Architecting Enterprises for IT-Enabled Value Creation: Part 2

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ABSTRACT

In spite of rapid strides in evolving Architecture processes that can help Enterprises leverage IT for creating Value, shortcomings are widely perceived. In this paper, the author discusses four points. Part I covers structuring the enterprise, business value and its measurement and maximizing returns from IT assets. This part examines architecting for value, IT enabled. It is suggested that, since the impacts are generally inseparable, IT changes should be planned within a holistic framework considering all other business considerations, merging all enterprise capabilities and all approaches from different disciplines to creating Value. Further, this Architecture should be aligned with the Architecture of the business, i.e., with business models, rather than with business strategies. A subsequent paper will study the application through a case study and share recommendations for IT services vendors.

Keywords: Business Model, Business Strategy, Enterprise Architecture, Enterprise Engineering, Information Technology, Management Science, Value

INTRODUCTION

A situation has emerged today where both business executives and IT practitioners are raising serious concerns about how IT may be used to create Value (Carr, 2005; Sessions, 2007).

However, there continues to be great hope that IT does and will continue to create value (OECD, 2003; PricewaterhouseCoopers; 2008; Kohli & Devaraj, 2004), though the conversion of IT capabilities and assets needs attention to ensure results.

We contribute from four perspectives to this research on how to create business value, especially from IT. They cover the purpose; goal-directed processes that use partitioning to overcome the complexities of scale of large, increasingly globalized, enterprises; and a matching standardized performance measurement methodology. IT assets are also positioned in a new role that better matches their capabilities to produce Value, enhancing their traditional roles. We look at

a) Structuring the Enterprise.
b) Business Value and its measurement.
c) Maximizing returns from IT assets.
d) Architecting for Value – IT enabled – it is suggested that IS and IT changes should be planned within a holistic Architecture framework that treats IT as a generic,
perhaps highly effective, technological asset and capability within an integrated business planning process, merging all the value-creating entities in an Enterprise. This approach should not remain confined within an IS/IT silo but invoke a multi-disciplinary initiative to create Value. Further, this Architecture should be aligned more with the Architecture of the business, i.e., with Business Models, rather than with Business Strategies. §2 outlines an approach to do so.

Issues a) to c) have been covered in Part I (SenGupta, 2011). A subsequent paper will elaborate on the issues, study the application of the concepts through a case study and provide a recommendation for IT services vendors.

ARCHITECTING FOR VALUE–POPULAR APPROACHES

Noble Prize winning economist Solow (1987) reported that IT was everywhere but improvements in productivity were elusive. Zachman (1987, 1996) responded with his suggestion of a systematic Process to applying IT that he called “Enterprise Architecture” (EA). In its absence, he predicted aimless IT of little Value – instances of which are being widely reported, even recently (Sessions, 2006, 2007, 2009; Carr, 2005; Triplett, 1999; Brynjolfsson & Yang, 1996). The current situation is more worrisome as several initiatives have been able to put shape and definition to the IT Architecture process and practice and yet, only a third of the enterprise IT projects seem to succeed by design while others succeed only if luck favours, suggesting weaknesses in the approaches, in the practice discipline, or in both (Ellis, 2008).

Sessions (2009) identified the root cause of many recent failures in the improper blending of the different Architecture methodologies, each with its own strengths and weaknesses, to address value creation and the Complexity of Scale. There is a wide spectrum of at least partially structured approaches for Architecting Enterprises, mainly to understand the Enterprise description and behaviour, with a few extending that understanding to engineer plans for improvement and growth. These approaches have come from different disciplines, including Computer Science and Engineering (CSE or IT), Information Systems (IS) and Operations Research and Management Sciences (OR/MS). An excellent review is provided by Chen and Vernadat (2004). Sessions (2007) has warned that none of the popular approaches generally used by IS/IT practitioners are within themselves quite complete. But they are supplementary and together provide a holistic view. Here we supplement the popular practices from IS/IT from approaches from multiple disciplines to guide organizational improvement and growth. A few do so without explicitly invoking IT.

CSE, IS IT: ‘Enterprise Architecture’

EA began with Zachman’s (1987) normalized 2-dimensional descriptive ontology of the artefacts (Figure 1) that could ‘completely’ represent any generic Enterprise. By prioritizing the primitive interrogatives: Why, What, How, Who, When and Where and generalizing the targets for his six levels of information abstractions, Zachman’s ontology can be used assist any significant Value-creating initiative, irrespective of IT. Then, at the highest level, the “Why” will be linked to Enterprise Value measures (Part I, §3), “What” will identify the assets, capabilities and processes (Part I, §2) to be changed, “How” will describe the process of change “When” will represent the prioritisation of the changes, and “Who” will list all stakeholders involved in the change. The last three are addressed this and the following section.

The Open Group Architecture Framework (TOGAF) (Harrison, 2007) (Figure 2) was first to appear in 1995 and is specific to IT services and infrastructure. It is a defacto standard that covers all phases of primarily IT-related Architecture. TOGAF has two core components
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