OFFICE OF INFORMATION AND TECHNOLOGY

OneVA EA Vision and Strategy

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EXECUTIVE SUMMARY

The Department of Veterans Affairs (VA) is undergoing a transformation to improve its support to our Veterans in the 21st century. To achieve VA transformation objectives, the supporting information environment must move from a disparate environment of stove-piped systems to a unified environment of integrated, interoperable business processes and technical services. Integration of the VA information is necessary to provide Veterans with high quality, efficiently delivered services that they have earned throughout the remainder of their experiences.

An Enterprise Architecture (EA) exists today as a loosely related set of information and functionality operating within Administration-specific architectures. Each is designed to provide quality service for specific portions of VA, but not strongly aligned when a Veteran's interests cross organizational or functional boundaries. Although substantial EA work has been accomplished to date, the VA needs, but does not yet have an enterprise architecture that effects an integrated information environment. This enterprise architecture will be used to provide the requisite information to guide future transformation activities. The OneVA EA is envisioned to become that integrated environment.

Per the Common Approach to Federal Enterprise Architecture (CAF), the outcomes/goals supported by effective use of an EA are: Improved Service Delivery, Functional Integration, Resource Optimization and Authoritative Reference. VA has recognized the four outcomes proposed by the CAF as consistent with meeting VA transformation objectives and adopted them to evolve the OneVA EA. VA understands that the key to achieving these outcomes is to have the right information available, accessible, visible and understandable to the appropriate decision-makers. Therefore, VA has adopted a question-based, data-driven approach to focus its efforts for developing the OneVA EA.

This question-based, data-driven approach requires fundamental changes in the way the VA plans, governs, develops and implements enterprise architecture. To address this fundamental change, VA will treat the OneVA EA as a program and evolve it as such. This entails addressing the OneVA EA program in eight areas; Governance, Principles, Method, Tools, Standards, Use, Reporting and Audit.

At the heart of this change is the stakeholder. Collaborative engagement of stakeholders is required to define an effective OneVA EA and transition to its useful application. Stakeholders will be involved throughout the lifecycle of the architecture; participating in the governance process, applying its principles, and supplying requirements that drive content development. Through strategic planning, investment management, and solution design processes, stakeholders will use the OneVA EA content to inform the decisions that will enable the VA to achieve its integrated objectives.

A clear, accepted, and shared strategy for the OneVA EA will allow VA Staff Offices and Administration efforts to be planned and implemented in a more coordinated and integrated fashion. When addressed in totality, the major sections of this document provide a complete picture of the Vision and Mission, Strategic Goals, and steps VA will take to create the authoritative information asset base known as the OneVA EA.

1 INTRODUCTION

The VA is a large organization with a diverse and complex mission, providing healthcare, disability benefits, pensions, home loans, life insurance, and educational assistance to our nation's Veterans. It also runs the nation's largest cemetery system and operates corporate services and capabilities. Currently, the VA aggregates the services and capabilities of the Staff Offices with the three Veterans Administrations: Veterans Health Administration (VHA); Veterans Benefits Administration (VBA); and National Cemeteries Administration (NCA). This provides a holistic vision of the VA necessary to achieve the integrated objectives of the Department.

The VA has embarked on a transformation to improve its support to our Veterans. To accomplish this transformation[1], the VA Secretary, Eric K. Shinseki, has established three integrated objectives (refer to sidebar).

VA's Integrated Objectives

1. *Make it easier for Veterans and their families to receive the right benefits, meeting their expectations for quality, timeliness and responsiveness*
2. *Educate and empower Veterans and their families through proactive outreach and effective advocacy*
3. *Build our internal capacity to serve Veterans, their families, our employees, and other stakeholders efficiently and effectively*

Reference: Department of Veterans Affairs VA Strategic Plan Refresh FY2011-2015

Only a more efficient and better-integrated VA enterprise can achieve these objectives. At the heart of this transformational vision is an alignment of strategic direction, operations, technology, and data that is methodically designed, aggregated and managed to deliver the right information to the right place, at the right time. Once this alignment is achieved, the VA can provide Veterans and their families a consistent experience for accessing information and services.

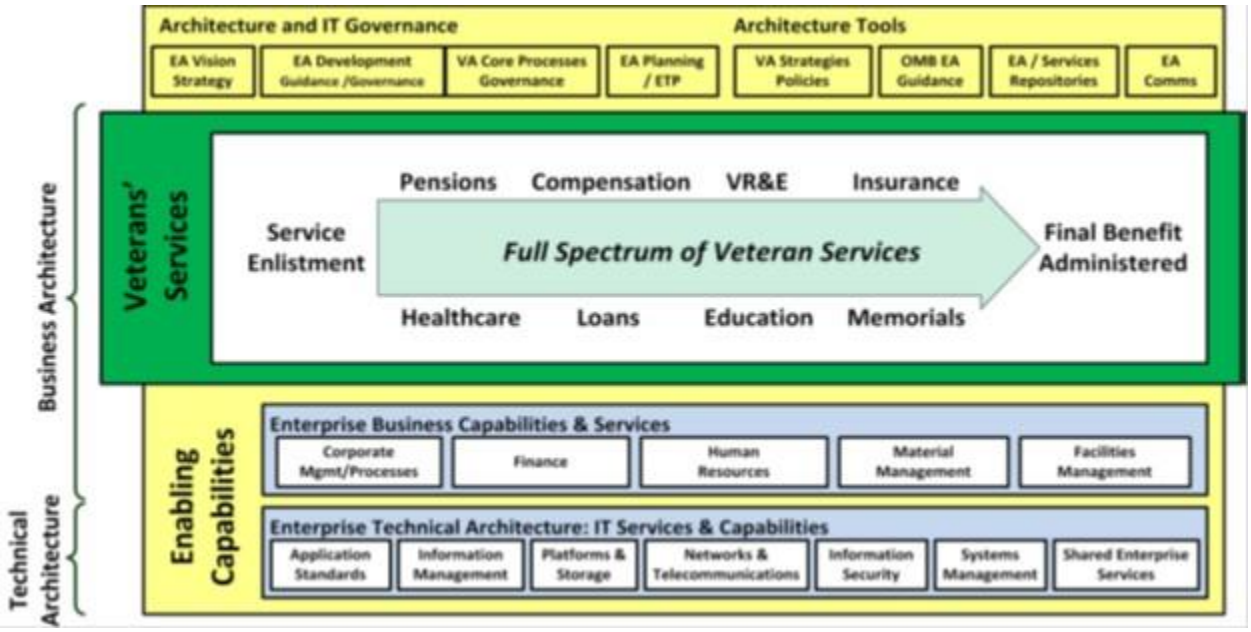
> *Only an enterprise-wide architecture can provide an integrated view of strategic, business, and technology domains across all lines of business, services, and systems – which is key to optimizing mission capabilities and resource utilization. At present, there is no other management best practice, other than EA, that can serve as a context for enterprise-wide planning and decision making.*[2]

The VA is envisioning its OneVA Enterprise Architecture (EA) as the mechanism for creating and housing the aggregation and alignment of its strategic, operational, and technology domains of information. Figure 1, OneVA EA Content Scope provides a conceptual depiction of the breadth of information to be made available via the OneVA EA.

[1] , These objectives are stated in the VA Strategic Plan Refresh fiscal year (FY) 2011-2015

[2] Common Approach to Federal Enterprise Architecture, May 2, 2012

Figure 1, OneVA EA Content Scope

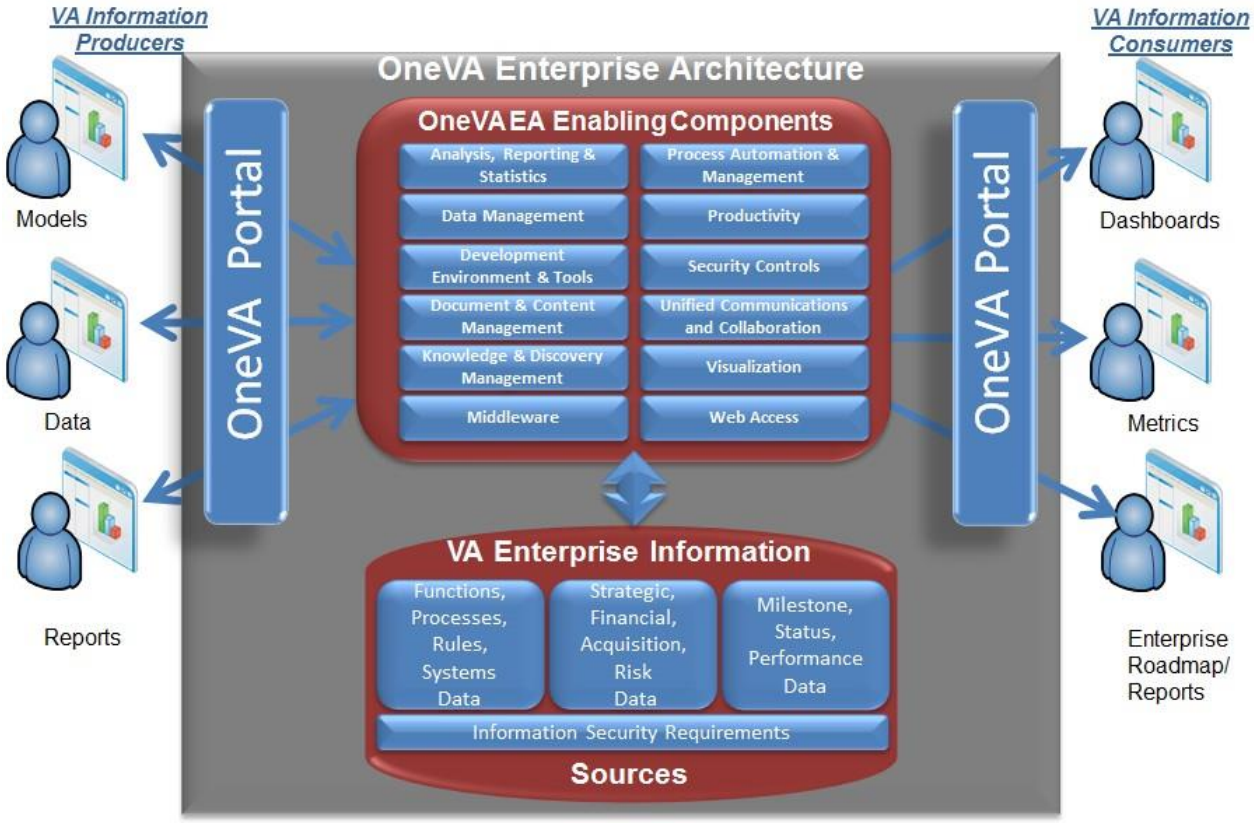


The OneVA EA responds to several drivers that affect its content. These drivers can be grouped into three categories: Transformational Needs, Legislative Mandates, and Policies and Directives. Transformational needs are existing business areas VA has identified that require enterprise wide changes in underlying strategy and processes. Legislative Mandates establish the statutory basis for building and using the OneVA EA. Lastly, Policies and Directives provide guidance in several areas ranging from EA frameworks to methods for assessing EA maturity. All of these drivers will be continuously revisited during the evolution of the OneVA EA. Appendix C, Drivers of the OneVA EA, lists several of the strategic plans, legislative mandates and policies that affect enterprise architecture within VA.

1.1 Vision of the OneVA EA

The vision of the OneVA EA is to be the authoritative reference for the requisite strategic, business and technology information used to make informed decisions for the Department of Veteran Affairs (see Figure 2, Vision for OneVA EA). This vision will be achieved via an ongoing, collaborative effort between the VA's Staff Offices and Administrations supporting the delivery of benefits and management of the Department. Together, these organizations document the current and desired relationships among business processes and IT and plan the transition to the desired state. They also develop business rules, development standards and decision- making criteria that support the transition to the desired state.

Figure 2, Vision for OneVA EA



1.2 Mission of the OneVA EA

The OneVA EA's mission is to serve as a strategic planning and management tool that helps VA's leadership chart the course for the Department's transformation into a 21st century organization. The OneVA EA products[3] are informed by and support the Department's business and operational visions, strategies and missions. It will provide information to the VA's capital planning and investment control processes to help guide the investment lifecycle to ensure alignment of technology with strategic priorities. Using the OneVA EA in this manner also enables the VA to identify areas of redundancy and duplication within business processes and systems thus providing invaluable support to portfolio management.

1.3 Guiding Principles

The OneVA EA is guided by a set of six global principles that are designed to enable enterprise mindsets and decisions and have been approved by the VA's Enterprise Architecture Council (EAC). These principles support the VA's drive to adopt enterprise approaches in developing and delivering services and capabilities to Veterans and VA employees and guide the development and use of EA. These guiding principles are:

[3] Products, in this context, are models, dashboards, reports and other formats in which VA enterprise information may be stored, exported and presented to users of the OneVA EA.

- **Mission Alignment.** VA information, systems and processes shall be conceived, designed, operated and managed to address the Veteran-centric mission needs of the Department.
- **Data Visibility and Accessibility**. VA Application, Service and Data Assets shall be visible, accessible, available, understandable and trusted to all authorized users (including unanticipated users).
- **Data Interoperability**. VA Information shall be made interoperable through data standardization, including the identification, designation, and utilization of authoritative sources.
- **Infrastructure Interoperability**. VA IT Infrastructure shall be made interoperable through definition and enforcement of standards, interface profiles and implementation guidance.
- **Information Security.** VA shall provide a Secure Network and IT environment for collaborative sharing of information assets (information, services, etc.) with Veterans, their families and other partners, including (among others) Federal agencies, third party service providers, academia, researchers and businesses.
- **Enterprise Services.** VA solutions shall utilize enterprise-wide standards, services and approaches to deliver seamless capabilities to Veterans, facilitate IT consolidations through reuse, and simplify the use of Veteran functions.

1.4 Purpose of the Vision and Strategy

The purpose of this document is to provide a description of the future direction of the OneVA EA[4]. This description comprises the supporting principles that guide and constrain development and use, goals/outcomes that guide content and evolutionary elements for achieving the OneVA EA's mission.

Stakeholders should use this document to gain an overall awareness of the high-level, enterprise-guiding principles for the OneVA EA. It can also be used as the basis for developing specific implementation activities to support the OneVA EA. This document is not intended to be a summary of detailed VA directives in support of the OneVA EA.

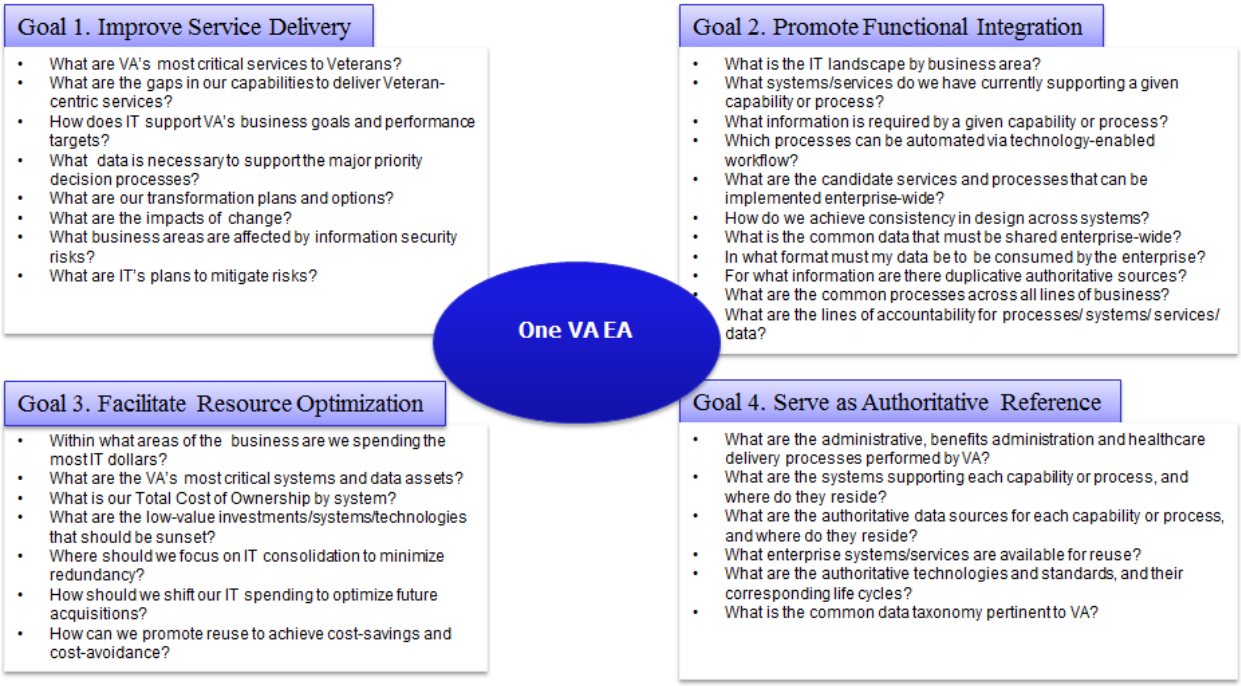
[4] Other lower-level details describing the tactical operations for OneVA EA governance, configuration management and measures/metrics to gauge effectiveness of the OneVA EA will be contained in other documents (e.g., Configuration Management Document [CMD], Architecture Development Methodology [ADM], OneVA EA Style Guide)

2 STRATEGIC GOALS/PURPOSES

The Common Approach to Federal Enterprise Architecture (CAF 2.0) lists the following as the primary outcomes enabled by developing and using EA: a) Service Delivery; b) Functional Integration; c) Resource Optimization; and d) Authoritative Reference. VA has recognized the four outcomes proposed by CAF as consistent with meeting VA transformation objectives and adopted them to evolve the OneVA EA. This recognition and adoption enables the OneVA EA to serve as a value-added enabler of these outcomes. VA understands that the key to achieving these outcomes is to have the right information available, accessible, visible and understandable to the appropriate decision-makers. Therefore, VA has adopted a question-based, data-driven approach to focus its efforts for developing the OneVA EA.

This approach is based on asking the right questions (i.e., the questions most relevant to VA business and IT stakeholders for their specific use) and discerning the data required to answer the questions. This data, in addition to the context gathered via the questions, represent the information that must be captured within and visualized by the OneVA EA. Figure 3, Outcomes/Goals Supported by Use of the OneVA EA, displays the strategic goals/outcomes to be supported by the OneVA EA and some of the associated questions that must be answered to achieve the goals.

Figure 3, Outcomes/Goals Supported by Use of the OneVA EA



The four primary OneVA EA goals, the related activities, and key performance indicators are described in more detail in the remainder of this section.

Goal 1. Support Improved Service Delivery

As mentioned in the introduction, the VA aggregates capabilities and services from the Administrations and Staff Offices to provide benefits and services to our Veterans. Therefore, one of the goals of the

OneVA EA is to support VA's efforts to improve delivery of these services to its Veteran customers. This requires a coherent and consistent understanding of the VA programs and service performance as well as agile planning and development processes.

The VA is moving to an IT shared services strategy that will result in a more secure, robust, reliable, rapidly scalable, efficient and interoperable infrastructure to support seamless service delivery. The OneVA EA will enable the VA to move to this shared environment through the identification of the needed connectivity and computing capabilities that will allow all users to access, share, and act on information required to accomplish the mission. In addition, the OneVA EA supports a shared services strategy through identifying common, enterprise-wide standards for interfaces, networking, and IT infrastructure, which provides greater flexibility and interoperability within VA.

Activities	**Value Added Outputs**
• Establish the VA enterprise-wide services registry. • Identify the authoritative data sources for the common data and document that information within the OneVA EA. • Identify the VA's most critical systems and data sets and assess their vulnerabilities. If needed, develop new capabilities for resilience. • Integrate opportunities for existing, new, and joint (VA, DoD and other mission partners) systems.	• Number of shared services identified and documented within the OneVA EA. • A synchronized suite of (specified) enterprise shared services that are visible, accessible, understandable, and trusted. • Identification of common data across VA and the functions and processes that use it.

Goal 2. Support Functional Integration/Interoperability

VA programs, systems and services are some of the major mechanisms used to carry out the mission. Interoperation of these mechanisms is paramount to the success of the VA. The OneVA EA must capture both the context (strategic, business and technology) for the way they "fit within the enterprise" as well as the requisite standards that enable interoperability.

Activities*	**Value Added Outputs**
• Identify and document the processes that cross Agencies and Administrations in the OneVA EA. • Identify and document the relationship of the VA systems to the cross-Agency and cross-Administration processes. • Establish a metadata registry to house and manage the data standards associated to the information that	• Number of cross-Administration and cross-Agency processes that have been documented and standardized within the OneVA EA. • Number of common Agency and Administration functions for which requisite data have been identified and documented within the OneVA EA.

Activities*	Value Added Outputs
must be shared across Agencies and Administrations.	

** Note: Activities that support Goal 1 also contribute to the accomplishment of this Goal.*

Goal 3. Facilitate Resource Optimization

With the current Federal Government trend of decreasing budgets and desired improvements in service delivery, Agencies are forced to find out ways to do more with less. This means that Government entities must implement leading practices for planning and investment management. The ability to discover available resources (people, processes, technology), and determine where these resources are being used and the funds being expended on them is critical to VA's ability to optimize its resources.

Activities*	Value Added Outputs
• Integrate use of the OneVA EA into the VA's Strategic Capital Investment Planning (SCIP) process. • Integrate use of the OneVA EA into the portfolio management process. • Integrate use of the OneVA EA into the VA's Project Management Accountability System (PMAS) processes. • Define and document the different "buckets of information" that will constitute the VA portfolios. • Identify and document the different owners of the VA portfolios. • Acquire and integrate requisite technological capabilities to enable the OneVA EA to capture, manage and visually represent the aforementioned information.	• Ability to visualize VA IT from a portfolio perspective. • Ability to visualize VA processes from a portfolio perspective. • Ability to "mash-up" budget data with the process and IT portfolio data. • Ability to discern redundancies from an initiative perspective. In other words, an ability to see all current and future initiatives and where there is overlap. • Ability to discern redundancies from process, data and system functionality perspectives.

** Note: Activities that support Goals 1 and 2 also contribute to the accomplishment of this Goal.*

Goal 4. Serve as Authoritative Reference

The value of information made available to the VA's decision-makers is directly proportional to the quality of that information and the degree of trust the decision-makers have in the information. In order for the OneVA EA to achieve its vision it must be viewed as an authoritative reference for the information it makes available to its end-users. The OneVA EA's integrated views of strategic goals, mission & support services, and data and information technology must provide the requisite information

to enable it to serve as the authoritative reference for issues of ownership, management, resourcing, performance goals and even design and documentation of systems and services. This means that, in addition to the typical strategic, business and technical information, it must also contain and enable discovery of information assurance requirements and security controls mandated by appropriate Federal guidance[5].

Activities*	**Value Added Outputs**
• Identify and define IA attributes for the different pieces of information made available via the OneVA EA. • Define and implement a Configuration Management plan for the OneVA EA such that data quality and information security are not compromised.	• The extent to which the OneVA EA contributes to the VA's Customer Data Initiative (CDI). • Ability to identify authoritative data sources and where they are used in VA processes. • Ability to identify authoritative data sources and the specific data for which they are authoritative. • Ability to identify, document and make available standard interfaces to target VA enterprise systems. • Ability of system and solution developers to extract information assurance and other security requirements from the OneVA EA.

[5] Examples of this guidance are National Institute of Science and Technology (NIST) Special Publications 800-37, 39, 47, 53, and 144; Federal Information Processing Standards 199 and 200; the FEA Security Reference Model

3 EVOLVING THE ONEVA EA

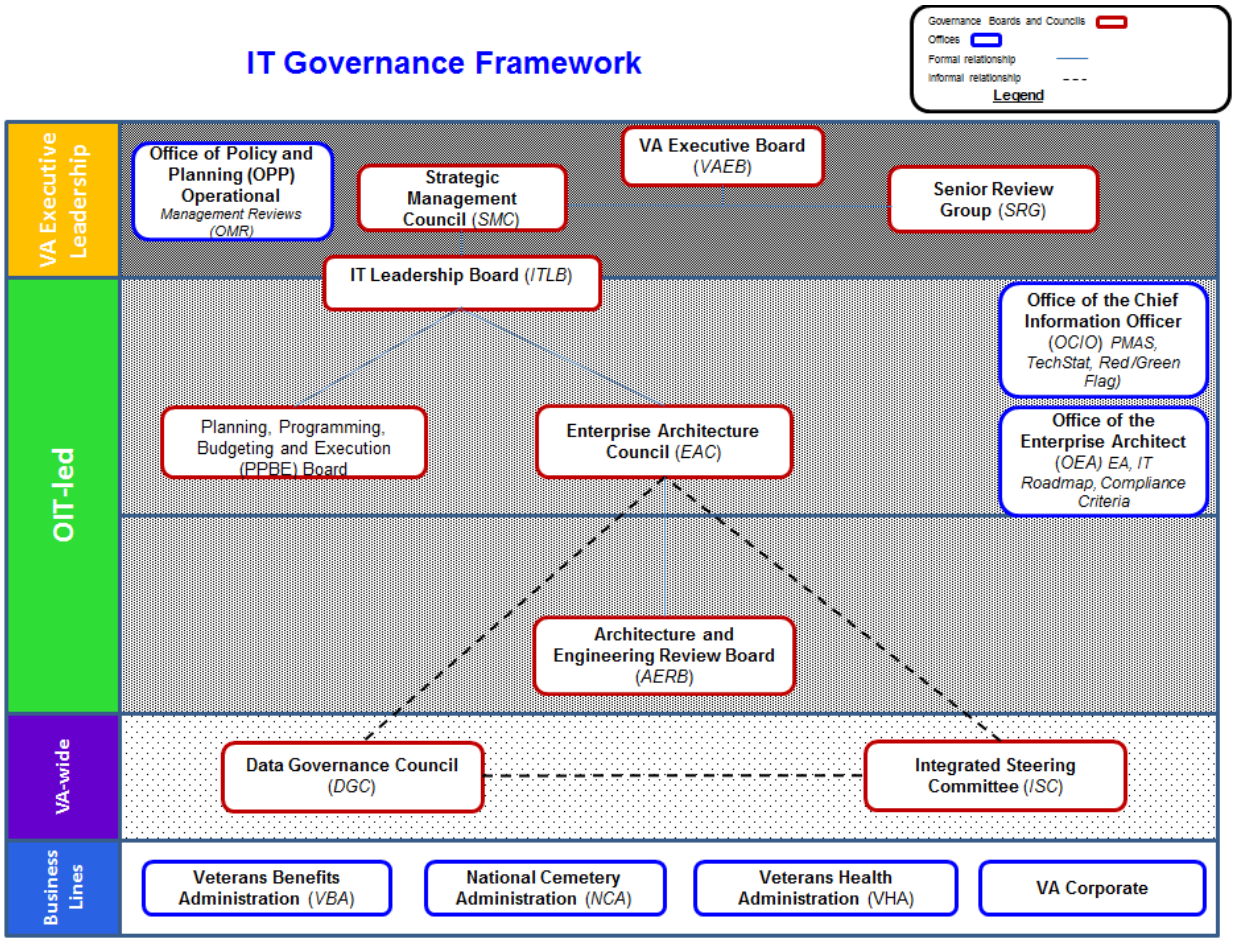
In order for the OneVA EA to achieve its vision and mission it must mature in several areas while improving its value to the Administrations and Staff Office users of its information. Per the Common Approach to Federal EA, there are eight basic elements of an EA program. They are depicted in Figure 4, Eight Elements of the OneVA EA Program. The following sections provide descriptions of what the VA is doing to evolve the OneVA program in each element.

Figure 4, Eight Elements of the OneVA EA Program

3.1 Governance

Governance comprises the planning, decision-making, and oversight processes and groups that will determine how the One VA EA is developed, verified, versioned, used, and sustained. The VA has identified several groups that must interact to enable the OneVA to achieve its mission in support of VA transformation. The groups and their relationships are depicted in Figure 5, Governance Structure for OneVA EA.

Figure 5, Governance Structure for OneVA EA



As mentioned earlier in this document, part of the strategy for the OneVA EA is to integrate it into the strategic planning, portfolio management and PMAS processes. In order for this to take place, multiple executive level offices and boards[6] must be aware of and provide strategic guidance to the offices and boards responsible for and participating in the development of the OneVA EA[7]. Roles and responsibilities of the different boards that impact the EA are described in Table 1, Responsibilities of OneVA EA Governance Groups.

Table 1, Responsibilities of OneVA EA Governance Groups

Governance Board or Council	Description
IT Leadership Board	Sets Department-wide information, security and technology direction based on business and technical requirements.

[6] Executive level offices and boards are the Office of Policy and Planning (OPP), Strategic Management Council (SMC), Veteran's Affairs Executive Board (VAEB), Senior Review Group (SRG), Planning, Programming, Budgeting and Execution Board (PPBEB), Information Technology Leadership Board (ITLB)

[7] Offices and boards responsible for building the OneVA EA are the (i.e., Office of the Enterprise Architect (OEA), Enterprise Architecture Council (EAC), Architecture and Engineering Review Board (AERB))

Governance Board or Council	Description
Planning, Programming, Budgeting and Execution Board (PPBE)	Confirms business needs and requirements, oversees risk, reviews funding costs and investments, and enables the business lines to achieve the Department's overall goals. It performs these functions through the process of preparing and recommending the Multi-Year Program (MYP), and in the near-term, through budget formulation and monitoring budget execution. The PPBE serves as the primary governing body making recommendations to the Information Technology Leadership Board (ITLB).
Integrated Steering Committee (ISC)	Supports the integration of multiple opportunities across the major initiatives within VA, with participation from the three Administrations.
Data Governance Council (DGC)	Guides the enforcement of VA data standards and data governance policy for every information technology project and business process initiative.
Enterprise Architecture Council (EAC)	Serves as principal oversight body for VA's enterprise architecture, its implementation and governance. The EAC decides what should be developed and managed as part of the "enterprise" architecture; what can be developed and managed at the "segment" level; additions, deletions, or changes to VA segments; and priorities for the development of architectural content. The EAC also ensures that the build structure is adhered to by reviewing and validating the planned, recurring releases of the EA. Its membership includes senior level participants from across the VA's Administrations and staff offices as well as each functional area within the Office of the VA CIO.
Architecture and Engineering Review Board (AERB)	Evaluates new investments for compliance against established "architecture compliance" standards. The board is also responsible for granting and tracking waivers to projects and programs and tracking the time period of usage of technologies not contained in, or approved by, the Technical Reference Model (TRM). The AERB recommends and offers the EAC assessments of compliance and risk in moving new efforts through the development cycle into production.
Enterprise Architecture Working Group (EAWG)	Led by the Director, Enterprise Architecture, the EAWG is comprises functional architects and process managers from across VA. It directly supports the VA Chief Architect and the EAC activity in proposing and evaluating EA methods, standards, rules and policies. It also serves as a forum to raise and discuss implementation issues related to OneVA EA development and maintenance.
Office of the Enterprise	The OEA facilitates the governance process used to guide and build

Governance Board or Council	Description
Architect	the OneVA EA. In this role it chairs the EAC and EAWG to support OneVA EA evolution to enable continuous improvement in its support of the VA's mission.

Going forward, the VA will employ an integrated Governance model that emphasizes a multi-level planning process that recognizes the strategic and tactical levels of governance required to successfully develop, deliver, and use a value-added OneVA EA.

The VA will leverage the priorities as identified by the Administrations and the ITLB to document the target business and IT environments of the VA. This represents the strategic level of the planning process. These priorities have to be broken down into smaller-scoped priorities that can be defined and scheduled for incorporation into the OneVA EA. Different releases of the OneVA EA will be managed according to these smaller-scoped priorities. This represents the tactical level of the planning process. The EAC and EAWG are directly involved in both levels of the planning process[8] .

3.2 Principles

Principles represent the criteria against which potential investment and architectural decisions[9] are weighed. The OneVA EA Program is guided by the six global principles as outlined in Section 1.3, Guiding Principles. These principles support VA's drive to adopt enterprise approaches in developing and delivering services and capabilities to Veterans. The VA will adhere to these principles when using the OneVA EA to support capital planning, portfolio management and PMAS processes.

3.3 Method

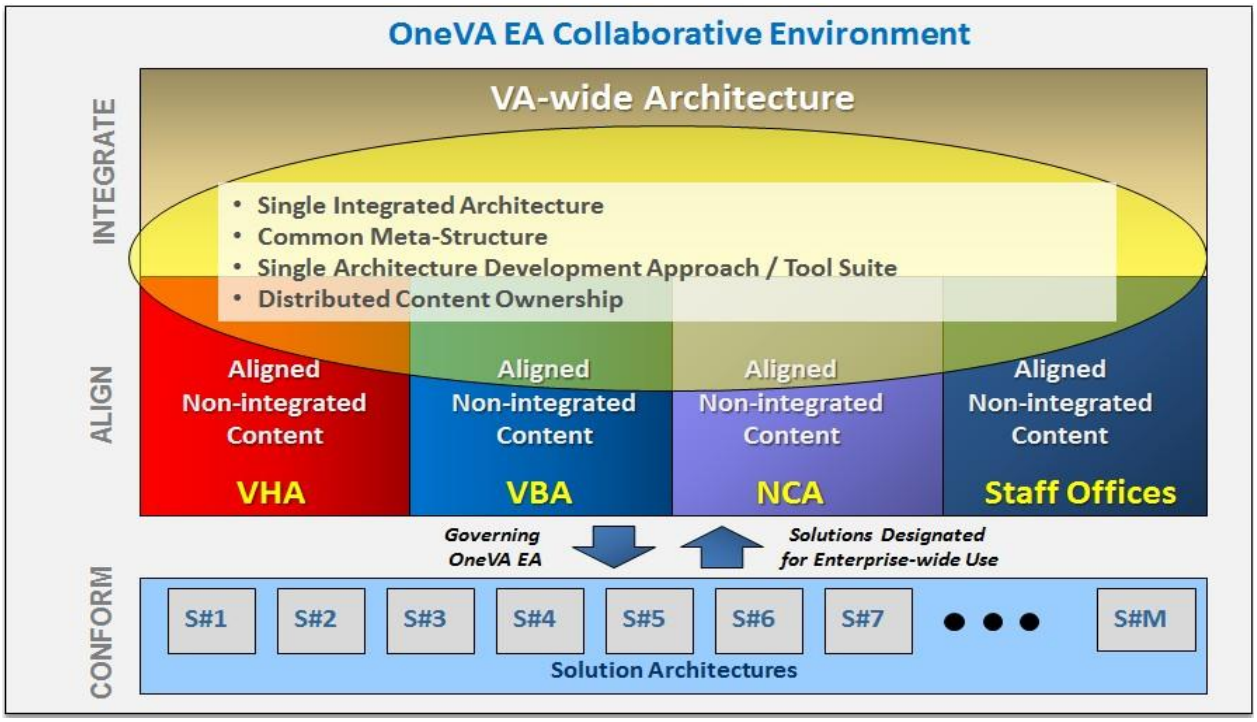
The VA will develop and manage the OneVA EA using a federated method[10] as shown below in Figure 3-3, Conceptual Federated OneVA EA Environment. This method includes a governance component necessary to ensure that the OneVA EA is consistently developed to support the evolving business and IT needs of the VA. Due to this governance component, it is important to clearly describe the roles and responsibilities of the Office of Enterprise Architecture (OEA) and its Chief Architect in shepherding the federated process/method. This section begins with a description of the relationship between the OEA and other architects, functional business process owners and other EA stakeholders across the Department. It follows this description with a description of the more tactical method used to develop each iteration of the OneVA EA.

[5] Please refer to the OneVA EA Governance document for more detailed descriptions of the Governance process and its supporting Offices and Boards.

[9] These same principles are used to determine the current and future technologies that are part of the OneVA EA tool suite.

[10] OI&T/ASD will be publishing a Federation Strategy that will provide more detail on how the VA will use the federated model to create and maintain the OneVA EA.

Figure 6, Conceptual Federated OneVA EA Environment



Organized into two directorates, 1) Enterprise Architecture and 2) Strategy, Planning and Accountability, the OEA has broad responsibility for: enterprise strategy and transformation leadership, developing the EA to meet stakeholder needs and ensuring appropriate use of the EA across the Department. The VA Chief Architect owns the overall framework for the OneVA EA, including standards, policies, and rules for the EA development methodology, tools, and repository. This enables the VA Chief Architect to ensure:

- the integrity of architectural development processes
- content of EA products provides the best possible information and guidance to IT projects and stakeholders, and
- system development efforts are properly aligned with program/business unit requirements.[11]

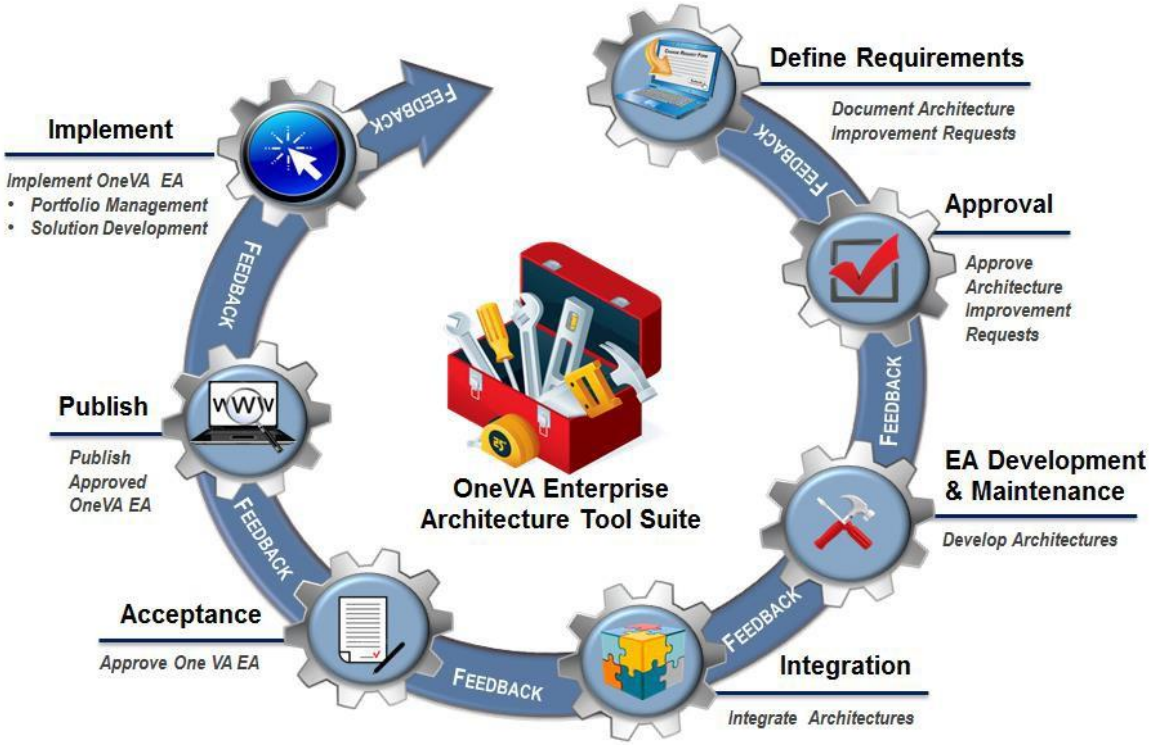
The OEA is responsible for working with Administrations and staff offices to ensure necessary EA content is developed and populated by the various EA stakeholders as well as identifying inconsistencies, gaps, overlaps and redundancies in content and working with EA stakeholders to resolve them.

The VA's Administrations and staff offices own and are responsible for all EA content, including all business rules and other criteria by which programs and investments are evaluated and held accountable. As the integrated VA EA tool environment is rolled out, the Administrations will be able to directly maintain and add content to their respective architectures using VA standards and tools that automatically feed and update the overall OneVA EA.

[11] Department of Veterans Affairs, VA Directive 6051, "Enterprise Architecture", July 21, 2002

Different releases of the OneVA EA will be incrementally built using the build cycle defined in Figure 7, OneVA EA Build Cycle. The establishment of the OneVA EA framework and collaborative OneVA EA information environment are prerequisites for implementation of the build cycle described below. The framework provides standards and meta-structure that will be used to integrate OneVA EA data, models and products. The collaborative OneVA EA information environment provides the common methods and tools that will be used to develop the EA content.

Figure 7, OneVA EA Build Cycle



The build approach is structured to ensure that the following are considered before expending resources building EA content: (1) stakeholder/user needs are defined and validated, and the value proposition is established; (2) critical dependencies are known and can be accommodated with acceptable risk; (3) alternatives that leverage existing OneVA EA content have been assessed; and (4) work can be accomplished within established constraints (e.g., workforce skills, availability of required Subject Matter Experts, budgets, timeframe)[12]. Although the build approach is sequential in nature, it does not prevent there being concurrent build cycles. For example, definition of the requirements for a subsequent release may begin while the current release is being reviewed for acceptance and eventual publishing. Implementing the method in this manner enables the OneVA EA to be developed in the most efficient manner possible.

[12] Refer to the OneVA Architecture Development Methodology (ADM) for more details on the development approach.

3.4 Tools

The tools that the VA selects for use within the OneVA EA information environment should not only develop and store documentation, but must be data centric and meet stakeholder needs for reports and data analytics to support planning and decision-making. Therefore, the OneVA EA environment must comprise a suite of tools that provides multiple capabilities that offer various methods of data entry, data manipulation, data storage, reporting and visualization.

The principles identified in Section 3.2 have been and will continue to be used to guide the tool suite implemented as part of the OneVA EA environment. The tools must enable linkage of model data with strategic, budget, acquisition and PMAS data to enable a rigorous reporting and visualization capability needed to support a wide range of users. The following figure provides a conceptual overview of the planned EA tool set capabilities.

Figure 8, Conceptual Overview of Enterprise Architecture Tool Capabilities

3.5 Standards

Architectural standards apply to all areas of EA practice and are essential to achieving interoperability and resource optimization through common methods for analysis, design, documentation, and reporting. The OneVA EA views standards from a use perspective. There are standards that will be used to constrain how the OneVA EA content is created, stored and visualized via the tool suite (e.g., Business Process Modeling Notation). There are also standards that are used when applying the EA content within the VA's decision processes (e.g., data and interface standards).

Because the OneVA EA is being developed in a federated manner as described in Section 3.3, it is imperative that the standards for creating and storing the OneVA content be identified and enforced. The following are content areas where standards will be identified and enforced to constrain OneVA EA content.

- Business function modeling (i.e., functional decomposition)
- Business process modeling
- Logical data modeling
- Business and systems rules definition/description
- System interface descriptions, and the
- Overall framework for guiding OneVA EA core products and content

As previously mentioned, the OneVA EA will also contain standards used to enable it to inform the decision processes mentioned in Section 3.1. For these purposes, the following types of standards will be identified and documented as requirements within the OneVA EA.

- Data standards
- Information security standards
- Web Services standards
- Standard system interfaces
- Standard service interfaces
- Infrastructure standards

The standards that are more technical in nature (e.g., those used to define web services) will be adopted from standards development organizations such as the National Institute of Science and Technology (NIST), the Institute of Electrical and Electronics Engineers (IEEE), the International Enterprise for Standardization (ISO), and the World Wide Web Consortium (W3C). Standards deemed required within the VA environment will be housed and managed via the OneVA EA Technical Reference Model and enforced through the established governance processes.

3.6 Use

Use of the OneVA EA information, criteria and requirements will become embedded in core processes and decisions at all levels of VA's management. Identifying specific uses and understanding the changes required for decision makers to appropriately use the OneVA EA will be critical to its success. Per Section 2, the VA is following a question-based approach to identifying and defining content for the OneVA EA. This approach emphasizes the involvement of the stakeholders/end-users of the architecture as they are the sources of the questions that drive the content. This approach also aligns well to the data-centric mantra of the VA in that specific sets of data must be identified, defined and made available to support answering the questions. As evidenced by Table 2, OneVA EA Uses Mapped to Strategic Goals, these sets of data can be used across different processes, thus supporting multiple uses and most importantly, multiple strategic goals.

Table 2, OneVA EA Uses Mapped to Strategic Goals

	Supported Goals			
One VA EA Uses	**Improve Service Delivery**	**Promote Functional Integration**	**Facilitate Resource Optimization**	**Serve as Authoritative Reference**
Investment/Portfolio Management			●	●
PMAS	●	●	●	●
Strategic Planning	●	●	●	●
Solution Design		●		●

Strategic Planning and Investment/Portfolio Management represent the top-level uses of EA content. The strategic level of the OneVA EA method as described earlier in this section enables the OneVA EA to capture the information required to support these uses. PMAS is a performance-based project management discipline which is mandated by the Assistant Secretary for Information & Technology (AS/IT) for product delivery projects. It is consumed within the Investment Management process and is very much akin to the system development lifecycle. Capturing the PMAS information within the OneVA EA environment enables the VA to extend the line of sight from strategy to solution design, which is also a desired use of the architecture. Lastly, the question-based approach to Enterprise Architecture, in conjunction with the data-centric focus, emphasizes that VA must ensure implementation of the appropriate security controls with respect to its systems and data. This underscores the need for investments entering the PMAS process to have enterprise security requirements “baked in" and reflected in the OneVA EA via role-based security models and information assurance attributes.

The intended use of the OneVA EA drives both the content and the technical capabilities used to store, manage and visualize the content. As evidenced above, the VA understands that there are several uses of the enterprise architecture, each with its own set of questions and data required to answer them. Therefore, the VA will not start out to have the OneVA EA “be all things to all people”. The OneVA EA will be developed according to uses as prioritized by VA leadership in coordination with the Administrations and Staff Office stakeholders. Developing the EA in this manner ensures that the architecture can adjust to changes in strategic direction while delivering value-added information to VA decision-makers.

3.7 Reporting

The OneVA EA Reporting capabilities entail not only providing a repository of architecture artifacts, plans, solutions, and other information (a “pull” model), but also regular reporting on capabilities and options through the lens of the architecture, delivered in a standardized way and from dashboards for overall progress and health (a “push” model). The enterprise architecture decision-support reports and data analytics will be available for viewing through a role-based portal and/or can be exported in various formats for presentation through other delivery mechanisms (e.g., Sharepoint, email, etc).

By leveraging the OneVA EA reporting and data analytics capabilities, stakeholders will be able to find answers to strategic and operational questions (see Figure 3: Outcomes/Goals Supported by Use of the

OneVA EA) and make informed decisions in support of costing and budget planning, change management, operations management, performance management, risk management, and workforce management as detailed in Table 3, Potential OneVA EA Business Reports.

Table 3, Potential OneVA EA Business Reports

Type of Report	Description
Cost/Budget Analysis	OneVA EA will "mash-up" financial data with architecture data
Change Management Analysis	Visualize "line of sight" to support impact analysis of business and IT decisions
Operations Management Analysis	Linkage of PMAS data to "architecture" data combined with the financial data contributes to generation of enterprise roadmap
Performance Management Analysis	Integration of Performance Measures and linkage to processes and systems enables identification of problem areas that may warrant focus and investment
Workforce Management	Definition of target business and IT environments will yield requirements for the target workforce and contribute to Human Capital Planning.

3.8 Audit

OneVA EA takes a holistic view of strategic IT and business planning and IT operations, and bases its approach to EA audits on the Government Accountability Office (GAO) Enterprise Architecture Methodology Maturity Framework (EAMMF), the Office of Management and Budget (OMB) Federal Enterprise Architecture (FEA), as well as frameworks and industry best practices and academic research. Periodic audits of an EA program will help the organization increase the completion, use and results yielded by the program, and gradually increase the maturity of the program from Stage 0 to Stage 6 of the EAMMF, as listed below.

- Stage 0 – Creating OneVA EA awareness
- Stage 1 – Establishing OneVA EA institutional commitment and direction
- Stage 2 – Creating the management foundation for OneVA EA development and use
- Stage 3 – Developing initial OneVA EA versions
- Stage 4 – Completing and using an initial version for target results
- Stage 5 – Expanding and evolving the EA and its use for institutional transformation
- Stage 6 - Continuously improving the EA and its use to achieve Staff Office optimization

The VA has established the EAC to lead ongoing communication with VA leadership and OneVA EA stakeholders and foster greater awareness of the capabilities offered by the architecture. This also contributes to maintaining institutional commitment and direction. The Office of the Chief Architect, via the previously described elements, has established the initial foundation for OneVA EA development and use. The VA will build on this foundation and report its progress using the EAMMF as its guide.

4. CONCLUSION

This document reflects the over-arching direction and priorities for the OneVA EA program, which are aligned to VA's strategic priorities and to best practices in the Enterprise Architecture discipline.

The VA is committed to successfully delivering the benefits and health care our nation's Veterans deserve. The OneVA EA assists VA achieve its strategic goals and objectives by enabling the effective communication and management of people, technology and processes. The OneVA EA program's primary goals are to improve service delivery, promote functional integration, facilitate resource optimization, and serve as an authoritative reference of enterprise information.

The development and use of a strategic information asset base such as the OneVA EA is integral to VA's ability to both capture and make available the information required to support its integrated objectives. VA recognizes that in order for the OneVA EA to realize its vision and mission it must evolve in several aspects that range from governance, to tools, to the ways in which its content is reported.

Intended use of the OneVA EA guides the identification and definition of information captured as content within the OneVA EA. This emphasizes stakeholder involvement early and often within the OneVA EA development process. Also, because the OneVA EA will respond to different types of stakeholders with different types of uses, the development process must be flexible, repeatable and supported by a robust tool suite that offers a wide range of capabilities.

The envisioned OneVA EA tool suite capabilities, when combined with VA's strategic, business and systems information, form an invaluable resource to support strategic planning, investment management and solution design within the Department of Veteran Affairs.

5. REFERENCES

1. Department of Veterans Affairs (VA) Enterprise Architecture (EA), VA Directive 6051, February 1, 2012
2. Department of Veterans Affairs VA Strategic Plan Refresh FY2011-2015, Office of the Secretary
3. The Common Approach to Federal Enterprise Architecture, May 2, 2012
4. One VA Enterprise Architecture Tools Strategy, Assessment and Evaluation, December 10, 2012
5. Office of Architecture, Strategy and Design (ASD) OneVA EA Governance Concept of Operations, June 29, 2012
6. Building out the OneVA EA in FY13, February 13, 2012

APPPENDIX A ACRONYMS

Acronym	Definition
AS/IT	Assistant Secretary for Information & Technology
CAF	Common Approach to Federal Enterprise Architecture
CDI	Customer Data Initiative
DoD	Department of Defense
EA	Enterprise Architecture
EAMMF	Enterprise Architecture Methodology Maturity Framework
EAC	Enterprise Architecture Council
FEA	Federal Enterprise Architecture
FY	Fiscal Year
GAO	Government Accountability Office
IEEE	Institute of Electrical and Electronics Engineers
ISO	International Enterprise for Standardization (ISO)
IT	Information Technology
NCA	National Cemeteries Administration
NIST	National Institute of Science and Technology
OEA	Office of Enterprise Architecture
OMB	Office of Management and Budget
PMAS	Project Management Accountability System
SCIP	Strategic Capital Investment Planning
VA	Department of Veterans Affairs
VBA	Veterans Benefits Administration
VHA	Veterans Health Administration
W3C	World Wide Web Consortium

APPPENDIX B SUPPLEMENTAL INFORMATION ON USES

B.1 Inform Portfolio/Investment Management

The OneVA EA will guide and inform investment decisions to achieve improved mission and business performance. The OneVA EA will be a knowledge base that is used to capture the data and information that represents the existing OneVA EA assets and resources and the OneVA EA Staff Office and operational investments. The OneVA EA knowledge base will support follow-on analysis and decision-making. From an investment management perspective, three areas will be supported by the OneVA EA:

1. The OneVA EA can be used to articulate a knowledge context in which proposed initiative requirements can be captured, further elaborated, evaluated, and validated with respect to their fit and alignment with related requirements and strategic objectives.
2. By analyzing baseline and target OneVA EA products, analysis can be conducted that evaluates the adequacy of the baseline ("as-is") systems and processes to provide the capabilities described in the target ("to-be") EA. Similar analysis can also be performed relative to funded and unfunded initiatives in providing those capabilities. The resulting recommendations (i.e., terminations, new initiatives, redirection for current initiatives—including both material and non-material solutions) provide a well-described, justifiable, and defendable business case for investment. Investments may span the entire scope of the enterprise (e.g., hardware, software, research and development, business processes, and facilities).
3. For those initiatives that are funded to address capability gaps, the OneVA EA is an information and data source that can be used to inform decision makers of the details of the acquisition, the dependencies between solutions, and the anticipated future states of the enterprise. A well-structured EA will enable analysis to help eliminate unwanted duplicative efforts and support sound budget execution.

Success of this use is dependent upon establishing a culture that views acquisition, management and retirement of investments in terms of strategic enterprise value, capability performance, gap severity, risk and financial efficiency. Through federated efforts across the enterprise, the VA will become an organization that optimizes the value of investments by managing their contributions as part of capability-based portfolios.

B.2 Inform Project Management

PMAS is a performance-based project management discipline which is mandated by the Assistant Secretary for Information & Technology (AS/IT) for all product delivery projects. All VA IT projects that introduce new functionality or enhance existing capabilities within current systems in VA are considered to be delivering products. All development projects and those infrastructure projects that provide new capability fall under the management discipline of PMAS. The OneVA EA can support the PMAS process by providing valuable information that can be used as input to the Project Charter. The OneVA EA can also serve as a source for requirements to be documented within the Business Requirements Document (BRD). Once the appropriate systems and services information has been integrated and linked to the BFM, the OneVA EA can be used to support the Program/Project planning by providing information that can used to develop the Acquisition Strategy Plan. Once fully operational, the OneVA EA environment will make the information produced in support of the PMAS available and accessible to the VA stakeholders.

B.3 Support Strategic Planning

The strategic planning process at VA follows standard practices in government and industry and encompasses activities such as defining the mission and objective of the Department, performing an internal and external environmental analysis, defining goals and strategies, implementing the strategy and monitoring performance. OneVA EA can provide significant support in several stages of the strategic planning process thus becoming a valuable tool used to help realize the goals and strategic objectives outlined in VA strategic directives such as the Quadrennial Strategic Planning Process (QSPP). Stages of the strategic planning process are described as follows.

- Environmental analysis. The environmental analysis may include the following techniques.
    - Internal analysis of the enterprise
    - PEST Analysis (Political, Economic, Social, and Technological factors). It is very important that an organization considers its environment before beginning the strategic planing process.
    - SWOT analysis (Strengths, Weaknesses, Opportunities, and Threats). The main objective of this tool is to analyze internal strategic factors, strengths and weaknesses attributed to the organization, and external factors beyond control of the organization such as opportunities and threats.
    - Balanced Scorecards, which create a systematic framework for strategic planning;
    - Scenario planning, which to analyze the most salient use cases for the organization.
- Strategy definition. Based on the previous activities, the enterprise matches strengths to opportunities and addresses its weaknesses and external threats to develop a strategic plan. This plan may then be refined at different levels in the enterprise.
- Strategy Implementation. The selected strategy is implemented by means of programs, projects, budgets, processes and procedures. To support strategy implementation, OneVA EA supports the development of enterprise, segment and solution architectures which contribute to operationalizing the strategy.
- Evaluation and monitoring. The successful implementation of the strategy can only be accomplished by monitoring progress against goals and making adjustments and course corrections when necessary. As described in Section 6, OneVA EA can contribute to the development of performance metrics and Key Performance Indicators (KPIs), definition of target values, and capture of performance measurements.

B.4 Inform Solution Design

As the OneVA EA products begin to materialize and are adequately defined, stakeholders can leverage these products to measure, analyze, and conduct capability and integration analysis. These activities and associated informational products will give the VA the appropriate level of programmatic detail that creates clarity for decision makers and inherently reduces risk. Capability evolution and risk assessments will allow the VA to determine whether a specific capability provides a measurable improvement and to understand whether the benefits of an iterative development process can overcome the costs of redeploying new capabilities and systems and teaching new operational concepts. Capability specifications and partnerships with stakeholders will serve as key sources for the initial capability evaluations and risk assessments. Concurrently, these capability and risk assessments fuel architecture-based interoperability and integration issue analysis, experimentation, and capability evolution management analysis.

B.5 Inform IT Acquisition

The OneVA EA already contains the VA's Technical Reference Model (TRM) which contains the technical standards to which systems must adhere. The TRM can also be used as a guidepost for vendors doing business with VA, providing them with the standards approved for use at VA.

The VA Chief Architect will work with the IT Leadership Board and other appropriate stakeholders to define and document a target business and systems environment as part of the OneVA EA. In doing so, the OneVA EA can help the Department further leverage its enterprise architecture to procure better solutions and services, through:

- Support for VA's IT Portfolio Management processes (as described in Section 4.1);
- Development of a Transition Roadmap to drive the alignment of acquisitions to approved goals and timelines;
- Use of target architectures to provide input to analyses of alternatives as well as acquisition plans as mentioned in Section 2;
- Communication of VA's enterprise architecture objectives, both to internal and external stakeholders, including vendors.

As the OneVA EA matures, the level of collaboration and coordination with the IT Acquisition function is expected to increase. The end goals is to eventually have enterprise architects and acquisition officers jointly refine the architecture enabling architecture information to be used as input for acquisitions.

APPPENDIX C TRANSFORMATIONAL AND REGULATORY DRIVERS

The following table lists the different drivers of enterprise architecture within the VA. The drivers are grouped into three categories; Transformational Needs, Legislative Mandates and Policies and Directives.

Driver Type	Examples
Transformational Needs. Transforming the VA requires alignment and harmonization of transformation efforts. The EA provides the organizational construct required to enable transformational change toward the achievement of common mission outcomes.	• VA Strategic Plan Refresh for FY 2011-2015 • Addendum to the Department of Veterans Affairs (VA) Strategic Plan FY 2011-2015 • VA's IT Strategic Plan FY 2010-2014 • Veterans Health Administration Health Information Strategic Plan, Version 1.1, July 2011 • VBA Under Secretary for Benefits Strategic Plan: 2009-2014 • NCA National Cemetery Administration FY 2011-FY2015 Strategic Plan Some of the plans listed above (e.g., VHA HISP) will be updated in the near future. The OneVA EA will respond accordingly to these updates.
Legislative Mandates. Laws and regulations establish the statutory basis for using EA to enable enterprise transformation of Federal Agencies. They also contain constraints that are reflected as rules and requirements within the EA.	• Clinger-Cohen Act of 1996 • Patient Protection and Affordable Care Act of 2010 • E-Government Act of 2002 • Health Insurance Portability and Accountability Act of 1996 (HIPAA) • Government Performance and Results Act of 1993 (GPRA) • Government Performance and Results Modernization Act of 2010 • HIPAA Privacy Rule (April 2003) and HIPAA Security Rule (April 2005) • Federal Information Security Management Act (FISMA) of 2002. • National Defense Authorization Act for Fiscal Year 2003 and 2008
Internal and External Policies and Directives. Internal Policies provide guidance in several areas such as strategic planning and security. External governance organizations such as the Office of Management and Budget (OMB) and the Government Accountability Office establish policy and	• OMB Circulars A-11, A-130, and Memorandum M-06-02 • OMB Management of Federal Information Resources, and The Common Approach to Federal Enterprise Architecture, May 2, 2012 • GAO Enterprise Architecture Methodology Maturity Framework (EAMMF) v2.0 • Federal CIO Council Digital Government Strategy, May 23, 2012 • VA OIT Directive relative to IT Strategic Planning, April 23, 2009 • VA Directives for security (6212), Protected Health Information (PHI), Privacy (6600, 6507), and Section 508

Driver Type	Examples
directives that provide guidance that directs the implementation of EA within Federal agencies.	• VA IRM Policies and Directives