

Chapter VI

Building IT Risk Management Approaches: An Action Research Method

Jakob Holden Iversen

University of Wisconsin Oshkosh, USA

Lars Mathiassen

Georgia State University, USA

Peter Axel Nielsen

Aalborg University, Denmark

ABSTRACT

This chapter shows how action research can help practitioners develop IT risk management approaches that are tailored to their organization and the specific issues they face. Based on literature and practical experience, the authors present a method for developing risk management approaches to use in real-world innovation projects. The chapter illustrates the method by presenting the results of developing a risk management approach for software process improvement projects in a software organization.

INTRODUCTION

Organizations that manage IT innovations have long been accused of having poor project execution and low product quality. These problems are often referred to as “The Software Crisis,” in which software projects frequently are delivered late, over budget, with missing features, and with poor quality. Furthermore, it has been very difficult to predict which organization would do a good job on any given project. These issues led to the establishment of the software process improvement (SPI) movement, in which poor processes in organizations are considered a major reason for the software crisis.

Organizations routinely rely on experienced developers to deliver high quality IT systems. However, in the 1990s, organizations realized that by defining and improving the processes these professionals used, it was possible to deliver more consistent results with better quality. SPI projects were established to improve specific aspects of a process, and in many cases to take advantage of standards like the Capability Maturity Model (CMM) (Paulk et al., 1993) and the Capability Maturity Model Integration (CMMI) (Chrissis et al., 2003). For each process that needed improvement, a focused SPI project would design and implement specific improvements into current practices.

However, not only is this hard work, it also is risky business. Much can go wrong in improvement projects, and mistakes can eventually lead to failure. The involved improvement actors might not possess appropriate skills and experiences. The design of a new process might not suit the organization or effectively meet requirements. The improvement project might be organized inappropriately, with unrealistic schedules or insufficient management attention. Also, the actors might pay too little attention to customers, failing to consider the interests, problems, and motivations of the people and groups that are expected to use the new process.

To deal proactively with such issues in SPI projects, the involved actors must manage the involved risks. The need for such risk management was the rationale behind Danske Bank's development of a practical risk management approach to reduce failures in their SPI initiative. Using this approach, improvement actors periodically held disciplined and tightly structured workshops in collaboration with SPI facilitators. The workshops gave each team a better overview and understanding of their project and its organizational context, and helped them address risks proactively.

Organizations face many different and quite diverse activities in which there are strong reasons to manage IT risks. While the literature provides

a portfolio of IT risk management approaches that cover many types of activities, organizations often face situations in which they need to develop a risk management approach that is tailored to their particular needs or that addresses issues not covered by the available portfolio of documented risk management approaches. This chapter offers organizations a generic method to develop new and dedicated IT risk management approaches. The method is based on action research into an organization's specific risk management context and needs, and builds on the available literature about IT risk management. It is based on our experiences from developing the tailored approach to risk management in SPI projects at Danske Bank.

RISK MANAGEMENT LITERATURE

A number of different approaches to IT risk management have been proposed. In this section, we provide an overview and categorization of the different approaches (risk list, risk-action list, risk-strategy model, risk-strategy analysis). We offer, in this way, a framework to help select an appropriate risk approach suited to particular organizational contexts and needs. An overview of the framework is shown in Table 1.

Risk List

The first and simplest form of available approaches are risk lists. They contain generic risk items (often prioritized) to help managers focus on possible sources of risk; they do not contain information about appropriate resolution actions. These lists are easy to use in assessing risks; they are easy to build, drawing upon published sources on risks or experiences within a particular context; and they are easy to modify to meet conditions in a particular organization or as new knowledge is captured. While these approaches offer strong support to help managers appreciate risks, they

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