Enterprise Architecture on a Single Page

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Introduction

Enterprise architecture (EA) as a discipline is chronically suffering from an acute lack of realism. This problem is caused, on the one hand, by the abundant supply of fake "best practices" and, on the other hand, by the lack of any alternative realistic reference models for EA. The first half of this problem is well-known EA frameworks aggressively promoted by commercially motivated consultancies and gurus, e.g. TOGAF, Zachman and FEAF. From the historical perspective all these EA frameworks can be considered only as the "next" management fad related to information systems planning, yet another attempt to sell the flawed ideas of the 50-years-old Business Systems Planning (BSP) methodology that can hardly be successfully implemented in practice[1]. Even if considered merely as "checklists" for an EA practice, as some EA gurus now recommend, the practical usefulness of EA frameworks is still highly questionable simply because most of their checklist points are never really "checked" anywhere, while some essential elements of successful EA practices are missing in their checklists. For example, who really "checked" TOGAF Enterprise Continuum in their organization? And which framework includes ubiquitously used Business Capability Models in its checklist?[2, 3] Such checklists may only confuse people, rather than help them. And they are certainly unable to provide any real practical guidance for architects, especially for newbies with no previous EA experience. Overall, the situation with EA frameworks looks absurd: frameworks appeared out of nowhere and have little or no connection with empirical reality, but for some reason are still widely discussed and respected by many people.

The second half of this problem is that for the last 20 years of active speculations around EA, with some rare exceptions, nobody seriously tried to produce any sensible alternatives to EA frameworks – something that can be used as a more realistic guidance or reference model for an EA practice instead of useless trinkets offered by numerous "snake oil salesmen". This is especially strange taking into account the fact that consistent EA best practices have existed in industry for a rather long time, well known to most experienced architects and institutionalized in many companies. As a result, all EA-related discussions sooner or later degrade to EA frameworks simply because no other models are available to provide constructive common points of reference. Even worse, many people have to start "using" EA frameworks only because there is essentially nothing else they can start from.

In order to address this longstanding lack of reasonable reference models for EA, I thought it would be a nice idea to provide a one-page comprehensive explanatory view of EA, as a collection of specific artifacts used for planning, reflecting actual EA best practices that proved effective in real-world organizations. Such a view can be used as a convenient catalogue of EA artifacts. It can be used as a sense-making instrument or as a tool for thinking around EA. It can be freely distributed and used as a common reference point to start from. It can be printed, used as a poster and pinned on the wall. I called the resulting view of EA artifacts simply as "Enterprise Architecture on a Page" and created a modest website for it: http://eaonapage.com.

Enterprise Architecture on a Page

As part of my research, I analyzed all EA artifacts used in 27 diverse organizations with reasonably mature and more or less successful EA practices (various business strategy documents, business cases and project management plans were not considered as EA artifacts). As a result, I identified 24 consistent types of EA artifacts used in these organizations more or less commonly (however, some artifacts were unique and very organization-specific).

Based on the relative frequency of their usage, I loosely classified all these types of EA artifacts into three broad groups: essential (used in the majority of studied EA practices), common (used in ~50-25% of studied EA practices) and uncommon (used in ~25-10% of studied EA practices). This classification may roughly represent the relative usefulness and importance of particular EA artifacts for an EA practice. Then, I grouped these 24 narrow types of EA artifacts into six general types, Considerations, Standards, Visions, Landscapes, Outlines and Designs (CSVLOD), according to the analytical taxonomy I presented and discussed previously[4, 5, 6].

For each of these 24 identified EA artifacts I developed a simple schematic graphical representation reflecting its typical format, high-level structure and critical informational contents. Finally, I placed all these EA artifacts on a single page around the overarching CSVLOD taxonomy explaining their usage and other core properties in the context of an EA practice. The full version of the resulting Enterprise Architecture on a Page is available here: http://eaonapage.com/Enterprise%20Architecture%20on%20a%20Page%20(v1.2).pdf.   A simplified schematic view of Enterprise Architecture on a Page is shown in Figure 1.

Enterprise Architecture on a Page

(Schematic view only, visit http://eaonapage.com for the full version)

Policies
Overarching organizational norms typically of a restrictive nature providing compulsory prescriptions in certain areas

Principles
Global high-level guidelines influencing all decision-making and planning in an organization

Direction Statements
Conceptual messages communicating organization-wide decisions with far-reaching consequences

Context Diagrams
High-level graphical descriptions of the current operational flows of an organization

Value Chains
Structured graphical representations of the added value chain of an organization

Business Capability Models
Structured graphical representations of all business capabilities, their relationship and hierarchy

Target States
High-level graphical descriptions of the desired long-term future state of an organization

Roadmaps
Structured graphical views of all planned IT initiatives in specific business areas having direct business value

Conceptual Data Models
Abstract definitions of the main data entities critical for the business of an organization and their relationship

Analytical Reports
Executive-level analyses of relevant technology trends and their potential impact on the business of an organization

Initiative Proposals
Very early idea-level descriptions of proposed IT initiatives and their justifications

Options Assessments
Lists of high-level implementation options for specific IT initiatives with their pros and cons

Considerations
Content: Global conceptual rules and fundamental considerations important for business and relevant for IT
Represent: Overarching organizational context for information systems planning
Usage: Developed collaboratively by senior business leaders and architects and then used to influence all architectural decisions
Lifecycle: Developed once and then updated according to the ongoing changes in the business environment
Purpose: Help achieve the agreement on basic principles, values, directions and aims
Benefits: Improved overall consistency between business and IT

Visions
Content: High-level conceptual descriptions of an organization from the business perspective
Represent: Shared views of an organization and its future agreed by business and IT
Usage: Developed collaboratively by senior business leaders and architects and then used to guide IT investments, identify, prioritize and launch new IT initiatives
Lifecycle: Developed once and then updated according to the ongoing changes in strategic business priorities
Purpose: Help achieve the alignment between IT investments and long-term business outcomes
Benefits: Improved strategic effectiveness of IT investments

Outlines
Content: High-level descriptions of specific IT initiatives understandable to business leaders
Represent: Benefit, time and price tags for proposed IT initiatives
Usage: Developed collaboratively by architects and business leaders and then used to evaluate, approve and fund specific IT initiatives
Lifecycle: Developed at the early stages of IT initiatives to support decision-making and then archived
Purpose: Help estimate the overall business impact and value of proposed IT initiatives
Benefits: Improved efficiency and ROI of IT investments

Enterprise Architecture

IT Principles
Global high-level IT-specific guidelines influencing all IT-related decisions and plans in an organization

Technology Reference Models
Structured graphical representations of all technologies used in an organization

Standards
Content: Global technical rules, standards, patterns and best practices relevant for IT systems
Represent: Proven reusable means for IT systems implementation
Usage: Developed collaboratively by architects and technical subject-matter experts and used to shape architectures of all IT initiatives
Lifecycle: Developed on an as-necessary basis and updated according to the ongoing technology progress
Purpose: Help achieve technical consistency, technological homogeneity and regulatory compliance
Benefits: Faster initiative delivery, reduced costs, risks and complexity

Landscapes
Content: High-level technical descriptions of the organizational IT landscape
Represent: Knowledge base of reference materials on the IT landscape
Usage: Developed and maintained by architects and used to rationalize the IT landscape, manage the lifecycle of IT assets and plan new IT initiatives
Lifecycle: Developed on an as-necessary basis and updated according to the ongoing evolution of the IT landscape
Purpose: Help understand, analyze and modify the structure of the IT landscape
Benefits: Increased reuse and agility, reduced duplication and legacy

Designs
Content: Detailed technical and functional descriptions of specific IT projects actionable for project teams
Represent: Communication interfaces between architects and project teams
Usage: Developed collaboratively by architects, project teams and business representatives and then used by project teams to implement IT projects
Lifecycle: Developed at the later stages of IT initiatives to support implementation and then archived
Purpose: Help implement approved IT projects according to business and architectural requirements
Benefits: Improved quality of the project delivery

Solution Overviews
High-level descriptions of specific proposed IT solutions understandable to business leaders

Preliminary Solution Designs
Preliminary high-level technical and functional designs of specific approved IT solutions

Guidelines
IT-specific implementation-level prescriptions applicable in narrow technology-specific areas or domains

Logical Data Models
Logical or even physical platform-specific definitions of the key data entities and their relationship

Patterns
Generic reusable solutions to commonly occurring problems in the design of IT systems

Inventories
Structured catalogs of currently available IT assets describing their essential properties and features

Enterprise System Portfolios
Structured high-level mappings of all essential IT systems to relevant business capabilities

Landscape Diagrams
Technical "boxes and arrows" schemes of different scopes and granularities describing the organizational IT landscape

IT Roadmaps
Structured graphical views of all planned IT initiatives of a purely technical nature having no visible business impact

Solution Designs
Detailed technical and functional specifications of approved IT solutions actionable for project teams

◤ Essential   ◹ Common   ◺ Uncommon

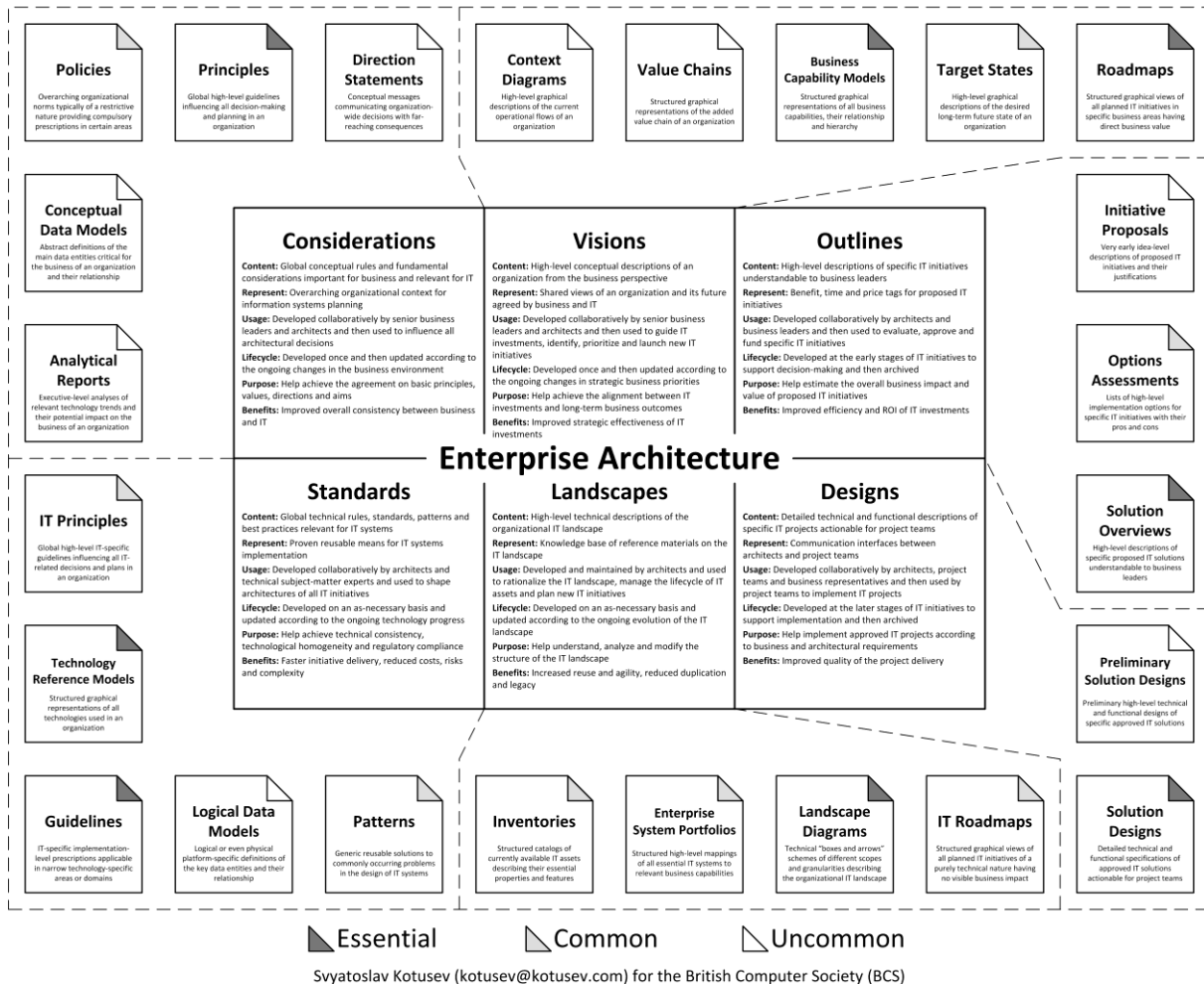Svyatoslav Kotusev (kotusev@kotusev.com) for the British Computer Society (BCS)

Figure 1. Enterprise Architecture on a Page (Schematic View Only)

Enterprise Architecture on a Page has been discussed with a number of experienced enterprise architects who generally approved it, found it useful and provided their improvement suggestions many of which I incorporated into the resulting model. This simple, one-page view of EA provides clear, evidence-based and concise answers to the following essential questions regarding an EA practice (surprisingly, but realistic answers to all these questions are incredibly hard to find anywhere else):

- What EA artifacts are useful?
- What information do they provide?
- What do they look like?
- For what purpose are they developed?
- How exactly are they used?
- What benefits do they bring?

Enterprise Architecture on a Page can be helpful in many ways to various people involved in EA-related activities:

- It offers an evidence-based reference model of EA artifacts to organizations starting their EA journeys
- It provides a convenient framework for thinking about EA and EA artifacts to practicing architects

- It explains the general ideas and mechanisms of an EA practice to newbie architects
- It can be used as an intuitive visual model of EA for teaching EA courses to students in universities

Enterprise Architecture on a Page is purely descriptive in nature and does not give any detailed prescriptions regarding the usage of EA artifacts. Instead, it merely shows what EA artifacts are typically used in organizations, explains how they are used and, thereby, provides some "food for thought" for architects and organizations starting their EA practices.

Certainly, Enterprise Architecture on a Page cannot be considered as a global statistical snapshot of all EA artifacts used in all organizations around the world, or even as an exhaustive list of all imaginable EA artifacts that might be helpful in organizations (many companies "invent" and use their own peculiar EA artifacts). However, it is based on empirical data from multiple diverse organizations, discussed with enterprise architects from different countries and therefore might be considered as reasonably representative and accurate. Despite its imperfectness, it is still incomparably more realistic than the fantastic recommendations of popular EA frameworks. The full version of Enterprise Architecture on a Page is freely available to download at http://eaonapage.com.

References

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