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Expertise Network

ELECTRONIC HEALTH RECORD VHA-WIDE MEDICAL SCHEDULING

RESPONSE TO DEPARTMENT OF VETERANS AFFAIRS REQUEST FOR INFORMATION VA118-12-I-0102

MONDAY, 30 JANUARY 2012

ELECTRONIC HEALTH RECORD
VHA-WIDE
MEDICAL SCHEDULING
· RESPONSE ·

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1 · BUSINESS INFORMATION

Name of Organization: VISTA Expertise Network

DUNS Number: 187520411

Please identify the NAICS Code assigned by the Government for actions where you either held or competed for a contract: We have not held or competed for a government grant, but the NAICS code that covers our organization's activities is 541511.

Type of Organization: Non-profit organization

Past Experience: The VISTA Expertise Network is the primary contractor for the successful implementation of VISTA at Oroville Hospital in California. We have done smaller VISTA projects for VA, Indian Health Service, Alaska Clinic LLC, and others.

Capabilities/Qualifications: The VISTA Expertise Network is a network of

VISTA experts with experience in installation, maintenance, development, and documentation of code, and with development and management of projects and contracts. Our programmers helped WorldVistA to achieve Meaningful Use certification for WorldVistA EHR, and we have published an introductory manual for VISTA users. Our executive director has over twenty-seven years of experience with VISTA at VA, WorldVistA, and now the VISTA Expertise Network.

2 · RECOMMENDATIONS

VA will increase their chances of successfully upgrading Scheduling if they fully embrace new open-source paradigm. This will mean incorporating the key advantages of open-source development into both the procurement process and the ensuing project. We recommend considering the following key differences, and leveraging the advantages of the open-source approach:

1) CLOSED SOURCE VS. OPEN SOURCE: The current VA Scheduling system is part of the main codebase of VISTA, and resides in the public domain. As such, it is already open source. If VA were to obtain a closed-source Scheduling system, the selected vendor would be providing a product that could not be improved or extended, or even debugged, without the assistance of that particular vendor. Beginning, as VA does, with an existing base of mature, fully-tested open-source code, there is a clear option to correct, improve, extend, and add modules to the existing functional code, rather than attempting to remove and replace it. VA will realize significant savings in time, money, and disruption by working from this existing basis. Additionally, non-governmental users of VISTA-based systems will be able to adopt and make contributions to certain facets of the new Scheduling system, contributions from which VA will benefit. It should also be noted that closed source provides a barrier to

assessing code quality and ease of maintenance or improvement, while open-source code will be examined by developers all around the community. The open-source model creates a meritocracy, where reputations depend on writing functional, well-documented, easily-maintained code.

2) Vendor vs. Service Provider/Development Partner: Under the old, closed-source paradigm, VA would procure the use of a product, for which they would pay continuing license fees—in essence, only leasing it from a vendor, who would retain ownership and control of the software. In the open-source world, VA will be partnering with providers of design and development services, and the end result will be code that VA and the rest of the user community have the full use of, without ongoing payment, except to the extent that VA chooses to continue with further development, or decides to contract for maintenance services. The key advantage of this model is the escape from "vendor lock." At any stage of the project, VA may add or change service providers, with no loss of access to the code. Moreover, later changes or additions to the project may be obtained from any service provider or programmed by VA's own staff, since all of the code involved will be either in the public domain or issued under a public license.

3) Waterfall vs. Agile Development: Using the old waterfall process, VA was required to hand off a complete set of specifications to a vendor, and then rely on the vendor's self-reporting to assess progress. Any changes to the requirements discovered during the term of the project could have serious repercussions, since everything about the project would have been designed with the assumption that the specifications were complete and immutable. The "waterfall" method has been repeatedly proven to cause failure in large, complex projects for two reasons. First, large projects can take years to complete, by which time

the original specifications are outdated. Secondly, even the best specifications are no substitute for real-world end-user feedback, so even if a project technically meets specifications, it can fail to accomplish the desired end state. In agile development, the project is laid out as a series of smaller efforts, either concurrent or dependent. VA will work closely with the designers and developers, providing immediate feedback into the process, and having full visibility into progress and challenges as they arise. VA will have the ability to adjust and adapt the project in concert with their design and development partners in order to enhance results that prove to be the most useful in production, and abandon approaches that are found to be less effective. The phased, modular nature of agile development will provide superior risk-management abilities to VA, and reduce disruptions as VA transitions from the current version of Scheduling, since enhancements can be created and introduced in stages.

4) Isolation vs. Community: In the old paradigm, VA was a source for software used by others, from Ihs's rpms to Oroville Hospital's WorldVistA Ehr installation, but it was isolated from those other users, having almost entirely one-way communication. By committing to open source, VA is both supporting an increasing community of non-va vista users, and opening up two-way communication through osehra, the open-source ehr custodial agent. Already, innovations are being submitted to osehra, such as Vistacom and Msc Fileman, innovations which can be freely used by VA. A successful Scheduling enhancement project will circulate design and code within the community at each stage of completion, allowing VA and its chosen partners to receive feedback, and leverage new ideas.

5) Bystander vs. Participant: In the vendor-customer model, VA cannot participate actively in the creation of needed software solutions—

requirements are sent off to a vendor, and VA is reduced to having veto power as a project proceeds. Over the course of the previous Scheduling project, VA paid out millions of dollars without receiving anything that could be usefully implemented. In the client-service provider model, VA will have to commit a higher level of in-house talent to work on the project, but in return, VA will receive code and documentation at every stage of the project, and have hands-on influence into the course of the development. Agile development relies on a tight feedback cycle between users and designers/developers. VA's users and super-users will be critical to assessing the quality of functionality improvements and user documentation, while VA's deeply-knowledgeable VISTA programmers will be key to assessing code for effectiveness and interoperability, for how well it follows standards and conventions, and for how well it is documented to facilitate future maintenance and development. By being an involved participant in the project, VA will both save taxpayer dollars and maintain the in-house resources necessary to the maintenance and continued successful use of VISTA.

2.1 · VA'S GENERAL REQUEST FOR RECOMMENDATIONS

> *Please describe your recommendations for VA's MSP replacement. In light of current technology, effective customer relationship management processes and logistical scheduling and management techniques, does VA's approach contain the essential ingredients for success? What kind of technical, programmatic or financial challenges do you forsee in the implementation of VA's suggested solution? How might it be adjusted or optimized? Are there alternative approaches – e.g., should VA consider Scheduling as a Service? What are the costs and benefits of an alternative approach?*

In order to reduce the risks inherent in any large-scale project, VA should

identify the extent to which Scheduling enhancement may be treated as multiple smaller projects. In reviewing VA's desired end state for Scheduling, we recommend breaking the project down into the following phases, ordered by complexity and incremental improvement to current functioning:

A) Provide improved scheduling management functionality within each VA facility

B) Provide web- and mobile-based appointment request and confirmation functions for patients

C) Provide inter-facility scheduling communication and coordination functions

D) Provide functionality to keep patient records up-to-date and consistent across those facilities where the patient is receiving care

E) Coordinate scheduled care and patient health records with non-VA health providers

Each of these steps can be treated as a project in itself, with limited, definable dependencies to the other steps.

VA can also reduce risks by maximizing the enhancements made to the core VISTA codebase, which is deployed locally at individual VA facilities, and adopted by non-VA VISTA sites, and minimizing the amount of data and functionality handled from a central system—a single point of service also creates a single point of failure. Note that phase E will be limited by the technological abilities of the third parties involved, so—while plans can be made, and interfaces specified and created—accomplishment of true coordination will be outside the control of VA and its development partners.

In order to assist VA in organizing material for the RFP, we have reviewed the RFI documents in light of their applicability for inclusion in the RFP. We present our comments in order by document:

2.2 · RFI MAIN DOCUMENT

To become the basis of the RFP, this document should not just lay out the desired outcomes, but also give a full overview of the existing system, and a complete description of perceived problems. The current problem statement says that Scheduling "no longer supports the multiple linkages needed." A prospective development partner needs to know whether the existing Scheduling system did at one time support those multiple linkages, and if so, what occurred that lowered the efficacy of the system. It is likely that VISTA Scheduling has not lost functionality, but that it has only provided functions at the individual facility level in the past, and VA has now identified the need for enhancements which will enable inter-facility scheduling, while providing improved support for intra-facility scheduling and introducing enhanced communication with patients.

The goal statement for the project reads, "Our goal is to replace the current MSP in VISTA." This statement incorporates an assumption that VISTA modules are separable entities, and not essentially notional divisions within a fully-integrated system. It also assumes that the older version of a part of the system must be removed in order to update functionality, add functions, or correct current functioning. These assumptions are only true if one is forced to consider switching from open-source to closed-source proprietary products. Fortunately, VA has an open-source system, with mature code in place that does perform some of the functions VA requires. That code is tightly-integrated within the VISTA codebase, and can be renovated and improved upon, and

serve as a basis for new modules and interfaces. Fully-tested, functional code is a valuable resource which should not be jettisoned lightly.

The section laying out lessons learned from the failure of the last Scheduling-replacement project is quite informative, and prospective development partners should be directed to closely study the GAO report cited. We would recommend expanding on some of the points, providing more context, and including the lessons learned from the 9/11 Claims Processing project, also covered in the same GAO report. Many of the failures cited for Scheduling arose as a result of the use of "waterfall" development methodology, e.g. "VA did not ensure that specifications were complete and sufficiently detailed." Using agile development, developers are in constant communication with system users, and are not solely reliant on a list of written specifications. The critique "VA. . . did not obtain the benefits of competition" is valid, but should not be interpreted to mean that VA must only compare and choose between delivery-ready "off-the-shelf" scheduling solutions, especially since no such solutions exist. Instead, VA will be evaluating competing designs and methodologies. It is important to note that when assessing the 9/11 Claims Processing project, the GAO praised VA not only for phased development, but for phased implementation. At the time of the GAO report, the first two stages of the 9/11 Claims Processing project had already delivered improved functionality, with two more phases still in development. When VA asks for phases in the design of the Scheduling project, they should require that those phases be organized around iterative stages of deliverable functionality, not just a set of internal project milestones.

All prospective development partners should exhibit knowledge of OSEHRA and its processes, since this will be key to to the success of the project. The section covering OSEHRA would benefit from communicating

the following key points about the VISTA codebase and the OSEHRA community that acts as its custodian:

1. OSEHRA has been charged with nurturing the community of open-source VISTA developers and users, and VA's prospective partners will be asked to demonstrate how they plan to avail themselves of the knowledge base that resides there. Though OSEHRA hosts documents from earlier VA efforts that recommended the decomposition of VISTA into "plug and play" modules, experts recommend this model only for optional external functions, and for interfaces which provide access to instances without affecting their internal functioning. Scheduling on the intra-facility level interacts directly with the core features of VISTA, such as patient records and facility operations, so it does not lend itself to being set up as a fully-separable external entity. Inter-facility scheduling, however, will need to function across a communication layer, so it will most likely require both integrated and "plug in" features.

2. VISTA is notionally divided into "modules" for ease of management and maintenance, but all of the code exists within a tightly-integrated whole. VISTA is able to support the delivery of world-class healthcare due precisely to this extreme integration, which allows the system to trigger every sort of desired activity (alerts, updates, etc.) in response to any specified change of data, anywhere within the system. Attempts to make every VISTA module "plug and play" will negatively impact this basic functioning of VISTA. While it is true that older VISTA code requires refurbishing to make it easier to maintain and update, a firm requirement that new code be completely separable or "substitutable" will result in noticeable reductions to system functionality.

3. OSEHRA does not act as a gatekeeper between developers and users. In fact, OSEHRA is an inclusive membership environment, facilitating open communication between all stakeholders, and Figure 1 in the

section should be updated to reflect this relationship. As each stage of new Scheduling function is designed and delivered, community feedback and testing will be an integral part of a successful project plan. Many facets of the Scheduling improvement project will be of benefit to non-VA VISTA adopters, and successfully engaging the attention of the community will result in higher-quality, lower-cost software for VA.

The section laying out the organizational divisions within VA is helpful to a prospective development partner, but VA should elaborate on how those organizational divisions may impact the project.

There is an inherent tension in the section provided regarding "Desired Business Functions." The introduction emphasizes the need for a "veteran-centric" system, but the very first business need listed states that the system must be "resource-centric." These two needs are not mutually exclusive, but there will be trade-offs: a system that keeps each examining room busy at all times is one in which veterans are sitting in the waiting room, while a system that allows veterans complete confidence about appointment times is one in which examining rooms are occasionally sitting idle. VA needs to balance the priority of these two objectives so that neither efficiency nor patient satisfaction is given short shrift.

VA has rightly placed an emphasis on a phased approach to such a large, complex project. Phased development and implementation will significantly reduce risks, and improve the quality of the final project. Unfortunately, the notional phases outlined in the RFI are divided up in a way that fails to leverage the key advantages of a truly phased approach. The listed phase 1 includes almost all desired additional functionality (while asking that DSS not be impacted, and that new national data not be required). The listed phase 2 indicates only the possibility of changing how DSS is integrated, and the development of new national data. A true

phased approach would separate sections of the project into manageable sub-sections, based on logical layering and functional boundaries.

We recommend that the project be organized into separate tracks, by functional areas as mentioned at the beginning of this section, and then by a series of deliverable increments within each of these tracks.

The last item in the RFI states that "VA anticipates using Medical Domain Web Services (MDWS) as a resource in the new scheduling system." VA risks rejecting innovation by requiring the use of a particular technology. If there is a pressing known reason that only certain technologies can be used, VA should fully explain it.

2.3 · BUSINESS BLUEPRINT

The current business blueprint document states that it is "based on documents from the previous VHA scheduling efforts." Those efforts did not result in any deliverable software, so we recommend that the information presented in the blueprint be critically reviewed. All of the material in the blueprint which only relates to the creation or purchase of "Commercially Off-the-Shelf (COTS)" software should be removed, since it does not provide relevant information to support VA's chosen open-source, agile-development approach.

The blueprint was prepared by outside consultants (according to the revision history), who seem to have had limited insight into VA's operations. The result is a document that is at times vague or incomplete. An example of this is the section on assumptions and risks—one assumption is that "VA has 50,000 schedulers." It is not clear if this is literal, meaning that 50,000 VA employees do nothing but work on scheduling, or if this the total number of employees who might set appointments or otherwise access the scheduling system as part of their

duties. Prospective development partners will need a more complete and detailed description of system users and their roles. The list of risks focuses on those caused by adoption of incompatible COTS software or waterfall development of closed-source software—risks that have been mostly resolved by VA's decision to use open-source, agile development. We would recommend that VA provide a higher-level view of risks and mitigation strategies, grouped by the following topics:

1. Disruption: How disruptive might the Scheduling improvement project be to VA function? What is the least disruptive path? What are the costs associated with disruption?

2. Cost Control: How will VA manage costs, both direct project costs, and total costs of ownership?

3. Failed Solution: What could cause the new project to fail? What caused previous projects to fail, and how have these factors been addressed? What are success criteria?

The sections of the blueprint which outline process steps, and their supporting flowcharts, will be very useful to prospective development partners. However, these sections do not indicate which process steps are supported by the current software and which are not, and to what extent these represent a preferred process, or merely catalog the existing process. Also, the flowcharts indicate unresolved process questions. VA should elaborate on the status of these. VA can achieve the best results for the project by clearly delineating process steps that are firmly set (for example, the handling of enrollment and eligibility checking might be constrained by regulation), and where they are hoping to achieve process improvement through efficient automation (for example, booking of certain appointments for patients who express a preference for email and web communications might be handled without direct scheduler intervention).

VA's prospective development partners will be very interested in the information provided in the "Pain Points" section. They will need to know what isn't working for VA currently, in order to propose innovative solutions. This will be facilitated if VA provides context and examples for each point.

Towards the end of the blueprint, several sections have been left blank or marked "TBD". Some of them are specific to the previous effort, and relate to the purchase of non-custom COTS software, including preparations to change organizational structure and process flows to adapt to the software. These sections do not contain much useful material for prospective development partners, and VA should not expend additional resources on them. One section that should be kept and completed, though, is "Key Performance Indicators." Prospective development partners can make more educated proposals if they are aware of how VA wishes to measure future system performance. Examples might be "time between appointment request and appointment confirmation sent" or "difference between scheduled appointment time, and when patient was seen by provider." There are some KPIs listed in Appendix B, but it would be helpful to have a full list, organized into measures for current functions and for future desired functions. This would be a good place to include any current benchmark data that VA tracks for Scheduling.

Most of the attached appendices provide larger versions of figures, or tables referenced in the blueprint. Several are blank templates from the COTS-adoption version of the project. The appendices should be reviewed for relevance to the revised version of the business blueprint.

2.4 · APPENDIX G: BUSINESS REQUIREMENTS

The Business Requirements document contains clear statements of needed functions. However, the following points should be addressed:

1) Current Functions: The document shows requested functions without an indication of whether such functions are currently supported, and if so, at what level of quality. Since this will be an open-source software project where existing mature code is in place, knowledge of what it already does—and how well—will allow VA's prospective design and development partners to do a gap analysis, and ascertain which parts of the existing code can be leveraged. It will also be important to draw distinctions between current situations where functionality is inadequate or missing, and those where functionality is present, but difficult or inconvenient (for instance, poor menu design would be a legitimate concern but of a different order than the inability to view all of a patient's appointments). Also, particular attention should be focused on those functions that the current system does not yet support; VA should be sure that they closely examine the cost-benefit equation of adding support for them, since there is inherently more risk involved in designing and implementing new functionality than in improving on existing functions.

2) Business Needs: The organization of the list of requested functions is by "business needs," but it only begins with Business Need #3. According to the accompanying flowchart, Business Needs #1 and #2 have to do with management functions to maintain facility schedules and parameters, and general management of patient information, including enrollment and eligibility determinations. Both are important areas that interact directly with scheduling, so it would be advisable to include VA's known functional abilities and needs in those areas as well.

3) Security: The structure of this Business Requirements document

does not allow it to clearly address how authorizations and security currently affect Scheduling, or any changes that are envisioned once new scheduling capabilities are introduced. VA indicates that they would like patients to be able to request certain types of appointments, or even self-schedule in certain circumstances, and be able to access current appointment records. The requirements document should describe how such enrollment and eligibility checking must be handled, the types of appointments patients should be allowed to initiate, and what appointment data should be accessible to them. There will also be a need to coordinate patient appointment requests with referrals or authorizations from a patient's care team (PACT). The current VISTA system has an excellent security framework, only allowing authorized personnel to have access to specified functions and data within the system. An outline of how the newly-requested functions must be controlled in terms of access and security will be critical to obtaining an acceptable solution.

4) PRIORITIZATION: The list has many areas of overlap and duplication, and does not indicate what priority VA places on the listed functions. This is a result of attempting to capture exhaustive detail for a set of upfront "waterfall" specifications. It would be beneficial for the RFP process for VA to provide the list in a way that clearly prioritizes desired functions, and minimizes repetition. This will allow prospective development partners to focus their proposed designs on ways to support VA's most critical needs.

For the following sections, we have examined VA's questions as they might be included in the RFP. Where we have commentary, it is marked with an "*".

3 · FUNCTIONAL REQUIREMENTS

VA's RFP questions:

> *Has VA identified the essential functions required to achieve its vision in the Blueprint? Which functions described in the Blueprint are particularly essential? Which functions are not needed? Why? What essential scheduling functions need to be added? What are the costs and risks of these additional functions?**

* There is a risk in asking a service provider to answer these questions for VA. Only VA knows which functions are necessary for VA's mission, and any outside provider will have to rely on the material and access VA provides for insight into VA's priorities and requirements. If VA works appropriately with their chosen development partner, using agile development and incremental implementation, the project design and the costs and risks of new functions will be dynamically assessed throughout the lifespan of the project. A function that is included in the initial specifications may prove to be unnecessary once other functionality has been implemented. Innovative functions that have not been envisioned may prove useful and inexpensive to add. A requirement that seems minor on the surface, and only provides limited benefit, may turn out to impact the entire system, at which point VA may choose to remove it from the project.

> *Do your recommendations involve implementing all of the functional requirements in the Blueprint? Discuss any requirements that cannot be met through your solution or that need additional clarification.*
>
> *Specific areas of interest to VA are:*
> - *Resource centric scheduling **

* VA has requested that the system be veteran-centric. VA should outline

what elements of resource-centrism are priorities, and how they should be balanced with the development of a veteran-centric system.

- *Capabilities for managing health care resources (clinical staff, equipment, support staff, facilities)*
- *Support for telehealth scheduling requirements through linking or referencing between appointments at various physical locations currently scheduled within different, independent VistA instances*
- *Data exchanges between VistA instances*
- *Scheduling across internal organizational and administrative boundaries*
- *Scheduling across internal to external system boundaries*
- *Implementation of VA Information Security and Privacy Policies.*
- *Management reporting methodology and capabilities, including the ability to generate, store, and customize reports.*
- *Integration or potential integration with DSS**

* The current Scheduling system is integrated with the system, incorporating DSS. VA has chosen an open-source, agile, incremental approach, which should include continued DSS support. Since VA is not attempting to purchase a closed-source incompatible system, this integration question should not be relevant.

- *User interfaces and how your recommendations will enable both trained and casual users to intuitively use the product.**

* VA must require prospective development partners to demonstrate deep understanding of Section 508 compliance requirements. User interfaces for most commercial products are not designed with Section 508 compliance in mind.

* Additionally, VA's functional requirements should explicitly call for HIPAA compliance, and VA should assess prospective partners for their understanding of HIPAA. This might seem as if it goes without saying, but patient privacy can be compromised through lack of understanding of necessary data security.

4 · RISK MITIGATION

The list of questions provided in the RFI is appropriate for the RFP:

> *Mitigation of risks related to data linkages between separate VistA instances and between the MSP and other VistA packages is of particular concern to VA. We contemplate a phased implementation may mitigate these risks. Please comment on this approach, and include consideration of:*
>
> - *Your assessment of the key risks inherent to this effort and how your recommendations address these risks*
> - *Details of recommendations, to include any suggested incremental steps*
> - *How the VA EHR Open Source initiative would enhance or mitigate the identified risks*
> - *Details of the capabilities provided by each increment, if applicable*
> - *Technical components or capabilities that must exist in the VA environment*
> - *Advantages of your recommendations*
> - *Disadvantages of your recommendations*
> - *Details of the 5-10 requirements you believe to be the most costly to implement*
> - *Any other information VA should consider in a phased approach to VHA-wide scheduling to optimize the results and minimize the cost**

* VA recognizes that a major risk category revolves around VA oversight and management of software projects. VA should include a question to prospective partners regarding their recommendations for facilitating VA oversight and management of the project.

5 · SYSTEM INTERFACES

The list of questions provided in the RFI is appropriate for the RFP:

> *Describe how your system will interface with other portions of the VA system and discuss how your system/software architecture will enable data exchange requirements. Please address the following:*
>
> - *How you recommend exchanging data across the 128+ independent VistA instances.*
> - *How you recommend interfacing with the more than 120 data interfaces to the current VistA environment. What products or capabilities would you recommend VA have in place in order to support such an interface capability?*
> - *How you recommend implementing data transfers needed to support telemedicine across the entire enterprise.*
> - *What interfaces would support scheduling with external partners and providers?*
> - *How your architecture helps to facilitate these data transfer requirements.*
> - *List applicable regulatory and industry standards and how your recommended solution would support compliance with them.**
>
> * It would be appropriate here to list those regulations that govern VA systems, since some of the them differ from the private sector (e.g. Section 508).

6 · IMPLEMENTATION/ROLLOUT, MAINTENANCE & SUPPORT

The list of questions provided in the RFI is appropriate for the RFP:

> *Describe your recommendation for implementing your system across the 128+ VistA instances and your recommendations for long-term maintenance and support. Please address the following:*
>
> - *Describe your recommendations for data management during the implementation period.*
> - *Describe your recommended systems development life cycle (SDLC) for implementing your system throughout the VA in consideration of schedule, testing, system integration, training, and infrastructure needs.*
> - *Describe your maintenance and sustainment support concept in consideration of help desk support, solution upgrades, backwards compatibility and how you would integrate within VA's current sustainment processes.*

7 · SUPPORT & DOCUMENTATION REQUIRED OF VA

VA will obtain the highest quality proposals through focusing the RFP on open-source phased development and implementation, agile development methodology and leveraging of existing code and the OSEHRA community.

Prospective development partners currently have access to the FOIA version of the VISTA codebase, through OSEHRA, but they should also be given access to any known variances between the FOIA release and the Scheduling module as it is currently deployed at VA facilities. Additionally, a full disclosure of pending class-three software related to

Scheduling will provide invaluable data for those designing improvements to VISTA Scheduling, since it will enable analysis of functionality corrections and additions that have already been worked on by VA staff programmers. There may be code that is directly useful to the project, and there may also be insights to be gleaned about perceived gaps in functionality.

7.1 · QUESTIONS ON SUPPORT & DOCUMENTATION REQUIRED OF VA

*Describe the support required of VA throughout the planning, development, implementation and training phases, including the following information:**

- *Any test related support (hardware or software) needed*
- *Documentation/Government Furnished Information required*

* We recommend that VA also ask prospective development partners to include support needs in terms of the agile development methodology (coordination with VA's users, VA programmer input on interoperability testing and standards and conventions compliance).

8 · ACQUISITION STRATEGY

In order to obtain the highest-quality result, with the least risk, VA has stated that they will embrace both the open-source model and the proven agile development methodology. Therefore, any part of the acquisition process which assumes that a "vendor" is going to deliver a finished "product" must be adjusted. VA will use the RFP response phase to obtain competing proposals for the project, with the full realization that the final end product—a Scheduling system that fully interoperates with VA's system, providing both known functional requirements and those that are discovered over the course of development—cannot be, and should not be, completely specified at the beginning of the project.

"Waterfall" development has proven to be a failed strategy for large integrated projects, and VA's previous Scheduling replacement project is a key example of that failure.

VA will not be able to simply purchase a completely formed, pre-packaged solution. Such a product does not exist, and given the level of integration to VISTA required to provide the functionality VA needs, only a solution built in partnership with VA, leveraging the existing codebase, will perform adequately. There has been a suggestion that a large prize could be offered to entice vendors to compete to create and offer a completed open-source Scheduling system. That approach would prevent any true small-business participation in the acquisition, and certainly eliminate all current experienced open-source VISTA development houses, since none are well-enough funded to make more than a very small project "on spec."

Instead, the RFP process will present VA with a range of potential development partners to choose from. That choice must be driven by the quality of ideas presented in response to the RFP, and an objective assessment of previous applicable projects and experience. The desired partners will demonstrate deep knowledge of how VISTA operates, and a realistic vision for how to improve the work experience of VA users and the satisfaction of VA patients, while respecting VA's budget. They will also need to put forth a plan for developing Scheduling in the open-source environment, with agile methodology, involving VA's users and programmers and OSEHRA's resources. Any proposal which falls back on waterfall "big-spec" methods—or fails to leverage the existing codebase and the wisdom of the open-source community—should be rejected.

8.1 · VA's RFP QUESTIONS REGARDING ACQUISITION

> *What programmatic recommendations/lessons learned does your organization have with respect to the phased approach?*
> *Please provide a Rough Order of Magnitude and/or estimated Level of Effort to implement your recommended solution. Do you have any market data that might justify an assessment of the type and magnitude of Return on Investment (ROI) which can be expected?**

* This question about ROI presupposes that other organizations are similar to VA and use processes and manpower similar to VA, allowing a service provider to quote a meaningful market comparison. As the largest healthcare organization in America, with a unique regulatory environment, and a mandated mission, VA is in a class by itself, and should instead seek clear information on future cost of ownership, which VA can assess against continued ability to perform its mission and anticipated efficiencies.

> *How should VA establish and structure a testing environment suitable to:**
>
> *1. ensure that a proposed vendor's scheduling system solution can meet baseline performance work statement requirements,*
> *2. fairly distinguish between competing Offerors*
> *3. ensure that a selected vendor's scheduling system will actually deliver promised functionality and interface without impairing the functions of other VistA packages and modules?*

* This section on a testing environment presupposes delivery of unitary, completed, "off the shelf" software. Since VA is instead pursuing a strategy of developing open-source software, through an agile development methodology, this question is not applicable. Instead, VA should ask prospective service providers to give references and access to

VISTA-relevant open-source projects they have worked on, demonstrating compliant code, clean documentation and accurate functioning.

Provide details on your involvement in any prior U.S. Government open source acquisitions regarding proposed contract type and unique terms and conditions.

*How would you recommend a demonstration or demonstrations be run for selection?**

* This question relates only to pre-built commercial closed-source acquisition. VA should instead ask for examples of software developed by the prospective development partner, highlighting appropriate knowledge of integration with VISTA.

9 · OTHER

Please provide any other recommendations or insights that you think will be valuable to VA.

VA is the custodian of an important public resource, the VISTA EHR. Prospective design and development partners should exhibit a deep level of expert knowledge of VISTA architecture and appropriate development methods, and a healthy respect for the complexity and functionality of the current VISTA system.

In order to reduce continuing costs, and leverage the advancements made to VISTA outside of the VA, VA should keep VISTA relevant to the non-VA VISTA community (Indian Health Service, public and private hospitals and clinics). One of the key requirements for those users is acceptance of VISTA as Meaningful Use-certified software to qualify for the Medicare and Medicaid reimbursement. Additionally, any VA-

specific functionality that is added or updated should contain options that allow that software to be used in a non-VA environment (e.g. allowing for patient IDs that are not Social Security numbers). The minimal cost and trouble to VA for including Meaningful Use requirements and options for non-VA use in its software projects will be overshadowed by the ongoing benefit VA will receive from gaining full access to non-VA VISTA enhancements.

RESPONSE CREATED BY

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