**Technical Evaluation**

**Vista Application Analytics RFP**

**August 18, 2024**

Background:

Vista Application Analytics (VAA) provides a first-ever comprehensive computable (RPC traffic-based) clinical workflow analysis. By leveraging the built-in traffic logging capabilities of the VA Enterprise Cloud (VAEC)-based VistA systems, VHA has the first-ever opportunity to analyze the actual clinical care workflows employed in VA medical centers. Such analysis would drive improved standards of practice by health care providers. These improvements would be prompted by the actual practice of care and not speculation about how care is being provided.

VAA is sponsored by VHA Digital Health Office as a clinical informatics and analytics program to improve clinical care and efficiency. The VA IT Workgroup (ITW) has determined that VAA is “non-IT”. VA contracting solicited the VAA Product Work Statement (PWS) under an OIT contract vehicle called T4NG, with an MOU stating OIT can perform IT-related tasks such as informatics and analytics. All responses are therefore IT contractors, which focus on tools and technologies. Please don’t let the technology format distract. This is not an IT task. It is a clinical workflow analytics task that only deep knowledge of how CPRS (and other VistA clients) are used in practice can provide – and which is the domain of clinical informatics.

The scope of our technical evaluation is regarding the vendor responses to PWS Section 5.2. To facilitate your evaluation, the text of the PWS section 5.2 is included below, with notes on the key deliverables.

**1.0 BACKGROUND**

To aid maintenance and manageability of VistA, VA has migrated all VistA systems to the VA Enterprise Cloud (VAEC), a federally certified U.S. GovCloud managed by Amazon Web Services (AWS). By leveraging the built-in traffic logging capabilities of the VAEC-based VistA systems, **VHA has the first-ever opportunity to analyze the actual clinical care workflows employed in VA medical centers.** Such analysis would drive improved standards of practice by health care providers. These improvements would be prompted by the actual practice of care and not speculation about how care is being provided.

**3.0 SCOPE OF WORK**

The Contractor shall analyze the traffic exchanged between VistA clients and a representative sample of VAEC-based VistA systems. These exchanges use VA’s proprietary Remote Procedure Call (RPC) protocol. The Contractor shall use the built-in facilities of VAEC to capture this traffic non-invasively (without any need to change or reconfigure the VistA system itself or its clients). From this captured data, the Contractor shall provide detailed analysis of representative traffic, identifying point-of-care applications, user behaviors, patterns of clinical use, and areas of concern. The Contractor shall reduce the production of this analysis to a repeatable process.

**5.2 VISTA CLIENT TRAFFIC CAPTURE AND ANALYSIS**

**5.2.1 CAPTURE OF VISTA TRAFFIC**

The Contractor shall coordinate the ***use of built-in VAEC facilities to non-invasively log the VistA client traffic (RPC traffic) of VAEC-hosted VistAs for a representative period.*** As a non-invasive method, it will not require any change, reconfiguration, interfaces, development, patches, or plugins in the VistA system itself or any client communicating with that VistA.

The Contractor shall coordinate the logging of all client traffic of three VAEC-based production VA VistAs (“Analyzed VistAs”). At least one of the VistAs should support a large integrated medical facility.

* Contractor should explain why their approach is non-invasive, and provide a diagram showing how RPC traffic would be non-invasively captured from a VAEC-based VistA.

**5.2.2 ANALYSIS OF VISTA CLIENT TRAFFIC**

Using the client traffic captured (deliverable 5.2.1A) , the Contractor shall provide ***Traffic Analysis Reports comprising the complete client traffic for each of the three analyzed VistAs.*** In addition, the Contractor shall provide a Cross VistA Analysis Report distinguishing cross-VistA from VistA-specific traffic patterns.

* This analysis is regarding the **traffic counts** to prove that the traffic capture worked, and was complete and correct.
* Key deliverables in this section include analysis of
* User volume , Client types and volume of use
* Connection volumes, frequency, and duration
* RPC usage frequency and execution times

**5.2.3 ANALYSIS OF USE OF KEY VISTA CLIENTS**

***Based on the traffic and client types isolated during the VistA traffic analysis [5.2.2], the Contractor shall produce a detailed Client Traffic Analysis of the operation of three of the most used VistA point-of-care applications ("Clients").*** CPRS shall be one of the three; the remaining two shall be chosen after project start based on client usage. ***All client analyses must be validated and verifiable in a demonstrable way, matching RPC flows to specific client screens and typical tasks.*** The Contractor shall document the verification and validation of the analysis and provide a Client Traffic Analysis Validation and Verification Report.

* This provides **workflow analytics based on the actual usage of CPRS** and other VistA clients (VistA applications).
* **Client use analysis reports will detail (actual) workflow in terms of (actual) traffic and (actual) screens.**
* ***This analysis requires matching the RPC flows to specific screens and tasks.*** For example, when a CPRS user clicks on the medications tab in the CPRS screen, it generates a sequence of RPCs, which would be identified as “opened medication tab”. Aggregating a series of such tasks creates a ‘task set’ (workflow) such as “order a medication”.
* We anticipate ***CPRS users will have hundreds of unique task sets (workflows), each with its associated unique RPC traffic sets.*** All of these task sets (workflows) must be verifiable and repeatable for all users.
* Key deliverables in this section include:
* Matching task sets with the use of one or more specific client screens (j)
* Clinical care task sets, represented as groups of RPCs used in tandem (i)
* Verification and validation that the analysis accurately captures care provision (m)

**5.2.4 VISTA CLIENT USE IMPROVEMENT REPORT**

Based ***solely*** on the Client Use Analysis Reports, the Contractor shall ***provide recommendations to upgrade the use of the top three RPC-using Point-of-Care VistA Clients [Vista Applications] to deliver better clinical care***. These recommendations shall be documented in Client Use Improvement Reports for each Client in Microsoft Word and PowerPoint presentation.

* This task requires successful completion of 5.2.3. All recommendations must be generated (solely) from the data from the workflow analytics of 5.2.3.

**Technical Evaluation of RFP**

**Vista Application Analytics**

Complete the table below for each proposal based on their (a) Understanding of each task, and (b) Feasibility of their approach for each task. Focus on the “What, Why, and How”. Rephrasing a requirement (“build XYZ”) as if it were a competency (“we will build XYZ”) without an explanation of the What, Why, and How is non-responsive (NR). Enter “Yes”, “No”, “NR”, or “Unknown” (+/- comments) in each box below:

|  |  |  |  |
| --- | --- | --- | --- |
| **TASK** | **Proposal A** | **Proposal B** | **Proposal C** |
| PWS 5.2.1  Non-invasive capture | Understanding: | Understanding: | Understanding: |
| Feasibility: | Feasibility: | Feasibility: |
| PWS 5.2.2  Traffic counts and totals | Understanding: | Understanding: | Understanding: |
| Feasibility: | Feasibility: | Feasibility: |
| PWS 5.2.3  Workflow analysis: matching RPC flows to CPRS screens and tasks | Understanding: | Understanding: | Understanding: |
| Feasibility: | Feasibility: | Feasibility: |
| PWS 5.2.4  Recommendations based on workflow analysis | Understanding: | Understanding: | Understanding: |
| Feasibility: | Feasibility: | Feasibility: |

[1] **non-invasive capture** of RPC traffic. Response should explain how and why the capture is non-invasive, including a diagram showing how the RPC flows are captured non-invasively from a VAEC-based VistA.

[2] **traffic counts** to prove capture worked (count of clinician types, client types).

[3] **workflow analysis** for top three VistA clients including CPRS. Key requirements include (j) matching the RPC flows to specific screens and tasks and task sets (workflows) and (m) validation that the workflow description covers client activity and screens

[4] **recommendations** based solely on the workflow analysis described in the client reports from #3

**Technical Evaluation Criteria:**

(1) Understanding of the Problem – The proposal will be evaluated to determine the extent to which it demonstrates a clear understanding of all features involved in solving the problems and meeting and/or exceeding the requirements presented in the solicitation and the extent to which uncertainties are identified and resolutions proposed.

(2) Feasibility of Approach – The proposal will be evaluated to determine the extent to which the proposed approach is workable and the end results achievable. The proposal will be evaluated to determine the level of confidence provided the Government with respect to the Offeror's methods and approach in successfully meeting and/or exceeding the requirements in a timely manner