



Open Source Technical Support and Working Group Services for VA VistA

Contract Number: VA118-16-C-0841

***SLIN 0002AB – Gap Analysis
Initial Submission***



April 13, 2016



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Gap Analysis Overview



Assess Open Source Product Candidates for VA VistA Intake

- **Conduct “Discovery” activities, performing research and analysis to identify open source EHR products, code, and toolsets that align to, or would further enhance/expand upon, the feature set requirements as defined in the VistA 4 Product Roadmap.**
- **Support the alignment of open source products and VistA needs:**
 - Produce a Gap Analysis of priority features and functions required to make progress with VA’s VistA vision, with primary emphasis on how that vision is elaborated in the Feature Set delivery schedule per the VistA 4 Product Roadmap.
 - Subsequently, overlay the findings of the Gap Analysis and SWOT Analysis to document detailed Open Source Software and Product Selection Criteria.

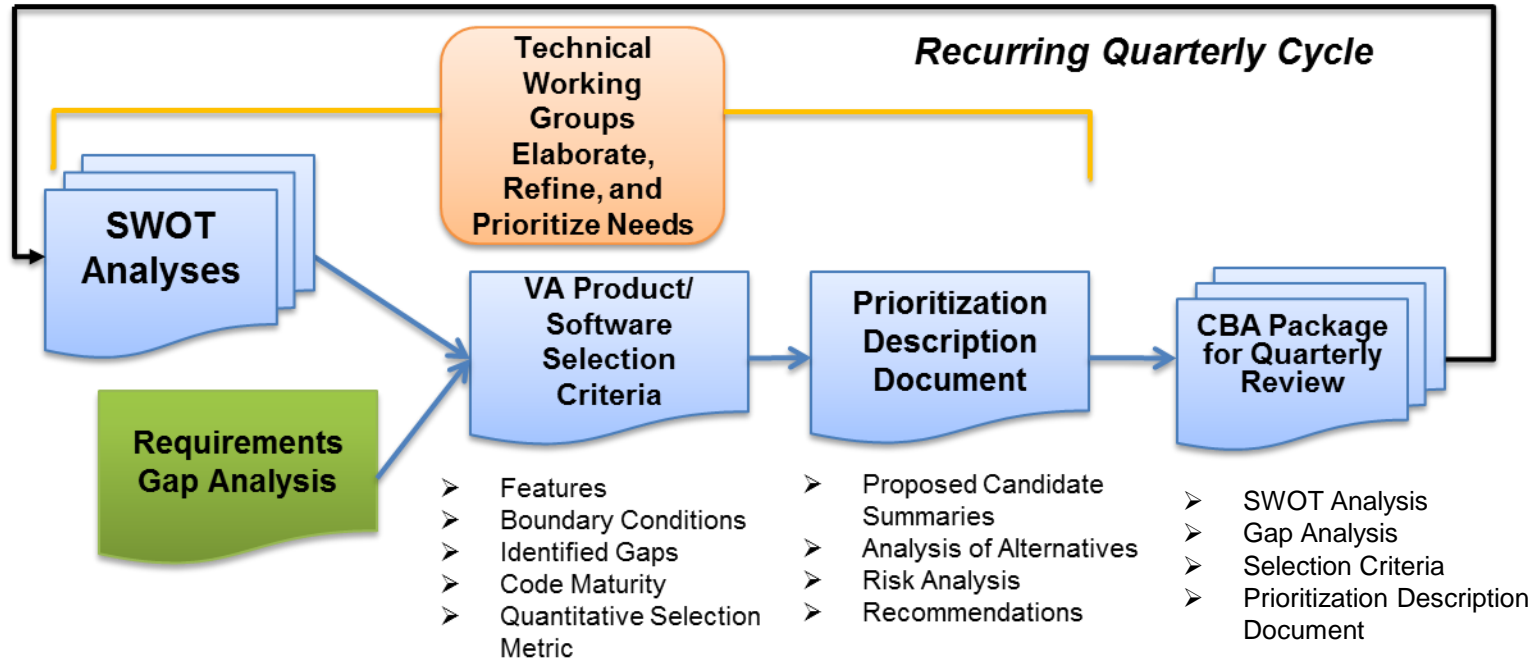
Gap Analysis

Using the GFI provided:

- VistA 4 Product Roadmap
- VistA 4 Product Architecture Document
- Business Requirements Documents (BRD)
- Requirements Specification Documents (RSD)

Produce a Gap Analysis of priority features and functions required to make progress with VA's VistA vision, with primary emphasis on how that vision is elaborated in the Feature Set delivery schedule per the VistA 4 Product Roadmap

Quarterly Cycle Overview



Challenges

There are many documents describing the various aspects of VistA Evolution (VE), issues include:

- Content overlap with varying degrees of currency
- Multiple elements (KPIs, metrics, etc.) describing aspects of the VE target
- No prior VE gap analysis documents to work from or use as templates
- No prior examples of VE selection criteria or other content that needs to integrate with the gap analysis to provide the open source candidate recommendations
- VE plans and implementations are continuously evolving, and document updates lag the changes



Critical Success Factors

- **Focus on business value**
 - Identify functional and technical gaps to focus efforts to identify open source software
 - Work with VA to “lay the pathway” for integration of open source software into VistA to fill gaps
- **Use flexible approach to content and document development that accommodates**
 - Initial development of content and format with longer term plan and maturation over time based on usefulness and feedback
 - Inclusion of detailed VE content over time
 - Continuous change regarding VE plans and implementations over time



Approach

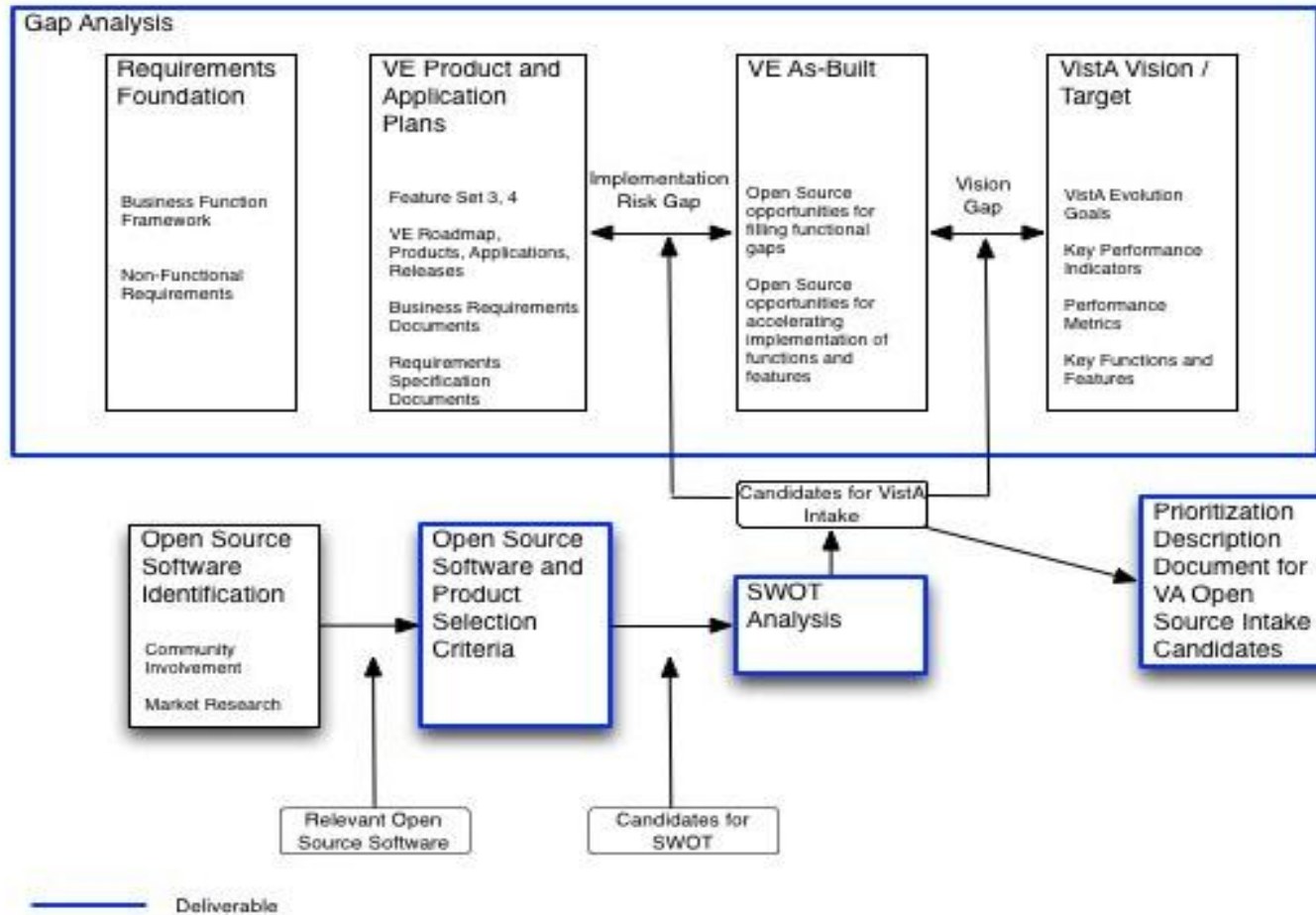


Approach Summary

- **Identify open source opportunities across VistA, focusing on Feature Set 3 for the initial quarters**
- **Develop the overarching concept for the gap analysis and mature it over several quarters**
- **Assess higher level gaps early, and increase the level of detail over several quarters**
- **Define the relationships of other content to the gap analysis, mature and synergize over time**



Approach Overview



Approach Details

Matured gap analysis will include

- A requirements foundation to be compared to VE plans
- Applications and functions that have been or are on track to be implemented
- The VistA vision to provide an overall target
- Assessment of two types of gaps
 - Implementation Risk Gap
 - Vision Gap

Gap Analysis – Quarterly Maturation Plan

- **Q1 (current)**
 - Feature set 3 scope - cross reference to application plans and releases
 - Sense of as-built for feature set 3 from roadmap and current plans
 - Identification of initial implementation risk gaps related to feature set 3
- **Q2**
 - Add initial target vision elements and assess vision gap
 - Add next level of detail regarding VE plans and as-built
 - Incorporate next set of candidates for VistA intake based on Q2 SWOT analysis and product selection criteria
 - Incorporate prioritization from PPBE process, VHA Innovations and other prioritization
 - pending items could be candidates for OSS intake
 - Include stakeholder perspective from interviews conducted during Q2
- **Q3+**
 - Incorporate requirements foundation
 - Map plans to as-built and vision at same level of detail to facilitate gap implementation and vision risk gap analysis
 - Incorporate cross references to other related content / documents
 - Continue to mature the gap analysis



Integration with Work Products

- **Open Source Software (OSS) and Product Selection Criteria will be developed next after the gap analysis is complete and will be used to screen open source software for SWOT analysis**
- **Selection criteria will be iterated in conjunction with the gap analysis findings to best screen for the most relevant SWOT candidates**
- **SWOT analysis results will be the source of potential gap filling OSS**
- **Prioritization Description Document for VA Open Source Intake Candidates will provide additional detail regarding each candidate for VistA intake**














Analysis and Findings



Feature Set 3 Alignment to Applications

Product Line	Application / Project	Interoperable EHR	Broad eHMP Deployment	VistA Scheduling Enhancements	Enhancements to Pharmacy	VistA Service Assembler	VistA Immunizations Enhancements	VistA 4 API Exposure, 2.0	FileMan Modernization (v22.2E)	Project Status
Major Applications										
	eHMP	●	●					●		Active
	CPRS		●							Active
	VSE			●						Active
	VIMM	●					●			Active
	MASS									On Hold
Ancillaries										
	VE Imaging									Active
	Pharmacy Reengineering (PRE)	●			●					Active
	VE Surgery Replacement									Active
	VistA Laboratory Enhancements									Active
	Women's Health									Active

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Infrastructure										
	Fileman 22.2 Enterprise									Active
	Fileman 23									Active
	Meaningful Use - New VistA Data Elements									Active
	Veterans Authorization and Preference (VAPE)									Active
	VistA Access Enhancements (VAE)									Active
	VistA API Exposure 1.0									Completed
	Vista API Exposure 2.0									Active
	Existing Product Intake Program (EPIP)									Active
	VistA Integration Adapter (VIA) Enhancements									Active
	VistA Access Enhancements (VAE)									Active
	VistA Services Assembler Phase 2 (VSA-P2)									Active
	Vitria Interface Engine Migration (VIE)									Active
	RAI/MDS Replacement System									Active
	Real Time Location System (RTLS)									Active
	Point of Service - Kiosks Phase II									Active

Feature Set 3 Alignment to Applications

Product Line	Application / Project	Interoperable EHR	Broad eHMP Deployment	Vista Scheduling Enhancements	Enhancements to Pharmacy	Vista Service Assembler	Vista Immunizations Enhancements	Vista 4 API Exposure, 2.0	FileMan Modernization (v22.2E)	Project Status
Interoperability										
	Collaborative Terminology Tooling & Data Management	●								Active
	Direct Secure Messaging Enhancements									Active
	eHealth Exchange	●								Active
	eHealth Exchange Enhancements	●	●							Active
	eMI Veteran Interoperability and Integrations (VII)	●	●			●		●		Active
	JLV - Get the Data Back (GTDB)		●							Active
Analytics / Population Health										
	Airborne Hazards and Open Burn Pit Registry (AHOBPR)									Active
	The Spinal Cord Injury & Disabilities Outcomes Application (SCIDO)									Completed
	ICD-10 Patient Treatment File (PTF)									Completed
	Military Eye Vision Injury Registry (MEVIR) Enhancements									Completed
Other - Non VE										
	VLER/VHIE Direct		●				●	●		Active

Implementation Risk Gap

Implementation Risk Gap – where specific tactical implementation plans (applications, feature sets) may not be met

Questions to consider:

- What VistA development projects are at risk of not meeting schedule or functional performance in the next two years?
- What open source products can be used to mitigate this risk?



Projects Implementing Feature Set 3 Elements

Additional implementation gap analysis for Feature Set 3 will focus on these projects:

- Enterprise Health Management Platform (eHMP)
- VistA Scheduling Enhancements (VSE)
- VistA Immunization Enhancements (VIMM)
- Pharmacy Reengineering (PRE)
- Fileman 22.2 Enterprise
- Meaningful Use – New VistA Data Elements
- VistA API Exposure 2.0
- VistA Services Assembler Phase 2 (VSA-P2)
- Collaborative Terminology Tooling & Data Management

Implementation Gaps

- **MASS cancelation is putting significant risk on meeting scheduling goals.**
- **Scheduling risks include development of standardized information sharing for scheduling data exchange, both internal and external to the VHA (outside MASS core function).**
 - **This has potential impact on VHA's ability to manage service demand and schedule staff resources.**
- **Feature set 3 program impact - VistA Scheduling Enhancements (VSE) project.**
- **OSS may be able to speed implementation and time to value for specific modules in the scheduling area, potentially in the information sharing area.**



Vision Risk Gap

Vision Gap – where the VE strategic vision may not be met by currently planned implementations

Questions to consider:

- What areas of VistA are not being developed due to other higher priority needs?
- What open source products can be used to fill this vision gap?

Vision Gaps

- **Population health functionality**
 - Capabilities for clinicians, managers, and researchers to define and manage patient populations
 - Placeholder for analytics and population health product line exists but no programs assigned so vision gap exists
- **Ability to use population level data to assess quality of care at the institutional protocol level (e.g., how well is one care team doing versus another with their pool of patients)**
 - Ability to use common/standard electronic clinical quality measures
 - Integrate broader care coordination activities with non-VHA healthcare professionals
 - Display, share, and disseminate population health reporting
- **OSS may be able to provide software and tools to fill this gap**

Q1 SWOT Candidates in Relation to Gaps

- **Appointment Postcard Notification Letter v4.0**

Enhances automatic notification functionality for upcoming scheduled patient visits

Adds functionality to fill a minor gap, already proven regionally, recommend further analysis and potential intake

- **OpenInfoButton**

Implements context-aware knowledge retrieval on demand from more than 30 online resources to aid in clinical decision support

Adds functionality to fill a potential gap. Proceed for further analysis and potential intake (if code is not already implemented or planned within eHMP)

Q1 SWOT Candidates in Relation to Gaps (cont.)

- **XU Digital Signature**

Consists of three files providing the interface between Delphi executables and the built-in Windows security functions released under the Apache 2.0 license

Does not provide new functionality, so does not fill a gap. Issue is copyright risk, additional assessment needed.

Next Steps



Next Steps

- **Mature gap analysis for Q2**
 - Identify additional gaps for OSS candidates
 - Gather sources of data for identifying additional gaps
 - Expand the content per approach
 - Increase depth of analysis
 - Initial integration with other products
- **Incorporate OSEHRA community input**
 - April OSEHRA Webinar will solicit community participation



Stakeholder Interviews

Anticipate conducting interviews with the following stakeholders:

- Jonathon Nebeker (VA)
- Alex Hacala (VA)
- Chris Rhodes (VA)
- Linda Hebert (VA)
- Michael O’Neil (HP)
- Wendell Ocasio (Accenture)
- Larry Albert (Accenture)
- Bill Synder (Accenture)
- Dave Parker (Defined IT)
- Rick Miller (Red Hat)
- Aneel Advani (Global Virtual Group)
- Oscar Diaz (HSPC)

