We're Hiring:



IT Consultants for E-Learning Platform Development!

Clean Technology Hub is looking for highly skilled IT consultants to develop an interactive, scalable, and Al-driven MOOC focused on clean energy and sustainability education.

Key Expertise Areas:

- MOOC & Learning Management System (LMS) Development
- Web & Mobile App Development
- Al Powered Learning Features
- API Integrations & Cybersecurity
- Scalable Cloud-Based Architecture

Why Join This Project?

Shape the future of digital learning in clean energy Collaborate with top professionals in innovation & sustainability Flexible contract – Open to individual consultants & teams

Apply Now!

Interested candidates should send their portfolio and proposal to

e-learning@cleantechnologyhub.org, CC: n.afani@cleantechnologyhub.org







REQUEST FOR PROPOSAL (RFP) FOR E-LEARNING PLATFORM, INSTRUCTIONAL DESIGN, AND MOBILE APPLICATION DEVELOPMENT

RELEASE DATE: Monday, March 3, 2025

SUBMISSION DEADLINE: 23:59 WAT, Friday, April 11, 2025

A. BACKGROUND

Clean Technology Hub (CTH) is seeking proposals from qualified IT consultants, software development firms, and EdTech solution providers to develop an interactive, scalable, and Al-driven Massive Open Online Course (MOOC) platform. The CTH eLearning Academy aims to bridge the knowledge and skills gap in renewable energy, climate change, and sustainability by providing accessible and high-quality education for African learners. This project will create a web-based and mobile (Android and iOS) platform, featuring a robust Learning Management System (LMS) integrated with Al-powered learning features, cybersecurity measures, and scalable cloud-based architecture.

I. Target Audience

- a. Pre-university students: Secondary school students eager to engage in climate change education.
- b. **University students:** Undergraduates seeking foundational and specialized knowledge in climate action and sustainability.
- c. Early- to mid-career graduates: Young professionals looking to build or pivot their careers in the climate and energy sectors.
- d. Academia: Researchers, lecturers, and educators interested in integrating climate-focused content into their curricula.
- e. Institution: Climate-focused organisations, NPOs.
- f. **Professionals and industry experts:** Who are keen to stay updated on industry trends, or transition into the climate sector.

This audience segmentation ensures that the platform caters to both basic learners entering the field and experienced professionals looking to expand their expertise.







Thematic Areas for Course Offerings

The platform will feature a structured curriculum aligned with the evolving needs of the clean energy and sustainability industries. Key course categories include but are not limited to the following:

1. Renewable Energy and Clean Technology

- a. Introduction to Solar, Wind, Hydro, and Biomass Energy
- b. Off-grid Energy Solutions
- c. Energy Efficiency and Smart Grids

2. Climate Change and Environmental Sustainability

- a. Climate Science and Policy
- b. Sustainable Agriculture and Forestry
- c. Waste Management and Circular Economy

3. Green Business and Finance

- a. Climate-smart Financial Models
- b. Carbon Markets and Green Bonds
- c. Sustainable Business Strategies

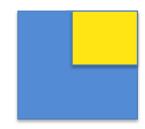
4. Climate Media and Digital Advocacy

- a. Climate Journalism and Information Literacy
- b. Social Media for Climate Action
- c. Storytelling for Climate Advocacy

5. Technical and Vocational Training

- a. Solar PV System Design, Installation, and Post-Installation Services
- b. Solar Panel Installation and Maintenance
- c. Energy Auditing & Efficiency Assessments using Software Tools (e.g., Homer Pro)
- d. Electric Vehicle (EV) Technologies (Audit, Retrofitting, Maintenance)





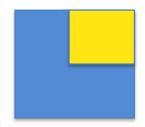
6. Business Training (Startup Acceleration)

- a. Climate Fintech Accelerator
- b. Gender-Responsive Climate Accelerator
- c. Off-Grid Energy Accelerator

B. PROJECT OBJECTIVES

- 1. Develop a **fully functional, mobile-optimized** eLearning platform for sustainability and clean energy education.
- 2. Provide a **structured curriculum** for renewable energy, green finance, climate policy, and sustainable business practices.
- 3. Ensure an **inclusive and engaging user experience**, incorporating interactive multimedia content, assessments, and gamification.
- 4. Develop a mobile application (Android and iOS) to support on-the-go learning.
- 5. Implement **Al-powered course recommendations and analytics** to enhance learning outcomes.
- 6. Enable secure **payment gateways** for premium access, certifications, and corporate training programs.





C. SCOPE OF WORK

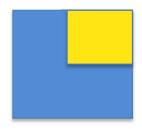
1. E-Learning Platform and Mobile App Development

- a. Development of a state-of-the-art Learning Management System (LMS) with features including user authentication, course catalog, progress tracking, quizzes, certificates, and discussion forums.
- b. Multi-device compatibility (web, Android, iOS) with offline access capabilities.
- c. Al-powered adaptive learning, offering personalized course recommendations and real-time learning analytics.
- d. Multi-format content delivery, including high-quality video streaming, interactive PDFs, e-books, podcasts, assessments, gamified quizzes, and simulations.
- e. Cloud-native, scalable infrastructure to support thousands of concurrent learners without performance degradation.
- f. Advanced cybersecurity measures, including multi-factor authentication, encrypted data storage, firewalls, and Al-driven fraud detection.
- g. Support for multiple languages and localization options to ensure accessibility across different African regions.

2. Instructional Design and Content Development

- a. Collaboration with CTH subject-matter experts to design and deliver engaging, localized, and competency-based learning content.
- b. Production of pre-recorded video lectures, interactive simulations, virtual labs, and real-world case studies.
- c. Live webinar integration for instructor-led training, expert Q&A sessions, and real-time learner interaction.
- d. Development of course certification mechanisms, including assessments, peer reviews, Al-generated feedback, and auto-graded assignments.
- e. Implementation of gamification, leaderboards, and incentive-based learning strategies to drive engagement and completion rates.





3. Final API Integration and Cloud Infrastructure

- a. Comprehensive API integration with third-party EdTech platforms, CRM, analytics tools, and enterprise learning solutions.
- b. Secure, scalable cloud hosting with real-time backup, disaster recovery protocols, and global CDN support for uninterrupted access.
- c. Deployment of Al-driven chatbots and virtual assistants for learner support, real-time feedback, and automated helpdesk functions.
- d. Smart Al-powered course recommendations, adaptive difficulty levels, and personalized learning dashboards.
- e. Seamless LMS migration support for institutions looking to transition from existing systems.

4. Payment Gateway System

- a. Multi-currency support for Naira, USD, Euro, and other African currencies to enable cross-border transactions.
- b. Support for diverse payment methods, including credit/debit cards, online banking, mobile money, wire transfers, and direct cash deposits.
- c. Automatic payment validation to minimize transaction failures and ensure seamless user experience.
- d. Built-in fail-safe mechanisms, including automated retry attempts, alternative payment channels, and real-time transaction monitoring to eliminate payment glitches.
- e. Instant digital invoicing and receipts generation for transparency and ease of financial tracking.
- f. Automated refund processing for failed or duplicate transactions.

5. Testing, Deployment, and Maintenance

- a. Comprehensive beta testing with targeted users, including UI/UX assessments, A/B testing, and usability analysis.
- b. Cross-platform optimization to ensure smooth functionality across different devices, screen sizes, and operating systems.
- c. Deployment of automated monitoring tools to track uptime, system performance, and usage analytics.



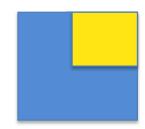


- d. Ongoing technical support and maintenance for at least 24 months post-launch, including bug fixes, updates, and security patches.
- e. Regular feature upgrades to align with emerging EdTech trends and future technological advancements.

6. Protection of Intellectual Property (IP) and Digital Content

- a. Advanced content protection protocols to prevent unauthorized copying, downloading, or distribution of course materials.
- b. Digital Rights Management (DRM) integration to restrict screen capturing, screen recording, and unauthorized sharing.
- c. Encrypted storage and watermarking to protect proprietary course content from piracy and plagiarism.
- d. Role-based access controls to differentiate between paid and free content, ensuring restricted materials remain protected.
- e. Al-driven content monitoring tools to detect and flag potential intellectual property infringements.
- f. Legal disclaimer and enforcement measures, ensuring that all users agree to strict content usage policies before accessing materials.





D. EXPECTED DELIVERABLES

Physical deliverables, beyond the tasks provided above, shall include the following:

- a. Draft and finalized requirements document based on user design validation and testing.
- b. An Android and iOS mobile application based on the features and functionality specified as part of the requirements document.
- c. A web application supporting the mobile applications, analytics, reporting, training content management, and user management.
- d. An SMS application capable of distributing lightweight training content.
- e. The codebase(s) for the application and any supporting architecture, including access credentials for the database and any relevant API keys.
- f. A training/user manual for the platform.
- g. A lessons learned report.

Digital Platform Deliverables

Deliverable	Expected Completion
Functional eLearning platform prototype	Month 3
Mobile app (Android and iOS) development	Month 5
AI-powered course recommendations	Month 6
Secure payment integration	Month 6
Fully tested and optimized platform	Month 7
Platform launch and promotion	Month 8
Technical support and maintenance	Ongoing





E. DESIRED SOLUTIONS

Based on the above explanation, scope, and background, CTH is soliciting competitive proposals from qualified organizations to develop and implement the CTH eLearning platform. We are seeking solution architects and developers who are interested in partnering for a long-term commercial venture in EdTech and Climate Education training starting out with a non-profit funded pilot phase. The firm should have experience in developing mobile and web applications for various industries and successfully rolling them out in various countries across Africa.

Specific roles and responsibilities include but are not limited to: converting training materials into web and mobile content; designing, developing, and implementing web, mobile, and SMS-based applications; end-user training; and ongoing support and maintenance of applications.

Note: The following high-level requirements articulate our vision for the application, but are subject to change throughout the project's anticipated design and pilot phases. Minimum features and functionality are listed to guide the scope of the project but are not considered all-inclusive.

a. Instructional Design

We have existing technical content and will develop additional content with a team of subject matter experts to ensure the quality and relevance of the content. The designers will facilitate content scoping and analysis of the target learner profiles to establish a healthy blend of Do-It-Yourself (DIY) and structured online training. They will be able to advise on the best presentation of the content in various formats such as animations, videos, infographics, and Audio, and then design storyboards, guides, tools, assessments, templates for face-to-face presentation, online learner experience, and downloadable implementation tools. Working closely with CTH staff and technical experts, this content should be parsed into bite-sized learning modules formatted for consumption on web and mobile applications in an engaging way.





b. Blended Learning Platform Core Features

The eLearning platform should align with the following four (4) focus areas:

- a. **Self-Paced Learning:** We envision a situation where learning is self-paced and the learners can seamlessly engage with the platform to acquire learning. The learners would be able to charter their own learning journey once the learning material is available on accessible platforms so that they can interact with it at their convenience and apply the learnings.
- b. Social Learning and Community: Social learning is a key feature where the reduction of face-to-face interaction is replaced by dynamic virtual chat platforms which allow learners to share experiences via comments, picture uploads, etc., of their knowledge application as well as troubleshooting issues within a community of practice.
- c. Analytics and Monitoring: The platform should allow for intelligent analytics (including Eye Tracking, and SEO) and customised reporting at the backend as well as the ability to push communication through email, short message service, and social media. Administrators and instructors should be able to monitor learner journeys through tools, alerts, and reporting.
- d. Recruitment, Engagement, and Incentives: Ideally the same platform should enable recruitment of learners through a rigorous selection process to target the right participants and enable payment through credit card or mobile money on the same platform. The platform should be developed in a manner that is engaging for end users and creates incentives for continual learning (intuitive UI/UX, accomplishment levels, gamification, etc.).





F. EVALUATION CRITERIA

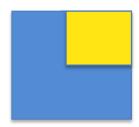
Proposals will be evaluated based on:

- 1. **Technical Expertise and Experience (40%)**: Prior experience in EdTech, MOOC development, and mobile applications.
- 2. Innovative Approach (20%): Use of AI, gamification, and interactive learning tools.
- 3. **Project Execution Plan (20%):** Clear methodology, timelines, and risk mitigation strategy.
- 4. Cost Effectiveness (10%): Competitive pricing and long-term sustainability.
- 5. Post-Deployment Support (10%): Commitment to training, maintenance, and scaling support.

Firm Qualifications

- a. A minimum of 3 years of experience in Android, IOS, and web application development experience, including expert knowledge of and experience in managing the full lifecycle of technology development projects.
- b. An ability to design the structure of databases and platforms which are secure and scalable.
- c. Experience working with local and international organizations and clients of a similar discipline to CTH, with an emphasis on organizations focused on agricultural value chains and food processing. Experience working with both public and private sector partners is strongly preferred.
- d. Proven experience successfully executing similar assignments across Africa.
- e. Expertise and experience in technology design and technology assessments for web and mobile applications deployed within the EdTech and Climate-tech landscape across Africa, including the development of requirements for custom applications.
- f. Experience working with clean energy-, climate change-, and sustainability-focused businesses to determine sustainable business models and best practices.





- g. Expertise and experience in User Interface/User Experience (UI/UX) design for educational platforms/companies across Africa.
- h. Experience in training project personnel, stakeholders, and end-users in the use of applications and database management, including deep expertise in designing training tailored for local communities across Africa.
- Professional ability to handle sensitive information related to organizations and individuals, including a demonstrated ability to respect the confidentiality of such information while working with CTH.
- j. Proven ability to ensure robust Information security procedures and principles pertaining to relevant data protection and confidentiality aspects (including appropriate data backups), in accordance with CTH IT standards and procedures, as well as local laws in the country of the application's operations.
- k. Proven ability to mobilize teams that work effectively with others, including multicultural teams with varying levels of technical competency and understanding.
- I. Ability to work under pressure and commit to deadlines along expedited project schedules with rapidly evolving timelines, where tasks must be carefully coordinated in parallel.
- m. Verbal and written fluency in English.
- n. Expertise in technology research and the ability to develop industry-relevant lessons learned and lessons learned reports for distribution among partners and key stakeholders.
- o. Ability to write industry-facing reports and conference papers for the distribution of lessons learned.





G. SUBMISSION GUIDELINES

Interested firms should submit a proposal including:

- a. Cover Letter with company profile and contact details (including for the team's designated contact person who can receive and distribute RFP information on behalf of the team).
- b. Technical Proposal detailing the comprehensive approach, methodology, and development roadmap.
- c. Past Performance and References highlighting firm's description and qualifications to address the scope of this assignment and share evidence of experience in similar projects (including up to three (3) references).
- d. Technical Approach and Support Overview describing vendor support during and after implementation, including a detailed plan for sustainability and support provided long-term.
- e. Team Composition including CVs of key personnel and roles.
- f. Cost Proposal presenting a detailed budget, including development, testing, and maintenance costs.

Provide a breakdown of cost per deliverable as indicated in **sections D and E** above.

The cost proposal must include all design, production, testing, and software necessary for the development and long-term support of the application(s). For each deliverable, costs should be broken out indicating one-time setup costs, implementation costs, travel, seat licenses and other fees, and integration costs.

Note:

- (i) The cost to be quoted should be inclusive of all applicable taxes, and
- (ii) ongoing fees that could be incurred as a result of the deliverables should be listed separately with an estimate (based on current market prices) of cost per year.
- g. Timeline and Implementation Plan.





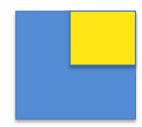
H. TIMELINE AND SCHEDULE OF EVENTS

- Questions regarding this RFP may be addressed to <u>e-learning@cleantechnologyhub.org</u> and cc: <u>n.afani@cleantechnologyhub.org</u>. All questions must be received no later than 23:59 WAT, Monday, March 24, 2025. Responses to all questions received will be distributed to all interested parties no later than 23:59 WAT, Friday, March 28, 2025.
- 2. Completed responses to the RFP with title clearly marked as "PROVISION OF CONSULTANCY FOR THE DEVELOPMENT OF CTH PROGRAM DIGITAL APPLICATIONS" should be sent to the email address below: e-learning@cleantechnologyhub.org and cc: n.afani@cleantechnologyhub.org and received by 23:59 WAT, Friday, April 11, 2025.

Please note that late submissions will not be considered at all and any form of Canvassing is prohibited and could lead to automatic disqualification.

- 3. The contract will be awarded to the selected provider and the provider will be contacted in writing when due.
- 4. The assignment will run for not more than 1 year from the date of signing the MOU. The first version of the application must be completed in time for pilot testing with a live app (Android and/or iOS) within the **first 6 months** of the project implementation. Lastly, a maintenance period of **up to 24 months** from the project completion date will be observed to cater to all performance related issues and corrective actions that arise from the use of the platform, requiring no additional costs.





I. TERMS AND CONDITIONS

- a. The Request for Proposal (RFP) is not and shall not be considered an offer by CTH.
- b. All responses must be received on or before the date and time indicated above. All late responses will be rejected.
- c. All unresponsive responses will be rejected.
- d. All proposals will be considered binding offers. Prices proposed must be valid for the entire period provided by the respondent or required by the RFP.
- e. All awards will be subject to CTH contractual terms and conditions and contingent on the availability of donor funding.
- f. CTH reserves the right to accept or reject any proposal or cancel the solicitation process at any time and shall have no liability to the proposing organizations submitting proposals for such rejection or cancellation of the request for proposals.
- g. CTH reserves the right to accept all or part of the proposal when the award is provided.
- h. All information provided by CTH in this RFP is offered in good faith. Individual items are subject to change at any time, and all bidders will be provided with notification of any changes. CTH is not responsible or liable for any use of the information submitted by bidders or for any claims asserted therefrom.
- i. CTH reserves the right to require any bidder to enter into a non-disclosure agreement.
- j. The bidders are solely obligated to pay for any costs, of any kind whatsoever, which may be incurred by the bidder or any third parties, in connection with the Response. All responses and supporting documentation shall become the property of CTH, subject to claims of confidentiality in respect of the response and supporting documentation, which have been clearly marked confidential by the bidder.
- k. Bidders are required to identify and disclose any actual or potential Conflict of Interest.

