March 13, 2020
Updated March 31, 2020

What Services are Being Procured?
The THSA is seeking a Vendor to provide the necessary technical services to design and implement the technical solution described in the provided assumptions document attached hereto as "Attachment A."

THSA Point of Contact
The sole point of contact for inquiries concerning this procurement is:

George Gooch, CEO
Texas Health Services Authority
901 S. MoPac Expressway
Building 1, Suite 300
Austin, Texas 78746
512-329-2730
procurement@thsa.org

Deadline and Instructions for Submission of Questions and Responses
Questions regarding this procurement are due by 5:00 PM Central Time on **Friday, March 27, 2020**.

The THSA will respond to questions regarding this procurement no later than 5:00 PM Central Time on ~~**Wednesday, April 1, 2020**~~**Tuesday March 31, 2020**~~.~~.

Responses to this procurement are due by 5:00 PM Central Time on ~~**Friday**~~**Wednesday, April** ~~**10**~~**8, 2020.**

The THSA intends to select a vendor under this procurement no later than **Friday, April** **10**~~**17**~~**, 2020.**

The subject line of emails related to this procurement shall state: PULSE Procurement: [Vendor Name].

Validation of Proposal Offerings
The proposal shall be a binding commitment which the THSA may include, at its sole discretion, by reference or otherwise, into any agreement with the Vendor. Therefore, each proposal copy must be validated by the signature of a person having authority to commit the Vendor.

Costs Incurred
Issuance of this procurement in no way constitutes a commitment by the THSA to award a contract or to pay any costs incurred by a Vendor in the preparation of a response to this procurement. The THSA is not liable for any costs incurred by a Vendor prior to issuance of or entering into a formal agreement, contract, or purchase order.

Copyright and Intellectual Property
The THSA will not consider any response that bears a copyright.

Responses may be subject to the Texas Public Information Act, Texas Government Code, Chapter 552, and may be disclosed to the public upon request. Subject to the Act, prospective Vendors may attempt to protect what they consider to be trade secret and confidential information from public release. Trade secrets or other confidential information, submitted as part of a response, must be clearly marked on each page on which such information appears. Such marking must be in boldface type and at least 14-point font. Vendors should review carefully Chapter 552, Texas Government Code, and in particular Section C, Information Excepted From Required Disclosure, for more information on exceptions to public disclosure of information under the Texas Public Information Act. Please note that the ultimate decision as to whether materials qualify for an exception under Chapter 552 rests with the Texas Attorney General's office.

THSA requires that Vendors provide a separate version of their RFP response that redacts all information the Vendor believes to be "Information Excepted from Required Disclosure" as noted above. THSA may use this redacted version of Vendor's RFP response to see if it satisfies any requests for information made pursuant to the Texas Public Information Act related to this procurement. **Please note that if this redacted version of the Vendor's RFP response does not satisfy a particular request for information under the Texas Public Information Act, THSA will continue processing the request for information pursuant to the Act.**

Warranties
Vendor warrants and agrees that no appointed official or member of the THSA has or will benefit financially or materially from this procurement based on any action of Vendor; and Vendor has not contracted to provide similar services to a similarly situated customer on better terms and conditions, including price, than it is offering to the THSA, and shall not do so during the contract term.

General Formatting Requirements
All procurement responses must be delivered in electronic format. Files should be delivered via electronic mail to procurement@thsa.org.

Electronic versions of each file should be submitted in the original Microsoft Word or Excel format as well as rendered in a single Adobe Acrobat PDF file containing all files.

Proposal Contents
The proposal contents must be organized in the following order. Page limits for each section, if any, are indicated with square brackets after each section name. These limits should be considered a maximum amount for each category, not a target. The THSA appreciates brief, on-point responses.

Transmittal Letter [1-page limit] - Please include the name, title, mailing address, telephone number and extension as well as a valid email address for the person that the THSA is to contact to resolve questions or issues regarding the submitted proposal. An officer authorized to bind the Vendor to the terms of the proposal must sign the transmittal letter.

Company Overview [3-page limit] – Please include the following information:

- Formal Company Name
- Company Trade Name (If Different)
- Physical Address
- Mailing Address (If Different)
- Corporate TIN
- Company Representative Contact Information:
    - Response Contact Person
    - Title
    - Daytime Telephone & Extension
    - Electronic Mail Address
    - Company Web Site
- Publicly or Privately Held
- Number of Active Government Clients or Customers
- Number of Active Nonprofit Corporation Clients or Customers
- Years of Experience with projects of similar scope and complexity
- References (Name, Title, Mailing Address, Work Phone, Email Address)
- All potential conflicts of interest and the measures the Vendor proposes to take to ensure that there will be no actual conflict of interest and that its fairness, independence and objectivity will be maintained

Executive Summary [3-page limit] – Please provide a brief narrative that demonstrates the organization's understanding of the services requested by this procurement. The Executive Summary should describe the proposed approach, including its key features and strengths.

Staffing Models [2-page limit] – Please provide an overview of the staffing approach to the project, including a description of the training and experience levels of the personnel that will be assigned to this project. Indicate any complaints against any proposed staff members that have been leveled by any state board or other regulatory authority. Indicate the outcome of these complaints and the corrective action(s) taken by your firm with respect to these complaints. Staff resumes are excluded from the page limit above.

Experience [5-page limit] – Please provide an overview of the firm's relevant experience including but not limited to the following:

Detail the firm's experience in providing health information exchange technical services.

Provide information on whether the firm provides services to any related industry organizations.

Project Plan [10-page limit]

Describe how the firm will approach the THSA's technical needs based on the Assumptions Document attached hereto as "Attachment A."

Cost [5-page limit] – Please detail the proposed pricing structure and costs. Include any assumptions made about the work in developing the estimates. Assume that the THSA may include a not-to-exceed amount in any contract awarded based at least in part on these figures. **Please also note that THSA reserves the right to develop certain functions of the PULSE system provided in the Vendor's RFP response utilizing THSA staff resources, as opposed to purchasing these services from the Vendor.**

Important Notice
Implementation of the PULSE system is predicated on THSA's receipt of funds to build the system. A contract award under this procurement is expressly conditioned on THSA's receipt of these funds. Vendor has no right of action against THSA in the event that THSA is unable to complete this procurement or award a contract pursuant to this procurement as a result of the suspension, termination, withdrawal, or failure of funding to the THSA or lack of sufficient funding of the THSA to implement the PULSE system.

ATTACHMENT A

PULSE REQUIREMENTS DOCUMENT

1. **Purpose**.
    a. The below assumptions and requirements are being stated for the purpose of creating a common baseline for the THSA procurement process. The THSA reserves the right to purchase nothing at all or something different than described herein. The message transaction volume statements in the assumptions section are expected to be different in the production deployment.
    b. The solution proposal should meet the requirements contained in this document. Deviations from the requirements must be denoted in the response.
2. **Assumptions**
    a. All proposed solutions must be secure and meet or exceed HIPAA and all other applicable state and federal regulations and best practices related to privacy and security, esp. including encryption of all data at all times, access control, and protection from inadvertent access or disclosure.
    b. Inbound HL7 v2 message volumes: 10k per day, per source, for the duration of an activation. Assume 50 inbound HL7 v2 data sources.
    c. Outbound eHealth Exchange type query volumes: 10k Patient Discovery, 1k Query for Document, and 1k Retrieve Document requests per day for the duration of an activation. Assume 10 outbound eHealth Exchange connections, one to the eHealth Exchange proper, and the remaining to local HIEs and other similar data sources.
3. **Environments**
    a. One Production (PRO) with a High Availability (HA) deployment such as a cluster of two or more computers behind a single Virtual IPA.
    b. One geographically diverse data center for Disaster Response (DR) with same performance as PROD.
    c. One Development (DEV) environment.
    d. One pre-production Validation (VAL) environment.
4. **Requirements**
    a. General
        i. Secure. Security best practices must be met or exceeded including using IP address whitelisting, continuous vulnerability scanning, frequently periodic penetration testing, patch policies, etc.
        ii. Handling of clinical data must occur in compliance with Sections 182.101 and 182.102, Texas Health and Safety Code.
        iii. All data must be encrypted at all times (in transit, at rest, in log files, etc.).
        iv. Automated processes to detect and correct faults such as stuck receivers.
        v. Predictive operational monitoring with configurable alerts and scheduled maintenance windows.
        vi. Fully managed data center (subject to the subsequent consideration regarding THSA vs. vendor-supported hosting), operations, and help desk.
        vii. Message replay from file queue.
        viii. Non-clinical operational reporting capabilities such as inbound message volumes by source and destination, message types, processing times, message disposition (error, processed and routed successfully, duplicate detected, manual work queue, etc.).
        ix. Administrative UI is provided by the vendor.

x. Technical support is provided by the vendor.

b. Deployment
    i. Consulting services provided by the vendor, or by a vendor network.
    ii. Training services provided by the vendor, or by a vendor network. Note that the THSA plans to provide training for the solution if it is more cost- effective than vendor-based training.
    iii. Hosting services provided by the vendor, or by a vendor network. Note that the THSA plans to host the solution if it is more cost- effective than vendor-based hosting.
    iv. Data Source Connections
    v. PULSE shall be connected to the following data sources:
        1. Local HIEs in Texas, where such connectivity options exist using standards-based approaches;
        2. Providers (physicians' offices, hospitals, clinics);
        3. The eHealth Exchange; and
        4. Carequality via the eHealth Exchange.
        5. Other data sources may also be included such as SHIEC or CommonWell networks.

c. Other Assumptions
    i. THSA will have an operational encounters alert system that can direct ADT traffic to PULSE.
    ii. THSA will be an eHealth Exchange Participant and via eHealth Exchange Carequality Connection.

Overview

The architecture and standards for PULSE should be based on and be consistent with the PULSE specifications drafted for ONC during the CAL-EMSA grant project https://emsa.ca.gov/wp-content/uploads/sites/71/2017/07/RFO-C16-037-Award-Announcement.pdf and posted on the ONC website https://www.healthit.gov/sites/default/files/2018-12/PULSEEMSandHIE.pdf and as updated by The Sequoia Project on their website and as described on the THSA PULSE web site page https://thsa.org/pulse/.

The PULSE instance will be based on either the open source version, The Sequoia Project version, or other similar version as specified by the THSA.

Goals

1. Develop necessary interconnectivity and web application functionality to implement PULSE as described herein.
2. PULSE is available when a state of emergency is declared impacting Texas citizens. PULSE will allow access by healthcare professionals registered with ESAR-VHP or a participating health system or HIO or other authorized source.
3. Authorized healthcare professionals will be able to search for patient data by patient demographics, such as name, date of birth, address, SSN, phone number, etc. PULSE will broadcast a query to all its responding gateways checking if patient data exists. PULSE will present a list of locations where data exists.
4. Healthcare professionals will select specific locations to retrieve summarized patient information.
5. Authorized non-healthcare provider users, such as information technology support staff, should also have appropriate access to PULSE.

6. PULSE should offer patient reunification functionality.
7. All activities in PULSE will be tracked through an audit log.
8. The THSA requires the architecture and standards for PULSE to be based on and be consistent with The Sequoia Project PULSE implementation and the eHealth Exchange network.
9. PULSE should always be ready to be activated. It should not be decommissioned or suspended when not activated. PULSE should be ready to move between "inactive" and "activated" status within 24 hours 24x7x365. The vendor will include sufficient emergency communications and staff to enable full deployment within this timeframe.

Governance

The THSA will convene a workgroup to seek public comment on PULSE. The selected vendor will partner with the THSA to facilitate the workgroup with a cadence as determined by THSA, such as monthly or quarterly.

Project Deployment Timeline

The contractor development schedule should reflect the following:

Milestone	Target Date	Description
1	+1 month	Project kick-off meeting with THSA followed by a project kick off meeting with external stakeholders. Note, as per the associated RFP vendor questions and answers document ("THSA PULSE RFP Questions and Answers March 31, 2020"), the COVID-19 version of PULSE response must be on a separate (highly-accelerated) timeline, to be proposed by the responder.
2	+4 months	The system is deployed in VAL
3	+5 months	The system is connected to available data sources VAL
4	+6 months	The system successfully completes VAL end-to-end testing
5	+7 months	The system is deployed in PROD
6	+8 months	The system is connected to available data sources in PROD
7	+8 months	Draft documentation delivered for THSA review
8	+9 months	The system successfully completes PROD end-to-end testing
9	+10 months	All query- and push-based provider connections are deployed and validated in PROD and VAL
10	+11 months	Final documentation delivered
11	+12 months	The vendor will organize and offer to facilitate training and semi-realistic drills for disaster response staff in at least 5 regions of Texas (annual requirement)
12	+12 months	System attains a privacy and security certification such as HITRUST CSF external validation certificate if and as directed by the THSA
13	+12 months	THSA formally approves the transition of the system to production operations mode

Regulatory Requirements

The deployed system must meet or exceed state and federal health information privacy and

security requirements, and it must obtain a privacy and security certification such as HITRUST CSF external validation within 12 months or as otherwise approved by the THSA.

Specifications

The proposed solution shall implement at least the following technical specifications, if and as directed by the THSA:

eHealth Exchange specifications:
https://ehealthexchange.org/testing-program/exchange-specifications/

eHealth Exchange validation program:
https://ehealthexchange.org/testing-program/

eHealth Exchange content validation program:
https://ehealthexchange.org/testing-program/content-testing/

Sequoia Healthcare Provider Directory Implementation Guide (FHIR based):
Available upon request from eHealth Exchange staff at administrator@ehealthexchange.com

Vendor Expectations

1. Selected vendor shall perform all project management, technical implementation, operations and help-desk support of the system. THSA will not be required or expected to provide any resources for the project other than providing limited project oversight.
2. The vendor will construct and operate the system as described herein.
3. The vendor will project manage and implement selected data sources and local HIEs.
4. Provide system maintenance from successful UAT through the end of the period of performance, correcting all Critical and Major defects, and providing workarounds for or correcting all defects as directed by THSA.
5. The vendor should specify the proposed intellectual property rights (such as open source, THSA license, proprietary, etc.) of the proposed solution.

Documentation and Training Deliverables

1. Provide a System Design Document including security considerations.
2. Provide documentation on installation, configuration, operation and administration of PULSE including hosting, interfaces, user data administration, etc.
3. Provide an installable package including the source and build instructions for all PULSE components and a non-revocable license for THSA to use such.
4. Provide a bill of materials for other components, such as COTS software products and hardware requirements.
5. The vendor will provide recorded training webinars targeting all end-user roles of the PULSE system including administrator, clinical end-user, etc. and will post such training webinars on a vendor-supplied media hosting system, and on THSA-specified content platform (such as YouTube) to help ensure broad accessibility of these materials. These training materials should also be able to be deployed onto local field devices such as tablets and laptops.
6. The vendor will provide electronic documentation, and printed field-ready documentation including water-proof quick reference guides, quick start guides, internet connectivity troubleshooting guides, etc. These field-ready materials should also be able to be deployed onto local field devices such as tablets and laptops.

7. The vendor will offer to facilitate live in-person field training for up to 5 THSA-designated locations (anticipated to be in North Texas, South Texas, Austin/Central Texas, West Texas and East Texas) on an annual basis.

Operations

1. The vendor will operate, operationally monitor, and diagnose the system.
2. The vendor will provide all support to maintain the inbound and outbound data connections including operational monitoring and diagnostics.
3. When PULSE is not in "activated" or "deployed" status: The system will be maintained and operationally monitored by the vendor during normal business hours, Monday through Friday, excepting Texas state holidays. When not-activated the system shall use a vendor-managed end-to-end "heartbeat" or message flow analysis to confirm proper operational readiness for activation when needed. The PULSE system will not be decommissioned between activation events, but it will be disconnected from all user log in systems other than administrative logins. This is intended to help ensure PULSE remains connected to key systems and is ready for use when needed.
4. When in "activated" or "deployed" status the system will be maintained 24x7x365 by the vendor including monitoring interfaces for correct operation.
5. Host a PULSE vendor-managed validation environment that is always available to testing during normal weekday business hours.
6. Host a PULSE vendor-managed production environment that is available and supported during normal weekday business hours when not activated and is available and supported 24x7x365 when activated.
7. The system will have vendor-managed disaster response and business continuity plans and shall perform a full live test at least twice a year.
8. **The vendor shall provide a cost estimate of "ongoing maintenance and operations" expenses as part of the vendor's response to this RFP. Please provide this information in the form of a chart that breaks down separate systems components and their anticipated costs. Please note these anticipated costs are separate from the proposed costs to build the infrastructure for the PULSE system.**

Solution Components

The following components are expected to be part of the vendor-provided solution, although responders to this RFP are also encouraged to propose alternative approaches:

1. Web application with search, local patient population, patient reunification, patient search, C-CDA document viewer at least containing all features of the open source PULSE implementation.
2. Ability to query using eHealth Exchange specifications, using the eHealth Exchange Hub, or direct connections.
3. Ability to query other data sources, including Texas local HIEs, and providers, using eHealth Exchange specifications.
4. Ability to query Carequality Implementers via the eHealth Exchange Carequality "bridge" capability.
5. Ability to query providers using FHIR 3.x, 4.x and 5.x.

6. Ability to receive HL7 v2 administrative admission, discharge, and transfer (ADT) data to provide a patient reunification function.
7. FHIR-based provider directory look-up based on the eHealth Exchange directory, augmented with additional entries reflecting Texas data sources not on the eHealth Exchange such as local HIEs, and provider EMRs with eHealth Exchange responding gateway specification support.
8. Ability to use third party SAML and OAuth2 single sign on including the integration of such to the Texas disaster response volunteer database.
9. Ability to import a list of authorized PULSE users, including names, contact information, and roles, via a tab- or comma-delimited text file.
10. Complete audit logging of non-clinical data of all user activities, and all messages transacted.
11. The ability to render C-CDA documents in a manner acceptable to end-users, such as a standard XSLT style-sheet view of the underlying XML content.
12. Back end administrative functions allowing for efficient operation of the deployed solution.
13. Implement at least the capabilities of the PULSE ONC whitepaper.
14. Given that multiple implementations of PULSE are now available, including a free open source version, the vendor should provide guidance regarding the suggested version of PULSE to utilize for this project. THSA reserves the right to accept or revise this proposed approach.