Collaboration of Solution Architects and Project Managers

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ABSTRACT

If IT projects are to be successful, they must meet business requirements, and they must be efficiently managed. IT projects need methodological skills to manage resources as well as technical capabilities for architectural planning and solution design. Project managers and solution architects represent two highly-qualified leadership roles in IT projects, both of which analyze requirements and both of which are responsible for supplying IT solutions. In predictive IT infrastructure projects, solution architects’ technology skills complement project managers’ organizational competencies. The combination of those skills improves requirements elicitation that is the key for IT project achievement. Project managers and solution architects closely collect and evaluate requirements and specify the scope in the planning phase. The relationship between these roles is examined by the IT management literature and established practitioner frameworks. Finally, suggestions for collaboration are derived and presented in the IT solution life cycle model.

KEYWORDS

Enterprise Architect, IT Solution Life Cycle, Project Manager, Requirements, Solution Architect

INTRODUCTION

Information technology (IT) solutions facilitate the attainment of enterprise goals by offering information services to human resources, partners, and customers and by automating business processes. IT solutions should not be viewed as isolated “technology” outcomes (Information Systems Audit and Control Association (ISACA), 2012, p. 76); instead, they must align with the business (Buckl, 2011, p. 152; Luftman, 2003). IT architecture and project management enable a structured supply of IT solutions that effectively meet business requirements (Office of Management and Budget, 2013, p. 149). Both IT architecture and project management are understood as crucial management disciplines for IT project success.

The notion of architecture is poorly understood outside the civil engineering field (Josyula, Orr, & Page, 2012, p. 35). In the IT realm, architecture is an immature, evolving management direction that is establishing its place among diverse IT methodologies. The role of the IT architect is vague in the literature and in practice (Ameller et al., 2012, p. 11; Olsen, 2017, p. 641; Thönssen & von Dewitz, 2018, p. 409). Architecture in IT is wide-ranging; it is multi-dimensional and comprises various levels of detail. Enterprise architecture comprises strategy, organization, processes, assets, resources, etc. (Body of Knowledge and Curriculum to Advance Systems Engineering (BKCASE), 2018, p. 644), striving to align IT with business (Baets, 1992; Buckl, 2011, p. 152). Architecture may also focus on solutions, systems, and components from technology segments such as security or networks (The Open Group, 2018, p. 474) or on software applications. Architecture is synonymous with the structural design of components, their features, and integration in present and future conditions (International
Institute for Business Analysis (IIBA), 2015, p. 441). Architectural works must be planned, developed, implemented, and maintained, which extends to include governance (The Open Group, 2018, p. 23). Purposeful organizational implementation of IT architecture vastly enhances efficient planning and effective design of IT structures.

In contrast to IT architecture, project management is a matured methodology and with established and accepted frameworks. For example, the guide to the Project Management Body of Knowledge (PMBOK) includes the standard approved by the American National Standards Institute (Project Management Institute (PMI), 2017, pp. 539–635). Project management is applied in almost all industries, especially for significant IT endeavors. IT projects convert business objectives into project objectives (Kendrick, 2018) and are linked to enterprise strategy either directly or via portfolios and programs (PMI, 2013).

Both IT architecture and project management are associated with strategy, processes, and delivering results (i.e., IT solutions). People, processes, technology, and data are interconnected (Institute of Electrical and Electronics Engineers Computer Society and Association for Computing Machinery (IEEE & ACM), 2018). However, there is no clarity how managing projects and IT architecture relate to each other in practice. The linkages between both management areas and the collaboration between the relevant roles remain undiscovered. There is currently a gap in both the IT management theory and practical business contexts.

The purpose of this article is to gain a better understanding of IT architecture and project management and to better comprehend the linkages between corresponding roles. This article explicates IT architecture and project interrelatedness and illuminates the key players in predictive IT projects from two management practices: the project manager and the solution architect. The skills and tasks of these roles are investigated, comparing and discussing their attributes regarding skill complementation and work organization. Technology skills from solution architect complement planning and organizational skills from project managers for accurate requirements and scope definitions. In addition, this paper enters into features of software projects to distinguish agile from predictive approaches and their impacts on roles.

This conceptual paper broadens the scope of thinking by bridging theories on fundamental IT management disciplines into an integrated model for collaboration over an IT solution life cycle (Gilson & Goldberg, 2015, pp. 127–128). Finally, further research directions are suggested and key points are summarized.

RELATIONS BETWEEN PROJECT MANAGEMENT AND IT ARCHITECTURE

Early influential scientific works about architecture did not find connections between project managers and architects (Feeny & Willcocks, 1998; Mentzas, 1997). Mentzas (1997) missed out the role of the architect. He described an approach for implementing strategies for information systems by emphasizing their link with a business and the participation of the business’ management and team. He proposed planning actions to implement IT architectures (e.g., budgeting, scheduling, human resources, migration), but he did not identify the role of the architect in this scenario. Technical teams coordinated by a project manager plan logical architectures (functional and organizational needs) and technical architectures (detailed specifications of physical hardware, software, and development efforts). In Mentzas’ proposal, even the business architecture (the processes and models of logical and technical architectures) was not the dedicated responsibility of an architect. In contrast, Feeny and Willcocks (1998) underrated the role of the project manager. They excluded project managers from architecture planning and characterized architectural planners by their high technical skills and low-to-medium business skills. These authors saw project management not as a core IT capability, but as an organizational capability related to the business.

The linkage between architects and project managers is more apparent in practitioner frameworks and standards dealing with IT management. Frameworks enable standardized views and help to
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