2. One-VA Enterprise Architecture – Applicability and Scope

This chapter defines the scope of the One-VA Enterprise Architecture from an overall perspective as the primary authoritative resource within the Department for enterprise IT. Since EA is being implemented as an ongoing process within the Department, this document identifies and describes the initial version (1.0) of the EA. Specific priorities are addressed within it and discussed and it details how the One-VA EA will evolve in subsequent incremental versions. The chapter also specifies the applicability of the One-VA EA for all IT projects to key processes across the Department including Capital Planning, Budgeting, Project Management Oversight and the day-to-day execution of Information Technology projects. It details specifically how the One-VA will be used in these key Department processes, and defines mandatory compliance requirements for all IT projects throughout their life cycle; from planning to in service use of the resulting IT system. The chapter concludes by discussing the Project Managers (PMs) perspective on the One-VA EA and how it supports, tasks, empowers and constrains PMs in the execution of their IT projects.

2.1 Scope

The One-VA EA is the primary authoritative resource within the Department of Veterans Affairs for enterprise IT throughout the entire life cycle of planning, programming, budgeting, development, integration, test/certification, deployment and in service support.

The primary purpose of the One-VA EA Project Document is to *inform*, *guide* and *manage* the decisions of the enterprise, especially as they pertain to IT investments. It is intended to serve as the primary authoritative resource within the Department of Veterans Affairs for enterprise IT throughout the entire life cycle of the project including the planning, programming, budgeting, development, integration, test/certification, deployment, and in service support. It addresses the entire spectrum of IT across the Department of Veterans Affairs. Sections 1.3 and 1.4 discuss the VA's approach to developing the One-VA EA from a general perspective, and VA's use of the Zachman Framework for Enterprise Architecture. VA's approach to the One-VA EA is top down, incremental and consistent with the hierarchical architectural views that are the building blocks of proven Enterprise Architectures. Using the perspective provided in sections 1.3 and 1.4, the scope of the One-VA EA is all encompassing from multiple viewpoints:

- The breadth addressed in the One-VA EA top-level program/business views span the operations of the entire Department.
- The six rows of the One-VA EA span the entire life cycle of IT systems, providing six increasingly detailed views from multiple perspectives.
- The six columns of the One-VA EA span the entire spectrum of concerns; first for business processes and then for IT systems at each level of abstraction.
- As discussed in sections 2.3 and 2.4 below, the One-VA EA is integrated into the critical Department functions of Capital Planning, Budgeting, and Project Management Oversight.

By using this business-focused top down approach used in the development of the One-VA EA, it provides a key mechanism for optimizing the program/business value and mission performance of the Department's systems. As one proceeds vertically down the architecture, it captures increasing levels of detail on all of the applications, processes, and infrastructures across the Department.

The governance structure and the Enterprise Architecture Council's efforts within the VA to develop and maintain the One-VA EA focus on the process of establishing and maintaining the One-VA EA as an ongoing activity, rather than focus on any specific event. This version 1.0 document of the One-VA Enterprise Architecture represents the initial effort in a continuing process of establishing and maintaining the One-VA EA. The priority established for this initial effort is to focus on those areas of the One-VA EA that most significantly impact the formulation of the Department's FY 2004 budget submission.

By keeping with the business-focused, top down approach, this initial effort establishes the top-level program/business views that span the entire Department by providing the key elements of the *Planner's View* (row one of the Zachman Framework, columns one, two, three and six (data, function, location and motivation), and the functional decomposition of the *Business Owner's* view (row two of the Zachman Framework, columns one and two (data and function). Since these top-level views are entirely functional, they encompass both the current (baseline) and desired (target) environments for IT systems across the Department.

Enterprise Business Functions (EBFs) and Key Enabling Functions (KEFs) have been established to organize the top-level views as follows:

<u>Enterprise Business Functions</u>

- Compensation
- Pension
- Vocational Rehabilitation & Employment
- Education
- Insurance
- Home Loan Guaranty
- Memorials & Burial
- Medical Care
- Medical Education
- Medical Research

<u>Key Enabling Functions</u>

- Finance and Accounting
- Acquisition & Material Management
- Information Technology
  - Telecommunications
  - Cyber Security
  - Data Center COOP
- Human Resources
- Training & Education
- Registration & Eligibility
- Contact Management

Version 1.0 of the One-VA EA also decomposes selected areas within these EBFs and KEFs beyond the top-level functional decomposition. The focuses of further development are areas that pertain to significant new project initiations or rebaselines in the planned FY 2004 budget submission. These areas include Telecommunications (rebaseline), Cyber Security (rebaseline), Data Center COOP (rebaseline), the Supplier Management within Finance and Accounting (rebaseline), Registration & Eligibility (new), Contact Management (new) and the Health Data Repository component of Medical Care (new). These areas have been the subject of a more detailed functional decomposition, identification of process threads (where appropriate),

reconciliation of redundancies and integration points (both within VA, and with other Federal Departments and/or Agencies), along with the establishment of an allocated functional baseline. This allocated functional baseline establishes the *Business Owner's View* of the desired (target) environments for these functions. As discussed in section 1.3, these allocated functional baselines provide the functional definition of the scope for desired (target) IT systems; guiding both the planning and budgeting for those IT systems and the execution of corresponding IT projects.

Version 1.0 of the One-VA EA also contains the initial Technical Reference Model and Standards Profile for the One-VA EA as Appendices B and C respectively. The TRM provides not only the layered services based definitions commonly found in such documents but also a three-tiered distributed systems architectural mapping of services and major systems components in the context of the overall One-VA distributed IT infrastructure discussed in section 2.3 below and again in much more detail in chapter 5 of this document. The Standards Profile provides a listing of authoritative IT standards adopted by the department for those technology areas where standardization is meaningful, recognizing that in some areas of IT, market conditions are such that 'de jour' standards either do not exist or are not sufficiently detailed or broadly adopted to provide the useful benefits of interoperability and portability. For those areas, it may be necessary to adopt product standards in execution of key projects, but that is an area beyond the scope of this document as it spans both technical and acquisition issues.

This document represents an initial delivery of the One-VA EA, and with it the start of an ongoing development process. Subsequent deliveries of the One-VA EA will build on this initial work product in the following three ways:

1. Refinement of previously delivered content. This will include completing the top-level business views of the Framework. It will complete the *Planner's View* in the time and people columns of the Framework (columns four and five) and the *Business Owner's View* in the location, people, time and motivation columns of the Framework (columns three through six) wherever necessary. In addition it will evolve the definition of EBFs and KEFs as the business of the Department evolves.

2. Completion of the functional allocation across all areas of all EBFs and KEFs. Whereas version 1.0 pragmatically focuses on functional areas important to significant new starts or rebaselines in the FY 2004 budget submission in order to functionally define their scope in the limited time leading up to that submission, subsequent deliveries will expand this coverage to include a full functional allocation across all areas of all EBFs and KEFs.

3. Population of the more detailed views of the One-VA EA; namely the *Designer's View*, the *Builders View*, the *AS-Built View* and the *Functioning Enterprise View*. Subsequent versions of the One-VA EA will define the architectural artifacts that are relevant and appropriate to include in the One-VA EA repository, as well as define the repository itself. Then as projects enter execution and proceed through their Milestone review process as detailed in section 2.3 below, it will populate the One-VA EA repository with those artifacts. This is where the One-VA will become integral to more than the planning, budgeting and oversight functions discussed thus far to *inform*, *guide* and *manage* enterprise decisions throughout the entire IT systems life cycle.

2.2 Applicability

The One-VA EA is the primary authoritative resource within the Department of Veterans Affairs for enterprise IT throughout the entire life cycle of planning, programming, budgeting, development, integration, test/certification, deployment and in service support.

As the primary authoritative resource for enterprise IT, the One-VA EA is applicable to all IT projects in the Department. Compliance with it is mandatory throughout the evolution of all IT projects over their entire life cycle. This compliance is to be validated at multiple events and in multiple Departmental processes including the Project Management Oversight process, Capital Planning process and the overall budget submission preparation process. Specific requirements for validation of One-VA EA compliance within the Project Management Oversight process under the authority of the formally appointed Project Decision Authority (PDA) are listed in Table 2.1 below.

Milestone	Requirement	Validation
0; Project Initiation Approval	Compliance with the *"Planner's View; Top Level Scope"* and positioning of the proposed IT system within the overall distributed systems architecture of the One-VA EA. Specific detailed compliance requirements are delineated in section 2.3.1 of the One-VA EA.	PDA
I; Prototype Development Approval	Compliance with the *"Business Owner's View; Functional Decomposition and Allocation"* to include compliance with the allocated functional baseline, and initiation of the detailed functional and technical requirements baseline of the One-VA EA. Specific detailed compliance requirements are delineated in section 2.3.2 of the One-VA EA.	PDA
II; System Development Approval	Continued compliance with allocated functional baseline, TRM and Standards Profile, and completion of the *"Designer's and Builder's View: Distributed Systems Architecture"* of the One-VA EA. Specific detailed compliance requirements are delineated in section 2.3.3 of the One-VA EA.	PDA
III; System Deployment Approval	Continued compliance with allocated functional baseline, TRM and Standards Profile, completion of the *"As-Built (Subcontractor's) View"* and initiation of the *"Functioning Enterprise View"* of the One-VA EA. Specific detailed compliance requirements are delineated in section 2.3.4 of the One-VA EA.	PDA

Milestone	Requirement	Validation
IV; Post Implementation Review	Continued compliance with allocated functional baseline, TRM and Standards Profile, and completion of the *"Functioning Enterprise View"* of the One-VA EA. Specific detailed compliance requirements are delineated in section 2.3.5 of the One-VA EA.	PDA

Table 2.1. One-VA EA Compliance Requirements and the Project Management Oversight Process.

Specific requirements for validation of One-VA EA compliance within the Capital Planning process are listed in Table 2.2 below.

Decision	Requirement	Validation
Inclusion of planning funds in an Exhibit 300	Completion of a Milestone 0 review and with it validation of compliance with the *"Planner's View; Top Level Scope"* and positioning of the proposed IT system within the overall distributed systems architecture of the One-VA EA.	VA CIO plus Administration CIO (as appropriate)
Inclusion of full acquisition funds in an Exhibit 300	Completion of a Milestone I review and with it validation of compliance with the *"Business Owner's View; Functional Decomposition and Allocation"* to include compliance with the allocated functional baseline, and initiation of the detailed functional and technical requirements baseline of the One-VA EA.	VA CIO plus Administration CIO (as appropriate)

Table 2.2. One-VA EA Compliance Requirements and the Capital Investment Planning Process.

Finally, during the overall preparation of the annual Department budget submission, even existing IT systems must identify their tie to the One-VA EA by at least identifying the EBFs and KEFs along with the subfunctions from the perspective of the *"Planner's View; Top Level Scope"* and the *"Business Owner's View; Functional Decomposition and Allocation."* The VA CIO and Administration CIOs will validate compliance, as appropriate.

2.3 One-VA Enterprise Architecture as a Driver For Information Technology Capital Planning

Figure 2.3-1, depicts the integrated process flow adopted by the Department for Information Technology projects across their entire life cycle. Within this flow, the major stages in the life cycle of a project from original identification of a need through to in-service support are identified along with five formal decision milestones:

- Milestone 0 Project Initiation Approval

- Milestone I Prototype Development Approval
- Milestone II System Development Approval / Full Acquisition
- Milestone III System Deployment Approval
- Milestone IV Post Implementation Reviews

It also depicts several major processes within the Department and their relationship to the IT system life cycle to include capital planning, funding, project execution, project management oversight and Enterprise Architecture. The One-VA Enterprise Architecture is being fully integrated into these major departmental processes and will play a pivotal role in all IT projects. This section describes specifically how that will occur.

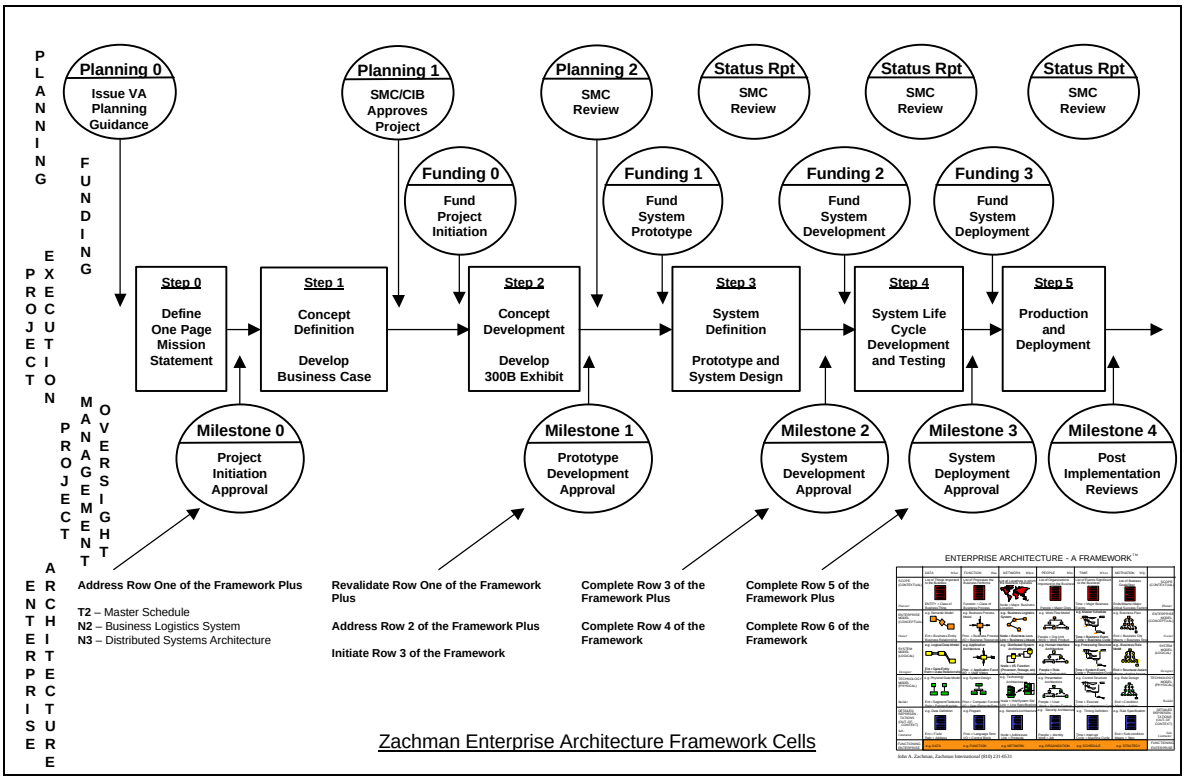

Figure 2.3-1. The Integrated Process Flow for VA Information Technology Projects.

2.3.1 Milestone 0: Project Initiation Approval and its Relationship to the One-VA EA

Milestone 0 is intended to have the Project Manager (PM) address a basic area necessary to warrant project initiation approval. It does not presume any significant prior investment in analysis (either business or technical), concept or requirements definition or design; rather, it seeks answers to these most basic questions even before committing to that level of investment. From the perspective of the One-VA EA, at Milestone 0, PMs are expected to focus on the information relevant to his or her proposed new project in row 1 of the EA Zachman Framework. This information is described in Chapter 3 of the One-VA EA: *"The Planner's View; Top Level Scope"*. Chapter 3 provides a delineation of the business of the Department from a business-focused, top down, enterprise wide perspective organized by EBFs and KEFs. Therefore, to

satisfy the PM Oversight requirements for Milestone 0 a PM shall use the material provided in Chapter 3 of this document as a baseline while addressing the following issues:

- Identify the specific EBFs and KEFs along with their corresponding specific high-level functions that the proposed project will address either in whole or in part (Framework row 1 column 2).
- Identify the specific external and internal drivers to be addressed either in whole or in part by the proposed project (Framework row 1 column 6).
- Identify the key high-level data classes that will be used in the proposed project (Framework row 1 column 1).
- Identify the primary locations at which the proposed project will be installed and used (Framework row 1 column 3).
- Identify the organizational entities that will be directly affected by the proposed project (Framework row 1 column 4).
- Identify the major business events that will be directly affected by the proposed project (Framework row 1 column 5).

In the event a proposed project only partially addresses functions, drivers, or data classes the PM should identify any key dependencies on other projects or processes needed to fully address them. In addition, PMs are expected to provide a planned project schedule (framework row 2 column 5). From the perspective of a distributed architecture, PMs are expected to go farther than the material in row 1 of the Framework to indicate where and how the project fits into the distributed architecture of the "*One-VA* To-Be Physical Infrastructure" shown in Figure 2.3.3-1 (rows 2 and 3 column 3). This distributed systems architecture, beginning with the top level view of Figure 2.3.1-1 and proceeding through progressively further levels of detail is addressed in Chapter 5 of the One-VA EA; *"Designer's and Builder's View: Distributed Systems Architecture"*. In the event that a PM considers the material in the corresponding sections of this One-VA EA to be either incomplete, or to require refinement or correction, they should propose changes to those sections of this One-VA EA to the Chief Enterprise Architect and through him/her to the Enterprise Architecture Council (EAC) prior to or concurrent with the Milestone 0 review with the Project Decision Authority (PDA).

This definition of scope for the proposed project by the PM at their Milestone 0 decision point serves to bound the project and position it with respect to the enterprise as a whole. Finally PMs are expected to indicate their planned technical approach, including major alternatives to be considered in their forthcoming analysis of alternatives subsequent to a favorable Milestone 0 decision. The objective is to ensure projects proceed in concert with the One-VA EA from their very inception. The PDA will chair all Milestone reviews beginning with Milestone 0 and will ensure compliance with the One-VA EA in these specific areas prior to granting project initiation approval.

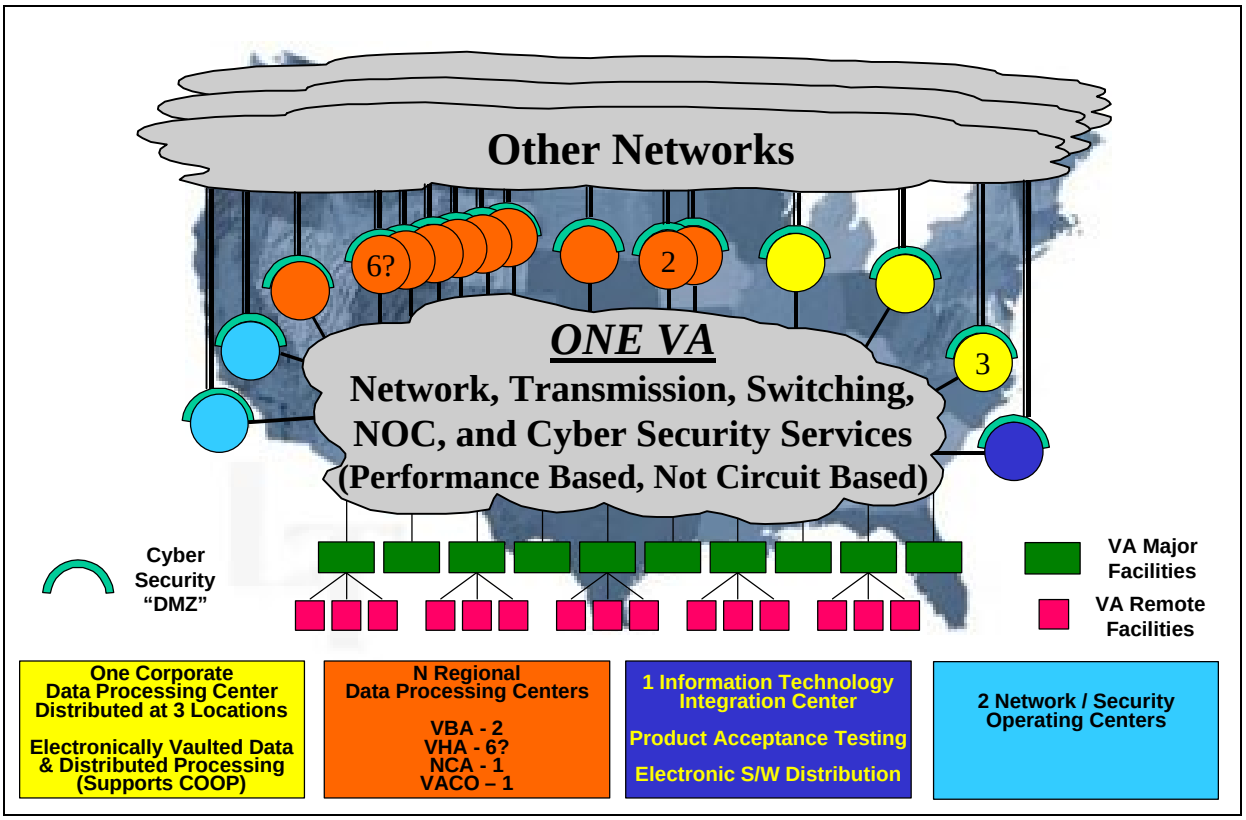

Figure 2.3.1-1 The Target "To Be" One-VA EA Physical Infrastructure.

2.3.2 Milestone I: Prototype Development Approval and its Relationship to the One-VA EA

Pilot or prototype IT efforts are encouraged within VA as a general principle in order to speed time to market and to increase the likelihood that the delivered product will fit the end users true needs. Commitment to a serious and structured piloting or prototyping effort however implies a commitment of planning resources and the Milestone I review is intended to have the Project Manager (PM) address areas necessary to warrant approving the commitment of these resources to a pilot or prototype effort. Therefore at Milestone I, PMs are expected to have completed their Business Case Analysis in terms of an Analysis of Alternatives, assessed Return on Investment, and performed a Cost Benefit Analysis. From the perspective of the One-VA EA, at Milestone I PMs are expected to focus on the information relevant to their project in row 2 of the One-VA EA Zachman Framework. This information is described in Chapter 4 of the One-VA EA: *"The Business Owner's View; Functional Decomposition and Allocation"*. In Chapter 4 of the One-VA EA, an allocated functional baseline is established which functionally defines information systems in terms of their target processes, functions and sub functions, data, and their integration points with other information systems both inside and outside the enterprise.

At Milestone I a PM is expected to revalidate the EA information provided at the Milestone 0 review, and update it, if appropriate. In addition, they are expected to show how the project fits into the allocated functional baseline and integration points established in Chapter 4 (row 2 of the Framework). The allocated functional baseline not only defines the functional scope of a project, it also provides constraints within which PMs must execute their projects and must be

adhered to by all projects in execution. Therefore, to satisfy the Project Management Oversight requirements for Milestone I decision to initiate pilot or prototype implementation, a PM shall use the material provided in Chapter 4 of this document as a baseline while addressing the following issues:

- Identify the specific sub functions and processes that the project will implement either in whole or in part (Framework row 2 column 2).
- Identify the data classes that will be used in the proposed project, and for each data class whether the project will create, read, update or delete that data class (Framework row 2 column 1).
- Identify the business objectives (ends) and business strategies (means) that the project will use to satisfy the relevant external and internal drivers identified as applicable to the project at Milestone 0 (Framework row 2 column 6).
- Identify the primary business locations at which the proposed project will be installed and used and their interrelationships with one another (Framework row 2 column 3).
- Identify the organizational units that will be directly affected by the proposed project and how they will interact with one another (Framework row 2 column 4).
- Identify the major business events that will be directly affected by the proposed project and how they relate to the process flows (Framework row 2 column 5).

In the event that a PM considers the material in the corresponding sections of this One-VA EA to be either incomplete, or to require refinement or correction, they should propose changes to those sections of this One-VA EA to the Chief Enterprise Architect and through him/her the Enterprise Architecture Council (EAC) prior to or concurrent with the Milestone I review with the Project Decision Authority (PDA). In addition, the PM is expected to take the allocated functional baseline for the project, its integration points contained within Chapter 4 of the One-VA EA (Framework row 2) and the TRM and Standards Profile, and begin development of the detailed functional and technical requirements baseline for the project (the subject of row 3 of the Framework). This includes the establishment of preliminary quantitative performance requirements for the project prior to the Milestone I review. The PDA will chair the Milestone I review and will ensure compliance with the One-VA EA and significantly increase the probability that the prototype will produce useful results that can transition into a production effort prior to granting approval for the project to proceed with prototype or pilot implementation.

This activity also serves as a validation of the architecture. As projects map to EBFs and KEFs, there is an opportunity to identify shared capability that may not yet have surfaced; particularly in the case of KEFs. This milestone provides a feedback-loop into the EA process for future maturation of the architecture.

2.3.3 Milestone ll: System Development Approval and its Relationship to the One-VA EA

At prior Milestones, PMs were required to take the material that already existed in the One-VA EA from rows 1 and 2 of the Framework and identify the portions of it applicable to their specific projects. This pre-existing material (augmented, if appropriate, with material proposed

as addition or modification to the One-VA EA by the PM) both defined and limited the scope of the project and positioned it as an integrated element of the overall target enterprise. To support these requirements, the material in rows 1 and 2 of the framework were developed using a business-focused, top down approach across the entire enterprise. In arriving at the allocated functional baseline, this approach provided a key mechanism for optimizing the program/business value and mission performance of the Department's systems by identifying and eliminating redundancy and driving integration across enterprise functions, processes and data.

At Milestone II, the approach for addressing the One-VA EA shifts from an enterprise wide focus, to a focus that maintains the broad enterprise wide perspective but also begins to capture increasing levels of detail about the specific projects. To preserve the enterprise wide perspective, the project at this stage must take as a mandatory requirement the results of the earlier work to establish the allocated functional baseline for the project and position it within the overall integrated enterprise. With that requirement as a starting point the project now begins to add the increasingly higher levels of detail to the One-VA EA specific to their project. During both Milestones 0 and I, and in the majority of the discussion of the Planners View and Owner's View of the EA, the focus is on the overall enterprise from a business-directed, top down perspective. Only in creating the allocated functional baseline at the conclusion of the Owner's View is the notion of an information system even introduced, and even they're only from the functional perspective.

As one proceeds to Milestone II seeking approval for full system development and along with it to the Designer's View within the One-VA EA, the focus must add specific in-depth consideration of the IT system being pursued in the project. As this philosophical shift occurs in the project interaction with the One-VA EA, the overall enterprise wide focus is preserved in two significant ways. First, as previously indicated the project must take as a mandatory requirement the results of the earlier work to establish the allocated functional baseline for the project and position it within the overall integrated enterprise. Second, the contributions of multiple projects to the One-VA EA taken in aggregate in the *Designer's, Builder's, As-Is (Subcontractor's)* and *In Service (Functioning Enterprise) Views* fully describe the overall enterprise at each level of abstraction. This shifting project focus throughout the overall life cycle is illustrated in Figure 2.3.3-1.

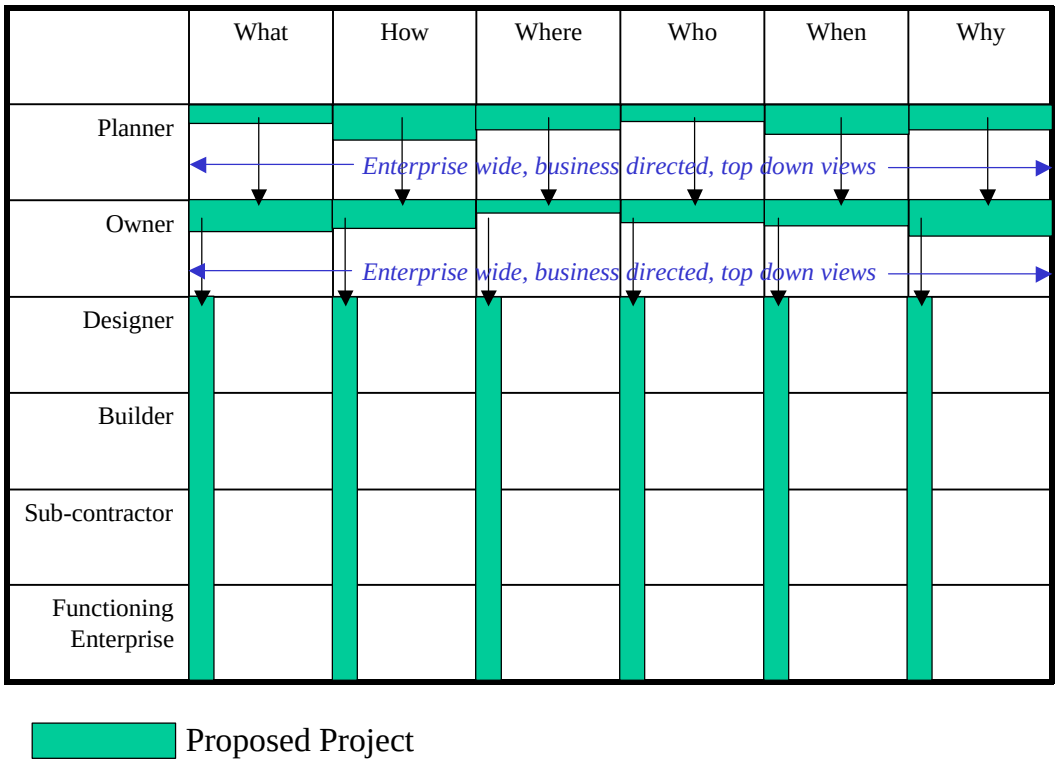

Figure 2.3.3-1. The Shifting Project Focus Throughout the Life Cycle of an IT Project[1].

At Milestone II to gain approval for full-scale systems development or acquisition, PMs are expected to focus primarily on rows 3 and 4 of the Framework. This is largely addressed thus far in the One-VA EA by Chapter 5 of this document; *"Designer's and Builder's View: Distributed Systems Architecture"*. (This treatment will be expanded with the introduction of the One-VA EA Repository and the future definition of specific architectural artifacts to be contributed by executing projects.) They are expected to revalidate the information addressed at Milestones 0 and I in terms of compliance with the allocated functional baseline and integration points. In addition, if the prototype effort further details the allocated functional baseline and associated process mappings for the EBFs and KEFs addressed, then they should be incorporated back into the One-VA EA in row 2 of the Framework.

At this stage in the project's life cycle, PMs are to have completed development of the detailed technical and functional requirements baseline for their project, which is the focus of row 3 of the Framework. They should also have initiated development of a design baseline and therefore initiate development of the content of row 4 of the Framework. In doing so, PMs must also show that they have adhered to the allocated functional baseline established for the project at Milestone I, the TRM, and the Standards Profile in the requirement baseline for the project. They must also show that their requirement baseline and their design baseline conform to the allocated functional baseline, and are on track to meet the quantitative performance requirements established for the project. The PDA will chair the Milestone II review and will ensure compliance with the One-VA EA in these specific areas prior to granting approval for the project to proceed with full-scale development or acquisition. The specific form of the detailed

[1] Adapted from a private communication with John Zachman, December 24, 2001

information to be provided by projects to the One-VA EA repository that are to constitute the row 3 and row 4 information, will be the subject of further development and specified in later updates to this One-VA EA.

2.3.4 Milestone lll: System Development Approval and its Relationship to the One-VA EA

Milestone III is intended to have the Project Manager (PM) address a basic set of questions necessary to warrant approval to deploy the system. Depending on the nature of a specific project, this decision Milestone can also be split into a Milestone IIIa for approval of limited initial deployment, and a Milestone IIIb for full, enterprise wide deployment. Key issues to be addressed are whether the project has adequately demonstrated through test that the system meets its functional and performance requirements (often referred to as effectiveness), and whether the system is adequately supported both from a human factor, documentation, spares and training perspective (often referred to as suitability).

At Milestone III from an One-VA EA perspective, to gain approval for deployment PMs must have completed the *"Builder's"* and *"As-Built (Subcontractor's) Views"* (rows 4 and 5 of the Framework) and in so doing validate that they have continued to respect the allocated functional baseline established for the project at Milestone I. They must demonstrate compliance with applicable portions of the TRM and Standards Profile. They must have completed cyber security certification and accreditation. They must also have defined the performance metrics to be collected during in-service operation of the information system as the basis for evaluating goal achievement in row 6 of the Framework. This should specifically include not only data to validate in service satisfaction of performance requirements, but also assess actual achieved ROI and CBA for comparison to projections made early in the project life cycle and updated as the project executed. Subsequently during Milestone IV post implementation reviews PMs are expected to report on the actual performance of the information systems in these areas.

2.3.5 Milestone lV: Post Implementation Review and its Relationship to the One-VA EA

Milestone IV, Post Implementation Review, is intended to assess in service effectiveness and suitability of an IT system as a continuation of the effectiveness and suitability examination undertaken in Milestone III. This includes assessment of the success in meeting the fielding plans, meeting performance parameters, cost, schedule, security and projected ROI. It also includes assessment of the adequacy of training, documentation and maintenance support for the IT system, as well as assessment of whether any changes are required to the IT system. From a One-VA EA perspective this provides an important feedback mechanism to also assess not only whether the system continues to be in compliance with the One-VA EA, but also whether in service experience indicated a need for change in the EA itself. To accomplish this at Milestone IV PMs must have completed the *Functioning Enterprise (In Service) View* (row 6 of the Framework).

2.3.6 The Capital Planning Process and its Relationship to the One-VA EA and the Project Management Oversight Process

Milestone 0 and I reviews, and therefore the early stages of addressing project compliance with One-VA EA are not only important from a Project Management Oversight perspective, they are integral to the Capital Planning process as well. The time phasing within the overall timeline for

preparation of the Department's annual budget submission is therefore an important consideration for new start projects. Figure 2.3.6-1, Project Management Oversight Relationship to the Budget Cycle, presents a nominal schedule of major events, and shows the timeline for preparation of the Department's annual budget submission. It reflects the timing of Milestone 0 reviews for approval of project initiation in conjunction with the preparation of the Exhibit 300 information to support planning funding and prioritization of the project for incorporation in the Department's budget submission. In order to include an Exhibit 300 for planning funds into the Department budget submission, a project should have completed at least Milestone 0 and demonstrated compliance with the One-VA EA as discussed in section 2.3.1 above.

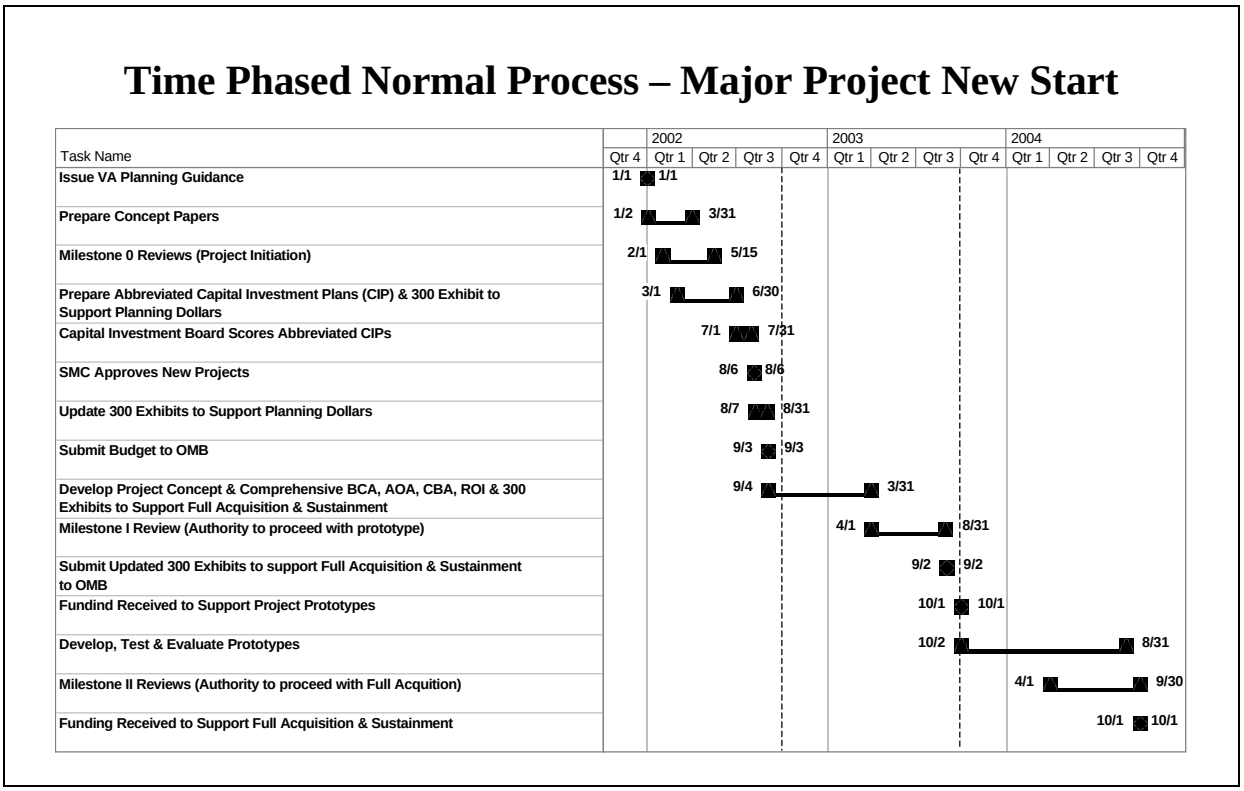

Figure 2.3.6-1. Project Management Oversight Relationship to the Budget Cycle; Nominal Schedule of Major Events.

Figure 2.3.6-1 also shows the nominal timing for a Milestone I review to approve prototype or pilot development upon receipt of planning funding, along with the preparation of Exhibit 300 information to support full acquisition funding. In order to include an Exhibit 300 for full acquisition funds in the Department's budget submission, a project should have completed a Milestone I review and therefore have demonstrated compliance with the One-VA EA as discussed in section 2.3.2 above to include formalizing the establishment of an allocated functional baseline for the IT system. It also shows the timing of Milestone II reviews including the verification of compliance with the One-VA EA as discussed in section 2.3.3 to authorize proceeding with full-scale development upon receipt of full acquisition resources. To receive Department support for both planning and full acquisition funding therefore, projects must show compliance with the One-VA EA as discussed in detail in the earlier sections at each oversight Milestone beginning with project initiation. Additionally to receive Department support for

sustainment funding, a project must, in its budget requests, identify its relationship to the One-VA EA and how it fits into the context the EA provides for the overall enterprise.

This discussion (and the requirements detailed above) illustrates the four way coupling for every IT project in the Department between One-VA EA, the Capital Planning process, the budget submission preparation cycle, and the Project Management Oversight process.

2.4 A Project Managers Perspective on the One-VA Enterprise Architecture

The One-VA Enterprise Architecture does impose specific tasks on PMs and forces them to execute projects within certain functional and integration point boundary conditions. Sections 2.2 and 2.3 of the One-VA EA delineate the requirements (and with these requirements the constraints) imposed on PMs to demonstrate compliance with the One-VA EA during the execution of their projects. Such constraints are the necessary effects of driving integration horizontally across multiple business and functional lines that span the entire Department. The One-VA EA will greatly benefit PMs in several important ways as they execute their projects. The tasks, constraints, and benefits that accrue as a result of the One-VA EA are discussed below in the remainder of this section.

Previous sections highlighted the EBF and KEF perspectives in relation to the One-VA EA and the rationalization of duplicative functions, processes and data in the allocated functional baseline produced as a key early product of the One-VA EA effort. This allocated functional baseline, along with the TRM and Standards Profile, form a necessary and sufficient set of documentation to functionally define the scope of an IT development project, identify its major integration points with other elements of the enterprise architecture, and specify broad technical approaches and standards to be employed in the development of the information system development project. This is both a significant enabler and a constraint on a PM in executing his/her project. It is a significant enabler because it specifies many functional and integration requirements for the project in unambiguous terms, and frees the PM from having to develop this specification, or compete with other projects or PMs over responsibility for key functions, processes, and enterprise data classes across the Department. It also serves as a constraint because it ensures that these key functions and enterprise data classes are implemented once and only once across the Department. In so doing, it prevents PMs who have not been allocated responsibilities for processes, functions and data classes from developing duplicative versions in a vertically focused style typically encountered in enterprises without a strong EA focus. Instead, it will force a PM to integrate his/her project with the authoritative source of the function, process or data as specified by the One-VA EA. This is a direct outgrowth of using One-VA EA to drive integration across the Department. That is, the One-VA EA will drive horizontal integration across what has traditionally been vertical, stove-style execution, both in terms of business processes and in systems and technologies used to implement the business processes. This will result in the achievement of a major Department goal – veterans will perceive the VA and its services as one entity and the term *"One-VA"* will experience a transition from being a slogan to becoming a reality.

As the VA proceeds in developing its One-VA EA and as projects are incrementally phased into execution, PMs will have the added responsibility of developing the artifacts to populate the One-VA EA beyond the allocated functional baseline to include requirements baselines, design

baselines, as-built configuration baselines, and in-service performance metrics. These disciplines will instill rigor in the Department's IT development efforts and assist PMs in developing IT systems that meet requirements, deliver on schedule and stay within budget. Within the context of the "Integrated Process Flow for VA Information Technology Projects" described in Figure 2.3-1, further population of the One-VA EA will be undertaken with a focus on productive and useful work efforts, and an overt minimization of bureaucratic requirements. The details of the requirements imposed on PMs for specific Milestone reviews were discussed in a previous section and will not be repeated here. As the One-VA EA repository is populated with these artifacts, e.g., business process definition, functional allocation, design, as-built, and performance artifacts, they will become very valuable repositories of corporate information and knowledge that will help project managers, and business and technical representatives with future development and maintenance efforts.

For individual PMs, compliance with One-VA EA comes in the form of two categories of requirements: (1) executing to the scope and constraints as defined in the allocated functional baseline, TRM and Standards Profile, and (2) providing the requirements, design, as-built configuration baselines, and in-service operations metrics artifacts to fully populate the One-VA EA repositories for their projects. In consideration of this, PMs will benefit from a clearer definition of the project scope and from the wealth of corporate and project knowledge inherent in the One-VA EA repository as the Department's EA matures over time.