Office of Information & Technology
Enterprise Program Management Office
VistA Adaptive Maintenance
RFI 2
TAC-17-42242

Department of Veterans Affairs (VA)
Technology Acquisition Center
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1. Overview of Liberty's Understanding and Capabilities

Liberty IT Solutions, LLC (Liberty) respectfully submits our response to the Request for Information (RFI) for Veterans Information Systems and Technology Architecture (VistA) Adaptive Maintenance. Liberty's corporate capabilities and vast VA experience position us to provide project management, sustainment services, and Agile software development support to the Enterprise Program Management Office (ePMO) and VistA Adaptive Maintenance project. Liberty is a **Veteran-focused organization, and as a Service-Disabled Veteran-Owned Small Business (SDVOSB)** with a 20% Veteran workforce and a distinguished Veteran Outreach Officer, we understand that the VA's ultimate objective in this solicitation is to achieve commonality across all versions of VistA and to improve data exchange. Overall, our expertise and experience in this area will bring a consistent and reliable offering and provide a proven, low-risk basis for executing the project in a performance-based partnership with the Government.

Through our support of numerous projects across the Veterans Health Administration (VHA) and Veterans Benefits Administration, including current Tier 3 maintenance on over 70 VistA clinical applications, Liberty will provide the top-quality resources who will bring the right mix of application and technical expertise for the VistA Adaptive Maintenance project.

- Liberty has proven experience under the Health Product Support (HPS) Tier 3 Sustainment Contract, providing corrective, preventive, and perfective sustainment for over 50 VA clinical applications, using approved tools, such as SDM and Rational. This includes full lifecycle support for obtaining and maintaining Authority to Operate (ATO) certifications (for Web Application Security Accessibility: WASA, Fortify, DB Scan, and Remediation).
- Liberty is also highly experienced in working closely with the Office of Information and Technology (OI&T), implementing Agile methodologies and adhering to Veteran-focused Integration Process (VIP) principles.
- Current resources with 10+ years working on Computerized Patient Records System (CPRS), Vitals, Allergy, Patient Problem, and FileMan and providing that deep interworking knowledge of these systems and applications.
- Liberty has decoupled business logic and created RESTful web services that provide access to many VistA packages, using industry standard reference implementation technologies, such as the RESTful Application Programming Interface (API) Modeling Language and Swagger.
- We have been responsible for releasing client software that interfaces with Identity Access Manager (IAM) Single Sign-On (SSO) to provide two-factor authentication for applications.
- We are providing automated testing capabilities via Rational Tools integrated with Jenkins to enhance the security posture of clinical applications using Fortify.

In the following sections, we provide our response to the remaining RFI requirements.

2. Summary of Technical Capability Statement (RFI A)

Liberty and its staff have provided direct support to the VA, relating to the following activities:

- Isolation of business logic, workflows, and data structures from VistA and MUMPS.
- Governance of Veteran data (i.e., access control, auditing, and encryption).

- Centralization of business functions (i.e., location, time management, and synchronization).
- RESTFul service interfaces that support standards and continuity of business functions from thick client or legacy VA applications.
- Application modernization of legacy interfaces and business logic into modern web and mobile applications.
- Cloud-based solutions and architecture with advanced deployment and testing requirements.

To decouple business logic and RPCs and MUMPs from CPRS, it is imperative to have a deep understanding of how the CPRS Graphical User Interface (GUI) works, as well as an understanding of the workflow and business logic that is contained in the RPCs being used. Liberty has current resources with 10+ years working on CPRS, Vitals, Allergy, Patient Problem, Pharmacy, and FileMan, all of whom provide that deep interworking knowledge of these systems and applications and who currently support all clinical applications and packages referenced in the draft PWS through the HPS Tier3 Sustainment Support: Clinical Task Order.

Our experts have reviewed the requirements set forth in the draft PWS and offer some of the following thoughts to demonstrate our direct knowledge. It is the type of knowledge discussed herein that will be required to replace the integrations and business logic for this draft PWS. Vitals is its own standalone application, and the interaction between CPRS and Vitals is handled within this application. Vitals measurement has a standalone GUI, which allows entry and management of vitals for the patient or a patient that is selected via the patient selection within the application itself (i.e., Vitals GUI).

There is also a Dynamic Link library (DLL) that leverages the same functionality as the standalone Vitals GUI but does so for one patient at a time only. The patient in this case is passed in via the calling host application. This DLL (referred to as "Vitals Lite") is used in various applications, such as CPRS and the Dental Record Manager (DRM) Plus application. Since there are no specific RPC calls within CPRS that deal with entering vitals, all that would be left to convert over would be the reading of the vitals to display on both the coversheet and the encounter form. If you were to convert the RPCs for entering vitals (writes/updates) via the DLL, then you would have to also update the standalone Vitals GUI since both the Vitals GUI and CPRS use the same code. This would also impact other applications that use this DLL. There are about 32 remote procedure calls of varying complexity related to the Vitals package that could be decoupled from VistA. This would require an update to both the Vitals and Vitals Lite GUIs. In CPRS, there are 11 RPCs that will need to be decoupled however these primarily deal with the reading of vitals information. Computerized Physician Order Entry (CPOE) via CPRS saves an outpatient pharmacy order through the ORWDX SAVE RPC that not only handles outpatient pharmacy but all orders within CPRS. Decoupling this RPC would mean pulling out outpatient pharmacy specific business logic that is tied to specific order dialogs in CPRS (including switches in CPRS), including the eventual orchestration and workflow encompassing the drug checking interface (First DataBank).

Liberty is providing continuous integration, continuous delivery, and continuous deployment on the Beneficiary Travel Self-Service System (BTSSS) and Pharmacy Reengineering – Pharmacy Product Systems – National (PRE PPS-N) task orders, where we are using a combination of automated unit, functional, and security testing to traditional VA infrastructure and Azure Government Cloud. This includes providing enterprise interfaces using technologies built for the

web that comply with security (Fortify), and Section 508 requirements. Liberty has also supported the VistA Services Assembler/VistA.js in both Development, Deployment and Sustainment where our team worked to integrate Node.js RESTful services with VistA, which used the cache.node API. We were directly responsible for VistA Kernel login code to pass a SAML assertion collected from the VA IAM. This included decoupling business logic, understanding workflows within RPCs as well as eventually identifying issues with cache.node regarding the use of a shared process id that created problems with VistA file locks. Our work for these task orders also included building and deploying infrastructure in the VHA Innovations Future Technology Laboratory (FTL) and leading all aspects of the VistA.js's VA Release Process and deployment to initial IOC sites.

While the above cites direct Liberty contract references (prime and sub) our staff have also been directly responsible through other task orders that demonstrate the isolation of VistA MUMPS. Our senior software engineers were responsible for removing the blood bank system from MUMPS and moved it to an enterprise platform. This included establishing new APIS, HL7 interfaces and procedures that allowed for backward and forwards compatibility. Our senior software engineers have also been responsible for enhancements/development of the CPRS GUI and the Order Entry Results Reporting (OERR) package as well as Pharmacy Enterprise Customization System (PECS) and Pharmacy Product System – National (PPS-N) GUIs and the Outpatient Pharmacy package. Our senior solution architect, senior software developer, and business analysts were responsible for the movement of Mental Health Instruments into a mobile application (MHPRO) on the Mobile Applications Phase 2 (MAP2) task order. This included allowing Veterans to take instruments outside a VA clinic as well as allowing data to be emulated and written in data structures that were represented in JavaScript Object Notation (JSON) documents in MongoDB. The application stores data for quick retrieval and National reporting in MongoDB and offers centralized business functions through RESTful web services protected by OAuth. The authentication mechanism for the application and protection of the RESTful endpoints is provided through integration with IAM Single Sign-On internal (SSOi) for the provider mobile application and Credentialing Service Providers (CSPs) made available though IAM Single Sign-On external (SSOe). The architecture includes the capability to provide both forward and backwards compatibility whereby data can not only be made available to a provider or a Veteran through two mobile applications (provider facing and Veteran facing) but also allows data to be written and reviewed within the Mental Health Assistant (MHA) a Delphi GUI as well as CPRS via Text Integration Utility (TIU) notes. Their work on this project involved decoupling business logic from RPCs used by the MHA as well as emulation of data structures from the Mental Health package (FileMan) as JSON documents in MongoDB. While decoupling from MUMPS, enhancements were made to the data structures and RESTful services and business layers to support scheduling of instruments (reoccurring and time-based) for Veterans, emergency notifications for Suicide Risk, and metrics calculations from end user responses that involved workflow, business rules, algorithms, and orchestration. The mobile applications were built using cutting edge mobile technologies (HTML5/CSS3/JavaScript). Build, package, and deployments were managed using Node Package Manager (NPM) and Node.js through automation scripts controlled via Jenkins.

The Liberty Agile Center of Excellence (ACE) is focused on digital capabilities that unlock Veteran data and allow both backward and forward compatibility. Our ACE Team is building a scalable, Amazon Web Service (AWS)-hosted, microservice architecture that provides both API features (e.g., governance) and developer productivity (e.g., data transforms, pre-developed

connectors, mocking services for external consumers of APIs, etc.). In line with the Digital Health Platform, Liberty has implemented the architecture and services using Mulesoft (Liberty is a certified Mulesoft Partner). The architecture conforms to the Fast Healthcare Interoperability Resources (FHIR) standard for interoperability across COTS and GOTs. Our team is underway, mapping VistA to FHIR (U.S. Core Profile) value sets (e.g., medication containers, medication forms, etc.). There are similar functionality and requirements with our work within ACE and this draft PWS.

3. CORPORATE EXPERTISE (RFI B)

As referenced in **Section 2**, Liberty has the corporate experience and individual staff-member expertise in performing these services. **Table 1** provides both Prime and Subcontract references to validate Liberty's corporate offering with regard to this Task Order.

Table 1: Corporate Expertise

Task Order	Agency	POC	Dollar Value	Contract Number
Beneficiary Travel Self-Service System	Department of Veterans Affairs	Carol Hickman, COR	$10,984,855.94	VA11816F10150011
Health Product Support (HPS) Tier 3 Sustainment Support: Clinical)	Department of Veterans Affairs	Michael Streff, COR	$223,868,999.14	VA11816F10150013
(Apex Data Solutions Sub Work)	Department of Veterans Affairs	Gregory E Matton, Apex CEO	$1,086,764.00	VA118-15-C-0670
VistA Services Assembler VistA.js Platform National Deployment and Sustainment	Department of Veterans Affairs	Thomas Manning, COR	$3,037,186.62	VA11816F10150012

4. SDVOSB SET-ASIDE APPEAL (RFI C)

Liberty will respond to the solicitation with a Task Execution Plan should this effort be released on T4NG. **Furthermore, as an SDVOSB, we highly recommend that the VA release this solicitation as an SDVOSB set-aside under T4NG** based on our ability to provide knowledgeable resources who can successfully perform all required tasks for this effort. Releasing this Task Order as an SDVOSB set-aside will also aid the VA in achieving its goals for SDVOSBs.

At this time, Liberty has not finalized our team for this effort. We are evaluating partners that will deliver domain expertise across Base Tasks and Optional Tasks and allow us to meet our small business objectives for this effort. In this case, **Liberty is positioned as the Prime Contractor to perform at least 50% of the cost of labor** by Liberty employees. Liberty has the financial capacity, working capital, and other resources to perform this project without assistance from any outside source. As part of our growth strategy, Liberty has invested in expanding and advancing our company, management team, and a variety of business infrastructure capabilities to ensure our success and the success of our customers.

Furthermore, as a company whose vast majority of projects are VA focused, Liberty has direct access to a pool of knowledgeable resources who hold existing VA clearances. As a benefit to the

Government, Liberty also employs three Security Clearance Administrators, all highly experienced in expediting the on-boarding process to the greatest extent allowable.