Six Types of Enterprise Architecture Artifacts

Svyatoslav Kotusev (kotusev@kotusev.com)

Introduction

Enterprise architecture (EA) is widely used in diverse organizations across the globe and is usually associated with popular EA frameworks (TOGAF, Zachman, FEAF, etc.). However, EA frameworks are no more than typical management fads with the long history of unsuccessful implementations[1, 2] and successful EA practices do not resemble the recommendations of these EA frameworks in any real sense[3, 4, 5]. But if popular EA frameworks do not explain real EA practices then how the notion of EA can be explained and conceptualized? Previously I presented the "one minute" conceptualization of EA which explains EA as a set of four different types of EA artifacts, Principles, Visions, Standards and Models[6]. My further analysis of EA artifacts used in successful EA practices shows that the notion of EA can be better explained with a refined taxonomy defining six general types of EA artifacts: Considerations, Standards, Visions, Landscapes, Outlines and Designs.

Taxonomy for EA Artifacts

My in-depth analysis of EA artifacts identified in the organizations successfully practicing EA shows that all EA artifacts can be grouped into six general types on the basis of *what* EA artifacts describe and *how* EA artifacts describe.

Firstly, all EA artifacts can be classified based on the objects of their description (what?), from more generic ones to more specific ones, into Rules, Structures and Changes. Rules describe broad global rules defining the organization or its divisions, Structures describe high-level structures of the organization or its parts, while Changes describe specific proposed changes to the organization.

Secondly, all EA artifacts can be classified based on the terminology of their description (how?) into Business-Focused and IT-Focused. Business-Focused EA artifacts are typically technology-neutral and use business language (money, customers, capabilities, business goals, competitive advantages, etc.), while IT-Focused EA artifacts are usually purely technical and use IT-specific language (systems, applications, databases, platforms, networks, etc.).

The intersection of the two orthogonal classifications described above produces the taxonomy with six general types of EA artifacts: Considerations, Standards, Visions, Landscapes, Outlines and Designs.

Six General Types of EA Artifacts

Considerations, Standards, Visions, Landscapes, Outlines and Designs are the six general types of EA artifacts found in all more or less mature EA practices. Despite the diversity of identified EA artifacts relevant to each type, these six general types of EA artifacts reasonably accurately describe the main common properties of all related EA artifacts. Specifically, the six general types of EA artifacts explain what these EA artifacts describe, how they are used, what their purpose is and what benefits result from their usage.

Considerations are Business-Focused Rules. EA artifacts related to this general type identified in organizations include principles, policies, maxims, core drivers, architecture strategies, conceptual data models, governance papers, position papers, strategy papers and

whitepapers. All these EA artifacts describe global conceptual rules and considerations important for business and relevant for IT. Considerations are developed collaboratively by senior business leaders and architects and then used to influence all architectural decisions. Their purpose is to help achieve the agreement on basic principles, values, directions and aims. The proper use of Considerations leads to improved overall conceptual consistency.

Standards are IT-Focused Rules. EA artifacts related to this general type identified in organizations include guidelines, standards, patterns, IT principles, data models and reference architectures as well as technology, application, infrastructure, platform and security reference models. All these EA artifacts describe global technical rules, standards, patterns and best practices relevant for IT systems. Standards are developed by architects and technical subject-matter experts and then used to influence architectures of all IT projects. Their purpose is to help achieve technical consistency, technological homogeneity and regulatory compliance. The proper use of Standards leads to reduced costs, risks and complexity.

Visions are Business-Focused Structures. EA artifacts related to this general type identified in organizations include business capability models, value reference models, business context diagrams, business reference architectures, business activity models, enterprise process maps, future state architectures and all sorts of roadmaps. All these EA artifacts provide high-level conceptual descriptions of the organization from the business perspective. Visions are developed collaboratively by senior business leaders and architects and then used to guide and prioritize all IT initiatives. Their purpose is to help achieve the alignment between IT investments and business outcomes. The proper use of Visions leads to improved effectiveness of IT investments.

Landscapes are IT-Focused Structures. EA artifacts related to this general type identified in organizations include platform architectures, relational diagrams, application portfolios, integration contexts, system interaction diagrams, inventories, asset registers, IT systems value maps, one page diagrams, enterprise technology models and all sorts of technology roadmaps. All these EA artifacts provide high-level technical descriptions of the organizational IT landscape. Landscapes are developed and maintained by architects and used to support technical decision-making and facilitate project planning. Their purpose is to help rationalize the IT landscape, manage the lifecycle of IT assets and plan IT projects. The proper use of Landscapes leads to increased reuse and flexibility, reduced duplication and legacy.

Outlines are Business-Focused Changes. EA artifacts related to this general type identified in organizations include conceptual architectures, solution overviews, conceptual designs, solution briefs, preliminary solution architectures, solution outlines, idea briefs, solution proposals, initiative summaries, investment cases, options papers and solution assessments. All these EA artifacts provide high-level descriptions of specific IT projects understandable to business leaders. Outlines are developed collaboratively by architects and business leaders and then used to evaluate, approve and fund specific IT projects. Their purpose is to help estimate the overall business value of specific IT projects. The proper use of Outlines leads to improved efficiency of IT investments.

Designs are IT-Focused Changes. EA artifacts related to this general type identified in organizations include detailed designs, solution definitions, full solution architectures, high-level designs, solution specifications, integrated solution designs, physical designs, solution blueprints and technical designs. All these EA artifacts provide detailed technical descriptions of specific IT projects actionable for project teams. Designs are developed collaboratively by architects, project teams and business representatives and then used by project teams to implement IT projects. Their purpose is to help implement IT projects according to business

and architectural requirements. The proper use of Designs leads to improved quality of the project delivery.

The resulting taxonomy with six general types of EA artifacts described above is shown on Figure 1.

	Rules	Structures	Changes
Business-Focused	**Considerations**	**Visions**	**Outlines**
	Identified Artifacts: Principles, policies, maxims, core drivers, strategy papers, position papers, governance papers, conceptual data models, etc.	**Identified Artifacts:** Business capability models, value reference models, future state architectures, roadmaps, business context diagrams, etc.	**Identified Artifacts:** Conceptual architectures, idea briefs, initiative summaries, investment cases, solution overviews, options papers, etc.
	Typical Purpose: Help achieve the agreement on basic principles, values, directions and aims	**Typical Purpose:** Help achieve the alignment between IT investments and business outcomes	**Typical Purpose:** Help estimate the overall business value of specific IT projects
	Expected Benefits: Improved overall conceptual consistency	**Expected Benefits:** Improved effectiveness of IT investments	**Expected Benefits:** Improved efficiency of IT investments
IT-Focused	**Standards**	**Landscapes**	**Designs**
	Identified Artifacts: Guidelines, standards, patterns, IT principles, technology reference models, reference architectures, data models, etc.	**Identified Artifacts:** Application portfolios, integration contexts, platform architectures, inventories, technology roadmaps, etc.	**Identified Artifacts:** Detailed designs, physical designs, solution specifications, full solution architectures, solution blueprints, etc.
	Typical Purpose: Help achieve technical consistency, homogeneity and regulatory compliance	**Typical Purpose:** Help rationalize the IT landscape, manage the lifecycle of IT assets and plan IT projects	**Typical Purpose:** Help implement IT projects according to business and architectural requirements
	Expected Benefits: Reduced costs, risks and complexity	**Expected Benefits:** Increased reuse and flexibility, reduced duplication and legacy	**Expected Benefits:** Improved quality of the project delivery

Svyatoslav Kotusev (kotusev@kotusev.com) for the British Computer Society (BCS)

Figure 1. Taxonomy with Six General Types of EA Artifacts

Despite its apparent simplicity, this taxonomy with six general types of EA artifacts provides a clear, straightforward, powerful and evidence-based conceptual explanation of the complex notion of EA.

References

[1] Kotusev, S. 2016. "Enterprise Architecture Frameworks: The Fad of the Century." Retrieved 3 August, 2016, from http://www.bcs.org/content/conWebDoc/56347

[2] Gaver, S.B. 2010. "Why Doesn't the Federal Enterprise Architecture Work?," Technology Matters, McLean, VA.

[3] Kotusev, S. 2016. "Enterprise Architecture Is Not TOGAF."   Retrieved 21 January, 2016, from http://www.bcs.org/content/conWebDoc/55547

[4] Kotusev, S. 2016. "The Critical Scrutiny of TOGAF."   Retrieved 15 April, 2016, from http://www.bcs.org/content/conWebDoc/55892

[5] Holst, M.S., and Steensen, T.W. 2011. "The Successful Enterprise Architecture Effort," *Journal of Enterprise Architecture* (7:4), pp. 16-22.

[6] Kotusev, S. 2016. "One Minute Enterprise Architecture."   Retrieved 30 June, 2016, from http://www.bcs.org/content/conWebDoc/56198