

# ICT based service innovation – A challenge for project management

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## Abstract

In this paper we investigate to what extent ICT based service innovation can be successfully facilitated by traditional project management thinking. Should service innovation initiatives be organized the same way as high-tech product innovation, i.e. with expert teams in well structured projects? Or should they be organized in some looser fashion, with more interaction with users and other stakeholders?

Our empirical evidence is a survey of 130 public sector projects in Norway, run within a national e-government program. We find that ICT based service innovation is not associated with a tightly run project (focused on cost, time and quality) or a professional project manager. Rather, successful service innovation is found in projects with a strong integration with the service providing organization and the external users of the services. We discuss three alternative models as an agenda for further research.

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## 1. Introduction

Services constitute today the dominant part of Western economies, and the innovation of new services is recognized as an important strategy in the global competition [23]. A particularly interesting strategy is ICT (information and communication technologies) based service innovation, which – combined with the general liberalization of services in the 1990s – has transformed several industries, such as financial services, telecom and IT, and media. Other sectors are following, for example the music industry and e-government. In a recent report for the European Union, a group led by the former Finnish Prime Minister Esko Aho called for a new approach to innovation in Europe [3]. First, the report argues that the large European public sector should create a market for innovations. Second, it argues that Europe has focused too little on service

innovation, where the greatest potential for future growth lies.

Bearing this in mind, it may come as no surprise that most research on innovation still is in the high-tech products field [23]. There are several reasons for this – the most important probably being institutional – but the consequence is that too little is known about ICT based service innovation. One of the most important questions concerns the *organizing* of service innovations processes; should service innovation initiatives be organized the same way as high-tech research, i.e. with expert teams in distinct and well structured projects? Or should they be organized in some looser fashion, with more interaction with users and other stakeholders? The research communities – both the service innovation and the project management research – are divided on this question. A key issue is the classic trade-off between integration and differentiation known from sociological and project management research, i.e. to what degree should the project be isolated from its mother organization? This is a crucial question, which we believe is not sufficiently answered in the current research literature. Thus, there is a need for more empirical

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research to understand and manage ICT based service innovations.

Addressing this issue, our research question is: *Can ICT based service innovation be facilitated by traditional project management thinking?* In the next section we review some important contributions from the project management and service innovations communities. Then, in Section 3 we outline our research approach, and present the results of our survey in Section 4. We discuss our findings in Section 5 before we conclude and point to further research in Section 6.

## 2. Research review

First we assess the question of integration versus differentiation; then we briefly review some important findings in service innovation research.

### 2.1. Integration and differentiation

Historically, projects were set up as means to integrate people and tasks from different departments, as a response to the classical, functionally specialized corporation of the 20th century. A basic insight from sociology is the trade-off between integration and differentiation. In a seminal article from 1967 Lawrence and Lorsch showed that organizations differentiate in response to environmental challenges, such as competition and demand. Differentiation allows for specialization and task focus, thus increasing efficiency. The more we differentiate, however, the more complex becomes coordination [14]. Thus, there is no (general) optimal trade-off between differentiation and integration; it must be decided in each case.

In this context, a project (in its classic form) may be regarded as an extreme case of differentiation; the set-up of a temporary separate organization with a single aim. This allows for a strong focus, but as documented in the thorny relationship between projects and organizations, the same trade-off between differentiation and integration applies here. A number of sophisticated mechanisms to handle this issue, such as steering groups and user representation, are well known in the project communities. As Engwall [10] points out, “No project is an island”, arguing that any project is heavily dependent on its organizational context.

The tension between integration and separation is certainly acknowledged in the project management research community. In the PMI Guide to the Project Management Body of Knowledge [19] the key issue in Project Management is defined as the management of *scope*: To decide the amount of work to be done and to demarcate against the work that should not be done. This constitutes the rationale for a planned and manageable project, where the performed activities deliver the business purpose.

This classic model has been challenged; in particular by researchers who point out that an increasing share of projects has a wider scope than producing a technical solution,

often termed *business projects*, which aims at innovation or organizational change [25]. An interesting example is a recent article in the International Journal of Project Management by Johansson et al. Their context was organization development projects in the public domain, and they find that there is a difficult choice between separation and integration: A well-run separate project, with its own identity, rationality and specific results, is not suited to implement its own results back to its mother organization. Correspondingly, the results from projects that are tightly integrated with the organization (but less innovative!) are much easier to implement. Thus, project owners and managers face the dilemma either to accomplish innovation or to prioritize implementation [13].

For the project management research community this finding is interesting and perhaps worrying. What is the external validity of this finding? Does it imply that service innovation should *not* be organized as projects? The obvious answer is that there is a need for more knowledge on this topic. We note, as a point of departure, that the overall picture is that the “hard” and “separate” paradigm, as represented in the PMI Guide to the Project Management Body of Knowledge, is predominant. There may be sound reasons for this. One may easily argue that the phenomenal success of the project management discipline the past 60 years rests on the parsimonious clarity of the project concept, which allows the project manager to concentrate on his objectives instead of becoming just another organizational politician.

### 2.2. Service innovation

A service is commonly defined as the non-material equivalent of a good. Innovation research does not agree whether the innovation of services is fundamentally different from the innovation of products [9,18,22]. One strand of research, however, has documented empirically that the service innovation *process* often differs from the innovation of products. Two important differences are [1,8,23]:

- Services are usually developed in close interaction with the customers.
- Services are usually innovated in networks rather than labs.

In addition to these aspects, an ICT based service innovation presents another challenge; it usually redefines the roles of the service provider and the users. An illustrative and very successful example is the web bank. The real innovation of Internet banking is not the web software, but the *redefinition of roles*: The bank organization provides the technological infrastructure, the technology is available 24/7, and the customers are doing the transactions themselves. The actual innovation is the interplay between the providing organization, the new technology and the users [23].

This has important bearings for the success of ICT based innovation: it is more dependent on the acceptance

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