

# State of Oregon

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## Enterprise Architecture - Iteration-1 *Building the Foundation*

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### Maturity Assessment

Version 0.5

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## Summary

Program maturity assessments provide a means of evolving a cross-enterprise perspective of program development and program valuation. Maturity assessments help to identify constraints that might inhibit program success. The information derived from a maturity assessment may then be used to focus efforts on activities providing the most value to the enterprise. Assessments help to determine a target maturity for the next iteration or phased evolution of a program. Finally, a maturity assessment helps to track the development of the program over time.

The Enterprise Architecture (EA) program completed a maturity assessment in the fourth-quarter of 2006. Overall, the assessment showed the components of an EA program to be immature and in the formative stages of growth. The statewide self-assessment "consensus" score (i.e., 1.1 out of a possible score of 5.0) indicates both opportunities and challenges for growth and maturation of an EA program. The successful completion of Iteration-1 (i.e., June 2007) is anticipated to lead to a score of 1.8 out of a possible score of 5.0.

The deliverables for Iteration-1 fall within the organization's capacity for change. They provide growth opportunities across the eight categories of the assessment. Completion of these deliverables is expected to produce an incremental increase in maturity of EA. Further, these deliverables will serve as the foundation for further maturation in Iteration-2 of the Program.

## Introduction

Organizations initiating and implementing EA programs have been able to surmount cultural, organizational, environmental, and political divisions to achieve enterprise views across the different lines of business and IT. However, they have not been able to achieve this level of success overnight. Success requires a validated and proven methodology and a maturing approach. Consequently, a major determinant of the success of EA programs is the maturity of the program components and the overall maturity of the program itself. The maturity assessment becomes an integral metric of the EA program.

A program maturity assessment provides a means of building a cross-enterprise perspective of program development and valuation. Maturity assessments help to identify constraints that might inhibit program success. The information derived from a maturity assessment may then be used to focus efforts on activities providing the most value to the enterprise. Assessments help to determine a target maturity for the next iteration or phased evolution of the program. Finally, a maturity assessment helps to track program development of the over time.

The Enterprise Architecture (EA) program completed a statewide, maturity assessment in the fourth-quarter of 2006. Overall, this self-assessment showed the components of the program to be immature and in the formative stages of growth. The final, "consensus" score (i.e., 1.1; out of a possible score of 5.0) indicates both opportunities and challenges for growth and maturation of the program. The successful completion of Iteration-1 (i.e., June 2007) is anticipated to lead to a score of 1.8 out of a possible score of 5.0.

The approval of the Iteration-1 Charter by the state CIO Council provided legitimacy to the program. Iteration-1 focuses on developing the foundation on which to build a strong, flexible program. The deliverables of this first iteration provide the basis for future maturation, although some of them will directly mature the overall program. A great leap in EA maturation is not envisioned as a result of completing Iteration-1.

As evidenced by other enterprise (statewide) efforts, the triple constraints of time, resources, and quality affect the EA Program. The EA effort is staffed currently by a limited number of contributing-agency volunteers. Although these contributors are knowledgeable IT professionals and have an increasing knowledge of EA, none are enterprise architects. The availability of seasoned enterprise architects within Oregon State government remains unknown. Additionally, the EA program remains unfunded. If EA is to be effective within the state, planning and budgeting for implementing and sustaining an EA program of record remains a business imperative.

Although the Charter defines Iteration-1 deliverables, success criteria, and metrics for measuring success, much work remains to be done. Governance needs further development. Stakeholder knowledge, acceptance, and involvement need attention. Architecture processes

and models require delineation. The EA program needs an explicit link to business strategy, demonstrating it can deliver business value. Gap analysis between current and future states is, and will continue to be, a requirement for success in all iterations. Talented individuals provided with the necessary professional development tools remain important to the maturation of an EA Program, as do vision, persistent sponsorship, and the will to use and promote EA results and constructs. Maturation of EA will be a calculated iterative process.

## **Maturity Assessment**

### ***Method***

This evaluation used the Gartner Enterprise Architecture Program Maturity Self-Assessment. The assessment contained eight categories: architecture scope and authority, stakeholder involvement and support, architecture development, business context, architecture content, future state realization, architecture team resources, and architecture impact. Each category examined two to five related concepts, each offering three to five possible item responses. A total of 26 individual questions comprised the assessment (see Appendix A).

Only thirteen respondents participated in this assessment, although all 32 of the State CIO's were invited to participate. The respondents included the EA Core Team (4), Peers (5, i.e., core team peers in different state agencies), and agency Chief Information Officers (CIO) (4). Individual responses were compiled for comparison and discussion. Item responses were averaged to compute an overall score per category and for the entire assessment. An overall consensus score for the assessment resulted from a facilitated discussion of the participants. The advice and analysis herein discuss the results of the consensus responses.

### ***Architecture Scope and Authority***

A mature architecture program derives from a common understanding and approach to business strategy, across the enterprise. The degree of EA program success results from its support of business change across agencies, business units and programs and processes. Success within the context of architecture scope and authority requires the optimization of end-to-end processes, the implementation of common

infrastructure, where and as appropriate, and the creation and effective implementation of governance bodies and mechanisms. The consensus score for architecture scope and authority was **1.8** out of a possible score of 5.0.

### **Advice from the tool:**

“Look to increasing this dimension by increasing the span of influence throughout all business areas. Also, ensure that governance processes exist and their importance is clearly communicated such that they are not circumvented. Often this requires building up stakeholder support. Ensure that disclosure of change is mandatory – this often involves incorporating appropriate rewards and punishments to promote disclosure. Along with disclosure, ensure the value of compliance is understood. Compliance must be supported by key stakeholders, so ensure key stakeholders enforce compliance. Many opt to make compliance easier than non-compliance, but rewards and punishments should support enterprise architecture compliance as well.”

### **Key Deliverables of Iteration-1 Affecting Architecture Scope and Authority**

- EA Charter for Iteration-1
- EA Program Named
- Complete Top-Level Models

### **Analysis**

The charter for Iteration-1 forms the initial basis for governance of the EA program. It defines the high-level, decision-making relationships. Further, the charter delineates the roles and responsibilities of the program participants for Iteration-1 along with the high-level stakeholders.

Providing the EA program with a recognized and accepted name should influence positive communication and permeate “enterprise architecture” methodologies throughout business areas. Without an acceptable moniker, the knowledge of the EA and its tenets will not be visible. The process of naming the program should help identify key

stakeholders and gain their support for the program. By participating in the naming process, key stakeholders should become aware of some of the disclosure and compliance issues appropriate to EA. Stakeholder identification and support will jump-start program validation and acceptance.

Completion of top-level, architectural models will begin the delineation of enterprise expectations for disclosure and compliance. However, such high-level models will not make disclosure and compliance mandatory. This will need to be driven from the highest levels of government leadership.

Given these deliverables there is a reasonable expectation of maturity advancement in the architecture and scope. However, this advancement in maturity may not be noticeable per the assessment tool. The span of business areas, architectural governance, disclosure, and compliance will probably remain constant for the duration of Iteration-1. The deliverables of Iteration-1 will lay the foundation for advancing the maturity of these measures by the end of Iteration-2. Therefore, 1.8 will probably still be the score of architecture scope and authority at end of Iteration-1.

### ***Stakeholder Involvement and Support***

Program maturity depends on the involvement and support of key stakeholders. Key stakeholders include state senior executives, IT managers, and owners of the state's lines of business. Achieving this support requires clear and accessible communication of EA, tailored to the specific needs of different stakeholder groups. The consensus score for stakeholder involvement and support was **1.2** out of a possible score of 5.0.

#### **Advice from the tool:**

“The involvement and support of key stakeholders, especially managers and senior executives is critical. The consensus score indicated relatively low stakeholder involvement and support. If this is not corrected, the enterprise architecture effort has little chance of expanding beyond technical infrastructure. Most probably, the enterprise architecture effort is in danger.

Improving this dimension is critical but easily remedied by clearly

communicating the value of enterprise architecture, or its content, to the key stakeholders in terms that relate to their issues and proactively address their opportunities. This includes: corporate management, key business unit stakeholders, key IT stakeholders, and the overall enterprise architecture community.”

## **Key Deliverables of Iteration-1 Affecting Stakeholder Involvement and Support**

- EA Program Named
- Develop Common Requirements Vision
  - Stakeholder Analysis
  - Communication Plan

### **Analysis**

Providing the EA initiative with a recognized and accepted name should influence positive communication and permeate “enterprise architecture” methodologies throughout business areas. Without an acceptable moniker, the knowledge of the enterprise architecture and its tenets will not be visible. The process of naming the program should help identify key stakeholders and gain their support and “buy-in” for the program. By participating in the naming process, stakeholders are afforded an opportunity to participate in the EA effort increasing their understanding of the program and processes.

Completion of the common requirements vision (CRV) provides the highest likelihood of gaining stakeholder involvement and support during Iteration-1. The CRV process provides a facilitated venue for vetting the stakeholder issues while providing a means for proactively addressing their opportunities. The CRV process creates a learning opportunity for stakeholders, helping them to gain a greater understanding of the value of EA.

Successful completion of the CRV requires a stakeholder analysis and the completion of a subsequent communication plan. Both of these efforts require stakeholder cooperation and collaboration for success. These efforts can be leveraged to increase stakeholder knowledge of EA and its inherent value.

Completion of these deliverables should lead to an increase in the measure of Stakeholder Involvement and Support maturity. State government and agency leaders, business managers, and IT constituents should become more aware of the EA program through the CRV, stakeholder analysis and communications planning processes. Further, a minority of these managers could be expected to start actively supporting the program.

The existence of true enterprise architects will probably not occur within Iteration-1. Enterprise architects can be reasonably expected to be identified and in place by the end of Iteration-2. Further, most aspects of the EA should be documented by the end of Iteration-2. The overall maturity level for stakeholder involvement and support should, therefore, increase from 1.2 to 1.8 by the completion of Iteration-1.

### ***Architecture Definition Process***

As the EA program evolves and matures, the architecture development process itself will mature. Characteristics of a mature practice include a well-defined, clearly identified and pragmatically executed process. The process should also involve appropriate stakeholders and should be integrated with key business processes. Key processes may include enterprise-wide, strategic planning by the business, IT capital planning, and investment and portfolio management. Regular iterations should be used to progressively expand the scope of enterprise architecture and to improve and update its individual elements. This process should involve appropriate stakeholders, and be integrated with related processes as appropriate to the enterprise, e.g., portfolio management. The consensus score for the architecture definition process was **0.9** out of a possible score of 5.0.

### **Advice from the tool:**

“A well defined and clearly articulated architecture definition process is critical to creating consistently valuable enterprise architecture content and change. The score for this category was relatively low. This is problematic. Address this issue by defining an appropriate architecture definition process, replete with regular planned updates, involvement of key stakeholders, and integration to related processes (e.g., business planning, portfolio management). Ensure that there is a defined enterprise

architecture process that's executed consistently, as well as accommodations for dealing with exceptions and variances expeditiously. Also, ensure that there are multiple planning horizons to address operational, tactical, and strategic concerns."

## **Key Deliverables of Iteration-1 Affecting Architecture Definition Process**

- EA Program Named
- Stakeholder Analysis
- Communication Plan
- Define EA Framework

### **Analysis**

Providing the EA initiative with a recognized and accepted name should influence positive communication and permeate "enterprise architecture" methodologies throughout business areas. Without an acceptable moniker, the knowledge of the enterprise architecture and its tenets will not be visible. The process of naming the program should help identify key stakeholders and gain their support and "buy-in" for the program. By participating in the naming process, stakeholders are afforded an opportunity to participate in the EA effort increasing their understanding of the program and processes.

Introduction of EA to stakeholders through the naming process, CRV development, and communications planning should bring greater understanding of the Program to these people. The completion of the communication plan is necessary to providing regular, planned updates.

Defining an EA framework will contribute to defining the enterprise architecture process. A definitive framework will lead to repeatable and consistently applied processes, while insuring planning horizons are not lost. The framework will provide a mechanism to insure that related processes are integrated. The architecture development process will be fairly well defined by the completion of Iteration-1. It remains doubtful that the architecture will be integrated with more than the technology acquisition process by the end of Iteration-1. Architecture will remain reactive through the end of Iteration-1, as its development will still be in progress.

As a result of Iteration-1, architecture development should begin to become a proactive process. Therefore, the architecture definition process should mature from a score of 0.9 to a score of 1.5 by the completion of Iteration-1.

### ***Business Context***

Mature EA programs link to the business strategy and demonstrate they deliver business value. Business and business change drive EA programs. These programs need to develop traceable linkages between business changes and the enterprise architecture. This top-down approach to defining the enterprise architecture requires close coordination, cooperation, and collaboration with senior business stakeholders. The consensus score for business context was **1.0** out of a possible score of 5.0.

### **Advice from the tool:**

“A common approach to the business strategy across the enterprise must drive a mature architecture program. To succeed, the program must support business change across multiple programs, business units and even companies. You scored relatively low in this dimension, indicating that your enterprise architecture doesn’t have the requisite business context to ensure that it’s aligned with the business. Ensure that the enterprise architecture process is trend aware, incorporating both business and IT trends. Also, ensure that these trends are considered in more detailed enterprise architecture decisions. Additionally, ensure that the business strategy and vision are clearly articulated, documented, agreed to by key stakeholders and factored into more detailed enterprise architecture decisions.

The primary enterprise architecture driver for Iteration-1 was business/IT alignment. The score on the business context dimension of this model suggests that our efforts do not support this goal. Consider taking action to improve business context. Ensure that efforts actively incorporate business and technology trends and the business vision.”

## Key Deliverables of Iteration-1 Affecting Business Context

- Develop Common Requirements Vision
  - Refresh Enterprise IRM Strategy
- Complete Top-Level Models
  - Business Model

### Analysis

Developing a common requirements vision (CRV) will provide a common approach to assessing business strategy across the enterprise. This approach requires the architecture development process be trend aware, with these trends being matched to business strategies. The CRV process requires that the articulation of business strategies be validated and agreed to by the key stakeholders. This will support, enable and deliver the primary driver for enterprise architecture, i.e., business and IT alignment.

The first step in developing a CRV requires defining the prevailing business and technology trends, with their validation by the business stakeholders. The refresh of the state's Enterprise IRM Strategy will help define the business vision and some of the business strategies for the CRV. The completion of the CRV-Iteration-1 is expected to promote the maturation of the business context of the EA Program from 1.0 to 2.7.

Completion of the business model will illustrate the linkages to the business change and enterprise architecture. This top-down view will be driven to increasing levels of detail in future iterations.

### ***Architecture Content***

As EA matures, it should address three basic architectures — business, information and technology; and it should address ways in which these three views combine to create solutions. Additionally, EA should also address three basic models -- conceptual, logical and implementation architectural views, moving from high-level to detailed expressions of *architecture*. The consensus score for architecture content was **1.0** out of a possible score of 5.0.

## **Advice from the tool:**

“The score for enterprise architecture content was relatively low. This indicates that the enterprise architecture effort may not be generating adequate content (e.g., requirements, principles and models) to meet the needs of the key stakeholders. Ensure that all key stakeholders and their needs are clearly defined and addressed through enterprise architecture content.”

## **Key Deliverables of Iteration-1 Affecting Architecture Content**

- Develop Common Requirements Vision
  - Stakeholder Analysis
  - Communication Plan
- Define EA Framework
- Develop EA Principles
- Develop metrics for meeting the success criteria of Iteration-1
- Definition of Common Services
- Complete Top-Level Models

## **Analysis**

Enterprise architecture content will be greatly enhanced by developing the common requirements vision (CRV). The CRV is a major deliverable Iteration-1, requiring stakeholder understanding and participation. Further, development of the CRV requires the delineation of requirements. Accomplishment of this deliverable will require a stakeholder analysis to be conducted, followed by the development of a communication plan. Both the stakeholder analysis and communication plan will insure that stakeholder communication needs are clearly defined.

The completion of other Iteration-1 deliverables will provide a greatly increased body of enterprise architecture content. Iteration-1 will define an EA framework, develop EA principles, and complete top-level models. Additionally, metrics for meeting the success criteria of Iteration-1 will be developed and a delineation of common services will be compiled. As the body of enterprise content expands, the score for architecture content is expected to increase from 1.0 to 2.3.

## ***Future-State Realization***

Fully-realized EA programs are actionable; defining, planning and initiating the projects to achieve a defined future state. The consensus score for future-state realization was **1.0** out of a possible score of 5.0.

### **Advice from the tool:**

“Enterprise architecture must be actionable. The score on future state realization was relatively low. While this is often indicative of a maturing enterprise architecture effort, based upon our overall response, it should be addressed to ensure the effort is perceived as providing utility. Ensure that a culturally appropriate future state architecture exists, a baseline of our current state exists, and gap analysis is performed and an appropriate level. Once this is in effect, it will enable the enterprise architecture effort to proactively provide recommendations, projects, and even programs to drive business change.”

### **Key Deliverables of Iteration-1 Affecting Future State Realization**

- Maturity Assessment
- Develop Common Requirements Vision
- Complete Top-Level Models
- Complete Implementation Strategy Alternatives
  - Demonstration Project

### **Analysis**

The maturity assessment indicated that the current state of enterprise architecture is immature. The results do, however, provide a starting point for conducting a gap analysis, at least between Iterations. Analogously, the development of a CRV for Iteration-1 provides a means of assessing the foundation of the current state via trend and strategy analysis. This process also includes a form of gap analysis to move the enterprise to a future state in more than a piecemeal fashion.

The completion of top-level models and the implementation strategy alternatives will provide a basis to define, and to move to, the future

state. These products will define the current and desired future state of the enterprise at discrete levels of the enterprise. Once this foundational information is assembled, realization of the future state of the enterprise can be considered.

The EA program will be challenged to complete a demonstration project during Iteration-1. However, using EA concepts in scoping and implementing an enterprise project would provide some proof of concept. Even a very small project will illustrate, in very practical terms, how to reap benefits from enterprise architecture.

Future-state realization will remain at 1.0 through the end of Iteration-1.

Ideally, architecture should be reactive to specific requests by the completion of Iteration-2. Further, this reaction should lead to migration projects. Whether or not there will be enterprise-wide coordination of these projects remains to be seen. Based on these assumptions, future-state realization will remain at 1.0 through the end of Iteration-1, but should increase by the end of Iteration-2.

### ***Architecture Team Resources***

Recruitment and training of talented individuals remains a foundation of any EA program success. Further, these *architects* need not only the training, but also the tips, tools, and techniques to help them understand, organize, and retain a diverse range of information assets. They must then relate these assets to each other and to the business strategy. Ultimately, these architects must communicate this information to stakeholders. The consensus score for architecture team resources was **1.0** out of a possible score of 5.0.

### **Advice from the tool:**

“To be successful, an enterprise architecture team must have skilled and talented resources. The score in this dimension was relatively low. Consequently, we run the risk of making mistakes and tarnishing enterprise architecture as a concept. Ensure that the resources on the enterprise architecture team have the necessary skills to perform the tasks required to meet the

objectives of the effort. Consider a formal training program, if one does not already exist. Also, consider acquiring resources with the requisite skills if needed. Provide the team with any information or tools necessary to be a high performing team.”

## **Key Deliverables of Iteration-1 Affecting Architecture Team Resources**

- Engage independent third party subject matter expert(s)
- EA Charter Approved

## **Analysis**

Enterprise architecture team resources are maturing with expanding resources and the engagement of subject matter experts through Gartner’s IT for Leader EA Premiere Services. There has been no formal training nor does a specific budget line item exist for EA training. Microsoft Office remains the de facto tool set being used by the EA Team. As the EA effort matures appropriate EA modeling tools will need to be identified and procured. A consideration for the tool suite will be the compatibility and integration with other related process tool suites.

Architecture team resources will mature from 1.0 to 2.0 by the completion of Iteration-1. The EA program was established by the approval of the Iteration-1 charter, and Microsoft Office remains the de facto tool set of the program. The completion of Iteration-1 deliverables and approval of the Iteration-2 charter by the state CIO Council (CIOC) are expected to stimulate discussions regarding program funding and possible future maturity of architecture team resources.

## ***Architecture Impact***

The program’s impact on the business should be measured with well-defined metrics, to both determine business value and improve its effectiveness. Metrics should include measures of financial efficiency and business effectiveness. The consensus score for architecture team resources was **1.0** out of a possible score of 5.0.

### **Advice from the tool:**

“Without defined program goals, EA programs will struggle to provide on-going justification of the value of EA and the impact of the EA program on the business. The score on this dimension was relatively low – the effort is at risk. Ensure that objectives and success criteria for enterprise architecture are agreed to by key stakeholders, as well as the sponsor(s) and clearly documented. Ensure an appropriate active measurement program exists. Mature enterprise architecture efforts include financial efficiency and business effectiveness metrics. If this is possible, institute immediately. If these metrics cannot be instituted, plan to establish these types of metrics as soon as possible and begin actively reporting progress of the overall effort to key stakeholders.”

### **Key Deliverables of Iteration-1 Affecting Architecture Impact**

- EA Charter
- Develop metrics for meeting the success criteria of Iteration-1

### **Analysis**

The EA charter defined objectives for the successful completion of Iteration-1. Further, it defined metrics for meeting the success criteria of Iteration-1. Approval of the Charter by the CIOC shows agreement with these metrics by some of the key stakeholders. A follow-on activity should include the implementation of an active measurement program for these metrics.

Metrics for financial efficiency remain to be developed. Until the foundation of the EA program becomes solidified with funding, measures of financial efficiency cannot be developed. The short timeframe of Iteration-1 combined with the limited resources available will only provide the very high-level EA artifacts for the next budget cycle.

Although architecture impact will increase by the end of Iteration-1, it will be small. Architecture impact will likely mature from 1.0 to 1.5 by the end of Iteration-1.

## Conclusion

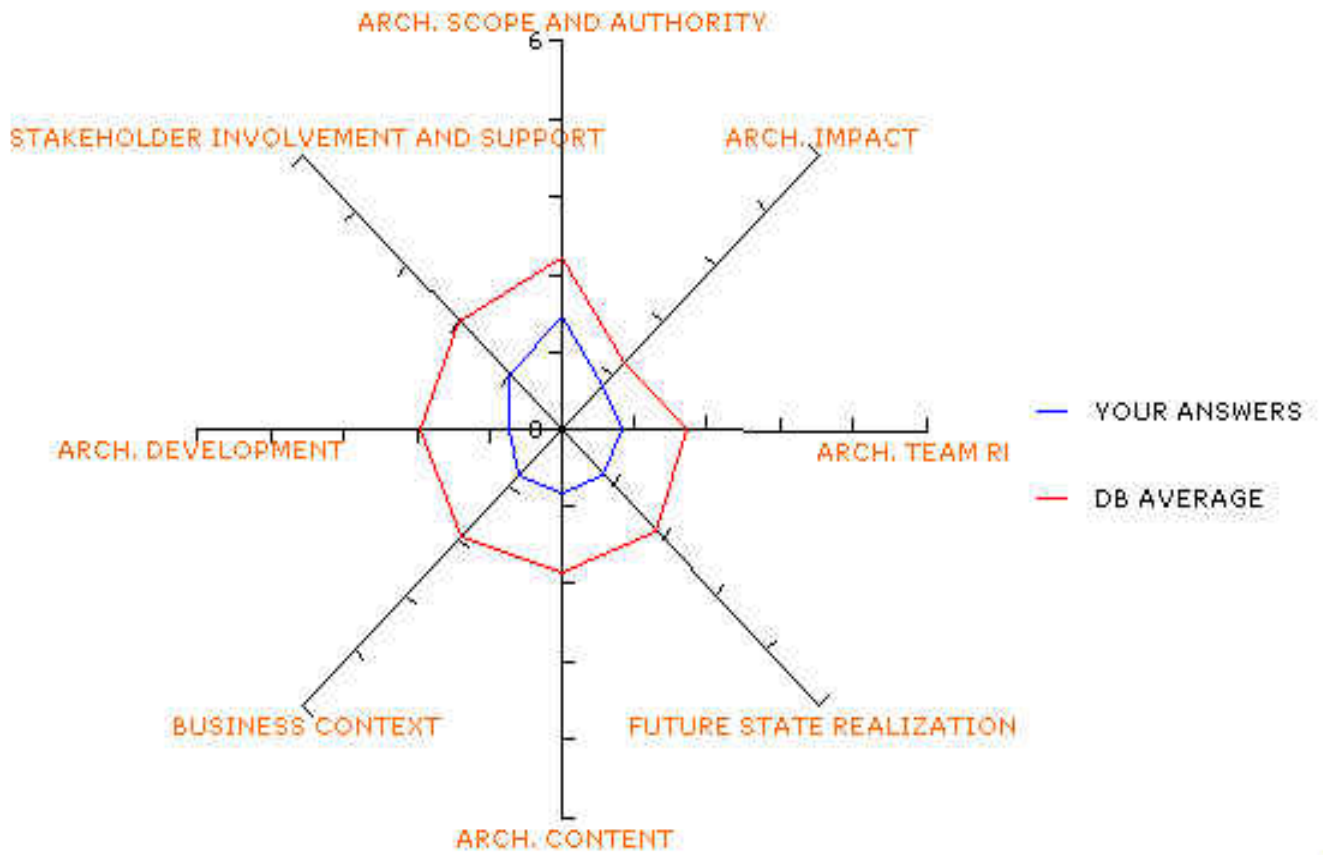
The maturity assessment of the EA program gauged the maturity of program components, as well as the overall maturity and status of the program itself. This assessment defines and identifies the opportunities, and the remediation required, for improvement. The assessment can uncover weaknesses, highlight differences in perception among stakeholders and identify missing foundational pieces on which to base future efforts.

Using the Gartner Enterprise Architecture Program Maturity Self-Assessment the current-state of the state's EA program was assessed during the 4<sup>th</sup> quarter of 2006. Overall, the program rated low in maturity receiving an aggregate consensus score of 1.1 out of a possible score of 5.0. Respondent discussion indicated this was not an unexpected result. The Oregon EA program, chartered by the CIOC within the last four months, is an unfunded, all-volunteer effort.

The next step is to set goals or target maturity levels across the eight enterprise architecture categories of the assessment. The assumption that the goal should be the highest assessment level (5) in all areas is not realistic. This program remains one of many. Sagacious attention to balanced, organizational priorities constitutes one reason such levels will not be reached immediately. Moreover, this program remains unfunded, supported by an all-volunteer cast, and its priority among government leaders remains uncertain.

Achieving the highest level of assessment is an unrealistic goal for an EA effort whose first iteration will determine whether it delivers enough value to be promoted to permanent program status. Demonstrating the value-add, incremental maturity becomes a lofty aspiration in itself. Targets should be set with an understanding of the organization's capacity for change. The Iteration-1 deliverables fall within the organization's capacity for change. Therefore, completion of these deliverables provides a realistic opportunity to increase the maturity of EA across the state in an incremental manner. Further, these deliverables are foundational to further maturation in Iteration-2 of the EA Program.

# Appendix A – Gartner Enterprise Architecture Program Maturity Self Assessment - Consensus Item Responses



# EA Program Maturity Self-Assessment SCORECARD

Respondent Form

Group: Name:		Core Team				Peers				CIOs				
		1	2	3	4	5	6	7	8	9	10	11	12	13
Q#	COMBINED	1.2	1.1	1.1	1.1	1.4	1.5	1.1	1.2	1.5	1.4	1.8	1.2	3.3
<b>Architecture Scope and Authority</b>		<b>1.5</b>	<b>1.8</b>	<b>1.8</b>	<b>1.3</b>	<b>1.5</b>	<b>2.0</b>	<b>1.5</b>	<b>1.8</b>	<b>1.5</b>	<b>2.3</b>	<b>2.3</b>	<b>2.3</b>	<b>3.8</b>
Q1	Span of Business Areas	2	2	2	1	1	2	1	2	1	2	3	3	4
Q2	Architecture Governance	1	1	1	1	1	1	1	1	1	1	1	1	3
Q3	Disclosure	1	2	2	2	2	3	2	2	2	4	3	3	4
Q4	Compliance	2	2	2	1	2	2	2	2	2	2	2	2	4
<b>Stakeholder Involvement and Support</b>		<b>1.0</b>	<b>1.0</b>	<b>1.0</b>	<b>1.2</b>	<b>1.6</b>	<b>1.6</b>	<b>1.0</b>	<b>1.2</b>	<b>1.2</b>	<b>1.2</b>	<b>2.2</b>	<b>1.0</b>	<b>4.0</b>
Q5	Corporate Management Support	1	1	1	1	1	2	1	1	1	1	1	1	4
Q6	Business Unit Support	1	1	1	1	1	1	1	1	1	1	1	1	3
Q7	IT Support	1	1	1	1	3	3	1	1	2	1	4	1	5
Q8	Architecture Community Support	1	1	1	1	1	1	1	1	1	1	3	1	3
Q9	Architecture Communication	1	1	1	2	2	1	1	2	1	2	2	1	5
<b>Architecture Development</b>		<b>1.4</b>	<b>0.9</b>	<b>1.0</b>	<b>1.1</b>	<b>1.3</b>	<b>0.9</b>	<b>0.9</b>	<b>1.1</b>	<b>2.0</b>	<b>1.3</b>	<b>2.1</b>	<b>1.0</b>	<b>3.6</b>
Q10	Architecture Development Process	1	1	1	1	1	1	1	1	1	1	2	1	4
Q11	Process Integration	3	1	1	1		1	1	1	3		2		4
	actual choices (a-d=1pt, e-f=0.5pt)	b,d,e,f	e	a	e		e	e	f	b,c,d,		b,e		a,b,d,e,f
Q12	Process Execution	1	1	1	1	1	1	1	1	3	1	2	1	3
Q13	Cycle Frequency & Maint.	1	1	1	1	2	1	1	2	1	1	2	1	4
Q14	Planning Horizon	1	1	1	2	1	1	1	1	2	2	3	1	3
<b>Business Context</b>		<b>1.3</b>	<b>1.0</b>	<b>1.0</b>	<b>1.0</b>	<b>1.0</b>	<b>1.3</b>	<b>1.0</b>	<b>1.0</b>	<b>2.3</b>	<b>2.0</b>	<b>1.0</b>	<b>1.0</b>	<b>3.7</b>
Q15	Business Trends	1	1	1	1	1	1	1	1	4	2	1	1	3
Q16	Technology Trends	1	1	1	1	1	1	1	1	1	2	1	1	3
Q17	Business Vision	2	1	1	1	1	2	1	1	2	2	1	1	5
<b>Architecture Content</b>		<b>1.0</b>	<b>1.0</b>	<b>1.0</b>	<b>1.0</b>	<b>1.3</b>	<b>1.7</b>	<b>1.3</b>	<b>1.0</b>	<b>1.0</b>	<b>1.0</b>	<b>1.3</b>	<b>1.3</b>	<b>3.3</b>
Q18	Requirements	1	1	1	1	1	3	1	1	1	1	1	1	4
Q19	Principles	1	1	1	1	2	1	2	1	1	1	2	1	4
Q20	Models	1	1	1	1	1	1	1	1	1	1	1	2	2
<b>Future State Realization</b>		<b>1.0</b>	<b>1.0</b>	<b>1.0</b>	<b>1.0</b>	<b>2.0</b>	<b>1.0</b>	<b>1.0</b>	<b>1.0</b>	<b>1.5</b>	<b>1.5</b>	<b>1.5</b>	<b>1.0</b>	<b>4.0</b>
Q21	Gap Analysis	1	1	1	1	2	1	1	1	1	1	1	1	4
Q22	Migration Planning	1	1	1	1	2	1	1	1	2	2	2	1	4
<b>Architecture Team Resources</b>		<b>1.5</b>	<b>1.5</b>	<b>1.0</b>	<b>1.0</b>	<b>1.5</b>	<b>2.0</b>	<b>1.0</b>	<b>1.5</b>	<b>1.5</b>	<b>1.0</b>	<b>1.5</b>	<b>1.0</b>	<b>1.5</b>
Q23	Team Skills	2	1	1	1	1	3	1	1	2	1	2	1	1
Q24	Tools	1	2	1	1	2	1	1	2	1	1	1	1	2
<b>Architecture Impact</b>		<b>1.0</b>	<b>1.0</b>	<b>1.0</b>	<b>1.0</b>	<b>1.0</b>	<b>1.5</b>	<b>1.0</b>	<b>1.0</b>	<b>1.0</b>	<b>1.0</b>	<b>1.0</b>	<b>1.0</b>	<b>1.0</b>
Q25	EA Measurement and Reporting Progr	1	1	1	1	1	2	1	1	1	1	1	1	1
Q26	Financial Efficiency	1	1	1	1	1	1	1	1	1	1	1	1	1
<b>Total Combined Average</b>		<b>1.47</b>												

## ***Architecture scope and authority***

**Question 1: Span of Business Areas.** The span of architecture defines the scope across lines of business. In smaller organizations, architecture is often enterprise wide, but in larger organizations, architecture may be limited to a line of business, or architecture may be at the corporate level, but dealing with only a subset of the overall business processes, information and technology, or it may be federated combining efforts at the corporate level and the LoB level and it may extend to external partners.

- Architecture is project focused.
- Architecture exists independently in LoB or geographic silos.
- Architecture is federated with defined corporate and LoB responsibilities. However, LoBs and corporate architecture programs do not have coordinated processes & governance.
- Architecture is unified or federated with standardized corporate and LoB processes and governance structures.
- Architecture is unified or federated across the enterprise and encompasses interactions with business partners.

**Question 2: Architecture Governance.** The decision making process to approve and support architecture is indicative of the level of importance the company places on architecture. Successful EA programs are viewed as critical to business sustainability.

- There is no effective enterprise architecture function. Project teams make independent design decisions.
- The role of enterprise architecture is purely advisory.
- Enterprise architecture is mandatory and accountable to IT.
- Enterprise architecture is mandatory and accountable to IT with escalation processes to the Business Executive Committee.
- Architecture function is part of the corporate strategy or change management group and is accountable to a Business Executive Committee.

**Question 3: Disclosure.** To be effective, architecture programs must have knowledge projects underway and appropriate "touch

points" to ensure projects are architecturally aligned. In some companies, disclosure of project progress is not mandatory, and if architecture is not supported in the company, disclosure may be actively avoided.

- Change disclosure (planned or current) is actively avoided.
- Disclosure of change is purely optional - no disclosure process in place.
- Disclosure of change is mandatory but no formal disclosure processes are in place.
- Disclosure is mandatory and disclosure processes are in place.
- Disclosure is mandatory. Penalties for non-disclosure are in place.

**Question 4: Compliance.** Architecture enforcement (adherence, compliance, assurance) must be addressed through a process established before the first project is asked to comply with a new architecture. We recommended leveraging the enterprise program management office to integrate "architecture touch points" into the project management methodology of the enterprise. Architecture compliance is evaluated at those touch points. This includes a process for assessment and approval of waivers from architecture standards and guidelines.

- The compliance is actively avoided.
- Architecture influences decision making - purely advisory.
- Architecture compliance is mandatory and the process to be followed is clearly defined and well communicated.
- Architecture compliance is mandatory and architecture reviews are integrated into program management processes.
- Architecture compliance is mandatory and penalties are applied for non-compliance.

### ***Stakeholder involvement and support***

**Question 5: Corporate Management Support.** Business aligned enterprise architecture begins with the support of the corporate management. Senior corporate management must believe and support IT and enterprise architecture by sending the appropriate "steering signals" to the enterprise to motivate the appropriate behaviors.

- Most Corporate Managers have no awareness or involvement with the architecture program.
- Most Corporate Managers are aware of the architecture program but do not see it as relevant to them.
- Most Corporate Managers are aware of the architecture program and it has the support of a significant minority.
- Most Corporate Managers understand and support the architecture program.
- Support of the architecture program by Corporate Managers is embedded into the enterprise culture.

**Question 6: Business Unit Support.** Architecture should engage the support of the business, ensuring that business unit managers understand the value of architecture and provide support for the program. Without this support, architecture is viewed as unnecessary project overhead and architects are engaged in an on-going battle to ensure architecture compliance.

- Most business unit managers have no awareness or involvement with the architecture program.
- Most business unit managers are aware of the architecture program but do not see it as relevant to them.
- Most business unit managers are aware of the architecture program and it has the support of a significant minority.
- Most business unit managers understand and support the architecture program.
- Support of the architecture program by business unit managers is embedded into the enterprise culture.

**Question 7: IT Support.** Key IT constituents (Infrastructure Managers, Project/Program Managers, and Application Developers) must buy-in to the architecture effort to 'make it real'. Communication and on-going involvement with these key constituents is critical to the success of the EA effort.

- Most "Key IT Constituents" have no awareness or involvement with the architecture program.

- Most "Key IT Constituents" are aware of the architecture program but do not see it as relevant to them.
- Most "Key IT Constituents" are aware of the architecture program and it has the support of a significant minority.
- Most "Key IT Constituents" understand and support the architecture program.
- Support of the architecture program by "Key IT Constituents" is embedded into the enterprise culture.

**Question 8: Architecture Community Support.** Responsibility for Enterprise Architecture should extend beyond a core EA group and involve a broad spectrum of related roles such as strategists, business analysts and application developers. Rather, a community of architects should be fostered within the enterprise.

- No formal enterprise architecture roles exist within the enterprise.
- Enterprise architects exist and are the only individuals tasked with enterprise architecture work.
- Enterprise architects exist. Others are occasionally tasked with participating in the enterprise architecture.
- Enterprise architects exist. Others are regularly tasked with participating in the enterprise architecture.
- The enterprise architecture community is embedded into the enterprise culture. This includes a program to develop future enterprise architects.

**Question 9: Architecture Communication.** For stakeholders to be involved and supported, the architecture itself must be clearly and widely communicated. This communication must be appropriate for the particular stakeholder audience and the message.

- There is no formal communication of the architecture.
- Some aspects of the architecture have been documented and are available. However, it is one-size-fits-all with no recognition of the different needs of various stakeholder groups.
- Most aspects of the architecture have been documented and are available. However, it is one-size-fits-all with no recognition of the different needs of various stakeholder groups.

- All aspects of the architecture have been documented and are available. However, there is only minimal recognition of the different needs of various stakeholder groups.
- The architecture is well documented and accessible to all stakeholders. Views of aspects of the architecture are available to meet the needs of different stakeholder groups.

### ***Architecture definition process***

**Question 10: Architecture Development Process.** The architecture development process must be explicitly defined and understood by the architecture team and stakeholders. The process defines the steps in the development/refresh of the architecture, and the artifacts that are produced.

- No formal architecture development process.
- Architecture development process defined but not mandatory.
- Architecture development process mandatory but does not include architecture refresh.
- Architecture development process mandatory and includes regular refreshing of the architecture.
- Architecture development process is mandatory and includes regular refreshing of the architecture. Continuous improvement processes in place.

**Question 11: Process Integration.** Architecture cannot exist as an island. To be successful, the architecture program must be integrated with other key business/IT processes. [Select all that apply]

- Architecture is integrated with business planning.
- Architecture is integrated with IT planning/portfolio management.
- Architecture is integrated with program management.
- Architecture is integrated with development methodologies.
- Architecture is integrated with the technology acquisition process.
- Architecture is integrated with the change management process.

**Question 12: Process Execution.** Architecture must be executed pragmatically. Each update of the architecture should be planned and

executed as a project, with appropriate planning and tracking mechanisms to ensure the architecture process and deliverables meet the agreed upon schedule, cost and quality. It should also be done iteratively with iterations taking around three months and providing a mix of short and long term benefits.

- Architecture is ad hoc or reactive - no planning is done.
- Architecture is proactive and process driven but not planned.
- Architecture is developed in a cyclical fashion with each iteration planned as projects but not tracked.
- Architecture cycles are planned and tracked for quality, schedule and cost.
- Architecture cycles are optimized to improve performance with each iteration and to provide a mix of short and long term business benefits.

**Question 13: Cycle Frequency & Maintenance.** Architecture is not a one-time effort, but must be refreshed periodically to ensure it is current with the changing business landscape. Refreshes must occur in along with updates to the business strategy and in response to changes in environmental factors such as the economy, the competitive environment or technology innovations.

- The architecture program has not been initiated or program artifacts have not been created.
- Architecture development is in progress but incomplete.
- The architecture has been created but there are no plans for updates.
- Architecture update reviews occur annually in step with budget planning.
- Architecture update reviews occur annually and can also be triggered by changes in technology or environmental trends.

**Question 14: Planning Horizon.** The most successful architecture programs have planning horizons that are match the business planning horizon, typically 3 years into the future and updated on an incremental basis. However, in many companies, architecture is 'just in time' or reactive.

- Architecture is non-existent or reactive.
- Architecture is "just in time" progressing with change projects.
- The architecture planning horizon is tactical < 1 year.
- The architecture planning horizon is strategic 1 to 3 years.
- Architecture planning is incremental with its planning horizon synchronized with the business strategy.

### ***Business context***

**Question 15: Business Trends.** Businesses change in response to external trends. These environmental trends may be the result of changing regulation, market forces or competitive conditions. The business trends identify the key environmental changes that are impacting the business.

- Business trends have not been formally identified.
- Business trends have been identified by the EA team, but not agreed upon.
- Business trends have been identified and agreed upon with the business.
- Business trends have been identified, agreed upon and are periodically reviewed and updated.
- Business trends have been identified, agreed upon and are continuously reviewed and updated.

**Question 16: Technology Trends.** As new technologies are introduced, organizations must identify the impact of those technologies on the business and plan for the appropriate deployment strategy.

- Technology trends have not been formally identified.
- Technology trends have been identified by the EA team, but not agreed upon.
- Technology trends have been identified and agreed upon with the business.
- Technology trends have been identified, agreed upon and are periodically reviewed and updated.
- Technology trends have been identified, agreed upon and are continuously reviewed and updated.

**Question 17: Business Vision.** The business vision describes the key business strategies that the organization will pursue in response to environmental trends or business opportunities. The business vision must be supported by senior business managers and represent a realistic change agenda.

- The business vision has not been formally identified.
- A business vision exists, but is not documented and/or agreed upon.
- The business vision is documented and agreed upon.
- The business vision is documented, agreed upon and periodically reviewed and updated.
- The business vision is documented, agreed upon and continuously reviewed and updated.

### ***Architecture content***

**Question 18: Requirements.** The future state architecture must be driven and prioritized by the business strategy and reflect environmental trends including economic, business and technology trends. The architecture requirements should address business, information and technology viewpoints as well as the solution architecture.

- Architecture requirements have not been defined.
- Architecture requirements have been defined but are not linked to the business strategy or environmental trends.
- Some architecture requirements have been defined and linked to the business strategy and the environmental context. However, requirements for at least one of the three architecture viewpoints have not been elaborated.
- Architecture requirements have been defined for all three architecture viewpoints and are linked to the business strategy and the environmental context. However, the solution architecture requirements to resolve a series of viewpoint intersections, have not been defined.
- Architecture requirements have been defined for all three architecture viewpoints and are linked to the business strategy and

the environmental context. Solution architecture requirements that resolve a series of viewpoint intersections has also been defined.

**Question 19: Principles.** Successful architecture programs have a set of clearly defined principles with which to anchor their content. In these programs, principles exist for each of the architecture viewpoints and the solution architecture and these are driven by the architecture requirements.

- Architecture principles have not been defined.
- Architecture principles have been defined but are not explicitly linked to their architecture requirements.
- Some architecture principles have been defined and are linked to their architecture requirements. However, principles for at least one of the three architecture viewpoints have not been elaborated.
- Architecture principles have been defined for all three architecture viewpoints and are linked to their architecture requirements. However, the solution architecture principles to resolve a series of viewpoint intersections have not been defined.
- Architecture principles have been defined for all three architecture viewpoints and for the solution architecture and these are linked to their architecture requirements.

**Question 20: Models.** Architecture models define the future state architecture. Those current state architecture models that are needed to serve as a baseline for change also exist. Model exist for each of the architecture viewpoints and the solution architecture and these are consistent the architecture principles. Models are developed iteratively to optimize support for the business strategy.

- Few, if any, future state models have been created. Those that do exist are not linked to architecture principles.
- Some future state models have been created that are consistent with the relevant architecture principles. Some current state models might also exist but these are not explicitly linked to future state models to serve as baselines for change.
- Future state models have been created that are consistent with the relevant architecture principles. These are accompanied by those current state models that are needed as baselines for change.

However, models for at least one of the three architecture viewpoints have not been elaborated.

Future state models for all three architecture viewpoints have been created that are consistent with the relevant architecture principles. These are accompanied by those current state models that are needed as baselines for change. The models that have been developed have been explicitly selected to optimize alignment with the business strategy.

Future state models for all three architecture viewpoints and the solution architecture have been created and are consistent with the relevant architecture principles. These are accompanied by those current state models that are needed as baselines for change. The models that have been developed have been explicitly selected to optimize alignment with the business strategy.

### ***Future-state realization***

**Question 21: Gap Analysis.** To be successful, the architecture must define specific projects for implementation through gap analysis - understanding the gaps between the future state and the current state. These should be selected and prioritized as part of an enterprise-wide project prioritization process that balances the enterprises long and short term needs along with sectional and broad-based requirements.

- Future state architectures are not defined in anything more than a piecemeal fashion.
- Architecture is reactive with gap analysis performed in response to specific requests. There is no enterprise-wide oversight.
- Future state business, information, technology and solution architecture gaps have been identified but have not been coordinated.
- Future state business, information, technology and solution architecture gaps have been identified in a consistent fashion within enterprise architecture.
- Future state business, information, technology and solution architecture gaps have been identified in a consistent fashion within enterprise architecture and the impacts on stakeholders have been considered.

**Question 22: Migration Planning.** High level migration plans prioritize highest business priority projects and determine which supporting projects must also be initiated to meet the business objectives.

- Future state architectures are not defined in anything more than a piecemeal fashion.
- Architecture is reactive with migration projects initiated in response to specific requests. There is no enterprise-wide coordination.
- Business change projects have been prioritized.
- Project dependencies have been identified. Project charters feed into the budget allocation process.
- Business priorities drive migration planning and implementation for both business change and supporting projects.

### ***Architecture team resources***

**Question 23: Team Skills.** To be successful, the enterprise architecture team must have the necessary skills and talents. Training, mentoring and certification programs must be in place to ensure a sustainable pool of EA team resources.

- The architecture team is new and formal training has not been completed.
- The EA program has been established and is operating, but EA team members generally lack EA training.
- Basic EA training has been completed by EA team members.
- All long term EA team members have been formally trained and a training program has been developed for new team members.
- All long term EA team members have been formally trained and a training program is in place for the wider architecture community.

**Question 24: Tools.** Mature EA programs require EA tools to create and manage the artifacts. The market for EA tools is becoming increasingly sophisticated.

- The EA program is just getting started. No EA tools have been selected.

- The EA program uses basic MS Office tools (Word, Visio, PowerPoint), or similar.
- An EA tool has been selected is used by the enterprise architects.
- An EA tool has been selected, is used by the enterprise architects, and is used to communicate enterprise architecture to stakeholders.
- An EA tool is integrated within an IT governance suite and other EA-related tools and is used as a communication hub with all EA stakeholders.

## ***Architecture impact***

### **Question 25: EA Measurement and Reporting Program.**

Without defined program goals, EA programs are will struggle to provide on-going justification of the value of EA and the impact of the EA program on the business. Define objectives for the EA program and report on the program's progress in meeting these objectives.

- There is no measurement or reporting program in place.
- Ad hoc reporting to EA Team's manager based upon points of interest or problems and concerns.
- Some EA metrics delivered formally.
- A measurement and reporting program in place that delivers one report to all stakeholders.
- A mature, established and planned EA measurement and reporting program that is delivering well crafted messages specific to each key stakeholder, which is continuously reviewed and updated.

**Question 26: Financial Efficiency.** Financial efficiency metrics deal with the financial impact of the EA program on the business. Financial benefits may be derived from reduced redundancy, improved time to delivery, reduced support costs and reduced acquisition costs.

- The financial impact of the EA program is not measured.
- Financial impact metrics have been defined, but are not agreed upon or reported regularly.
- Financial impact metrics have been defined and are agreed upon and reported regularly.
- Financial-impact metrics have been defined, implemented and are periodically reviewed.