Statement of Work: Technical Support for iSantéPlus and SEDISH Deployment

Background
The International Training and Education Center for Health (I-TECH) is a center in the University of Washington’s Department of Global Health. I-TECH has projects in more than 20 countries, and its worldwide staff work with local ministries of health, universities, non-governmental organizations, medical facilities, and other partners to support efficient, well-ordered health care systems that provide high quality care to all citizens.

Project Description
I-TECH seeks a highly-qualified software development team to provide support in refining and bug testing during deployment of the Système d'Échange d'Information Sanitaire Haïtien (SEDISH), which is the implementation of an OpenHIE in Haiti.

SEDISH is the national health infrastructure that replaced and enhanced the consolidated server that was operational with the national electronic medical record (EMR) iSanté, was built to be responsive to strategic information needs in Haiti. It includes a master client index and fingerprinting system that supports unique patient identification, a shared health record that collects clinical encounters and laboratory orders for all patients in the country and a health management information system that supports national data aggregation, health workers management and reporting. I-TECH and its partners the Centre Haïtien pour le Renforcement de Système de Santé (CHARRESS) and SolDevelo, followed the structure outlined by OpenHIE and implemented health standards-based workflows for the Client Registry, Facility Registry, Health Management Information System, Shared Health Record, and Interoperability Layer components of SEDISH. While iSanté is still in use at over 150 sites in Haiti, a new EMR, iSantéPlus, was built on the OpenMRS platform to adhere to international standards, benefit from a developer community, and facilitate interoperability. iSantéPlus is connected to SEDISH and operational in three pilot sites.

The major task ahead of the teams beginning in October 2018 is to stabilize and optimize the product in the pilot sites and move towards full national deployment. A key factor will be ensuring SEDISH can handle large volumes of transactions while maintaining short response times in the EMR for point of care use, for generating reports locally, and in SEDISH for generating reports at the national level.

The firm/consultant(s) will work with the Health Information Systems Manager (HIS Manager) based in Haiti as well as other technical staff located at I-TECH’s HQ in Seattle at the University of Washington. It is expected the firm/consultant(s) will be able to communicate with the team remotely and collaborate with the team to meet overall project goals.
Required Qualifications

- Proven experience with OpenMRS core (Spring, Hibernate)
- Proven experience with OpenHIE development
- Proven experience with the OpenXDS service for cross enterprise document sharing
- Proven experience with FHIR interfaces (Mirth Connect)
- Solid grasp of web technologies: HTML, CSS, Java, JavaScript, JSP/JSTL, AngularJS, nodeJS and XQuery
- Proven experience in transferring capacity to implementing partners in Haiti or other low- and middle-income countries

Desired Qualifications

- Advanced knowledge of object oriented programming with Java
- Demonstrated experience with PHP, SQL
- Demonstrated experience with Linux
- Excellent problem solving and debugging skills
- French language proficiency a plus

Proposed Activities and Deliverables

1. Review architecture and system documentation for iSantéPlus and SEDISH and become familiar with code repository to assess possible gaps or bottlenecks that would impede optimal performance of the EMR and HIE.
   
   **Deliverable:** Provide a report outlining recommendations for enhancing performance of the two systems.

2. As sites convert from iSanté to iSantéPlus, load legacy EMR data into the SHR and DHIS2 components of the HIE.
   
   **Deliverable:** Legacy data are available and validated in the OpenSHR and DHIS2.

3. Refine and enhance DHIS2 component of the HIE with all legacy and current EMR data available in the reports with drill down capabilities by each site.
   
   **Deliverable:** DHIS2 continues to function as deployment progresses and more sites are added to the system.

4. Stress-test and refine SEDISH during deployment so that it continues to function end-to-end according to specifications for each component.
   
   **Deliverable:** Monitor that SEDISH handles large volume of transactions in the OpenHIM and the OpenSHR, OpenEMPI, and are configured or enhanced accordingly to achieve optimal response times in the user-facing application and accurate storage, retrieval, and display of data.

5. Provide technical assistance to third parties who are responsible for the National Fingerprint Server (NPFS).
   
   **Deliverable:** Monitor the NPFS component of SEDISH and troubleshoot issues as possible and/or provide recommendations to responsible parties.
6. Complete testing and debugging of XDS Sender feature that enables the sending and receiving of lab orders and test results between iSantéPlus, SEDISH and LNSP/SCC Softlab, the national lab information system.

   **Deliverable:** Test and refine the XDS Sender so that lab orders and results are exchanged between iSantéPlus and LNSP via SEDISH.

7. Test and refine the laboratory interface between iSantéPlus clinical application and OpenELIS.

   **Deliverable:** Test and refine iSantéPlus so that it can send and receive lab orders to and from OpenELIS.

8. Address priority bug fixes or change requests in a timely manner.

   **Deliverable:** Maintain a backlog in coordination with UW/I-TECH and its implementing partner CHARESS in Haiti through frequent standups.

9. Consultant or contractor must adhere to the following expectations while executing the work:

   - All user interface features that are created will need to include translations in English and French at a minimum.
   - All source code must be developed on the iSantéPlus and SEDISH github organisations.
   - All code developed must have appropriate tests as per the OpenMRS Automated Testing Guidelines.
   - All enhancements to the module must be documented on the relevant OpenHIE and OpenMRS pages.
   - Provide coaching and technical support to the Haiti-based software development team.
   - Availability for weekly virtual meetings with the teams in Haiti and Seattle.
   - Provide weekly status reports.
   - Developer(s) routinely create, monitor and resolve tickets in the development tracking system.
   - Maintain regular communication with the UW team in Seattle and the CHARESS team in Haiti via remote phone calls and email.

**Application & Eligibility**

Preference will be given to contractors (firms) due to the need for multiple skill-sets and short timeline. Individual consultants are also eligible to apply. The expected duration of the contract is from October 15, 2018 to December 14, 2018. Interested applicants should provide:

1) A summary of relevant past performance including one letter of recommendation or reference;
2) A technical proposal detailing proposed approach for each deliverable above including proposed resources/staffing and technical capacity to manage the work;
3) A cost proposal include number of individuals proposed to complete the work, hourly rates, and estimated effort dedicated to the project. Cost proposals submitted for more than $15,000 will not be considered. As more funding becomes available, there may be an opportunity to extend and expand the SOW and budget.

Please submit applications to Joanna Diallo, I-TECH Senior Program Manager (jdiallo@uw.edu) and Scott Barnhart, Principal Investigator (sbht@uw.edu) by 5pm Pacific Daylight Time (PDT) on **Monday, October 8, 2018**.

Post Date: September 26, 2018