

# **IT Professional Technical Services Master Contract Program T#:902TS**

## **Statement of Work (SOW) For Technology Services Issued By**

**Minnesota Department of Health**

**Project Title NwHIN Direct Proof of Concept**

**Service Category(ies) Architecture Planning & Assessment –  
Technical, Quality Assurance, Server - Application (Design &  
Development), Testing, Web Applications Specialist -  
Java/JSP/Servlets**

### **Business Need**

- 1. This project is structured as three parts; parts A, B and C. Any eligible 902TS vendor may bid on any combination of the three parts.**
2. The statutory mission of the MDH is to protect, maintain, and improve the health of all Minnesotans. This mission is realized through disease surveillance and other activities. A key component of these activities is the exchange of health records with health care providers. Traditionally these records have been reported through paper documents.
3. The Legislature of the State of Minnesota has mandated use of electronic health records by all Minnesota health care providers by January 2015. The Minnesota Department of Health is required to receive various health records. It is necessary for the Department to have an infrastructure capable of accepting these health records in electronic form. Additionally the federal government is promoting the use of electronic health records through various incentives and mandates..
4. MDH acknowledges that a messaging infrastructure is necessary for the Agency. Building an Agency wide infrastructure is a very complex task involving many components. The scope of this project is to demonstrate the feasibility of using a federally recommended component called NwHIN Direct. The reference architecture envisioned includes: NwHIN Direct as the gateway component; RabbitMQ as the messaging component; Orion Rhapsody as the transformation and translation component and; PostgreSQL representing a service layer component. The vendor(s) will install the gateway component and connect it to the other key infrastructure components necessary to move information across the reference implementation. Once this concept has been proven, a larger scale implementation with associated new contracts is envisioned. This reference architecture is potentially a new State standard for health information exchange.
5. This is a proof of concept project. Future phases of the overall effort may expand upon this work to build an operational capability for the delivery of electronic health records across all appropriate State agencies.
6. The primary stakeholder for this project is MDH.
7. The solution must be built on MDH's infrastructure. MDH will require the use of KVM virtualization, Linux, Java, PostgreSQL, RabbitMQ version 2.8 using AMQP specification 0-9-1, Orion Rhapsody version 4.1 which may be upgraded to version 5 during this project, Apache Tomcat, Apache Maven2, Subversion, Hudson and Sonatype Nexus.

# Project Deliverables

## 1. For all parts A – C

- a. A detailed project plan
- b. A detailed plan for collaboration
  - i. Communication of basic project information such as system requirements, design documents, testing and quality assurance plans and other documents
  - ii. Mentoring of State employees
  - iii. Knowledge transfer to State employees
- c. Detailed consolidated project plan coordinating activities between multiple vendors and the State if contracts are awarded to multiple vendors
- d. Specification of technical environment required to accomplish the contract based on the technical constraints listed above (to enable State staff to build the necessary infrastructure for the commencement of work)
- e. A test plan including test cases, test data and test scenarios for immunization records (HL7 version 2.5.1 VXU, VXQ and VXR) and electronic lab reporting (HL7 version 2.5.1 ORU^R01). Subject matter experts will be available to assist with the definitions of these use cases. The test plan may include a HL7 version 3.x use case that has yet to be defined
- f. Documentation including:
  - i. Technical requirements: Minimum system requirements for the system as built
  - ii. Design documentation including tradeoffs and justifications for decisions made
  - iii. Procedures for promoting solution between environments (development, quality assurance and production)
  - iv. Installation and configuration documentation
- g. Mentoring and knowledge transfer to State employees
- h. Written project status reports every two weeks commencing two weeks after the acceptance of the detailed project plan

## 2. Part A

A proof of concept reference architecture implementing a NwHIN Direct Gateway

## 3. Part B

A proof of concept reference architecture implementing a bidirectional and configurable connection from NwHIN Direct to an AMQP compliant messaging queue

## 4. Part C

Design and develop a proof of concept reference architecture implementing a bidirectional and configurable connection from an AMQP compliant messaging queue to Orion Rhapsody. The solution must be deployed to the MDH development and quality assurance environments

# Project Milestones and Schedule

1. 9/28/2012 4:30 pm CDT: Contract(s) signed. The funding stream for this project requires that the contract(s) be signed before or on this date
2. 10/1/2012 8:00 am CDT: Project Start Date
3. Key deliverable dates
  - a. 10/8/2012: for parts A-C:
    - I. Detailed project plans submitted by vendor to State project team
    - II. Technical environment requirements submitted by vendor to State project team
  - b. 10/15/2012: Collaborative process plan(s) for parts A – C submitted to State project team
  - c. 10/17/2012:
    - I. Project kick-off meeting – The agenda will include:

- 1.3.c.i.1. Approve detailed project plans
- 1.3.c.i.2. Review collaborative process plans
- 1.3.c.i.3. Develop a plan to coordinate activities between project participants (consolidated project plan)
- II. Build out of technical environment completed by State employees
- d. 10/19/2012: Consolidated project plan completed by all project participants and approved by State project team
- e. 10/19/2012 – 11/30/2012: According to approved consolidated project plan:
  - I. Installation and configuration of the NwHIN Direct Gateway (Part A)
  - II. Bidirectional and configurable connection between NwHIN Direct and an AMQP compliant messaging queue (Part B)
  - III. Bidirectional and configurable connection between an AMQP compliant messaging queue and Orion Rhapsody (Part C)
  - IV. Execution of Quality Assurance activities for parts A - C
- f. 11/30/2012: Sign off by State project team
  - I. All Project deliverables
  - II. Knowledge transfer
  - III. Quality Assurance activities
- g. 12/7/2012: All contract work must be completed and invoiced. The funding stream for this project requires that all work must be completed, invoiced and paid before or on 12/31/2012
- 4. 12/31/2012: End of project.

## Project Environment (State Resources)

The following State resources will be available to the contractor:

1. The State project team which consists of:
  - a. Project Manager Bill O'Brien
  - b. Enterprise Architect Jerry Alholm
  - c. Interoperability Coordinator Mark Doerr
  - d. Business Analyst Kathy Grantham
  - e. Systems Administrator Gerry Skerbitz
  - f. Database Administrator Keith Hammel
  - g. Message System Administrator Mark Hollock
  - h. Orion Rhapsody Administrator/Developer John Nieland
2. The contractor(s) will be given access to a computer, desktop software, phone and desk or VPN access depending on whether or not the contractor works at the Freeman Building at 625 Robert Street North, St. Paul, MN. If the contractor works remotely the expectation is that the contractor will use their computing equipment. If the contractor is able to regularly work at the Freeman Building, then they will be provided with the equipment, tools and physical access to the building necessary to complete their work during normal MDH business hours.
3. The contractor will be granted access to appropriate systems in State's development and quality assurance environments as necessary to accomplish their work. The State follows the principle of least privilege in granting access rights to systems.

# Agency Project Requirements

## 1. For all parts A – C

- a. Two week sprints will be defined setting high level goals. Detailed tasks will be defined in the sprint project plan. These detailed tasks will be monitored in daily project status meetings and updated based upon accomplishments.
- b. Brief daily status meetings will be held to discuss progress and barriers
- c. Document:
  - i. Instructions for promoting from development to quality assurance environments
  - ii. Quality Assurance procedures
  - iii. Documentation of test activity
  - iv. Other information useful to maintaining the installation
- d. Use a collaborative approach to mentor State employees throughout the duration of the project
- e. Perform Quality Assurance
  - i. Design appropriate test scenarios
  - ii. Build appropriate test scenarios with anticipated results
  - iii. Execute test scenarios
  - iv. Evaluate results of test scenarios
  - v. Remediate and retest failed test cases until accepted by State project team
- f. Any custom code must have reasonable complexity such as a McCabe Cyclomatic Complexity score under 20

## 2. Part A

- a. Install NwHIN Direct reference implementation on State Linux virtual server, stubbing out components where necessary to simulate an exchange partner sending and receiving a message
- b. Document
  - i. Patches applied to the NwHIN Direct installation
  - ii. Configuration choices of the NwHIN Direct installation
  - iii. Idiosyncrasies of the NwHIN Direct product and this installation

## 3. Part B

- a. Design and develop a connector between NwHIN Direct and AMQP
  - i. The connector will be bidirectional
  - ii. The connector will integrate the NwHIN Direct implementation established in Part A and the State's existing RabbitMQ implementation
  - iii. The connector will be configurable
- b. Document
  - i. Configuration choices of the connector developed
  - ii. Idiosyncrasies of the connector developed

## 4. Part C

- a. Design and develop an Orion Rhapsody Communication Point for AMQP compliant messaging queues
  - i. The Communication Point will be bidirectional
  - ii. The Communication Point will integrate the State's existing RabbitMQ implementation with the State's existing Orion Rhapsody implementation
  - iii. The Communication Point will be configurable
- b. Document
  - i. Configuration choices of the Communication Point developed
  - ii. Idiosyncrasies of the Communication Point developed

# Responsibilities Expected of the Selected Vendor

1. The contractor will use the State's process for promoting systems
2. The contractor will comply with all applicable federal, State and local legal authority

3. The contractor will comply with all applicable State and MDH technical standards
4. Change in contractor staffing must be approved by State project manager
5. Project management will be a joint responsibility shared by the contractor and State
6. The contractor will provide staff with technical experience with the requested technical components
7. The contractor will inform State project management of any anticipated slippage in the project schedule
8. The contractor will review any proposed changes in the scope and respond with the impact to cost and time necessary to complete the project
9. The contractor will complete and invoice all work by 12/7/2012. The vendor understands that the State will be unable to pay for any work that does not meet this deadline. The funding stream for this project requires that all work must be completed, invoiced and paid before or on 12/31/2012

## Required Skills

Required minimum qualifications:

1. One (1) year of experience working with NwHIN Direct as a Federal contractor
2. Three (3) years of experience with Java
3. Three (3) years of experience working with XML
4. Three (3) years of experience developing test cases
5. Three (3) years of experience executing quality assurance plans

## Desired Skills

1. Familiarity with AMQP and AMQP compliant messaging engines
2. Familiarity with building Orion Rhapsody Communication Points
3. Familiarity with relational databases
4. Familiarity with mail routing, SMTP and DNS configuration
5. Excellent written and verbal communications skills
6. Excellent interpersonal skills
7. One (1) year of experience mentoring
8. Capable of working with minimal supervision
9. Experience in an Agile environment

## Process Schedule

- |   |                                   |
|---|-----------------------------------|
| 1. Deadline for Questions                     | Wednesday, 9/19/2012, 4:30 pm CDT |
| 2. Anticipated Posted Response to Questions   | Thursday, 9/20/2012, 4:30 pm CDT  |
| 3. Proposals due                              | Monday, 9/24/2012, 4:30 pm CDT    |
| 4. Anticipated proposal evaluation begins     | Monday, 9/24/2012, 4:30 pm CDT    |
| 5. Anticipated proposal evaluation & decision | Tuesday, 9/25/2012, 4:30 pm CDT   |

## Questions

1. Any questions regarding this Statement of Work should be submitted via e-mail by 9/19/2012, 4:30 pm CDT  
 Name: William O'Brien  
 Department: MN.IT Services @ Minnesota Department of Health  
 Telephone: 651-201-4611  
 Email Address: william.obrien@state.mn.us
2. Questions and answers will be posted on the Office of Enterprise Technology website by approximately 9/11/2012, 4:30 pm CDT ([http://www.oet.state.mn.us/mastercontract/statements/mcp902ts\\_active.html](http://www.oet.state.mn.us/mastercontract/statements/mcp902ts_active.html))

## SOW Evaluation Process

1. Company (5%)
2. Experience (40%)
3. Three References (15%)
4. Work Plan (10%)
5. Cost (30%)

**Statement of Work does not obligate the state to award a work order or complete the assignment, and the state reserves the right to cancel the solicitation if it is considered to be in its best interest. The Agency reserves the right to reject any and all proposals.**

## Response Requirements

Responses to this statement of work will include:

1. Company
  - a. Company overview
  - b. Identify the project parts on which you are bidding (A,B, C or multiple)
2. Experience
  - a. Provide resumes of staff and define staffs' qualifications for this project
  - b. Describe the company's participation with NwHIN design and implementation projects similar to this statement of work
  - c. Describe any involvement that the company has had with the Office of the National Coordinator for Health Information Technology
  - d. Describe your company's experience with designing message oriented infrastructures
  - e. Depending on which part of the statement of work you are bidding on, describe your experience with:
    - i. Part A: NwHIN Direct
    - ii. Part B: NwHIN Direct and AMQP and specifically RabbitMQ
    - iii. Part C: Orion Rhapsody and AMQP and specifically RabbitMQ
3. References: Provide three clients that used your services on similar work
4. Work Plan
  - a. Project Overview describing your understanding of the problem on a high level
  - b. Detailed description of your understanding of the need and an explanation of your proposed solution
  - c. Explain how your proposal will meet the State's requirements. Clearly describe your solution. Include a description showing your vision of the architecture and connectivity requested. If bidding on less than the entire project, describe your proposal for integrating with the other components
  - d. Detailed response to Project Approach - explain how you will approach your participation in the project. This includes:
    - i. Organization and staffing
    - ii. Work-plan with cost breakdown
    - iii. Contract/change management procedures
    - iv. Project management (e.g. quality management, risk assessment/management, etc.)
    - v. Documentation of progress such as status reports
    - vi. Provide a high level project plan
5. Cost
6. Conflict of interest statement as it relates to this project
7. Required forms to be returned or additional provisions that must be included in proposal
  - a. Affirmative Action Certificate of Compliance (if over \$100,000)  
<http://www.mmd.admin.state.mn.us/doc/affaction.doc>
  - b. Affidavit of non-collusion  
<http://www.mmd.admin.state.mn.us/doc/noncollusio.doc>
  - c. Certification Regarding Lobbying  
<http://www.mmd.admin.state.mn.us/doc/lobbying.doc>
  - d. Veteran-Owned/Service Disabled Veteran-Owned Preference Form  
<http://www.mmd.admin.state.mn.us/doc/vetpref.doc>

## Proposal Submission Instructions

1. Response Information:
  - a. Email response to:  
William O'Brien  
william.obrien@state.mn.us  
Subject of email: NwHIN Direct Proof of Concept

2. Number of copies: one
3. Key dates:
  - a. Response due date: Monday, 9/24/2012, 4:30 pm CDT
  - b. Expiration date for the vendor's price/terms guarantee: 60 days
4. Constraints or rules on respondents:
  - a. Respondents may not contact anyone at the State except William O'Brien at email address [william.obrien@state.mn.us](mailto:william.obrien@state.mn.us).
5. Vendors must submit candidate resumes with the response package

## General Requirements

### Proposal Contents

By submission of a proposal, Responder warrants that the information provided is true, correct and reliable for purposes of evaluation for potential award of this work order. The submission of inaccurate or misleading information may be grounds for disqualification from the award as well as subject the responder to suspension or debarment proceedings as well as other remedies available by law.

### Liability

Each party will be responsible for its own acts and behavior and the results thereof. The Minnesota Torts Claims Act, Minn. Stat. § 3.736 and other applicable laws govern the State's liability.

### Disposition of Responses

All materials submitted in response to this SOW will become property of the State and will become public record in accordance with Minnesota Statutes, section 13.591, after the evaluation process is completed. Pursuant to the statute, completion of the evaluation process occurs when the government entity has completed negotiating the contract with the selected vendor. If the Responder submits information in response to this SOW that it believes to be trade secret materials, as defined by the Minnesota Government Data Practices Act, Minn. Stat. § 13.37, the Responder must: clearly mark all trade secret materials in its response at the time the response is submitted, include a statement with its response justifying the trade secret designation for each item, and defend any action seeking release of the materials it believes to be trade secret, and indemnify and hold harmless the State, its agents and employees, from any judgments or damages awarded against the State in favor of the party requesting the materials, and any and all costs connected with that defense. This indemnification survives the State's award of a contract. In submitting a response to this RFP, the Responder agrees that this indemnification survives as long as the trade secret materials are in possession of the State.

The State will not consider the prices submitted by the Responder to be proprietary or trade secret materials.

### Conflicts of Interest

Responder must provide a list of all entities with which it has relationships that create, or appear to create, a conflict of interest with the work that is contemplated in this request for proposals. The list should indicate the name of the entity, the relationship, and a discussion of the conflict.

The responder warrants that, to the best of its knowledge and belief, and except as otherwise disclosed, there are no relevant facts or circumstances which could give rise to organizational conflicts of interest. An organizational conflict of interest exists when, because of existing or planned activities or because of relationships with other persons, a vendor is unable or potentially unable to render impartial assistance or advice to the State, or the vendor's objectivity in performing the contract work is or might be otherwise impaired, or the vendor has an unfair competitive advantage. The responder agrees that, if after award, an organizational conflict of interest is discovered, an immediate and full disclosure in writing must be made to the Assistant Director of the Department of Administration's Materials Management Division ("MMD") which must include a description of the action which the contractor has taken or proposes to take to avoid or mitigate such conflicts. If an organization conflict of interest is determined to exist, the State may, at its discretion, cancel the contract. In the event the responder was aware of an organizational conflict of interest prior to the award of the contract and did not disclose the conflict to

MMD, the State may terminate the contract for default. The provisions of this clause must be included in all subcontracts for work to be performed similar to the service provided by the prime contractor, and the terms "contract," "contractor," and "contracting officer" modified appropriately to preserve the State's rights.

### **IT Accessibility Standards**

Responses to this solicitation must comply with the Minnesota IT Accessibility Standards effective September 1, 2010, which entails, in part, the Web Content Accessibility Guidelines (WCAG) 2.0 (Level AA) and Section 508 Subparts A-D which can be viewed at:

[http://www.mmd.admin.state.mn.us/pdf/accessibility\\_standard.pdf](http://www.mmd.admin.state.mn.us/pdf/accessibility_standard.pdf)

### **Nonvisual Access Standards**

Nonvisual access standards require:

- 1) The effective interactive control and use of the technology, including the operating system, applications programs, prompts, and format of the data presented, are readily achievable by nonvisual means;
- 2) That the nonvisual access technology must be compatible with information technology used by other individuals with whom the blind or visually impaired individual must interact;
- 3) That nonvisual access technology must be integrated into networks used to share communications among employees, program participants, and the public; and
- 4) That the nonvisual access technology must have the capability of providing equivalent access by nonvisual means to telecommunications or other interconnected network services used by persons who are not blind or visually impaired.

### **Preference to Targeted Group and Economically Disadvantaged Business and Individuals**

In accordance with Minnesota Rules, part 1230.1810, subpart B and Minnesota Rules, part 1230.1830, certified Targeted Group Businesses and individuals submitting proposals as prime contractors shall receive the equivalent of a six percent preference in the evaluation of their proposal, and certified Economically Disadvantaged Businesses and individuals submitting proposals as prime contractors shall receive the equivalent of a six percent preference in the evaluation of their proposal. Eligible TG businesses must be currently certified by the Materials Management Division prior to the solicitation opening date and time. For information regarding certification, contact the Materials Management Helpline at 651.296.2600, or you may reach the Helpline by email at [mmdhelp.line@state.mn.us](mailto:mmdhelp.line@state.mn.us). For TTY/TDD communications, contact the Helpline through the Minnesota Relay Services at 1.800.627.3529.

### **Veteran-owned/Service Disabled Veteran-Owned Preference**

In accordance with Minnesota Statute §16C.16, subd. 6a, veteran-owned businesses with their principal place of business in Minnesota and verified as eligible by the United States Department of Veterans Affairs' Center for Veteran Enterprises (CVE Verified) will receive up to a 6 percent preference in the evaluation of its proposal.

Eligible veteran-owned small businesses include CVE verified small businesses that are majority-owned and operated by either recently separated veterans, veterans with service-connected disabilities, and any other veteran-owned small businesses (pursuant to Minnesota Statute §16C.16, subd. 6a).

Information regarding CVE verification may be found at <http://www.vetbiz.gov>.

Eligible veteran-owned small businesses should complete and sign the **Veteran-Owned Preference Form** in this solicitation. Only eligible, CVE verified, veteran-owned small businesses that provide the required documentation, per the form, will be given the preference.

### **Foreign Outsourcing of Work Prohibited**

All services under this contract shall be performed within the borders of the United States. All storage and processing of information shall be performed within the borders of the United States. This provision also applies to work performed by subcontractors at all tiers.

