



Enterprise Architecture – More Than Just Standards

David Rudawitz

EITS
February 2004

Abstract

A far too common belief is that a set of standards for hardware and applications is an organization's enterprise architecture. Although it is true that hardware and application standards are included, they are only a small component of a comprehensive enterprise architecture. An Enterprise Architecture is the description and design of a portfolio of processes, applications, information and their supporting technologies that enable business strategy. It addresses the structure of that portfolio over time (current, tactical, strategic) and its interactions and linkages through guidelines including principles, rules, patterns, reference models, standards, initiatives, governance structures and processes to use when building new IT capability. To be truly effective, organizations have to really understand and embrace the holistic concept of enterprise architecture. Focusing solely on the standards aspect greatly limits the benefits that an enterprise can achieve.

Talk to an IT executive about Enterprise Architecture (EA) and you are likely to find that he/she is fully satisfied with their EA. They have a set of standards for hardware and applications and that is what enterprise architecture is, right? Although it is true that hardware and application standards are included in an EA, standards are only a small component of a comprehensive EA.

Definitions of “Enterprise Architecture” have been developed and published by many industry experts and organizations involved with developing, promoting or supporting Enterprise Architecture efforts. Some of these definitions are:

- From the United States Federal Government – “Enterprise Architecture - a strategic information asset base, which defines the mission, the information necessary to perform the mission, the technologies necessary to perform the mission, and the transitional processes for implementing new technologies in response to the changing mission needs. An enterprise architecture includes a baseline architecture, target architecture, and a sequencing plan.”¹
- From the Meta Group, Inc. – “Enterprise Wide Technical Architecture – An enterprise wide technical architecture (EWTA) is a logically consistent set of principles that guide the engineering of an organization’s information systems and technology infrastructure.”²
- From John Zachman – “A comprehensive definition of Enterprise Architecture –A framework for improving enterprise communications about architecture issues.”
- From Richard Buchanan of the Meta Group, Inc. “...the definition of EA as an ongoing strategic planning process”³
- From the Open Group's definition in TOGAF: There are four types of architecture that are commonly accepted as subsets of an overall Enterprise Architecture:
 - Business architecture: the business strategy, governance, organization, and key business processes.
 - Data/information architecture: the structure of an organization's logical and physical data assets and data management resources.
 - Application (systems) architecture: the blueprint for the individual application systems to be deployed, their interactions, and their relationships to the core business processes of the organization.
 - Information Technology (IT) architecture: the software infrastructure intended to support the deployment of core, mission-critical applications. This type of software is sometimes referred to as "middleware,” and the architecture as a "technical architecture.”

¹ *A Practical Guide to Federal Enterprise Architecture 1.1*, Chief Information Council, February 2001. The definition for Enterprise Architecture is the endorsed definition from the Federal CIO Council and appears in the September 1999 version of the FEAF.

² 1999 Adaptive Architecture Emersion Workshop, Tempe AZ, the META Group, Inc.

³ Buchanan, Richard, *Answering Tough Questions about Enterprise Architecture*, Delta 2050, March 19, 2003, The META Group Inc.

Taking these all together, the best definition for Enterprise Architecture is from our associates at Technology Performance Associates, LLC:

Enterprise Architecture (EA) is the description and design of a portfolio of processes, applications, information and their supporting technologies that enable business strategy. It addresses the structure of that portfolio over time (current, tactical, strategic) and its interactions and linkages through guidelines including principles, rules, patterns, reference models, standards, initiatives and governance structures and processes to use when building new IT capability.

A common thread with all of these definitions is that Enterprise Architecture is much more than just a list of IT standards to be followed by an enterprise. Enterprise Architecture must encompass the entire process. It starts by identifying, articulating and understanding the enterprise's business objectives and goals. It must include the establishment, communication and governance of standards and patterns and the implementation of these standards through transition or sequenced projects. It then goes back to a review of the business objectives in an ongoing cycle of overall IT governance to insure ongoing interlock with the business.

Many companies whose enterprise architecture is standards focused have not also addressed the governance of the standards process. Even if an enterprise elects to restrict its enterprise architecture efforts to standards, a complete, on-going governance process is necessary to maintain those technology standards after the initial standards setting activity. Companies that simply establish and then dictate a set of standards quickly find that they have outgrown the standards and the standards now adversely impact the ability of IT to support the requirements of their business.

In these companies, IT managers will complain that their IT standards constrain their efforts and limit expansion and growth in the technology needed to meet the IT organization's internal customer's needs. These managers can all recount recent projects that were adversely impacted because of some standard that was set without full thought to the overall company needs, part of an inconsistent standards set, or was unable to provide any leeway for future requirement or technology change. When they complain, they are told "those are the standards" and they must comply. There is no effective standards governance process and they are not included in what processes there are to manage the standards. When they tell their business customers that IT can not meet their needs, these business managers find their low opinions of an un-supporting inflexible IT reaffirmed.

These companies have focused on establishing their standards as their "enterprise architecture." They may have even used some ad hoc committee for the standards setting effort. Then, believing that they were finished, did not create any processes to manage the standards for the future. True, they might have an Architecture Review Board (ARB). However, in such an organization, the ARB is

Enterprise Architecture (EA) is the description and design of a portfolio of processes, applications, information and their supporting technologies that enable business strategy. It addresses the structure of that portfolio over time (current, tactical, strategic) and its interactions and linkages through guidelines including principles, rules, patterns, reference models, standards, initiatives and governance structures and processes to use when building new IT capability.

there to enforce the standards and not manage their growth and change as needed. Waiver granting may be the only leeway these ARBs are provided with. Yet the waiver process often will not include any means to create needed growth and change in the standards.

A robust enterprise architecture is able to effectively deal with specific project needs as well as extend beyond the current established standards. It will have effective governance processes that virtually seek out such needs to extend and grow the standards. This, in fact, is one of the more effective ways to evolve the enterprise architecture. Managed technology growth is essential and must be triggered by the business needs. As these needs are articulated, often by pushing the standards to the limit, they are then translated into technology solutions, creating business based standards growth.

Even with the ability to change standards, an enterprise needs to include processes that insure an appropriate business case for such change. The availability of a new technology should not automatically justify a standards change. Because standards can and should have significant impact on the entire organization, the thought and effort necessary to make changes must be embodied in a comprehensive set of governance processes designed to insure a good business case and an integrated plan across the entire spectrum of technology.

Another aspect of IT standards, often abused in an attempt to limit vendor monopoly, is the concept of “open standards.” Embraced but not as often understood, myopic acceptance of open standards can handicap a company instead of reducing its IT costs. This can be the case for enterprises that desire to take advantage of off-the-shelf applications. It can easily turn out that the most appropriate combination of packaged ready to run applications would not fit with an open standard based set of technology standards. Many vertical industry solutions are built on a proprietary base, which are not often compliant with accepted open standards. In many cases, companies with existing systems, including new web based applications only recently installed, will go ahead and establish an open standards based technology standard only to find that the complimentary software and local development needed to enhance and customize their existing application base must violate those very same technology standards.

This can lead to nasty ARB battles as the project managers are demanding their non-standards compliant projects be approved and the ARB is fighting to avoid granting waivers. Meanwhile, the business customers are upset with the entire IT organization which is now not meeting their needs but, instead, arguing over standards. Open standards can be an important aspect of an enterprise’s standards, but only if adopted after full consideration of the impact on the current and future application roadmap.

To be truly effective, organizations have to really understand and embrace the holistic concept of Enterprise Architecture. Focusing on just the standards aspect, greatly limits the benefits that an enterprise can

Performing a comprehensive enterprise architecture effort will exercise the processes and activities to quickly uncover the potential for these problems and guide the company into the establishment of a consistent, business supporting technology roadmap and standards. On-going processes will be put into place that will continue to align the technology with the business needs to insure that these business needs are being met by the IT organization. In this environment, ARB activity will be greatly reduced and, when a waiver is required, the requirements and needs will be rolled into the overall EA process towards the growth and improvement of the enterprise’s technology roadmap.

Benefits of Enterprise Architecture

Tangible

- **Cost Savings** – through reduction of development and maintenance costs accomplished through integration and asset reuse
- **Cost avoidance** – through reduction of duplicate infrastructure or product implementations, avoiding purchase of incompatible architectures.
- **Integration and re-use gains** – through elimination of redundancy in business and technical by reusing common components and by adoption and leverage of standards and unified processes.
- **Risk Reduction** - that new initiatives will not meet requirements, will not properly integrate or will require significant rework.
- **Time to Market** - reduced for new applications through shortened development time and reduced cycle time for deployment.
- **Increased Revenue** - due to close integration of business and IT enabling identification of opportunities where IT can enhance the business.

Intangible Benefits

- Common vision & principles
- Consensus approach serving common goals
- Promotes healthy discussion bringing issues and concern out in the open
- Develops processes as an organization
- Enhanced communications and common language
- Centralized information
- Documents the technology inventory
- Increased knowledge base

To be truly effective, organizations have to really understand and embrace the holistic concept of Enterprise Architecture. Focusing on just the standards aspect, greatly limits the benefits that an enterprise can achieve with the efforts they expend.

David Rudawitz is Vice President of Antevorte Consulting, LLC and a business partner of EITS. He is a senior IT management consultant with recognized subject matter expertise in Enterprise Architecture implementation and automation. He has conducted evaluations of EA tools as well as implemented tools for EA teams. He has practiced his craft over 30 years with companies such as Ameron Corp., General Dynamics, Holmes & Narver, Inc IBM and Northrop Grumman Corp. He is a member of the Association of Computer Machinery (ACM) and the IEEE Computer Society. Mr. Rudawitz can be contacted at David.Rudawitz@antevorte.com (www.antevorte.com).

EITS (Enterprise IT Solutions, LLC) has a team of consultants with extensive backgrounds in Enterprise Architecture, data architecture and IT management. EITS provides full spectrum Enterprise Architecture consulting including tool selection and implementation.

EITS

Enterprise IT Solutions, LLC

5308 E. Shoshone Ave. Orange, Ca. 92867

(714) 282-8765 Fax (714) 282-7286

Visit our WEB Site at www.enterpriseitsolutions.com/