INNOVATION, MANAGEMENT AND SERVICE

RESEARCH PAPER

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ABSTRACT

Management innovation is a complex and dynamic process of organizational change. This article will focus on the importance of innovation, management innovation, innovation in service and the relationship between innovation, management and service. Manufacturing firms are turning to services as a new way of creating and capturing value. Despite its potential benefits, many new product-service providers struggle to deploy service activities effectively, not least because they fail to reflect the presence of service activities in their performance management systems. We conclude this paper by a case study of Boeing's formalized innovation program. The case study will provide an example of how a company can effectively manage the innovation process on an extremely large scale.

OVERVIEW

Why Innovation?
The “why” of innovation is simple: change is accelerating and we don’t know what’s coming in the future, which means that we must innovate to both - prepare for change and to make change. There is an established relationship between business strategy, innovation, and organizational performance.

Many organizations, in the past, have been able to survive even with very limited amounts of innovation. They focused on providing quality products and simply update them to a level that maintains their competitiveness in the market. This method still, applies to some products with long lifecycles and few opportunities for innovation.

Recently however, some trends have emerged that drive the innovation process. Due to factors such as globalization and outsourcing, there is an increased push to improve efficiency and effectiveness of organizations. Organizations need more than good products to survive; they require innovative processes and management that can drive down costs and improve productivity. Consumer expectations also drive the amount of innovation in the market. Customers are used to those products which continually improve and make their life easier. Modern customers are more informed and have more options in terms of what they buy and who
they buy it from. Essentially, customers won't accept mediocrity because they know they can always go somewhere else.

Innovation is important as it is one of the primary ways to differentiate your product from the competition. If you can't compete on price, you'll need innovative products and ideas to make your business stand out from the crowd. Innovation in your business can also be driven by the amount of innovation your competitors are doing. Being first to market with a new product can provide you with a significant advantage in terms of building a customer base. It is difficult to compete if your products are seen as obsolete or out of date. Innovation is also important for small firms as large companies recognize the ability of smaller firms to capture innovation, will often tap the creativity of small growth-oriented firms to remain competitive, and have acknowledged that fostering innovation is very effective via linking to smaller entrepreneurial firms.

**Theoretical considerations**

Innovation can be discussed as the development of a new product, the process of developing a new product, or the adoption of a new product, which also can be investigated at various levels. The levels such as the project level, industry sector, or region. It has been described as „the successful implementation of creative ideas”, which can lead to solutions to problems that can have a potential impact on revenues of a firm, industry sector effectiveness, and the prosperity of nations. The U.S. Small Business Administration (SBA) defines innovation as „a process that begins with an invention, proceeds with the development of the invention, and results in the introduction of a new product, process or service to the marketplace.” Even more simply, Glynn (1996) described the process as two main phases: invention (initiation of the idea) and implementation.

In his studies, Schumpeter (1934) discusses how economic development is driven by innovation, through dynamic processes of „creative destruction” in which new technologies replace existing ones. Under this view, Schumpeter proposed the following forms of innovation: (1) introduction of new goods; (2) introduction of new forms of production; (3) discovery of a new source of raw materials or semi-elaborated products; (4) opening of a new market; and (5) creating new market structures in an industry. Hidalgo et al. (2002) define innovation from a technological perspective. Technological innovation is defined as „all technical, industrial and commercial stages leading to successful launch of new products and services into the market or the commercial utilization of new technical processes”. The Oslo Manual (OECD, 2005) proposes the following definition: „an innovation is the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organizational method in business practices, workplace organization or external relations”. This definition covers a wide range of different types of innovation compared with the previous definition that focused solely on technological innovation.

**Management Innovation**

Management innovation is a complex and dynamic process of organizational change. Management innovation, or innovation in management practice, has been most often defined as the introduction of a new set of management tools, techniques, processes, and managerial skills
for the specific goal of improving management practice and an organization’s ability to function efficiently and effectively. Organizations regularly invest in planned organizational change programs aimed at implementing a particular type of management innovation with the intent of improving organizational performance. Recent macro-level research using surveys of innovation and publicly reported performance data indicate management innovation has a positive effect on organizational performance. A focus on the wider climate and culture for management innovation is a way of emphasizing the collective and contextual nature of action.

*Innovation in services*

According to Gadrey (1992), service is defined as „the set of processing operations carried out by a service provider (B) on behalf of a client (A), in a medium (C) held by A, and intended to bring about a change of state in the medium C“. Gadrey et al. (1995) add that to produce a service is to organize a solution to a problem that does not principally involve supplying a good. It is to place a bundle of capabilities and competences (human, technological, organizational) at the disposal of a client and to organize a solution, which may be given to varying degrees of precision. From the perspective of service-dominant (S-D) logic, value service creation is always a collaborative and interactive process and service is the fundamental basis of exchange. In the S-D logic, service is defined as „the process of using one‟s competences (knowledge and skills) for the benefit of another party“ (Vargo and Lusch, 2004; Vargo, 2009). More recently, Toivonen and Tuominen (2009) define service innovation as „a new service or a renewal of an existing service that is put into practice and which provides benefit to the organization that has developed it‟; the benefit usually derives from the added value that the renewal provides to customers. In addition, to be an innovation the renewal must be new not only to its developer, but in a broader context, it must involve some elements that can be repeated in new situations. Den Hertog et al. (2010) propose that a service innovation is a new service experience or service solution that consists of one or several of the following dimensions: new service concept, new customer interaction, new value system / business partners, new revenue model and new organizational or technological service delivery system. Service organizations can innovate in any of these dimensions or a combination thereof. Each innovation dimension and their interactions vary depending on every service organizations.

*Innovation, Management & Service*

It is well recognized that the top management of an organization is responsible for the firm”s key strategic decisions. At the heart of new product development is the emergence of something new or novel. The identification of novel information and knowledge is a key input to new product development.

The tendency of manufacturing companies to move towards services has been noted in several research communities. The label “servitization” was first coined by Vandermerwe and Rada to delineate the tendency of manufacturing firms to “offer fuller market packages or “bundles” of customer-focused combinations of goods, services, support, self-service, and knowledge.” Services enrich the product marketing strategy and boost customer satisfaction, thereby providing manufacturers with an opportunity to distinguish themselves from the competition.
The price level of the service offering is another important factor in service coverage, given that the “intangibility” of services invites varying practices in service pricing.

As customers get into higher levels of life quality, their demands for diverse and customized products and services increase. Innovation becomes fundamental in developing a better-value proposition through an increased supply of new or renewed manufactured products and services. Many manufacturers are changing their strategies, and they are now offering services around their products in order to offer a better-value proposition, and every day service organizations need to have more developed processes of innovation to respond to the growing competition.

There has been a lack of studies on innovation in service sectors, despite the importance of innovation as one of the primary sources of competitive advantage. Furthermore, as manufacturing firms and service firms are different in many respects, including innovation performance, it could be expected that manufacturing firms could pursue and emphasize different aspects of innovation than their service counterparts.

**Case Study: Boeing's Global Enterprise Technology System (GETS)**

In 2003, Boeing, a $54 billion-a-year aerospace company, developed and applied a new process for managing its enterprise-level research and development called the Global Enterprise Technology System (GETS). The Global Enterprise Technology System (GETS), which combines strategies from systems engineering, software process improvement, organizational psychology, and anthropology, provides a strategically-driven and systems engineering-based approach to managing innovation. GETS is an example of applying the concepts of systems engineering to research and design.

The Global Enterprise Technology System is collaboration between Boeing's business units including Boeing Commercial Airplanes, Integrated Defense Systems, and Phantom Works. The scale of Boeing's business operations includes customers in 145 countries with products and services such as commercial airplanes, defense products such as military airplanes, rotor-craft, missiles, communications systems, and space products such as satellites and launch vehicles. Technological innovation within Boeing's huge system and markets occurs primarily at the research organization called Boeing Phantom Works. Boeing Phantom Works is often referred to as Boeing's catalyst of innovation. The scale of Boeing's enterprise necessitated an approach to managing innovation across many areas in a manner that is focused and connected without squashing vision and creativity. Boeing developed the GETS program to satisfy the following goals and objectives: highly collaborative, systematic, efficient, continuous, traceable, effective, and simple.

Boeing considers the GETS program to be successful in guiding and managing the innovation efforts of their 2,500 researchers and their managers. Boeing reports the followings benefits and gains from the GETS program:

- Stronger working relationships across technology, product, and market arenas,
- More strategically focused portfolio that delivers greater value to Boeing”s business units,
- More effective long-term focus, strategic planning, and synergy,
• Reduced meetings and travel associated with the portfolio planning,
• More flexible technology portfolio to meet the changing needs of the business,
• Reduced complexity and a stronger innovation process that is easier to apply to new areas.

The GETS program is a model of large-scale innovation management. Boeing created GETS as an institutionally approved, supported, and overseen space for creativity and breakthrough innovation.

CONCLUSION

The relationship between strategy and innovation is vital, and the important role that innovation plays in transforming the concepts of strategy into realities in the marketplace tells us that none of these companies could have succeeded without innovation. The process of innovation depends heavily on knowledge, and the management of knowledge and human capital should be an essential element of running any type of business.

Finally, the management of the innovation processes across businesses and industries shares numerous characteristics. Patterns of disciplined innovation management include understanding the product development process, making support functions time-invisible, grouping critical resources together, and maintaining management continuity. Managers of the innovation process can improve their firm’s chances at successful innovation by lowering sales expectations, assessing risks and rewards, sharing the rewards, encouraging innovation, allowing for learning and failure, and promoting experimentation and the need for change. Questions that managers of the innovation process should ask themselves as they develop and implement their management strategies include the following: Is innovation stated as part of your corporate objectives and business plan? Do you provide support to staff that try out new ideas, even if the ideas fail? Do you have experiments or pilots of new service concepts being conducted within your business? Does your financial reporting system reflect innovation as an investment or a cost?

Ultimately, innovation, when properly managed, gives companies competitive advantage in the marketplace.