Performance Work Statement
Sustainment of HDW Software for Palo Alto VAMC
Healthcare-Associated Infections and Influenza Surveillance System (HAIISS)
Office of Quality, Safety and Value
Public Health Surveillance and Research

1.0 Background Information

The Department of Veterans Affairs (VA), Office of Quality, Safety, Value (QSV), Public Health Surveillance and Research (PHSR) conduct public health surveillance and research within VA.

PHSR has recently realigned under the national Office of Quality, Safety and Value. PHSR's current responsibilities include:

> -Public Health Surveillance
> -Promotion of Public Health Surveillance and Reporting by VHA Facilities
> -Epidemiologic Investigations and Lookbacks
> -Public Health Reference Laboratory (PHRL)
> -Public Health Policy and Document Review
> -Public Health Subject Matter Expertise and Scientific Research

2.0 Scope of Work:

2.1 The Contractor shall furnish project management, all corrective maintenance, HDW software user support, system and software documentation updates, and software sustainment/maintenance services in support of VHA's legacy HDW developed by Systems Made Simple and the newly developed HDW engineered by Bitscopic Inc. The Contractor shall provide such services from the Contractor's own premises (remotely). For the purposes of this Performance Work Statement, maintenance work includes perfective, adaptive, and corrective maintenance. Perfective maintenance refers to enhancements made to improve software performance, maintainability, or understandability. Adaptive maintenance consists of any effort which is initiated as a result of changes in the environment (including rules, laws, regulations, hardware configurations, data formats, file structures, system software) in which a software system must operate. Corrective maintenance refers to changes necessitated by actual errors (induced or residual "bugs") in a software system. OPHSR, as the business owner, will determine the type of maintenance and priority assigned to each support item.

2.2 The Contractor shall utilize the VA's established online tools for project management and tracking; currently, IBM Rational Tools™.

2.3 The Contractor shall track and document resolution of all perfective maintenance support requests for HDW downstream users such as QC Pathfinder and the engineering team from Vecna Technologies maintaining QC Pathfinder, Biosurveillance System for the Early Notification of Community-Based Epidemics, and OPHSR. All pending work shall be organized in a prioritized inventory, which the Contractor will maintain and keep current.

2.4 The Contractor shall participate in weekly scheduled and/or ad hoc conference calls with OPHSR to provide a report of ongoing issues, to coordinate activities with the Government or other OPHSR contractors, to review work plans, and to establish collaboration with other teams, as needed.

3.0 Period of Performance (POP) and Hours of Maintenance (Sustainment)

3.1 December 14, 2015 – April 30, 2016

3.2 Hours of Coverage: Monday through Friday, 8am – 6pm, all time zones within continental United States.

3.3 Location of Performance: All work shall be performed remotely.

4.0 Competency of Contractor Personnel Servicing the HDW Software

4.1 The Contractor will assign fully qualified staff to all positions on the support teams assigned to this contract. The Contractor shall utilize Sr. Software Engineers with mastery in all key technology areas of HDW. These areas include: Sr. Oracle Database Administrator with sub-specialty experience in administration of Oracle RAC 11g on multi-node Linux RedHat clusters and VMware; Sr. Software Engineers fluent with design and architecture of Medical Domain Object (MDO) software framework in C# and Java; Sr. Informatica PowerCenter Programmer and Administrator; Sr. Data Warehouse Architect with in-depth cross-over expertise on VistA, MDO and Oracle data warehouse.

4.2 "Fully Qualified" will be based upon relevant Academic and Training qualifications as well as related work experience. For technical staff positions, Academic and Training qualifications will include attainment of a Bachelor's degree in a technical discipline as well as attainment of certifications or completion of related technical training. Related work experience will include substantial experience with the HDW technologies (MDO, Informatica, Oracle, SQL, etc.) and demonstrated experience with the HDW design and architecture is highly desirable. For Project Manager, Academic and Training qualifications will include attainment of a Bachelor's degree, familiarity with HDW technologies (MDO, Informatica, Oracle, SQL, etc.), and substantial experience in project or program management positions of similar complexity and technology. An overall understanding of the HDW design and architecture is highly desirable.

5.0 Contractor's Quality Control Program (QCP)

5.1 The Contractor shall implement and maintain a complete quality control (QC) program so that all requirements are provided for as specified in all sections of this contract. One copy of the Contractors QCP shall be submitted as part of the proposal within 15 days after contract award. The Contractor's QCP shall include but not be limited to the following:

5.1.1 A statement describing how the Contractor will meet the basic requirements of this contract (including staffing levels, time to respond to an incident, software maintenance requirements) shall be provided to the Contracting Officer's Representative (COR) fifteen (15) days after effective date of contract award and whenever there are major turnover of personnel. A major turn-over will be determined by the COR.

5.1.2 A method for identifying deficiencies in the quality of services performed before the performance deficiency becomes unacceptable. The QCP shall contain processes for corrective actions without dependence upon Government direction and shall maintain records of all Contractor QC inspections and corrective actions.

5.1.3 A method of recording or logging the daily activities of the Contractor, which would demonstrate the Contractor's ability to maintain the minimum requirements of this contract.

5.2 The Government will monitor the Contractor's performance using the Contractor's QCP and the Government's Quality Assurance Surveillance Plan (QASP) as established by the COR, Project Owner, and Government Project Manager.

5.3 The Contractor shall provide monthly QC assurance report. It shall include the results of the reviews, identification of problems and a plan of correction.

5.4 The Contractor shall have a written security plan to assure that the requirements of the contract are met as specified herein. The plan shall be for the physical facility at the Contractor's place of business. It shall address security issues, including identifying the security system employed to maintain patient confidentiality and identifying the virus protection to be used.

5.5 Quality Control Program Deliverables:

5.5.1 QCP document

5.5.2 Monthly Quality Control Assurance Report

5.5.3 Security Plan

6.0 Quality Assurance Surveillance Plan (QASP)

6.1 The QASP will be used by the Government to monitor and evaluate the Contractor's performance using mostly customer feedback. The Government will use random, scheduled and unscheduled inspections of the various reports transcribed to determine the validity of the customers' complaints. Performance will be recorded by the COR or designated representative and when an observation indicates defective performance, the COR will request the Contractor or designated representative to initial the observation.

7.0 Tasks to be Performed

7.1 Task 1 – Kick-Off Meeting

7.1.1. The Contractor shall hold a Project kick-off meeting with the OPHSR Program Manager. The purpose of the kick-off meeting is for the parties to the contract to meet to establish a clear and mutual understanding of the contract requirements and respective roles and responsibilities. The Contractor shall coordinate with the COR as required to schedule the kick-off meeting. The kick-off meeting should take place within five (5) business days after the contract is awarded. If this is not possible, the kick-off

meeting must take place within two (2) weeks after the contract is awarded. Prior to the kick-off meeting, the Contractor must provide a written copy of their Response to the Scope of Work. This document should include or be modified to include a list of what the Contractor believes to be OPHSR's responsibilities. The Response to Scope of Work document must be received by OPHSR two (2) business days prior to the kick-off meeting. The Response to Scope of Work document may need to be revised prior to and/or after the kick-off meeting per OPHSR's request. The Contractor shall produce and distribute kick-off meeting minutes (e.g., names of attendees, discussion topics, revisions to project schedule, action items, issues, and decisions) following the kick off meeting.

At the kick-off meeting, the Contractor shall:

a) Present the overall approach to the work, work plan, Response to Scope of Work, and project schedule including deliverable dates for review and approval by VA;

b) Review detailed contract deliverables schedule and activities requiring coordination and review by OPHSR;

c) Present Staffing Plan and introduce the key members of the Contractor's team;

d) Project Management Plan (PMP) template;

e) Meeting agenda template; and

f) Monthly Progress Report template.

7.1.2. **Kick-off Meeting** *Deliverables:*

7.1.2.1 **Participate in kick-off meeting;**

7.1.2.2 **Prepare kick-off meeting minutes; and**

7.1.2.3 **Prepare work plan and project schedule (in Microsoft Project format).**

7.2. Task 2 - Project Management

7.2.1 The Contractor shall provide a detailed plan for carrying out activities related to the management of software maintenance and support, which includes, but is not limited to, assigns staff and responsibilities (including identifying staff responsible for project deliverables), coordination of support activities, and tracking and ensuring completion of software maintenance activities, and maintenance of system documentation. Contractor shall provide feedback to OPHSR in the form of regular (weekly) reports and/or calls on the progress of above activities, and present any problems encountered and potential solutions.

7.2.2 Project Management *Deliverables:*

7.2.2.1 **Project Management Plan**

To be updated monthly and provided to the COR by the fifth (5) business day of each month.

7.2.2.2 Staffing Report

Initial staffing report is due at the kick-off meeting. Thereafter, a report will be required within three (3) business days after a significant personnel change occurs. Significant personnel changes will be defined by the COR and Project Owner.

7.2.2.3 Monthly Progress Report

Incorporating all reports scheduled to be reported on a monthly basis

7.3 Task 3 – HDW Software User Support

7.3.1   The Contractor shall track and document resolution of all support requests for HDW's downstream users such as QC Pathfinder and the engineering team from Vecna Technologies maintaining QC Pathfinder, Biosurveillance System for the Early Notification of Community-Based Epidemics, and OPHSR. The support requests will comprise an inventory of work which will be maintained and kept current by the Contractor. The Inventory will be available to OPHSR and will reside electronically on a Sharepoint system provided by the Government.

7.3.2 The Contractor shall provide support via a user support email (to be supplied through a VA account), for which responses shall be provided within an acceptable time frame (i.e., response no later than two (2) business days).

7.3.3 The Contractor shall implement a systematic process for collecting and processing problem reports and user requests and a response process for addressing each problem report or user request.

7.3.4 The Contractor shall participate with OPHSR and the engineering teams from Vecna Technologies maintaining QC Pathfinder, and engineering team maintaining the Biosurveillance System for the Early Notification of Community-Based Epidemics in order to resolve HDW-related maintenance matters.

7.3.5 The Contractor shall make all documentation, deliverables, and work records available to the Government on a SharePoint of similar collaboration system provided by OPHSR.

7.3.6 The Contractor shall maintain and update the existing system documentation, standard operating procedures, and Run Books for maintenance of all the components of HDW. At the end of a maintenance action, the system documentation shall be updated.

7.3.7 Software User Support Deliverables:

7.3.7.1 An HDW Software User Support Process (to be included in the CPMP)

7.3.7.2 HDW Work Inventory

7.4 Task 4 – HDW Software Sustainment and Maintenance Services

7.4.1 The Contractor shall perform all corrective maintenance associated with the legacy-HDW system and infrastructure developed by Systems Made Simple until such time as the newly-developed-HDW engineered by Bitscopic can functionally replace the legacy system. The Contractor may be assigned tasks to assist in the orderly transition of users from the legacy HDW system to the new HDW system. These tasks may require collaboration with other technical teams. In conjunction with OPHSR, the Contractor will be required to plan and implement the orderly shutdown and archival of the legacy HDW system.

7.4.2 The Contractor shall maintain the newly-developed-HDW engineered by Bitscopic keeping the system fully operational. The Contractor shall also maintain functional correctness of the Data Marts included in the newly-developed-HDW engineered by Bitscopic through close coordination with the Application contractors from Vecna Technologies (for QC Pathfinder) and Bitscopic (for ESSENCE). Tasks that are defined under this maintenance will be maintained in the Inventory and may include:

7.4.2.1 Maintain and support near real-time data feed updates from VistA to HDW for at least twice daily updates to the newly-developed-HDW for the life of the contract.

7.4.2.2 Maintain and update the MDO extraction procedures from VistA in order to accommodate any change to the existing VistA data domains in the newly-developed-HDW for the life of the contract.

7.4.2.3 Maintain and update the Informatica software ETL processes of HDW for the life of the contract.

7.4.2.4 Maintain, backup, and keep current the Oracle databases supporting HDW and related downstream systems.

7.4.2.5 Maintain, backup, and keep current HDW software components, including but not limited to Informatica and Oracle software, supporting HDW.

7.4.2.6 Maintain and keep up to date the Data Dashboard software tool supporting HDW. All documentation related to the Dashboard will be kept current and up to date by the Contractor. The Contractor shall be available to support Dashboard users and resolve any software errors or user problems as they occur.

7.4.3 Patch releases fixing HDW software bugs must be provided on a monthly basis if not more frequently.

7.4.3.1 Provide monthly (or more frequent) patch releases in order to maintain software functionality and correct software errors identified by users and prioritized by OPHSR staff. Any expected application downtime shall be communicated. Releases will be accompanied by Release Notes to be delivered with each release on the day the software release takes place. Each release will be the product of an Agile Sprint. Each Agile Sprint will be scheduled by the Contractor and will be accompanied by a written Sprint Plan and a Sprint Review meeting at the conclusion of each sprint. At the conclusion of each release or on some other similar and agreeable schedule, the Contractor shall file the most current source code and related design documents to a VA supplied source code management system. Source code is

defined as the human readable version of the software which can be compiled or otherwise transformed in to executable object code.

7.4.3.2 Monthly Patch Release

Deliverables:

7.4.3.2.1 Sprint Plans, as proposed by the Contractor and agreed upon by OPHSR at the beginning of each Agile Sprint;

7.4.3.2.2 Release Notes, as needed and to accompany each patch release of the software; and

7.4.3.2.3 HDW System Source Code and related design documents.

8.0 Reporting Requirements

8.1 The Contractor shall provide the COR and the OPHSR Project Manager with monthly Progress Reports in electronic form in Microsoft Word and maintain a schedule in MS Project format. The Monthly Progress Reports shall describe all work completed during the reporting period and work planned for the subsequent reporting period. The report shall also identify any problems that arose and a description of how the problems were resolved. If problems have not been completely resolved, the Contractor shall provide an explanation including their plan and timeframe for resolving the issue. The Contractor shall monitor performance against the PMP and report any deviations. The Contractor shall communicate with VA accordingly so that issues that arise are transparent to both parties to prevent escalation of outstanding issues.

8.2 Reporting Requirements

Deliverable: Monthly Progress Report.

9.0 Travel: Travel is not included.

10.0 Definitions and Acronyms:

10.1 Acceptance Signature - COR or VA designee signature; indicates COR accepts work status as stated in SOW

10.2 CO - Contracting Officer

10.3 COR - Contracting Officer's Representative

10.4 CMP – Contract Management Plan

10.5 EHR - Electronic health record

10.6 HAIs - Healthcare-Associated Infections

10.7 HAIISS - Healthcare-Associated Infections and Influenza Surveillance System

10.8 HDW - HAIISS Data Warehouse

10.9 MDO – Medical Domain Objects

10.10 OPHSR - Office of Public Health Surveillance and Research

10.11 OPH – Office of Public Health

10.12 PMP – Project Management Plan

10.13 QASP - Quality Assurance Surveillance Plan

10.14 QC – Quality Control

10.15 VA - Department of Veterans Affairs

10.16 VistA – Veterans Health Information Systems & Technology Architecture

11. Security and Remote Access

The Contractor shall have and maintain a VA approved site-to-site virtual private network (VPN) connection for remote service and shall have a Business Associates Agreement (BAA) on file with VHA. The Contractor shall comply with applicable clauses in VA Directive 6500.5 and shall provide security/privacy training to employees that service VA sites.

12. Summary Table of Contract Deliverables

Deliverable	Delivery Schedule
5.5.1 Contractor Quality Control Plan (QCP)	Due 15 days after contract start. Thereafter, updates occur on the 5th of each month.
5.5.2 Monthly Quality Control Assurance Report	Due on the 5th of each month for the previous month reporting period.
5.5.3 Security Plan	Due 15 days after contract start.
7.1.2.3. Work Plan and Project Schedule	15 business days after Kickoff Meeting
7.2.2.1 Project Management Plan (PMP)	Updated on the 5th business day of each month
7.2.2.2 Staffing Report	At Kickoff Meeting
7.2.2.2 Staffing Changes Report	On the 3rd business day following a significant staffing change.
7.2.2.3 Monthly Progress Report	On the 5th business day of the month for the reporting period of the previous month
7.3.7.2 HDW Work Inventory	Initial backlog or inventory of work due on the 15th day of the contract. Updates are ongoing after that and until contract end.
7.4.3 Software Patch Releases at the Conclusion of each Sprint Activity	As scheduled after contract award; Delivered artifact is Source Code (7.4.3.2.3. below)
7.4.3.2.1 Sprint Plan (proposed)	Due at the beginning of each scheduled Agile Sprint.
7.4.3.2.2 Release Notes	Due on the day of each Patch Release.
7.4.3.2.3 Source Code and Documentation	Due on the day of each Patch Release.