Stanford Continuing Studies Program
Request for Proposal: Technology Modernization Project Consultant(s)
As of April 22, 2022

Overview

Our Program

Stanford University's Continuing Studies Program (CSP) is a premier adult learning program offering more than 600 courses, workshops, and seminars to more than 17,000 students annually through online and on campus formats. The mission of Stanford Continuing Studies is to share the rich educational resources of Stanford University with adult students living in the Bay Area and beyond.

Continuing Studies Website: https://continuingstudies.stanford.edu/about-us/about-us

Our Project

CSP is launching a Technology Modernization Project (the Project) to build a new technical infrastructure in a staged process that includes a database, public website, and instructor onboarding portal. The standards-based infrastructure will be robust, flexible, and capable of supporting new features and anticipated program growth. It will also improve how our three major user groups (staff, instructors, and students) engage with the systems, creating operational efficiencies which realign resources to focus on instructor development, course quality, and the student experience.

The Role

Stanford Continuing Studies is seeking a Consultant (or team of Consultants) to play an integral role in a Technology Modernization Project (the Project) that will galvanize the development of the Continuing Studies program at Stanford. We are looking for a dynamic Consultant(s) who will help us lead the transition from our legacy systems to new, modern systems while attending to both the technical and human elements of the change. Successful candidates should bring technical expertise and a willingness to invest in understanding our culture, successes and challenges as well as our vision for the future. This project will ultimately serve as the backbone of our day-to-day operations so designing with the user experience in mind will be key to establishing the operational priorities needed for success. The Consultant(s) will engage regularly with our gifted staff, instructors and students and will be an essential member of our team for the duration of the Project.

The Consultant(s) will work closely with CSP's Technology Manager, Associate Director, and other members of CSP's leadership team throughout the Project. In addition, the Consultant(s) will be presenting to senior members of CSP including our Director and the Dean of the Continuing Studies and Summer Session Program.

Principal Responsibilities

The goal of the Consultant (or team of Consultants) is to guide CSP's Technology Modernization Project through a smooth transition to our new systems. The multi-year Project will address three components of our infrastructure (database, website, and instructor portal) in three distinct phases: (1) Definition of Systems Requirements for the three components; (2) Solution Architecture for the three components; and (3) Implementation. The Consultant(s) will lead the definition of the systems requirements that will help us design the architecture for our new technology infrastructure (Phase 1), design the architecture for our technology system, help us determine an approach to implementation, and advise on selecting the appropriate vendor(s) for the database migration, as well as identify potential vendors for the website and instructor portal (conclusion of Phase 2). To enhance coherence and systems integration, we plan to develop the systems requirements and overarching architecture of the technology infrastructure at the same time.

Scope of Work Phase 1: Systems Requirements

The Consultant's primary work product is a Requirements Document that outlines: (1) current workflows, (2) desired new workflows and (3) opportunities for process improvement and product differentiation in order to assess vendor solutions that will fully support CSP now and into the future. The Consultant(s) will review the findings with CSP's Technology Modernization Project Working Group.

We estimate that the Consultant(s) will invest approximately 20-40 hours each week for about 4-6 months. Their responsibilities will include:

- CSP Workflow interviews
- Review findings from recent research with CSP instructors and students that describes their user experience with our systems
- Review Stanford requirements for Security (see: https://uit.stanford.edu/guide/riskclassifications) and Accessibility (see: https://uit.stanford.edu/accessibility/)
- Review current technology stack with CSP's Technology Manager
- Technical review of existing 4D database system, website, and instructor portal

- Technical review of the Stanford University technical infrastructure and operating environment
- Draft findings
- Review findings with CSP's Technology Modernization Project Working Group
- Finalize the Requirements Document
- Weekly project team meetings

Workflow interviews should include:

- Each member of CSP staff, to review current workflows (tasks, timing, data, interactions) (2-3 hours for each person, approximately 17 staff)
- 5 representative instructors, to understand their impressions of the course submission and communication processes
- 5 representative students, to understand their impressions of the course registration process and online class experience

Scope of Work Phase 2: Solution Architecture

The Consultant's primary work product will be the development of a proposed technical architecture that includes the implementation approach and estimated costs of the proposed system. The technical architecture should include the database/software system as well as the website and instructor portal so that the architecture is comprehensive (technical systems are described below).

We expect a preliminary work product to be a Vendor Assessment Document that summarizes the assessment of vendors against our systems requirements based on research and interviews that will inform the technical architecture of CSP's new systems. The Document will address: (1) Recommended vendors; (2) Required customizations; (3) Required integrations; and (4) custom development projects (if any). Ideally, there should be few or no custom development projects needed and the responsibility for addressing the technical debt will be placed on the vendor. The Consultant(s) will present the report to the Working Group and will schedule vendor reviews for CSP.

We estimate that the Consultant(s) will invest approximately 20-40 hours each week for about 4-6 months. We anticipate that there might be more than one Consultant working on our project simultaneously. Their responsibilities will include:

- Review and expand on CSP's recent research on peer school's systems
- Vendor research for new database, website, and instructor portal
- Vendor interviews for new database
- Draft architectural options

- Technical review of options with CSP's Technology Manager
- Functional review of options with Working Group
- Vendor followup for database migration
- Finalize architecture
- Develop implementation plan
- Develop financial analysis
- Weekly project team meetings held over Zoom
- Present the proposed architecture, implementation approach, and financial analysis to CSP's Technology Modernization Project Working Group and Program leadership

The primary deliverable should address the following:

Technical Architecture

- Recommended vendor(s) for database migration, website, and instructor portal
- Required customizations for new database, website, and instructor portal
- Required integrations for new database, website, and instructor portal
- Custom development projects (if any)

Implementation Approach

- Implementation order for modernizing the three systems
- Data conversion plan
- Training plan
- Risk analysis / mitigation plan
- Required resources (internal and external)
- Timeline

Cost Estimates

- Implementation cost
- Operating cost forecast

Scope of Work Phase 3: Implementation

The Scope of Work for the Consultant(s) as outlined in this document covers the first two Phases of the Project (Definition of Systems Requirements and Solution Architecture). Though we are open to discussing a role for the Consultant(s) for Phase 3, that work is not included in this document at this time because it is expected to take shape during Phase 2. The RFPs for the database migration and the development of the website and instructor portal will be based on the work of Phases 1 and 2 of our Project.

Background on CSP's Technical Systems

CSP has identified three systems for our technology upgrade identified below. A diagram of our current architecture can be found on the next page. The Consultant will help us gather systems requirements for the modernization of the first two systems and the development of the third system.

The following systems are part of this project:

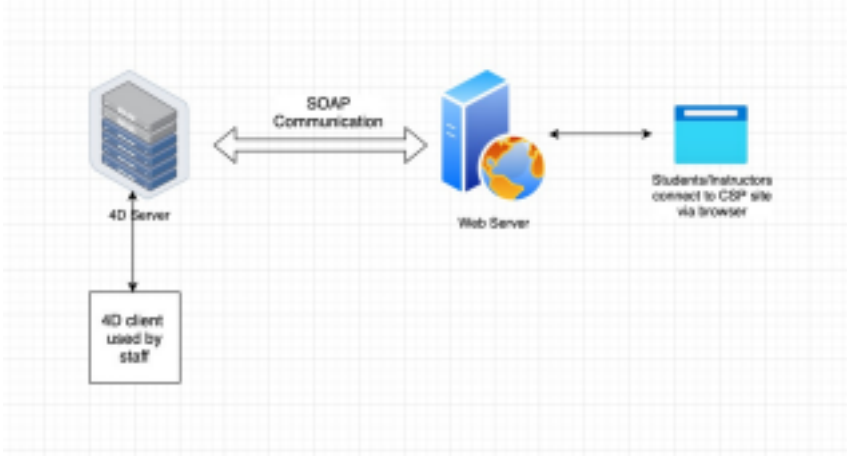
1. **CSP's 4D database:** This proprietary database contains data and significant business logic that is used in the following ways:
    a. It is updated and managed by CSP staff using the 4D client
    b. It is used by CSP's website application (at https://continuingstudies.stanford.edu).
    c. It is used to create and track student enrollments (via the website), as well as collect and track their tuition payments (including discounts)
    d. It has a custom course submission workflow system
    e. It has other workflows including but not limited to revenue tracking, curriculum coordination, emails to students, emails to instructors, syllabus creation, survey evaluation creation, grade submission, transcript processing, and so on.

2. **CSP's website:** The website provides several layers of functionality using data from the 4D database and feeding data back to the database. This functionality includes:
    a. Course catalog
    b. New student account creation
    c. Course registration system for students
    d. Secure payment system for students
    e. Student home page and access of the Canvas LMS
    f. Student end-of-course survey
    g. Instructor services:
        i. Prospective instructor course submission
        ii. Current instructor course submission
        iii. Information gathering from current instructors regarding their course (syllabus, books, etc..)
        iv. Instructor policy handbook

3. **Instructor onboarding portal:** Proposed instructor portal to automate current manual processes, submissions and communications.

CSP's Current System Architecture

- Current System
  - 4D Server (from 4D Inc.)
    - Hardware in Forsythe Data Center on Windows Server 2008
    - What is it:
      - Relational DB
      - SQL server
      - Web server
      - Application server
      - SOAP server
  - 4D Client:
    - Communicates to 4D server via proprietary protocol
    - MacOS or Windows program
  - Web Server
    - CodeIgniter 3 Framework
    - Nginx web server



Database Migration

One goal of the CSP's Technology Modernization project is to migrate 4D to a modern technical stack that will:

- Provide CSP staff with the same capabilities they have now have in interacting with 4D and performing their day-to-day jobs in servicing CSP's mission for its students and instructors
- Provide extensibility for future features/capabilities that will be consistent with CSP's budget and staff requests (i.e. their wants/wishes list)

Website Redesign

The goal of the Website redesign is to build a flexible, dynamic, and accessible platform to showcase our courses, increase revenue via improved student enrollment experience and ongoing student engagement, and to improve our marketing and branding.

Instructor Portal

The goal of the instructor portal is to automate current manual processes including course submissions and routine communications.

Required Skills

CSP is seeking a Consultant (or team of Consultants) who have the following skills:

- Ability to effectively and efficiently identify, understand, and communicate with CSP staff about system needs/requirements, understand the technical underpinnings of those requirements, and effectively communicate with evaluation software vendors about system functionality and alignment with our team's needs

- Ability to understand from a technical standpoint the extent to which a vendor's software systems integrate with other university data systems

- Ability to work effectively, efficiently, and pragmatically to identify best solutions as opposed to conducting an exhaustive review. For example, the Consultant will be able to ask targeted questions of vendors in order to quickly identify whether the vendor is a likely contender; the Consultant(s) will suspend the review immediately upon identifying a key lack in the system (versus continuing to develop a comprehensive report on that vendor when it is clear that it is not a viable option for CSP) and share findings with supervisor to determine whether to stop or continue investigating.

- Willingness and ability to work as a partner with CSP Technology Modernization Project Working Group. We anticipate a collaborative and productive relationship.

Estimated Project Duration

CSP's Technology Modernization Project has three Phases, the first two of which are outlined in this document. For the sake of completeness, the estimated duration of each of the three Phases are identified here.

- Phase 1: Systems Requirements - 4 to 6 months
- Phase 2: Solution Architecture - 4 to 6 months
- Phase 3: Implementation - 6 to 12 months for database migration, additional time for website development and instructor portal development

Assumptions and Agreements

Proposals will not be returned and Continuing Studies reserves the right to dismiss any proposal for any reason.

Though Stanford Continuing Studies is located on Stanford's main campus, the Consultant(s) role is eligible for flexible work options including hybrid and remote opportunities.

Proposal Guidelines

Please include the following information in your proposal:

- Professional background of key players who would work on the project (include company background if an agency is responding)
- General description of proposed solutions and approaches
- List of deliverables for each component of the project
- Work samples from relevant previous projects
- Technical recommendations
- Detailed breakdown of costs, schedule, and terms of work
- Pricing methodology
- Client references

The quoted price should include all work and fees. If any subcontracting work will be necessary, this should be explained in the proposal—both who would be subcontracted to and why.

Submission Information

Please submit the proposal to csp-jobs-info@lists.stanford.edu. Proposals will be reviewed on a rolling basis.

Selected Consultants(s) will be invited to an interview. Consultant(s) who are not selected for an interview will be notified.

For Additional Information or Clarification

For additional information or clarification, please send an email to csp-jobs-info@lists.stanford.edu.

Eli Lev (Technology Manager)
Jen Deitz (Associate Dean, Continuing Studies)
Teresa Kpachavi (Senior Manager of Learning, Design, and Technology)

It is recommended that all Suppliers review Stanford's Supplier Requirements, paying special attention to the Certificate of Insurance and Invoice Information. CSP will provide support to navigate this process for individuals and organizations new to working with Stanford. See this list of requirements: https://fingate.stanford.edu/purchasing-contracts/do-business-stanford

Basis for Award of Contract

Stanford Continuing Studies will evaluate the Consultant, team of Consultants, or agency and proposal based on: experience, references, portfolio and proposed budget. Requirement of liability insurance must be presented as a contingency of contract award.