A Holistic Approach for Understanding Project Management

Theresa A. Kraft, University of Michigan, USA
Annette L. Steenkamp, Lawrence Technological University, USA

ABSTRACT

Companies invest significant sums of money in major Information Technology (IT) projects, yet success remains limited. Despite an abundance of IT Project Management (ITPM) resources available to project teams, such as the Project Management Institute (PMI) Body of Knowledge, IT standards and IT governance, a large percentage of IT projects continue to fail and ultimately get scrapped. Recent studies have shown an average of 66% IT project failure rate, with 52% of the projects being cancelled, and 82% being delivered late. The purpose of this research was to provide a way for uncovering potential causes of IT project failures by utilizing a systemic and holistic approach to identify critical success factors for project management. The holistic approach has enabled the development of an ITPM conceptual model, which provides a method to evaluate the critical success factors of a given project, and their alignment with each other. The adoption of the systemic methodology and its implementation increase the potential for IT project success, and alert project leaders of potential problems throughout the life of the project.

Keywords: Business Processes, Critical Success Factors, Information Systems, IT Governance, IT Project Management, Organizational Dynamics, Systemic Approach

INTRODUCTION

Companies invest large sums of money for major information technology projects yet achieve limited success. In efforts to reduce the risks associated with the failure of information technology projects, enterprises have opted to replace existing legacy systems with packaged solutions. Some use commercial-off-the-shelf (COTS) software, rather than incurring the costs and risks involved in software development. Despite the availability to project teams of body of knowledge on IT project management, IT standards and governance, a large percentage of IT projects are scrapped, over budget, or delayed. A comparison of project management studies by Forrester Research Inc. has shown that there is a sixty-six percent project failure rate, with fifty two percent of the projects being cancelled and eighty two percent being delivered late. Sixty seven percent of the companies surveyed feel their program or project management practices are “in need of repair” (Visitacion, 2006, p. 5). According to
Charette (2005, p. 43) “five to fifteen percent of the IT projects initiated will be abandoned before, or shortly after delivery as hopelessly inadequate and many others will arrive late and over budget or require massive reworking”.

Typical project management articles have documented factors that contribute to project success or failure in terms of budget constraints, resource costs, ability to meet schedules, and satisfy objectives. Despite numerous methods and techniques that have been developed “project management remains a highly problematic endeavor” (White & Fortune, 2002, p. 1). The purpose of this research project was to provide a way for uncovering potential causes of IT project failures by utilizing a systemic and holistic approach to identify critical success factors for project management and thus to expand the body of knowledge related to IT Project Management of COTS software procurement and implementation.

The contribution of the paper is in the development of a systemic conceptual model illustrating the critical factors that impact project success. The conceptual model was developed based upon an extensive analysis of four case studies selected from industry. The conceptual model was refined utilizing interviews and surveys of industry experts who have experience with project management, and who are certified Project Management Professionals (PMPs). The paper proceeds with a review of the related literature, formulation of the conceptual model, discussion of the results from validation of the model by experts in the field and conclusion.

LITERATURE REVIEW AND FINDINGS

The purpose of the initial literature review was to understand the existing subject matter on system modeling approaches and factors related to project management. The literature review focused on the body of knowledge of the systems approach, factors contributing to the success and failure of IT PM, and IT systems delivery.

IT Project Management Issues

Project success factors found in the literature include measures such as on-time project delivery to the customer, adherence to the project schedule, project cost and budget control, quality of the project management process and customer satisfaction (Jugdev & Muller, 2005). “Measures of project success need to include the diversity of shareholder interests” (Milosevic & Patankul, 2005, p. 183). Additionally, standardized PM tools, processes, and skills, in connection with project team interpersonal relationships and organizational culture also affect project success.

Jugdev and Muller (2005) state that project management can have strategic value when the project’s products and services provide business value. Literature on the tradeoffs between time, cost, quality and scope indicate that scope is one of the primary determinants of project success. The meta analysis of the literature indicated that project management publications are primarily focused on tools and techniques, and project management methodology at the tactical level. “Few publications discuss project management in the context of strategic planning, company mission, and the importance of corporate management performance” (Jugdev & Muller, 2005, p. 21).

IT has become so central to modern organizations that the implementation of IT projects must also take into consideration the comprehensive evaluation of change management within the organization. The IT project is usually part of a wider business strategy, which includes business process reforms of existing business systems, organizational structure and team efforts (Ives, 2005). “The alignment of IT with business goals has been a critical issue for organizations for as long as IT has been an important factor in the success of organizations. As organizations cope with rapid changes in their business and technological environments, alignment issues have been at or near the top of the list of critical issues in IT management for the past fifteen years” (Chen et al., 2006, p.6). Current IT PM literature and research topics
Related Content

How Knowledge Creation Capabilities Lead to Competitive Advantage
www.irma-international.org/chapter/how-knowledge-creation-capabilities-lead-to-competitive-advantage/86218/

Multi-Level Service Infrastructure for Geovisual Analytics in the Context of Territorial Management
www.irma-international.org/article/multi-level-service-infrastructure-geovisual/39000/

Moving Towards a Knowledge City?: Brisbane’s Experience in Knowledge-Based Urban Development
www.irma-international.org/article/moving-towards-knowledge-city/55599/

Organizational Learning Facilitation with Intranet (2.0): A Socio-Cultural Approach
www.irma-international.org/chapter/organizational-learning-facilitation-intranet/49073/

Knowledge Flow
Mark E. Nissen (2006). Harnessing Knowledge Dynamics: Principled Organizational Knowing & Learning (pp. 31-48).
www.irma-international.org/chapter/knowledge-flow/22108/