

# Balancing Business Performance and Knowledge Performance of New Product Development

## *Lessons from ITS Industry*

**Jae-Hyeon Ahn, Dong-Joo Lee and Sang-Youn Lee**

New product performance (NPD) has a critical impact on a company's profitability and thus on its long-term survival. This study identifies two important dimensions of new product performance: business performance and knowledge performance. The business performance of a new product in the market can be regarded as the outcome of exploitative NPD activity, while knowledge performance, the degree of new knowledge creation, can be seen as the outcome of NPD exploratory activity. While recent studies have suggested the importance of organizational ambidexterity in terms of exploration and exploitation, few have investigated its determinants at the product-level. This study addresses this issue, focusing on controllable factors in NPD, through an empirical examination of sixty NPD projects in the information and telecommunications service industry. We find that while product quality contributes to business performance, organizational support and NPD marketing and technical proficiency contribute to performance in both dimensions. The trade-off relationship between the two is illustrated by the level of NPD technical challenge, which has a negative effect on business performance but a positive effect on knowledge performance. Overall, our study shows that exploration can be compatible with exploitation in NPD. Based on the results, we derive managerial implications over various stages of an NPD project.

© 2006 Elsevier Ltd. All rights reserved.

### **Introduction**

The development of new products has become a focus of industrial competition. New product development (NPD) is one of the most essential processes for organizations' success, and has a direct impact on their survival, particularly in fast-paced, competitive markets.<sup>1</sup> Most companies

recognize that a continuing stream of successful new products is essential to ensure long-term organizational health.

However, they also recognize that product development is accompanied by high costs and risks. NPD success is not common: but while Cooper argues that only one out of seven new product ideas is successful, he also notes that the return on investment (ROI) from a successful new product can be 12 times that of an ordinary product.<sup>2</sup> This perspective typically evaluates new product performance in terms of its market performance. In this article, we refer to the performance of a new product in the market as its *business performance*.

Recent research attention has been paid to knowledge creating aspect of NPD, and NPD has been regarded as one of the most critical endeavours for creating organizational knowledge.<sup>3</sup> Because competitive advantage rests increasingly on difficult to replicate knowledge assets, especially in knowledge-intensive industries, we also consider the degree of new knowledge creation as another important NPD performance dimension, which we term its *knowledge performance*.

Because organizational knowledge and performance are closely linked, it is necessary for managers to consider the two performance dimensions for long-term profitability and growth of the firm. However, as the case in [Exhibit 1](#) illustrates, a high level of knowledge performance does not always coincide with a high level of business performance.

### **Exhibit 1** **NPD case in a mobile telephone company**

In August 2003, a Korean mobile telephone company (Company A) launched a location-based information service using mobile handsets, which provided information about a subscriber's location to others previously approved by the subscriber. Although this service inherently involved customer privacy issues, Company A had insufficient understanding of customers' privacy concerns, and there were many complaints from subscribers. The mobile user interface was also neither convenient or effective - for example, users had to make at least five navigation steps through the menu directory. Finally, there were significant levels of inaccuracy in the location information, with the repeater, a component of the communications network, found to be a major source of errors. These problems made the market performance of the service very poor. However, based on the knowledge obtained through the provision of the service, Company A developed and launched a new enhanced location-based service late in 2004, which provided travel information for the destination and an emergency alarm capability, as well as offering the subscriber's current location information to others. The new service delivery process was designed to minimize the possibility of privacy invasions, the interface became user-friendly and a special solution had been found for the repeater problem, which allowed significantly improved accuracy of location information, with the result that the service started to provide a satisfactory cash flow for the company.

In fact, the argument between the two performance dimensions can be seen in terms of the classic exploration/exploitation divide. Business performance, which is related to the immediate gain from the utilization of a firm's knowledge base, can be regarded as the outcome of *exploitative* NPD activities, while knowledge performance can be seen as the outcome of *exploratory* activities, since it measures the degree of new knowledge creation. Exploration and exploitation employ fundamentally different logics, and it has been widely suggested that there are trade-offs between them.<sup>4</sup> Considering these trade-offs, we ask whether it is possible, in an individual NPD project, for a firm to accomplish high levels of outcomes in terms of *both* business and knowledge performance. More specifically, we have the following questions in this study:

متن کامل مقاله

دریافت فوری ←

**ISI**Articles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات