

TEXAS HIGHER EDUCATION COORDINATING BOARD

Request for Offers (RFO) OERTX Repository

RFO No. 781-3-29535

Questions and Answers
September 22, 2023

1. Technical Requirements and Integration:

- A. What specific technical requirements must be met for maintaining the existing OERTX Repository?

Unknown

- B. How should the system be expanded to accommodate anticipated growth in user numbers?

OERTX is a web-based platform that should be able to withstand high levels of user traffic and increasing upload of educational content to backend data structure.

- C. What integration capabilities are required with existing educational or institutional systems?

Ability to integrate with Third Party Systems to allow OERTX users the capability of direct access to resources through a Learning Management System (LMS).

2. Content Management and Authoring:

- A. What are the content standards and quality guidelines for OER materials within the repository?

All materials should be licensed with an open copyright license (i.e. Creative Commons license). Materials are approved through the Django CMS by platform administrators prior to publication on the OERTX website. The OERTX submission policy can be found here: [OER Commons Submissions](#)

Policy | OERTX (texas.gov) and the Terms of Use can be found here: OER Commons Platform Terms of Use | OERTX (texas.gov).

- B. What authoring tools are preferred or required for content providers to upload or create OER materials?

There are no preferred or required authoring tools. The OERTX website has an embedded authoring tool (Open Author) and that should be maintained for users.

- C. How will intellectual property rights be managed for content created within the platform?

OERTX endeavors to provide information about the copyright status of the educational materials in the platform, and to identify any other terms and conditions that may apply to use of such materials. However, there is no guarantee or assurance that all pertinent information is provided or that the information provided is correct in each circumstance. In all cases, it is the user's sole responsibility to determine what permission(s) are needed in order to use materials available from OERTX and, if necessary, to obtain such permission(s).

3. Collaboration and Curation Tools:

- A. What collaboration tools and functionalities are expected to be provided to users?

OERTX contains groups (with discussion boards and options for collaboration in resource creation and curation) and hubs (custom resource centers where groups can create and share collections associated with a project or organization). Existing groups and hubs should be maintained and there should be the option of creating new ones.

- B. How will institutional or organizational hubs be established and maintained for OER curation?

Institutions work with THECB Digital Learning staff to establish hubs. Institutional hub administrators have limited permissions to modify hub design once established.

- C. What customization options must be provided to institutions for curating OER materials?

Institutions must be provided access control: i.e. roles, tags, collections, endorsements, metadata management

4. User Accessibility and Support:

- A. What are the expectations for user accessibility, including compliance with ADA or other relevant accessibility standards?

[WCAG 2.0 Level AA](#)

- B. What type of user support and training will be required, both for end-users and administrators?

[End users and administrators must be provided knowledge base articles for usability, a support ticketing system, and professional development. Administrators may require additional technical training on the administrative portal.](#)

5. Security and Compliance:

- A. What security protocols and compliance standards must be adhered to in maintaining and expanding the repository?

[Data encryption in transit and rest, OWASP TOP 10, ISO](#)

- B. How will user data be protected, and what privacy regulations must be complied with?

[ISO](#)

6. Performance Metrics and Reporting:

- A. What performance metrics are expected for system availability, response times, and other technical KPIs?

[Site Improve Integration](#)

- B. What reporting functionalities must be provided to track usage, collaboration, and other relevant activities within the platform?

[Matomo](#)

7. Future Enhancements and Scalability:

- A. How should the system be designed to facilitate future enhancements or integrations?

[OERTX baseline system design is already in place and future enhancements would be based on analysis of user experiences and analytics.](#)

- B. What is the expected scalability of the platform to accommodate unforeseen growth or expansion into new areas?

[Hosting platform and backend data structures should be robust enough to be scalable.](#)

8. Framework and Languages:

- A. What programming languages and frameworks were used to develop the current OERTX Repository?

Django language framework with integrations to Python, HTML, JavaScript.

- B. Are there any proprietary or customized components that require specialized knowledge or skills for maintenance?

Django CMS is an open-source content management platform

9. Hosting and Cloud Services:

- A. Where is the OERTX Repository currently hosted (e.g., AWS, GCP, Azure, or on-premises)?

Amazon Web Services (AWS) in the US-East availability zone

- B. Are there specific cloud services or tools being utilized that must be maintained or expanded?

Application: OERTX, an instance of the ISKME Microsite application (Maintained by ISKME), including Build, Test, and Continuous Integration tools. Development and maintenance of the application is the primary focus of ISKME's software development team.

Infrastructure: AWS: EC2, RDS, ALB, S3, and other related AWS services

Operating system: Debian 12 (Bookworm)

Hosting: Amazon AWS (Maintained by Amazon)

10. Databases and Data Storage:

- A. What types of databases are used within the OERTX Repository, and what is their size and structure?

Preference would be MySQL.

- B. How is data backup and recovery managed, and what are the specific requirements for maintaining data integrity?

Per ISKME's Backup policy, all databases and logs are backed up every 24 hours. Database recovery is tested as part of our Disaster Recovery testing plan.

11. Dependencies and Integrations:

- A. What are the peer dependencies within the application stack, such as third-party libraries, APIs, or other integrated services?

SMTP integration, .net framework, JavaScript utilities, Matomo, FreshDesk

- B. How are these dependencies managed and maintained, and are there any specific versioning considerations?

Core dependencies (Operating System, various core pieces of software and libraries) are managed at the time a “Golden Image” is created to establish the baseline for all deployments. Other libraries that are required for features within our software are managed as part of the codebase that undergo our SDLC process - eg. code reviews etc. Dependencies are updated regularly to incorporate bug fixes and security patches.

12. Networking and Security Considerations:

- A. What are the current networking configurations, including load balancing, firewall rules, and other security measures?

All resources used to host the OERTX repository are created inside a Virtual Private Cloud (VPC) in AWS. Access to web services are via AWS Application Load Balancers (ALB). Further, the web servers are managed with an AutoScaling group that adds and removes instances as needed based on load. Resources inside the VPC are not allocated public IP addresses with the two following exceptions:

Load balancers - which only accept incoming traffic on port 80 (http) and 443 (https) Bastion host - which only accepts traffic on port 22 (ssh) and only allows certification authentication.

- B. Are there any specific compliance requirements related to networking and security that must be adhered to?

SOC2 compliance is required.

13. Development and Deployment Processes:

- A. What are the current development, testing, and deployment processes, including CI/CD pipelines, and how are they managed?

Software is managed in a version control (git) repository. Software development and change management utilize Agile best practices Branching, merging after code review by peers, automated tests, manual QA tests Deployments using Continuous Integration / Continuous Deployment (CI/CD) code pipelines Blue/Green deployments

- B. Are there specific tools or environments that must be used for development, staging, or production deployments?

Unknown

14. Monitoring and Performance Optimization:

- A. What monitoring and logging tools are currently in place, and what are the expectations for maintaining or improving them?

Matomo and Site Improve are in place. The expectation is that they would be maintained, and improvements made as necessary.

- B. How is performance optimization managed, including caching, indexing, or other techniques to ensure optimal user experience?

Unknown

15. User Experience and Interface Design:

- A. How is the user experience (UX) and user interface (UI) currently designed, and what improvements or changes are expected?

Unknown

- B. Are there specific branding or design guidelines that must be adhered to?

Yes. THECB has specific branding and design guidelines. THECB will provide the vendor with a license for such use.

16. Disaster Recovery and Business Continuity:

What are the existing disaster recovery and business continuity plans, and what expectations are there for maintaining or enhancing them?

ISKME's Information Security Management System (ISMS) adheres to the International Standard for Information Security, ISO/IEC 27001:2022. The ISMS policies cover disaster recovery, business continuity, data backups, privacy controls, secure software development, vulnerability management, training, incident response, and other areas to ensure that ISKME maintains compliance with legal and regulatory requirements as well as upholding its high standards for reliability and continuous improvement. The ISMS is reviewed annually by the management team, and certified by external auditors.

17. Licensing and Third-Party Agreements:

What licensing or third-party agreements are in place that must be considered in maintaining, supporting, or expanding the system?

Hosting platform service

18. Training and Knowledge Transfer:

What training or knowledge transfer will be required for internal staff or other stakeholders involved in the project?

Administration training for staff, knowledge base articles, user guides, and technical architecture should be provided to THECB. Other stakeholders with limited permissions (such as hub administrators) should also receive training and documentation.

19. Budget and Financial Considerations:

Are there specific budget constraints or financial considerations that must be adhered to in the proposal?

Funding for this project is contingent on available state appropriations.

20. Stakeholder Engagement and Communication:

How will stakeholder engagement and communication be managed throughout the project, and what are the expectations for vendor collaboration and reporting?

Vendor will be expected to provide a dedicated project manager to collaborate with appropriate agency staff through means of Teams meetings and email.

21. Accessibility and Inclusivity:

Beyond general compliance, are there any specific requirements for ensuring the platform is accessible and inclusive to a diverse user base, including various age groups, abilities, or other demographic considerations?

WCAG 2.0 Level AA. The accessibility check within the authoring tool should be maintained.

22. Looks like OERTX is hosted on AWS. Is this hosted on THECB's tenant or this needs to be migrated to vendor hosted tenant? If it needs to be migrated to the vendor's tenant how much content size it is utilizing at this time and what is the future planned content size?

This is a vendor hosted tenant.

23. OERTX web site is hosting all digital content with in the THECB hosted servers and is it also serving external provider content? If it is hosting external providers, will it need to authenticate with external providers?

OERTX is also serving external provider content that is hosted within the vendor platform. (a)OERTX links to external entities that do not require authentication.

- 24.** Is THECB is responsible for student/user service requests coordination or is the vendor responsible for this?
THECB and the vendor share responsibility for responding to requests.
- 25.** What authentication providers are being used in OERTX?
No authentication providers are being used, there is built-in user management.
- 26.** Is OERTX is capturing meta data for analytics?
Yes.
- 27.** Is there analytics platform is already implemented or analytics platform need to be implemented? If there is a platform already, is it custom solution or COTS product?
Matomo is currently implemented. Matomo is a COTS product.
- 28.** How many reports are being used and will there be need to develop more reports?
Multiple reports are being used. THECB and the vendor are currently analyzing which are most effective. There should be an option for developing more reports in the future.
- 29.** What reporting tool is being used?
Currently data is not reported externally and THECB is in the process of analyzing data to make determinations about future reporting. Power Bi is preferred.
- 30.** Section 3.1/Page number 2-Is there any integration with internal or external systems/applications of the OERTX application?
There are no Third -Party integrations other than Matomo (analytics tool) and hosting platform.
- 31.** Section 3.1/Page number 2-What is your current application architecture at high level? Is it based on a microservices or does it follow a monolithic architecture?
OERTX website is built on an open-source CMS (Django) with backend MySQL data collection.
- 32.** Section 3.1/Page number 2-Are there any background jobs and processes with respect to OERTX applications? Like different admin portals for different set of users?
Yes. OERTX is a single application platform with role-based dependencies to perform specific tasks.

- 33.** Section 3.1/Page number 2-Does the application have compatibility with the REST API framework, allowing it to be utilized with various frontend applications, or is it specifically tailored to work solely with Django templates?
The CMS has the capability of utilizing API frameworks and that should be maintained. This is currently not in use.
- 34.** Section 3.1/Page number 2-Has the application been deployed in a cloud environment, or is it hosted on-premises? If it's deployed in the cloud, is there a possibility of requiring cloud resource migration in the future?
It is a cloud-based environment. There could be a future possibility of migration between hosting platforms.
- 35.** Section 3.1/Page number 2-Could you please provide information about the current projected maximum user capacity for the application, as well as any anticipated growth in user numbers for the future?
The site is designed for users in various roles (i.e. faculty, librarian, institutional staff, student, etc.) across the state of Texas. The number of potential users at any given time is uncertain.
- 36.** Section 3.2/Page number 3-Does the scope include migrating the current infrastructure to new vendor hosted AWS account?
Yes.
- 37.** Section 3.1/Page number 3-What is the current Authentication and Authorization technique in the application?
Currently there is native built-in user management.
- 38.** Section 3.1/Page number 3-What is the current Key Management technique in the application?
TLS keys, used for secure communication with web applications, and encryption keys, are maintained by AWS Key Management Service.
- 39.** General-What is the current CI/CD practice in place?
Unknown
- 40.** General-To keep the cost low, is the agency open for this work to be done from an offshore/nearshore location?
No.
- 41.** General-"Is there already a set of vendors who are on the previous/current Master Service Agreement? If yes, please provide the list of vendors who are on the MSA.
THECB cannot provide this information.

- 42.** List the incumbent to this solicitation."
Institute for the Study of Knowledge Management (ISKME)
- 43.** General-Can awarded vendors use consultants that hold a US work visa (H1B, EAD, etc.) for this project?
All vendor employees and subcontractors performing work under this contract shall be eligible to work in the United States.
- 44.** General-Can Offshore(Outside of USA) be considered for this contract? No.
- 45.** General-Is there a pre bid call that happens? A pre bid call would help us save few questions in Query log?
There is no pre-bid call. A post-bid call may be possible.
- 46.** General-What is the current team size/capacity utilized to manage this project?
Currently 10-15 people.
- 47.** Introduction 1-Currently the Repository servers over 500,000 users, Approximately what is the anticipated growth in the next one year? Growth is expected over the next year, but the scale is uncertain.
Growth is expected in the next year, but the scale is uncertain as it is dependent on a number of factors.
- 48.** Scope of Work 3.1-What is the responsibility of hosting here? Do the Respondent should have any dedicated AWS account and do the migration or we need to take the hosting ownership on the existing AWS account itself? Is it possible to share the current owner of the AWS account where it is hosted?
The expectation would be for the OERTX website to migrate to a vendor managed AWS account.
- 49.** Scope of Work 3.1-Are you looking for periodic research and development programme for increasing user satisfaction & engagement. If yes, what will be the frequency of such events?
Yes, it is expected that several research studies would be conducted annually, dependent on need and THECB priorities.
- 50.** Scope of Work3.1-Will there be any historical data & knowledge exchange for us to conduct the research & Development programme effectively?
Yes.
- 51.** Scope of Work-Rough Size of the Data?
This question is not clearly defined.

52. Scope of Work-At a high level, what are the issues faced for OERTX that points to the user satisfaction area?

This question is not clearly defined.

53. Scope of Work-"Does this require 24x7 support? If yes, could you please provide the volumetrics ticket analysis for the past 3-6 months?"

Yes. 42 service tickets have been received in the past six months from users.

54. Scope of Work - Is it possible to share the current state architecture diagram for OERTX?

THECB cannot share the current architecture. At a baseline, it is a cloud hosted CMS with MySQL backend.

55. Scope of Work-Do we have any form of customer analytics?

Yes, Matomo is in use.