

Enterprise architecture case study examples

[Business](#), [Company](#)



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Introduction

The field of enterprise architecture came to birth over twenty years ago. It was mainly aimed at addressing two major problems, i. e. System Complexity whereby so much spending was made in establishing IT systems, and Poor Business Alignment where organizations found it increasingly difficult to ensure that the expensively acquired IT systems remained aligned to the needs of the business, (Sessions, 2007). With time, these problems have become more acute and pronounced than in the past. This has led business organizations to establish the Enterprise Architecture Center of Excellence, which came up with a framework “ setting strategic goals, priorities and business technology alignments around enterprise architecture,” (Chakkanat, 2011). This paper will delve into ideas and topics that should be added to such frameworks so as to make them more effective as IT system implementation guide.

Pre-requisites for proper management and growth of enterprise architectures

Enterprise Architecture is composed of the whole business together with all its components. It is fundamental to align the business and organizational structure of the enterprise along the IT architecture. However, this structuring and alignment of the basic components will differ. Unlike the information systems architecture, enterprise architecture involves the entire IT structure and not just a single aspect of it. It is a means of supporting the alignment of business and IT. Therefore, effective is paramount not just for furthering the growth of IT landscape but it also provides the agility to respond quickly to market requirements, (Hayles, 2007).

In this respect, some of the essential requirements which challenge the development of a good enterprise architecture methodology include the integration of IT into the entire business, being able to balance specialization and abstraction, reducing the fundamental entities and construction principles as well as the representation of mutual dependencies.

Enterprise Architecture Framework

Even though structuring and naming of enterprise architecture differs there are common elements identifiable which are; the business (business architecture), an information system (application architecture) and a technology architecture (infrastructure Architecture), (Rohloff 2005). The interdependence of these core elements is essential to the growth of enterprise architecture.

The business architecture is concerned with the business needs based on organizational goals and objectives as well as the business strategy. It

provides us with a view on what nature of business is being carried out in terms of goods and services offered, the value chain, the distribution channels used, the business partners and how resources and information are integrated to generate value add. It describes the organizational design and the relation with customers and suppliers. It also describes all the processes within the business and their value adds to the organization. This is classified in terms of management of customer relations, the supply chain, product life cycle and the support processes. The architecture is also concerned with the logical structure of informational flow on such entities as products, logistics and business partners between branch offices, (Nobel, 2010).

The Application architecture on the other hand provides us with an overview on the applications supporting business processes with the building blocks of the applications of the enterprise. The applications support the automation of the processes of the business which can be assigned their respective processes on the basis of their functional support. It also provides us with a portal and a framework for the management of information which helps access all company information as well as knowledge. Further, data depositories as the physical storage of company data gives us an overview on customers, products, business partner, finances and logistics. It helps integrate business applications with company data all over the organization.

Infrastructure Architecture comprises of the software, the hardware and the entire network infrastructure that is crucial for the effective operation of applications. Such infrastructure includes things like basic services, server systems and storage, workplace services and the network. The basic services provide a certain functional support distinct from business

processes and are used for different applications. The workplace services help in presentation and supporting productivity at the work place by working with information. The server systems support application resources, integration services and data repositories. It provides the memory capacity required for proper running of applications. The networks help in providing a communication link both within and outside the organization.

Views on Enterprise Architecture

There are several stakeholders within enterprise architecture each of who have different interests and concerns to be satisfied. These concerns may include such system considerations as reliability, performance, distribution, security and the ability to evolve. A system is only effective if it can fulfill at least one or more missions that are within its environment. There are many views that can be identified but these have been classified into three basic views which act as a representation of all the others. These three views are; component view, communication view and distribution view.

The component view describes the functional and logical structure of the architecture in scrutiny. It is concerned with describing all the building blocks, their components and systems in terms of their structure, composition and how they relate to each other. This view allows for different layering of the architecture. The systems, subsystems, components and all the building blocks can either be integrated or disintegrated. Their classification is based on the particular architecture in scope.

The communication view describes how different systems and components interact as between themselves. The relationship as between the systems is decomposed as the components interact within the system and with other

systems. Different communication lines can be drawn from the interaction of systems. The distribution view is concerned with the allocation of component and systems in terms of their organizational or geographical distribution. These three views may be applied to all the aspects of enterprise architecture. The complexity of the enterprise architecture may be minimized by adopting views focusing on specific aspects of the architecture. These three views help the reduction to fundamental entities and construction principles to understand their behaviour. Description helps identify pattern so as to establish proper standards for designing the architecture, standards which will be derived from these views.

Architecture Deployment Blueprints

Enterprise architecture consists of more than just a collection of its constituents. The interaction of the various components is paramount to the functioning of the enterprise architecture such that the various domains cannot be approached in isolation. Thus, the foremost importance of architecture design is accounting for the interrelation of the various building blocks. Blueprints are therefore introduced as a way of planning the architecture deployment on a large scale. They give a comprehensive view on how the various building blocks interrelate and show their effect between business, infrastructural and application architecture.

Enterprise architecture is focused on the alignment of IT with the business. This means that the business architectural design determines which IT architecture is to be adopted to be able to support and enable effective business to take place. The component of business and process architecture in turn define the framework of the IT landscape design. The blueprints

describe the interdependency of the different architectures. It provides a detailed plan for the deployment of the components of the architecture across the enterprise.

Different types of blueprints can also be generated depending on the architecture in focus. The dimensions can also be chosen according to different levels of detail though a high level is desired. Generating a detailed blueprint may involve a lot of resources including time without particularly enhancing the decision base. The three views earlier discussed give us a good information base to come up with management decisions.

Blueprints are important for the presentation of 'as is' and the target architecture, (Rohloff, 2005). The target architecture blueprint describes how IT strategy is to be implemented through the deployment plan. From the analysis of 'as is' as well as the target architecture, we derive IT projects. These projects are then prioritized as well as the overall IT program defines to facilitate implementation of the architecture.

Conclusion

This paper has discussed the architecture framework and the structure of the components of architecture. Using the three views on architecture outlined, complexity and construction principles of architecture will be highlighted. Component view shows how the various aspects of architecture relate while the communication view shows how they link with each other. The distribution view shows how the various elements are geographically distributed. The blueprints, on the other hand, paint a picture of the building blocks and their interaction as well as their effects on architecture designs. However, development of architecture is mainly premised on the

management and communication as between the various stakeholders and not just technical construction. Thus, proper management and process are fundamental for sustainable development of enterprise architecture.

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