Chapter 4.29
Investigation into the Impact of Integration of Mobile Technology Applications into Enterprise Architecture

David Curtis
MethodScience, Australia

Ming-Chien (Mindy) Wu
University of Western Sydney, Australia

ABSTRACT

Enterprise Architecture (EA) is a role or function that primarily ensures the Information Technology strategy and implementation within an organization is correctly aligned with its business strategy and objectives. An EA function focuses on the collection and analysis of information including software applications, business processes, business information (data), technology, and governance (people). The result of this analysis delivers the technology strategy and the roadmap required to support what the organization is trying to achieve. Mobile Technology (MT) integration into the EA function creates the opportunities to deliver and respond to rapidly growing organizations that require immense flexibility from a technology perspective. This is so because mobility can overcome the boundaries of time and location in the dealings of the organization. The result of this extension is the creation of a Mobility Enterprise Architecture (M-EA) model, which will provide the organization with advantages of real-time business processing, better customer and end-user services, and the addition of increased control across the entire organization. This chapter brings together the experience of an Enterprise Architect with a Ph.D research candidate to investigate the M-EA model and its implementation. The chapter includes an overview of EA and M-EA models and also includes investigations of the advantages; limitations and blueprint overcome those challenges of M-EA implementation.

INTRODUCTION

The Enterprise Architecture (EA) model provides sound foundation for an enterprise's business applications. An EA provides the alignment of a business's strategic objectives with the Information Technology Strategy that supports it. Rapidly growing organisations needs to construct their EA, which is a structure of the required business processes, data, technologies, systems, people and governance of the organization, to deliver this alignment.

The extending of EA with mobility is designed to create opportunities to overcome the boundaries of time and location in the dealings of the organization. Thus, the research project reported herein is based on the idea of constructing a Mobility Enterprise Architecture (M-EA) model. The selected methodology for this research is a qualitative research method. These qualitative methods include: Constructive method, Case Studies by interviews, and Action Research. Literature Review is used to understand MT and the current frameworks for building EA; it results in the construction of the initial M-EA model based on this understanding.

The case studies by the interview method are able to help in creating a complete M-EA implementation framework and also provide an understanding of the potential benefits and challenges of implementing M-EA. These implementation challenges are aimed to be further be discussed by the researchers in order to provide the approach to implementing M-EA along with overcoming the challenges to such implementations. Finally, the Action Research studies described here are the future of this work. They will be concluded by visits to companies to study their M-EA implementations and thereby validating the results. This extension of EA with mobility through this research project will result in a comprehensive M-EA which will provide the business with advantages of real-time business processes, reduced costs, increased client satisfaction, and better control over business and its processes.

This chapter incorporates the experience of an Enterprise Architect in a large Insurance company together with the researcher whose focus is the construction and implementation of M-EA. The framework extending the organization's Enterprise Architecture with mobility is outlined and discussed in the chapter. The potential advantages of M-EA, implementation challenges, practical issues and limitations are analysed from the comments from the interviewees who were interviewed as a part of the case study interviews for this project. The chapter concludes with recommendations on how to overcome these challenges to organisations that would like to implement the M-EA model.

ENTERPRISE ARCHITECTURE (EA) OVERVIEW

The world of Information Technology Enterprise Architecture is still a relatively new discipline. This is so mainly because it is only in the recent past that the importance of Strategic IT planning has been considered similar to and with equal importance as the other strategic business planning functions within the organization. The Enterprise Architecture (EA) function within an organisation ensures that the IT Architecture is aligned with the Business Strategic goals and objectives, and more importantly, remains aligned (McGovern et. al., 2004).

This is an important differentiator to more project or system based objectives because whilst individual applications evolve typically to address a "point in time" business issue or opportunity, the EA seeks to address the more holistic organisational level requirements and business alignment objectives on an ongoing basis. A key output of the EA programme is the Target State Model. One of the important aspects of the Target State Model is that it helps guide the subsequent work that is carried out and is also used to identify and cost the opportunities in which the organization should invest to achieve its IT objectives.

Related Content

Intellectual Property and Licensing Strategies in Open Collaborative Innovation
Marcel Bogers, Rudi Bekkersand Ove Granstrand (2012). *Open Innovation in Firms and Public Administrations: Technologies for Value Creation (pp. 37-58).*
www.irma-international.org/chapter/intellectual-property-licensing-strategies-open/60223

Advanced Visualization Systems in Industrial Environments: Accessible Information in Any Factory Place
Manuel Pérez-Cota, Miguel R. González-Castroand María Díaz Rodríguez (2018). *Protocols and Applications for the Industrial Internet of Things (pp. 1-34).*
www.irma-international.org/chapter/advanced-visualization-systems-in-industrial-environments/202562

Cybersecurity Risks With Supervisory Control and Data Acquisition (SCADA) Systems is a Public Health and National Security Issue
Horace C. Mingoand Darrell Norman Burrell (2023). *Handbook of Research on Cybersecurity Risk in Contemporary Business Systems (pp. 149-167).*
www.irma-international.org/chapter/cybersecurity-risks-with-supervisory-control-and-data-acquisition-scada-systems-is-a-public-health-and-national-security-issue/321017

An Associative Classification-Based Recommendation System for Personalization in B2C E-Commerce Applications
Y. Zhang (2007). *Mass Customization Information Systems in Business (pp. 107-121).*
www.irma-international.org/chapter/associative-classification-based-recommendation-system/26121

RFID and Labor Management Systems Selection in the Logistics Industry
Cheryl A. Tibusand Linda L. Brennan (2013). *Cases on Performance Measurement and Productivity Improvement: Technology Integration and Maturity (pp. 38-58).*
www.irma-international.org/chapter/rfid-labor-management-systems-selection/69106