Chapter 3.2
Knowledge Sharing Tools for IT Project Management

Stacie Petter
Georgia State University, USA

Vijay Vaishnavi
Georgia State University, USA

Lars Mathiassen
Georgia State University, USA

INTRODUCTION

Information technology (IT) project disasters make worldwide headlines, and billions of dollars have been lost due to poor project implementations. The Standish Group, a research advisory firm, reports that only one-third of the over 13,500 IT projects evaluated in 2003 were successful, and half of the reported IT projects were classified as challenged, meaning they experienced cost and budget overruns (Larkowski, 2003). While the state of IT project management is improving, organizations must explore ways to reduce unnecessary spending that occurs because of failures, cost and schedule overruns on IT projects. One possibility is to improve knowledge sharing to avoid repeating mistakes and to build on successes from the past.

BACKGROUND

IT project management is demanding because of time pressure, restricted capital, and high degrees of uncertainty during projects and is comprised of complicated and ill-structured problems (Grupe, Urwiler, Ramarapu, & Owrang, 1998). However, valuable knowledge gained before, during, and after the completion of projects is rarely captured, shared, and utilized in future projects. As a result, projects suffer from reinvention of solutions, repetition of mistakes, and loss of process knowledge after project completion. These problems are further exacerbated by the turnover of project managers and the lack of technologies that effectively integrate relevant knowledge with existing project management software (Tiwana & Ramesh, 2001).

Knowledge is a combination of experience, values, contextual information, and insight used to create, absorb, and evaluate new experiences and information (Davenport & Prusak, 2000). Project managers rely on past experiences to make decisions that keep the project within schedule, budget, functionality, and quality targets; however, these experiences are rarely shared among project managers (Schindler & Eppler, 2003). Furthermore, a problem faced by many IT project managers is their own lack of experience as an IT project manager. Individuals are often promoted to an IT project manager position because of their superior programming skills. However, these experiences alone are not enough to guarantee success as an IT project manager (Standish Group, 2001). Fortunately, a variety of knowledge sharing tools can help inexperienced project managers acquire relevant knowledge. Even for IT project managers with extensive knowledge, such tools provide good opportunities to learn from others when confronted with a unique problem (Newell, 2004).

TOOLS FOR SHARING KNOWLEDGE

Many tools have been developed to assist IT project managers in avoiding project failures, including post-mortem analysis, knowledge management systems, and networking. Rather than focusing on specific tools for sharing knowledge, this section describes generic classes of knowledge sharing tools available to IT project managers. Each tool is described in terms of *what* type of knowledge is shared (i.e., available in documented form or emergent through interaction), *who* is the primary user of the tool (i.e., project manager or entire project team), *where* knowledge is shared within the organization (i.e., between individuals or organization-wide), and *why* the tool is used for sharing knowledge (i.e., exploitation of existing knowledge or a basis for exploration of new knowledge).

Post-Mortem Analysis

Post-mortem analysis is supported by a process and a series of documents to identify successes and failures for a given project (Sinofsky & Thomke, 1999). Good post-mortem analyses not only record the history of the project itself, but also provide information on what went wrong during specific phases of the project's life cycle (Thomke & Fujimoto, 2000). Often, organizations only conduct post-mortem analyses on projects that have been abandoned or have failed (Esusi-Mensah & Przasnyski, 1995); however, there are benefits to conducting post-mortem analyses on successful IT projects. Organizations that perform post-mortems state that the knowledge gained is useful in avoiding repetition of past mistakes, improving processes on future projects, providing historical accounts of what went wrong, and enhancing performance on future projects (Esusi-Mensah & Przasnyski, 1995).

The output of a post-mortem analysis is a series of documents. These documents can be shared across the entire project team as they articulate the aspects of a project that were successful and the areas needing further improvement. Although the results of post-mortems can benefit the entire project team, a survey of post-mortem analyses found that IS managers, system developers, and new IT project managers were more likely to consult these documents than other groups such as programmers, senior management, and other functional managers (Esusi-Mensah & Przasnyski, 1995). Post-mortem analyses are shared across the organization, frequently through the use of new processes or management practices. The knowledge gained through post-mortem analyses is exploited throughout the organization to minimize the repetition of problems, better plan or manage new projects, and guide the development of new management procedures (Esusi-Mensah & Przasnyski, 1995).

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