Structuring the Information System Architecture Using Patterns

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ABSTRACT

Enterprise Architecture (EA) is an approach, which aims to align the business strategy and IT infrastructure in order to maximise the application and investment of IT facilities. In fact, EA is a conceptual framework that defines the structure of an enterprise, its components and their relationships. It involves a considerable amount of work with high level of complexity. Indeed, if proper methods and approaches are not used, a huge amount of chaos and overheads will be caused. This paper aims to introduce a structuring approach for organising EA tasks. This approach provides guidelines on how to organise and document business services. Therefore, a more organised EA process will be carried out and both time and effort are saved. A case study is used to elaborate and explain the structure accompanied by the evaluation and discussion.

KEYWORDS

Enterprise Architecture, Service Oriented Architecture, EA, SOA, BAITS, Information System Architecture.

1 Introduction

Organisations face an increased level of competitiveness nowadays. IT plays an important role to help organisations stay competitive and moving forward. Therefore, aligning business and IT will help organisation towards their goals. Enterprise Architecture (EA) helps to align Business strategy with IT. As mentioned in Kaisler *et al.* (2005), "*Organisations need to have clear, but concise, strategic plans for business and IT. The business strategic plan becomes the driver for the EA*" [12]. Therefore, the main purpose of EA is to create a unique IT environment within an enterprise. EA is sometimes accompanied by the term Service – Oriented Architecture (SOA). Bell (2007), one of the leading Enterprise architects, defines EA as a city planner, "*one who oversees how the entire landscape comes together*" [2]. In fact, when entire city is considered and how different sections fit into the city. Conversely, he believes SOA focuses on the "*delivery of city services and facilitating communication within the city*" [2].

There are a vast majority of frameworks and guidelines on how to do EA and how to align business and IT. However, there is still not a common solution. Frameworks are short of clarifying and facilitating the modeling and implementation. Moreover, it is quite difficult to communicate the outcome of EA to the whole organisation since connections are not well understood or documented [11].