

Terms of Reference (TOR)

Development of a National Learning Management System (LMS) and Training Modules for the National Expanded Program on Immunization (NEPI) in Vietnam

Clinton Health Access Initiative (CHAI) Vietnam

Duration: July 1 – December 10, 2025

1. Background

The National Expanded Program on Immunization (NEPI), under the Ministry of Health (MOH) Vietnam, has delivered immunization training to healthcare workers nationwide since 1985. To adapt to changing needs and embrace digital transformation, NEPI has begun integrating e-learning into its training model. However, the existing platform remains limited in infrastructure, interactivity, scalability, and content design.

Building on previous assessments and pilot implementations, CHAI seeks to collaborate with one or more qualified companies to:

- Build a new Moodle-based LMS (e-learning) platform, and/or
- Produce a set of standardized, multimedia-based immunization training modules.

Vendors can bid to cover the 1) Server set-up and LMS development or 2) the multimedia content, or both.

This work aims to support national scale-up and align with the MOH's digital health vision and global learning standards.

2. Objectives

The project has two overarching objectives:

1. Develop a secure, scalable, and user-friendly national LMS (e-learning) platform to support on-demand health care worker training, aligned with global standards
2. Design and produce 20 high-quality, multimedia-rich e-learning courses in SCORM format covering priority topics in immunization, based on existing training materials. The existing materials are either in a) Powerpoint and Word format or b) Edulive's e-learning format.

3. Scope of Work

The scope is divided into three key components: (1) Server Setup, (2) LMS Platform Development, and (3) Media Package Development.

3.1 Server Setup

The selected vendor will set up the LMS on a cloud-hosted provider procured by CHAI. The LMS must follow industry best practices for security, reliability, scalability, and data protection.

Key tasks:

- SSL/TLS Setup: Install and configure a secure SSL certificate to enable HTTPS, ensuring secure communication and data protection especially in terms of user data.
- Server Optimization: Enhance server performance through load balancing, caching mechanisms, and backend tuning to ensure maintain response times under 5 seconds.
- Security Protocols: Implement infrastructure-level protections including firewalls, DDoS protection, automated secure backups, and timely software patching for safeguard system integrity.

3.2 E-Learning Platform Development

The vendor will build a new Moodle-based LMS (or equivalent open-source solution) from scratch to ensure optimal functionality, scalability and usability.

Key tasks:

- System Development: Deploy the latest stable version of Moodle with configuration supports for scale and sustainability.
- UI/UX Redesign: Create a modern, mobile-friendly, and accessible user interface inspired by platforms such as Coursera, Upgrad, or the Global Health Learning Center.
- Core Features:
 - User Management and Permissions: Implement role-based access control (e.g., admin, national trainer, provincial trainer, provincial admin, learner) with granular permissions and personalized dashboards.
 - Course Management: Enable administrators to create, manage, and schedule courses, including course categorization and enrollment workflows.
 - Content Management: Develop a training content repository, including a lecture bank for storing reusable learning materials and a question bank for quizzes and assessments.
 - Integration: Facilitate integration with Zoom, Teams, and Google Meet for virtual sessions
 - Compliance: Ensure SCORM 1.2/2004 compliance
 - Progress tracking: Provide analytics to monitor learner outcomes and performance
 - Multilingual Support: Training content should be in Vietnamese (audio and captions) and offer translation of captions to other languages using artificial intelligence, and offer downloaded courses for offline access to improve accessibility.
- Advanced Features:

- Continuing medical education (CME): install necessary features to help the MOH issue online certification and digital badge
- Gamification: Incorporate elements (e.g., points, leaderboards) to boost engagement
- Social learning tools: Include features like discussion forums, messaging system for learners to provide feedback and ask questions
- E-Learning Hub: Facilitate linking to external training platforms and resources
- Blended Learning Support: Support pre- and post-course activities by combining online modules with in-person training sessions, including pre-reading materials and post-course assessments
- Security Measures:
 - Data encryption (in transit and at rest)
 - User audit logs
- Testing and Training:
 - Conduct system load testing (600+ users)
 - Provide user manuals and video tutorials for admins, trainers, and learners

3.3 Media Package Development

The vendor will design and produce 20 high-quality, multimedia-rich e-learning courses in SCORM format covering priority topics in immunization, based on existing training materials. The existing materials are either in a) Powerpoint and Word format or b) Edulive's e-learning format.

Key tasks:

- Develop e-learning course themes aligned with NEPI's immunization priorities:
 - Vaccine schedules and safe practices
 - Cold chain and storage
 - Monitoring of adverse events
 - Introduction of new vaccines
 - Supportive supervision and disease surveillance
- Content Conversion to SCORM format:
 - Convert existing NEPI training content into the new platform format.
 - Adapt CHAI Edulive cold chain materials and older NEPI Moodle content into interactive modules compatible with the new LMS.
- Create engaging multimedia materials for effective learning:
 - Instructional videos (60%) – expert-led narration
 - Animated explainers (30%) – for technical content
 - Scenario-based or simulation videos (10%)
 - Mini-quizzes that are inserted at several points during each course
 - Downloadable quizzes and job aids in PDF format
- Ensure high-quality visuals, accessibility, and consistency content:
 - Full HD (1080p) video in H.264/H.265 format
 - Vietnamese narration with subtitles

- Consistent branding and layout across modules
- Integrate interactive features to enhance user engagement:
 - Embedded quizzes and knowledge checks
 - WCAG 2.1 compliance (e.g., screen reader support)
- Provide all editable source files for future use and adaptation to ensure sustainability and adaptability

4. Deliverables

1. LMS that is fully functional on the CHAI-provided cloud host and CHAI-provided domain name
2. Twenty (20) interactive training modules with narration, assessments, and downloadable learning resources, plus converted NEPI and CHAI Edulive content
3. System training materials for administrators, trainers, and normal users at the national and provincial levels
4. System and content testing reports, verifying functionality, performance, and compliance with requirements
5. Two-year maintenance and technical support plan, including regular updates, troubleshooting, and system optimization

5. Timeline

Phase	Estimated Timeline
Server setup and system planning	July 1 – July 15, 2025
Platform and content development	July 15 – September 30, 2025
Integration and user testing	October 1 – October 31, 2025
Training and final adjustments	November 1 – December 15, 2025
Final handover and documentation	December 20, 2025

6. Vendor Qualifications

- Proven experience/expertise in either:
 - Developing management systems or online applications with many users, with experience on Moodle or equivalent LMS, or
 - E-learning content production, including multimedia and interactive training materials
- Capacity to provide long-term technical support, including system maintenance, troubleshooting, and updates
- Preferred: Track record of working with healthcare or public health sector

7. Proposal Requirements

- Technical and financial proposals outlining the approach, methodology, and budget
- Workplan aligned with the project timeline detailing key milestones and deliverables
- Company profile highlighting expertise, capabilities, and relevant experience
- Portfolio of relevant past work demonstrating experience in similar projects
- Cost breakdown by component (hosting, platform, media, training)

8. Evaluation Criteria

Criteria	Weight
Technical expertise & past experience	30%
Cost	30%
Timeline	25%
Other support (maintenance & technical support quality/duration, training provided to CHAI and government administrators, bonus features, etc.)	15%