Chapter 64

Integrating Sustainable Development Into Project Portfolio Management Through Application of Open Innovation

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ABSTRACT

In recent years, the idea of integration of sustainability into project management has been put forth, which requires a more comprehensive and holistic approach to project management. Integration of sustainability increases the complexity of project management. Therefore, project management organizations require a framework capable of opening up the traditional organization of the project business and providing competitive advantages. This study argues that the open innovation model presents the requisite capability to approach this issue. This research, through a structured review of the literature and an overview of the open innovation and project management knowledge areas, explains how open innovation can provide a fruitful contribution to the integration of sustainable development into project portfolio management and why it should be favoured. The findings show that open innovation can facilitate the environmental, social and economic sustainability of projects, while rendering the project organization more agile.

INTRODUCTION

Over recent years sustainability has become one of the most significant challenges facing organizations, and companies are thus striving to implement sustainability into their planning processes and strategies. Development of societies is associated with projects that are instruments for change, and that act as stepping stones for the infrastructural changes; therefore project management (PM) skills must be developed in order to lead these projects in a successful and sustainable way. The transition from traditional PM to sustainable PM is a necessity and should be fulfilled by project-oriented organizations in distinct stages.

The concepts of sustainability and PM have recently been linked together to form an emerging field of research (Marcelino-Sadab, González-Jaen, & Pérez-Ezcurdia, 2015).

Consideration of sustainability in projects moves PM towards the title of a true profession, and expands the system boundary of PM. Integration of sustainability into PM shifts the traditional PM paradigm, and calls for a new approach to handle this complex issue. This new paradigm incorporates a variety of values of partner's (stakeholder's) to create shared values (Silvius, Schipper, Planko, Brink, & Köhler, 2012).

The open innovation (OI) model presents a new paradigm which shifts firms from a closed to an open model, thereby advancing the business. Primarily, the logic of OI was introduced to the world by Chesbrough (2003) as a new way to cope with the innovation process, having observed that some newcomers in the field of high-tech industries were, surprisingly, managing to compete with large established companies such as IBM and AT&T. Subsequently, in 2006 the OI strategy was furthered by the introduction of open service innovation as a business model, and not just a way of doing R&D.

However, the link between OI, different management disciplines and the economic context has not yet been discussed (West, Salter, Vanhaverbeke, & Chesbroughd, 2014). Consequently, the OI literature has not adequately addressed a number of themes, such as sustainability and PM. Therefore, this research explores the PM potentials of OI, tries to link OI to the project portfolio management context and provides a perspective for future research. In addition, until now, the attention of PM researchers has mainly been focused on integrating one dimension of sustainability (triple bottom line) into PM. This study presents a more comprehensive understanding of this case and incorporates other dimensions by means of OI.

This research is based on a sound review of the (Scopus indexed) literature and is presented as follows: first, the link between OI and the concept of sustainability is evaluated. Next, the gap between sustainability and PM is discussed. Finally, the connection between portfolio management and OI is explored.

OPEN INNOVATION BACKGROUND

The OI model shifts firms from a closed model to an open strategy (Chesbrough, Vanhaverbeke, & West, 2006). Chesbrough (2003) coined the term "open innovation", while highlighting that, in a world of widely-distributed knowledge, firms cannot rely entirely upon internal ideas and should utilize valuable ideas generated outside the company made by customers, suppliers and other stakeholders. Therefore, OI emphasizes that "firms can and should use both external and internal (equal importance) ideas and paths to advance their business" (Chesbrough, 2006a, p. xxiv). OI can be defined as "both a set of practices for profiting from innovation and also a cognitive mode, for creating, interpreting and researching those practices" (Chesbrough et al., 2006, p. 286). Subsequently, Chesbrough (2011) developed the concept of the OI model, broke new ground with the "open service innovation" model that considered the business model from an open service perspective, both for product and service delivery businesses, and concluded that OI is not just a method for approaching R&D.

OI is depicted as a porous funnel that benefits the environment of relevant companies via the use of ideas generated outside an individual company (the outside-in process; acquiring externally-sourced knowledge) and the simultaneous transfer of unused ideas to other companies (the inside-out process; transferring internal ideas to the market), as well as coupled processes that combine outside-in and inside-out processes (Lichtenthaler, 2011). A vital feature of this model is that projects can be initiated based on external resources and progress to market at various stages and in a variety of ways, thereby

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