., RESTful), robust database design (RDB), and current information security best practices.
    - Significant experience in designing and implementing system integrations and complex data migration strategies.
    - Excellent analytical, conceptual, and innovative problem-solving skills.
    - Complete fluency in written and spoken English is mandatory.

- **Senior Software Developers - Frontend and backend- (2 Positions)**

  - Responsibilities (per position):
    Actively participate in the development, unit testing, and implementation of software modules in strict accordance with the validated design specifications and established coding standards. Contribute to code reviews, debugging sessions, system integration efforts, and the creation of technical documentation.
  - Qualifications (per position):
    - Minimum of a Bachelor's degree in Computer Science, Software Engineering, or a related technical discipline.
    - Proven professional experience of a minimum of five (5) years of continuous, hands-on experience in developing enterprise-grade web-based applications, specifically using the technology specified in this ToR for this project.
    - High proficiency in C#, .NET Core web development framework, front-end technology (Angular, Vue.js, HTML5, CSS3, bootstrap, JavaScript), and database technologies (SQL).
    - Solid experience with version control systems (Git), automated testing frameworks, CI/CD pipelines, and agile development practices.
    - Strong analytical, problem-solving, and debugging skills.
    - A demonstrable ability to write clean, efficient, well-documented, and maintainable code.

- **Database Specialist / Administrator (1 Position)**

  - Responsibilities:

Holds primary responsibility for the detailed design, efficient implementation, performance optimization, and ongoing maintenance of the VTMS database. Manages all aspects of data migration, ensures data integrity, implements database security measures, and monitors database performance.

- Qualifications:
  - Minimum of a Bachelor's degree in Computer Science, Information Technology, or a related field, with a clear specialization or significant coursework in database management systems.
  - Proven professional experience of a minimum of five (5) years of dedicated experience working as a Database Administrator (DBA) or Database Developer, with strong expertise in Microsoft SQL Server environment.
  - Strong, in-depth knowledge of database design principles (normalization, indexing), advanced SQL programming, performance tuning techniques, and database security best practices.
  - Proven experience with data migration tools, ETL processes, and data validation techniques.

- **TVET Trainer (1 Position)**

- Responsibilities:
  Takes the lead in designing, developing, and delivering comprehensive and effective training programs and associated materials for all categories of VTMS users. Coordinates all training logistics (scheduling, venue, participants), conducts Training of Trainers (ToT) sessions to build MoL's internal capacity.
- Qualifications:
  - Minimum of a Bachelor's degree in Education, Information Technology, Human Resources, Communications, or a closely related field.
  - Proven professional experience of a minimum of five (5) years in designing, developing, and delivering IT software training programs, preferably for public sector clients or large enterprise systems.
  - Exceptional presentation, public speaking, communication (written and verbal), and group facilitation skills.
  - Demonstrated experience in developing a variety of training materials, including user manuals, instructor guides, presentations, practical exercises, and video tutorials.
  - Complete fluency in both written and spoken English and Arabic.

***Note on Team Structure**: Contractor must submit detailed, up-to-date CVs for all proposed key personnel, which clearly highlight their academic qualifications, relevant professional certifications, years and types of experience, and their specific roles and contributions in past projects of similar projects. The proposed overall team structure should be adequate to ensure sufficient capacity to meet the project timeline and deliver high-quality outputs as per this ToR.*

Role	No.	Key Responsibilities (Summary)	Key Qualifications (Summary)
Project Manager	1	Overall project planning, execution, monitoring, reporting, stakeholder management.	Bachelor's+ in IT/Business; 10+ yrs managing complex IT projects; Agile & Waterfall; English/Arabic fluency.

Lead Software Architect / Sr. Systems Analyst	1	System architecture, ERD review, scalability, security, integration design.	Bachelor's+ in CS/SE; 5+ yrs in architecture; SDLC, patterns, API, DB, security expertise.
Sr. Software Developer	2	Develop modules, testing, integration, documentation.	Bachelor's in CS/SE; 5+ yrs C#, .NET Core, Angular/Vue, SQL; Git, CI/CD.
Database Specialist / Administrator	1	DB design, migration, optimization, security.	Bachelor's in CS/IT; 5+ yrs MS SQL Server; DB tuning & security.
TVET Trainer	1	User training programs, ToT, materials preparation.	Bachelor's in Education/IT; 5+ yrs IT training; English/Arabic fluency.