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| **T4 TECHNICAL EVALUATION FORM – FIRM FIXED PRICE & TIME-AND-MATERIALS** | | |
| T4 Number  T4-0250 | Task Title  VistA Adaptive Maintenance | |
| Name of Offeror  Offeror B | | Date of Proposal  August 17, 2017 |
| **1. Technical Evaluation Criteria:**  TECHNICAL: The evaluation of the technical proposal considered the following:  (1) Understanding of the Problem – The Technical Volume of the Task Execution Plan (TEP) was 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 task and the extent to which uncertainties are identified and resolutions proposed.  (2) Feasibility of Approach –The Technical Volume was evaluated to determine the extent to which the proposed approach is workable and the end results achievable. The Technical Volume was 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.  **2. Proposal Summary:**  The Offeror’s response described their technical and management approach to the problem identified in the Performance Work Statement (PWS). The Offeror included their approach to creating a “service layer” to emulate Computerized Patient Record System (CPRS) Remote Procedure Calls (RPCs) to be built on a third-party project called the VistA Data Project (VDP). The proposal describes how the Offeror will also utilize their first-hand experience, knowledge, lessons learned, and approach they used on the VistA Interface Adaptor (VIA) project, which involved the encapsulation of Massachusetts General Hospital Utility Multi-Programming System (MUMPS) RPCs for VistA scheduling and orders management. The response includes a discussion on the Offeror’s approach to utilize the InterSystems’ Node.js add-on module that would expose VistA’s data as a single, secure, symmetric read-write server-side interface to all underlying data for external interfacing and integration. They also described their intent to automate as much of the testing as possible using third-party tools. The Offeror provided their overall proposed as-is and to-be approach and architecture (Figure 5). Finally, the proposal outlines the staffing levels by labor category and contract function and the hours proposed for each as referenced by prime and subcontractor.  The Offeror has proposed to team with 1 subcontractor.  After review of the entire proposal, it was determined that the Offeror’s approach contained the Weaknesses and Deficiencies detailed below. The remainder of the VistA Adaptive Maintenance requirements was adequately addressed.  **3. Summary of Significant Strengths and Strengths:**  None  **4. Summary of Significant Weaknesses and Weaknesses:**  **Significant Weakness #1 (TEP pp12-13, Section 2.1, RTEP Instructions B.1.5, PWS 5.7)**: The requirement is for the Offeror’s approach to retain full functionality against a single centralized service, replacing those functions of the original, de-centralized VistA source instances. The Offeror proposes no solution or architecture for a single centralized service capable of replacing the original, de-centralized VistA source instances and just reiterates the requirement and their intent to support it. (WHAT is proposed) This indicates a lack of understanding of the problem to be solved. The idea of replacing central services in a way that CPRS and VISTA still continue to run doesn’t seem to be understood. This results in an essential component of their solution approach completely absent. (WHY this is a weakness) Without the capability to retire the service from the 131 de-centralized VistA instances using the VICS, there is no capability to migrate off VistA to a new modern cloud based Electronic Health Record (EHR). (IMPACT) Statement)  **Significant Weakness #2 (TEP p4, Section 2.1, RTEP Instructions B.1.1.a):** The Offeror’s approach included a “Javascript based approach” using the InterSystems Cache add-on module for Node.js. According to the Offeror, this InterSystems add-on module “can expose VistA’s data as a single, secure, symmetric read-write, server-side interface to all underlying data.” The Offeror provided an example of how this InterSystems Node.js module would provide “MUMPS emulation using a Javascript/Node.js-driven model-driven replacement.” **(WHAT is proposed)** The Offeror’s response indicates a failure to understand that Node.js is simply a Javascript run-time environment (i.e., runs javascript code on the server) and has no additional functionality to which the Offeror implies regarding the ability to provide emulation. Specifically, it is not an off-the-shelf, “model-driven MUMPS emulator” as is assumed in the Offeror’s response and which requires custom development as required of this project. If such a commercially-available product were available for the VistA MUMPS environment, there would be no need for this Request for Technical Execution Plan (RTEP). **(WHY this is a weakness)** The Offeror’s proposed approach fails to address the problem of how to create the model-driven, MUMPS emulation in Javascript/Node.js, which is the foundation of this RTEP, which places the Government at risk of successful completion of this project and increases the risk to successful migration to a cloud-based, commercial Electronic Health Record (EHR).  **(IMPACT) Statement)**  **Significant Weakness #3 (TEP p8, Section 2.1, RTEP Instruction B.1.1.g):** The Offeror demonstrated a lack of understanding of the intended final solution as explicitly described in PWS Section 1.0, Background, and as further emphasized in RTEP Instruction D.1.g, which states that, among other requirements, the “final solution has no legacy MUMPS dependencies.”  **(WHAT is proposed)** The Offeror’s proposed incremental approach to migration (Figure 5) indicates that the to-be architecture will be based on the VA Fileman database. The VA Fileman Database is legacy MUMPS infrastructure. Making the final solution architecture depend on legacy MUMPS infrastructure prevents migration off legacy MUMPS infrastructure. **(WHY this is a weakness)** Lack of migration off the legacy MUMPS infrastructure to centralized services with no MUMPS dependency places the Government at risk of successful completion of this project and increases the risk to successful migration to a cloud-based, commercial Electronic Health Record (EHR). (**IMPACT) Statement)**  **5. Summary of Deficiencies**:  **Deficiency #1 (TEP pp3-4, Section 2.1, RTEP Instruction B.1.1.a):** The Offeror lacks understanding of FileMan Data Modeling. The Offeror proposes to create a scheme to represent VistA data by analyzing the MUMPS Globals and map those to collections. **(WHAT is proposed)** The Offeror approach lacks any reference to FileMan’s data definition mechanism, the data dictionary, and thus implies the offeror doesn’t understand the structure of FileMan. It is notable that despite stating they will use design patterns of the VistA Data Project, they fail to describe any of these patterns here and focus instead on MUMPS and mapping MUMPS language structures directly. **(WHY this is a weakness)** Failure to understand FileMan internals and the third party mechanisms they reference is a fundamental and major defect, as FileMan modeling is the first RTEP requirement upon which all other RTEP requirements depend. Without and understanding of Fileman Data Modeling, the dependent requirements of this RTEP will not be possible to fulfill. This puts the project at high risk of failure, thus impeding the migration of VistA to a modern, commercial cloud based EHR. **(IMPACT) Statement)**    **Deficiency #2: (TEP p6, Section 2.1, RTEP Instruction B.1.1.g and B.1.2.f):** The Offeror demonstrated a lack of understanding of the intended final solution as explicitly described in PWS Section 1.0, Background, and as further emphasized in RTEP Instruction B.1.1.g, which states that, among other requirements, the “final solution has no legacy MUMPS dependencies.” The Offeror’s response reiterates the requirement but does not at all reference an approach to this requirement. Rather, the Offeror references their experience with the VistA Integration Adapter (VIA) project. The VIA project created services to access RPC calls using a wrapper written in Java. This approach efficiently provided the service without replacing MUMPS code. On page 2 of the response, the Offeror stated "Although VIA services were developed in Java, the basic principles and methodology will remain the same." **(WHAT is proposed)** The Offeror’s approach applies a completely different methodology (e.g., RPC wrapping), which will not yield the contract goal of having no Legacy MUMPS code dependencies and would result in the opposite of model-driven emulation in centralized services, which is a stated requirement of the PWS. **(WHY this is a weakness)** The Offeror’s approach is not feasible, as it continues reliance on, versus replacement of MUMPS code, which thus creates a risk for successful contract performance.  **(IMPACT) Statement)**  **Deficiency #3** **(TEP pp3-4, Section 2.1, RTEP Instructions B.1.1.a):** The Offeror indicated its intent to build on the work done through the VistA data project (VDP) in which it did not participate at the prime or subcontractor level. The Offeror’s response contains unmodified copies of text and figures from the VDP website and slideware, but demonstrated a lack of understanding of the complex factors involved in the creation of the Master VistA Data Model (MVDM) to the requirements of the solicited VistA Adaptive Maintenance project. The partial reuse of VDP seems to acknowledge this but as the Offeror doesn't relate the two projects and their concepts, and this indicates a lack of a proper understanding of the means by which to apply these previously developed components to this project. (**WHAT is proposed)** The Offeror stated that “MVDM creates a ‘universal’ data model that each VistA conforms to,” which implies that MVDM creates itself, rather than describing specifically how the Offeror would create MVDM as a standardized data model for use by the 131 VistA systems. In addition, the Offeror failed to understand and apply the open source concepts to which it got access whereby neither the figures provided, nor the text supporting them, make mention of technical approaches capable of providing synchronization required to enable the final solution to be VistA/MUMPS backwards-compatible or to demonstrate a solution indicative of centralized Veteran Integrated Care Services (VICS). Since these technical issues were not addressed in the architecture a complete solution was impossible to assess. **(WHY this is a weakness)** The Offerers’ lack of understanding of this third party VDP project makes successful application highly unlikely. The VistA Data Project (VDP) was for re-engineering VISTA using node.js and providing it with a new more secure interface. It was neither meant to establish national services (VICS) nor retire equivalent VISTA functionality. Beyond repeating its purpose based on publicly available materials, the Offeror failed to relate the work of VDP to the specific requirements of this project. The Offeror’s proposal indicates a failure to emulate and replace the Patient Data Entry (PDE) and Outpatient Pharmacy Computerized Physician Order Entry (CPOE) VistA functionality as centralized services, omitting the most essential feature of the final solution. **(IMPACT) Statement)**  **6. Special Terms and Conditions / Deviation / Critical Assumptions stated in TEP:**  None.  **7. Evaluation Criteria:**  **a. Understanding of the Problem**  Overall the Offeror demonstrates a X understanding of the requirements.  **b. Feasibility of Approach**  Overall the Offeror demonstrates an approach that is considered X feasible and is considered X risk.  **8. Rating:**  Unacceptable - A TEP that contains a major error(s), omission(s) or deficiency(ies) that indicates a lack of understanding of the problems or an approach that cannot be expected to meet requirements or involves a very high risk; and none of these conditions can be corrected without a major rewrite or revision of the TEP. | | **Technical Rating:**  **Unacceptable** |
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| **Evaluator Signature**  *Only one signature should be provided even if multiple technical evaluators participated. The lead technical evaluator should sign and date the technical reports.* | | **Date** |
| **Rafael M. Richards, MD MS, Physician Informaticist, U.S. Department of Veterans Affairs** | | |

*Contract Evaluation Form Rev 2.0 CAI 22 May 2009*