Chapter 14
Collaborative Innovation for the Management of Information Technology Resources

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ABSTRACT

All organisations are now facing one of the largest upheavals in business practice since the ‘great depression’. Information technology organisations, who frequently lead the development of change based around ICT, are being asked to develop new products and services that add significant value for customers and to radically change their internal processes so that they are more cost effective. Innovation is process of creating positive change to any organisation and that adds value to customers – internal and external. Innovation is now widely accepted at the only sustainable engine of renewed growth for organisations. Organisations that do not embrace innovation and learn to apply its principles will simply stagnate or be obliterated by competition. ICT organisations that can learn to apply innovation effectively will become key strategic assets in driving costs down and also in adding new dimensions to product and service development. This paper presents an approach to applying innovation in any ICT based organisation, be it a service department within a larger organisation or a commercial business that generates ICT solutions for clients. The process of innovation in ICT based organisations is similar to innovation in any organisation and requires an in-depth understanding and practice of developing innovation goals, the management of innovative actions or projects, the empowerment of human capital or teams and the continuous monitoring of innovation performance. This paper presents a methodology for applying innovation and a case study of how innovation related knowledge can be managed in any ICT organisation.

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INTRODUCTION

Today’s organisations are faced with the challenge of meeting the ever increasing demands of a global customer base, whilst remaining competitive against suppliers from lower cost economies. Organisations need to constantly improve their competitive advantage and respond faster to changing markets by reducing costs, improving quality, becoming customer-driven and increasing productivity. The principal mechanism for organisational growth and sustainability is innovation. Innovation is the process of idea generation and exploitation by an organisation whose mission is to continuously add value to its customers – internal and external.

The factors that influence organisational innovation include culture, process and implementation. Factors such as fostering a risk taking environment, managing innovation continuously and portfolio management are viewed as critical for success for all types of organisations. In order to adequately address these factors and many others to be outlined later, organisations need to manage their innovation process effectively. In recent years there has been a steady growth in support for adopting a contingency approach in relation to managing organisational change, resulting in a convergence of diverse approaches to better facilitate the management of innovation. While the specific causes for the failure of innovative actions is specific to an individual organisation, there are a number of macro causes, which cuts across organisations (O’Sullivan and Dooley, 2008). These include:

1. Inadequate definition of organisational direction.
2. Ineffective mechanisms for the deployment of organisational goals to innovative actions.
3. Poor leadership of the systems innovation process
4. Poor planning in relation to generation of innovations
5. Poor implementation of proposed innovations
6. Low levels of employee participation in the innovation process
7. Ineffective results management.

Understanding these root causes of failure leads to solutions for managing innovation that can be deployed effectively in any organisation.

Understanding Innovation

Innovation is synonymous with the concept of novelty and originality (Ghislein 1963). However, this is a very narrow perspective and ignores the reality that, what may represent a trivial change for one organisation may represent a significant innovative challenge to another. Tidd et al. (2005) state that “novelty is very much in the eye of the beholder”. West and Farr (1990) stress their belief that all innovation is change but emphasises that not all changes are innovation. They see the defining criteria of innovative change as “planned and desirable and must have something new to the individual”. Terninko et al. (1998) cite findings from analysis of product innovation patents, that only 5% of innovations corresponded to major discoveries that resulted in solutions outside contemporary knowledge or technology. The majority of innovations analysed (95%), comprised either of conventional solutions, small inventions inside the paradigm or substantial inventions inside the technology, that bring varying levels of improvement. Adapting these findings to determine a definition of innovation, one concludes that a change that strives to improve the existing systems overall performance may be deemed an innovation.

Damanpour (1990) defines innovation as falling into three categories, namely technology, administrative and ancillary innovations. This views the potential scope for innovative change as effecting the technology application of the organisation, the interaction between the organisation’s social and technical systems and the interactions that occur across the organisational boundaries.
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