ABSTRACT

There is significant interest in managing IT resources as a portfolio of assets. The concept of IT portfolio management (ITPM) is relatively new, compared to portfolio management in the context of finance, new product development (NPD), and research and development (R&D). This article compares ITPM with other types of portfolio management, and develops an improved understanding of IT assets and their characteristics. It presents a process-oriented framework for identifying critical ITPM decision stages. The proposed framework can be used by managers as well as researchers.

INTRODUCTION

IT investments constitute a major portion of organizations’ capital budgets in many organizations (Jeffery & Leliveld, 2004). However, some authors question the business value of IT (Carr, 2003), and the actual contribution of IT to organizational performance is the subject of debate (Kohli & Devaraj, 2003). IT managers are constantly under pressure to justify their IT investments and demonstrate the business value of IT. For most companies, selecting a project that would fit the corporate strategy—and therefore maximize the business value—is a challenging process (Jeffery & Leliveld, 2004). In addition, the high failure rate of IT projects in many organizations is a cause for
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Developed. However, there are several streams of research that seem to be relevant to ITPM. These include business values of IT (Devaraj & Kohli, 2003), IT project management (Wallace & Keil, 2004; Wallace, Keil, & Rai, 2004), IT adoption and use (Jasperson, Carter, & Zmud, 2005; Venkatsh, Morris, Davis, & Davis, 2003), IT success (DeLone & McLean, 2003), strategic use of IT (Bhatt & Grover, 2005; Piccoli & Ives, 2005), strategic IS planning (Grover & Segars, 2005), business process change (Kettinger & Grover, 1995), and others. Hence, there is a need to better understand how these streams of research are related to ITPM, and further develop ITPM from a research perspective.

This article views an organization’s IT portfolio as comprising a set of assets: IT infrastructure assets (the hardware and software that support IT applications such as servers, workstations, database software, and network infrastructure), application assets, project assets, and IT-related human resource assets. This view of the IT portfolio mirrors the way many organizations manage their IT assets, and is discussed in Section 3. Application, infrastructure, and project components of the IT portfolio are the focus of this article, since managing the human component of the IT portfolio is an important topic in its own right.

Jeffrey and Leliveld (2004, p. 41) define ITPM as “managing IT as a portfolio of assets, similar to a financial portfolio, and striving to improve the performance of a portfolio by balancing risk and return.” This article views ITPM as a continuous process to manage IT project, application, and infrastructure assets and their interdependencies, in order to maximize portfolio benefits, minimize risk and cost, and ensure alignment with organizational strategy over the long run. This view of ITPM specifically recognizes different types of IT assets, the continuous process nature of ITPM, and identifies major dimensions (alignment, benefits, costs, risks, and interdependencies) that need to be considered in managing IT as a portfolio of assets. It is important to note that...
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