A Quick Introduction to Enterprise Architecture

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What is Enterprise Architecture?

A good way to start to answer the question is to break it up into two parts—what is an enterprise and what is architecture? According to the Georgetown University Data Warehouse Glossary (n.d.), an enterprise is “a group of departments, divisions, or companies which make up an entire business.” Simple and straightforward—I like it. So what is architecture in the IT context? According to the Open Group (TOGAF – Frequently Asked Questions, 2002), an architecture is “the fundamental organization of a system, embodied in its components, their relationships to each other and the environment, and the principles governing its design and evolution” (Open Group attributes this definition to ANSI/IEEE Std 1471-2000).

Using an architectural viewpoint or approach to manage the future IT developments of an enterprise is part of what enterprise architecture is about. Here are three more specific definitions (Scheinkerman, 2005—):

1. “Enterprise architecture is about understanding all of the different elements that go to make up the enterprise and how the elements interrelate (Institute for Enterprise Architecture Developments).”

2. “Enterprise architecture is a strategic information asset base, which defines the business mission, the information necessary to perform the mission, and the transitional processes for implementing new technologies in response to changing mission needs (USA Federal CIO Council).”

3. “Enterprise architecture is a holistic expression of an organization’s key business information, application and technology strategies and their impact on business functions and processes. The approach looks at business process and the structure of the organization, and what type of technology is used to conduct these business processes (Gartner/Meta Group).”

...improved approaches regarding application development (Zachman, 1987). Frameworks also provide a way to describe new information systems or strategies for modernizing existing ones. With them, you have a clear path for developing enterprise information systems and a starting point for detailed design and construction (Armour, Kaiser, & Liu, 1999). Five important frameworks one might explore include—:

1. Zachman Framework (see: http://www.zifa.com/ for more information)
3. The Open Group Architecture Framework (TOGAF) (see: http://www.opengroup.org/architecture/togaf8-doc/arch/p/togaf_faq.htm for more information)

What about standards and methods?

Standards and methods have been developed for EA. An example of a formal standard and method combination is The Open Group Architecture Framework (TOGAF) and the TOGAF Architecture Development Method (ADM).

TOGAF provides a comprehensive approach to the design, planning, implementation, and governance of enterprise information architecture. The architecture is typically modeled at four levels or domains including Business, Application, Data, and Technology. A collection of foundation architectures are provided to make it possible for the team to conceptualize the current and future state of the architecture (The Open Group, 2006).

When and how did the discipline start?

Enterprise Architecture (EA) developed from the flowering of IT Architecture. Generally, the paper by John Zachman (1987) in the IBM Systems Journal is considered a strong historical starting point because the framework he proposed is useful and interesting. His framework was for information systems architecture but its implications for enterprise-level use were easy to grasp. The framework was later revised and extended in 1992 (Sowa & Zachman, 1992) again in a paper in the IBM Systems Journal.

What is the discipline of EA?

The discipline is end-to-end starting with EA Planning (EAP) and ending with the implementation and maintenance of the EA (perhaps first as a collection of enterprise IT initiatives). One might think of EA as having three domains—high, medium, and low. The high domain is focused on overall EA planning and integration with business goals and objectives. From Spevak’s book on EA planning (2004) this would include activities like planning initiation, preliminary business model, and an enterprise survey.

The middle domain is focused on technology. Chorafas (2002), in Enterprise Architecture and New Generation Information Systems, is largely focused on the marriage of EA and technology. Topics such as “the use of intelligent environments within an enterprise architecture” and “advanced technology and engineering design must be on the fast track” can be found in his book. The low domain is focused on implementation or management of change. From the Perks and Beveridge book (2003) this would focus on ADM activities surrounding implementation (cost-benefit analysis, project prioritization, and project planning) and architecture maintenance (staying true to the architecture; allowing for continuous improvements).

This is a simple way to think about Enterprise Architecture. The EA frameworks provide a more expert way to consider this broad topic.

What is the linkage of Enterprise Architecture and Frameworks?

Frameworks are often discussed in the context of Enterprise Architecture. A framework is a tool to do many things like improving professional communications within the information systems community and developing...
What should I read to obtain more information?

Here is a sample of articles, books, and Web sites. The references section of this paper also contains some useful sources.

**Articles**


Please see the Web site for the course that I teach at Nova Southeastern University as it contains links to four items that I use as preread materials for my course—

http://scis.nova.edu/~gulla/DISS792_DISS892_Spring2006.htm

The Zachman (1987) article is in the preread materials and has a link to the IBM Journals web site so you can print it or read it directly from the site.

**Books**


**Web sites**

Here are five interesting sites—

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<tr>
<td>Enterprise for Enterprise Architecture Developments</td>
<td><a href="http://www.enterprise-architecture.info/index.htm">http://www.enterprise-architecture.info/index.htm</a></td>
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**References**


