Innovative versus incremental new business services: Different keys for achieving success

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Abstract

In companies where new product development plays an important strategic role, managers necessarily contend with a portfolio of projects that range from high technology, new-to-the-world, innovations to relatively simple improvements, adaptations, line extensions, or imitations of competitive offerings. Recent studies indicate that achieving successful outcomes for projects that differ radically in terms of innovativeness requires that firms adjust their NPD practices in line with the type of new product project they are developing. Based on a large-scale survey of managers knowledgeable about new product development in their firm, this study focuses on new business-to-business service projects in an attempt to gain insights about the influence of product innovativeness on the factors that are linked to new service success and failure. The research results indicate that there are a small number of “global” success factors which appear to govern the outcome of new service ventures, regardless of their degree of newness. These include: ensuring an excellent customer/need fit, involving expert front line personnel in creating the new service and in helping customers appreciate its distinctiveness and benefits, and implementing a formal and planned launch program for the new service offering. Several other factors, however, were found to play a more distinctive role in the outcome of new service ventures, depending on how really new or innovative the new service was. For low innovativeness new business services, the results suggest that managers can enhance performance by: leveraging the firm’s unique competencies, experiences and reputation through the introduction of new services that have a strong corporate fit; installing a formal “stage-gate” new service development system, particularly at the front-end and during the design stage of the development process; and ensuring that efforts to differentiate services from competitive or past offerings do not lead to high cost or unnecessarily complex service offerings. For new-to-the-world business services, the primary distinguishing feature impacting performance is the corporate culture of the firm: one that encourages entrepreneurship and creativity, and that actively involves senior managers in the role of visionary and mentor for new service development. In addition, good market potential and marketing tactics that offset the intangibility of “really new” service concepts appear to have a positive performance effect. © 2001 Elsevier Science Inc. All rights reserved.

1. Introduction

New product development (NPD) is essential for outstanding corporate performance, and research about what leads to new product success and failure has been carried out for both goods and services. For manufactured goods, a large number of studies over the last three decades have established a wealth of evidence about what factors affect new product outcomes. Similarly for services, although studies are more recent and less proliferate, researchers have explored new service success and failure not only to develop conclusions about how to achieve high levels of performance, but also to gain insights about how the dimensions that distinguish services from manufactured goods influence new service development. Despite this extensive documentation on how to achieve success, new product development remains a high risk venture. A recent study based on a large sample of new manufactured goods and services [26], showed that the overall rate of success for newly commercialized products has remained stable (compared to earlier studies [51]) at less than 60%, indicating that substantial resources continue to be devoted to innovation efforts that fail in the marketplace. Clearly, much needs to be done to improve our understanding of the factors that affect new product performance if firms are to significantly improve their success rate in this essential corporate function.

One approach that might help to improve our understanding of how to achieve positive new product outcomes is to look more closely at the type of innovations that are

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being developed by firms. Much of the past new product success/failure research, in a effort to generalize about the factors that are linked to performance, has been based on broad empirical samples of projects that include all types of ventures, ranging from totally new-to-the-world innovations, to minor improvements or adaptations of existing products [14,16,17,20,42,51]. In other words, many studies have tended to overlook an important reality: that projects can differ substantially in their degree of innovativeness and that this may have an impact on what it takes to achieve success.

Product innovativeness or newness refers to the degree of familiarity organizations or users have with a product, and there is both theoretical and empirical evidence to suggest that it is important to distinguish among different degrees of innovativeness when undertaking new product development. This is because product newness is potentially linked to levels of uncertainty and risk [1,41,64], to new product development difficulty [2,26,41] and performance [2,36,63], and to the effort and resources required when undertaking NPD ventures [2,26,41,57,64]. Indeed, the subject of “really new” products, as a topic of interest to managers and academics, maintains a priority ranking (#1 or #2) by the MSI and was the underlying theme of several recent conferences as well as of a special issue of JPIM (March 1998). Typically, researchers distinguish between “really new” and “incremental” new products in an attempt to establish how project innovativeness impacts new product development. The majority of the studies concentrate on the manufactured goods sector, with only a small number of efforts that also include services as part of the research sample (e.g. [26]). One objective of the research presented in this article is to focus on innovativeness in services.

When we consider the economic activity that results from product innovation, it is services that have experienced the greatest level of growth and dynamism over the past several years [47,67]. In particular, convergence in the fields of electronics, communications, computer and information technology have created enormous opportunities for creating totally new-to-the-world services, as well as for reinventing past service offerings, impacting both consumer (e.g., web brokerage, virtual banking) and business-to-business markets (e.g., broadband-based international communication, network-based business solutions) [39]. Given the economic importance of new services and the relative lack of research here, this article focuses on the influence of innovativeness on the factors that impact success and failure in the development of new business-to-business services.

2. What is an innovation?

Innovation involves the creation of a new product, service or process. “New” products can be viewed in terms of their degree of newness, ranging from a totally new, or discontinuous, innovation to a product involving simple line extensions or minor adaptations/adjustments that are of an evolutionary, or incremental, nature [5,26]. Thus, “discontinuous” innovations and “incremental” new products represent opposite ends of the newness spectrum [5,64]. Further, product innovations can be described along several dimensions of newness, the most common of which include measures of newness to the developing firm, to the outside world or to both of these [5,50].

Some definitions of innovativeness focus primarily on the newness of the product to the firm, emphasizing newness of the technology and the product category. Thus, discontinuous or radical innovations are characterized as: truly novel or unique technological solutions [49], the development or application of new technologies [61], or state-of-the-art breakthroughs in technology or product category [18]. Continuous or evolutionary products—that is, projects at the opposite end of the newness spectrum—are typically described as new products involving only minor (or no) changes in technology, simple product improvements, imitations or line extensions [18].

Other definitions of innovativeness consider primarily the product’s newness relative to the outside world or market. Using this newness dimension as a measure, the discontinuous end of the spectrum can be described as new products: that are perceived as totally different and require major changes in thinking and behavior on the part of customers [54]; or that involve dramatic leaps in terms of customer familiarity and use [44]. In contrast, products that are incrementally new in terms of the market dimension include straight me-too products or offerings that provide no new or very limited added benefits for customers.

In recent studies, researchers addressing the issue of “really new” versus incremental new products usually view innovativeness in terms of both of these dimensions of newness; that is, newness of the technology and the product’s degree of familiarity or uniqueness in the marketplace [5,36,55,57,64]. This is because, in studies of new product success factors, it is a well-accepted paradigm that both the technological and the market perspective must be taken into account [8,17]. Veryzer [64], for example, distinguishes among four types of innovations, based on the degree to which the new product provides unique benefits to customers and on the extent to which new or expanded technology is used to create these benefits. Thus, in the analysis presented in the current article, this broader, more inclusive, representation of product innovativeness is used (see Exhibit 1).

3. Effects of product innovativeness on new goods/service development

In firms where new product development plays an important strategic role, managers are typically concerned with a portfolio of projects, ranging from highly innovative ventures to relatively simple adjustment, or imitative, type
Because degree of innovativeness has been characterized as a distinguishing feature that can influence the NPD function of the firm, it makes sense that managers adjust their approach depending on the type of project they are dealing with [1]. For example, according to one school of thought, discontinuous innovations entail a much higher degree of risk, require greater company effort and resource commitment, but are usually the only types of new product ventures by which a firm can gain really outstanding profits or achieve a major competitive advantage [18,26,41,63]. Incremental new products, on the other hand, while typically providing returns that are less spectacular, are seen as involving lower levels of uncertainty, risk and development effort, but a higher degree of fit with company experiences and resources, and thus a higher rate of success [45,57,63]. This view was supported by the 1995 PDMA “best” practices study in which new-to-the-world projects were found to be more profitable (see also [57]), but comprised only 10%—compared to over 47% for incremental-type projects—of the total portfolio of new product introductions. This result was attributed to firms’ “difficulty of uncovering and delivering radically new solutions” or to “a bias...against very high risk projects” [26,p.4]. Similarly for services, Storey and Easingwood [58] showed that, while highly distinctive new service introductions can be instrumental in opening truly new and enhanced opportunities for the firm, it is relatively simple service augmentations that impact the company’s overall level of profit and sales.

Contrary to the view that degree of innovativeness leads to radically different new product outcomes, Kleinschmidt and Cooper [36] found that superior performance is typically achieved for both highly innovative and incremental new products in industrial product contexts. This was confirmed for business services by de Brentani [22] who showed that opposite types of ventures—that is, the highly innovative “Pioneering Venture” and the incremental “Improved Customer Service Experience”—are both key “success” scenarios. Indeed, these two types of NPD projects, although at opposite ends of the innovativeness spectrum, are often closely linked in the new product development portfolio of firms. This is because firms often achieve a major competitive advantage in the marketplace as a result of a new-to-the-world innovation; but, they can usually only sustain this advantage over the longer-run through the subsequent development and introduction of product improvements, market segment adjustments and line additions. It is through these incremental new products that firms can respond to specialized and/or changing customers needs, as well as continue to differentiate themselves and their product offerings from imitators and other competitors [8,52]. Thus, while both types of new product projects are important for company performance, each entails a substantially different new product development scenario. This begs the question: what unique approaches or changes in emphasis should managers undertake to achieve success in either type of new good or service venture?

Past studies of new product success/failure highlight a number of critical dimensions that are linked to innovation performance. These can be categorized as: product-related—for example, product superiority, complexity, newness, degree of customization; market-related—for example, market attractiveness, competition, specialized or mass market, customer need fit; company-related—for example, strategies, capabilities and resources of the firm, competitive advantage, and innovation environment; and new product process-related—for example, complexity and formal-
ity of the NPD process, extent of actual use, NPD process management, and application of NPD tools [3,11,14,16,17, 20,23,26,38,42,43,51]. The following section provides a review of the literature, together with insights, about how the degree of project innovativeness is likely to impact these generic new product success factors.

3.1. Impact of innovativeness on product-related success factors

A number of product-related dimensions have been linked to NPD outcomes that can be expected to have a differential performance effect, depending on the degree of innovativeness of the new product. Demonstrated product superiority is one of these. For discontinuous innovations, the importance of providing a significant comparative advantage in order to secure adoption by customers—for example, by incorporating new technologies to solve previously unsolved problems or to handle customer concerns in completely different, more effective, ways—is a well-accepted paradigm [36,54,57]. At the same time, companies must take care to avoid the potential hazard of an overzealous focus on technological advances that result in the development of elegant, but costly, solutions to relatively simple or nonexistent problems [8]. Similarly for new products that are of a more continuous nature, product superiority is relevant for success, although it probably needs to be less overwhelming since customers face a much lower purchase risk [54,63].

In services—the topic of the study presented in this article—the need for product superiority or distinctiveness has also been shown to be an essential success criterion [14,23,58,59]. However, services entail some important differences which companies must take into account when they go about creating and actually demonstrating product superiority. For example, services that are highly intangible and abstract can create a major challenge for firms in getting customers not to only grasp a concept that is totally foreign to them, but to appreciate its superiority compared to more familiar ideas [4,39]. For incremental new service offerings, lack of a physical dimension can make it difficult for service providers to effectively demonstrate the differential or superior facets of a new service offering. At the same time, because business clients are often actively involved in the production and/or delivery of services, service providers can use this to their advantage in demonstrating and in implementing product superiority by creating an enhanced customer service experience [4,68]. For discontinuous service innovations, interaction with clients offers the opportunity to explain and convince buyers of the value embodied in a totally new and unfamiliar service; for incremental products, focusing on providing customers with a more satisfying experience—for example, offering more efficient problem solving, improved client training, or a more professional working relationship—can be an important basis for differentiating the new service from competitive offerings [4,24,28,68].

Another product-related factor likely to impact differentially the success of discontinuous versus incremental new products is the complexity of the new product itself. While both types of NPD ventures can entail products that are of a complex nature, in the case of improvements, adaptations or line extensions, companies are familiar with the core product, its technology and design, and usually also its market ramifications. This can substantially simplify development and launch, significantly reducing the effort and cycle time required for the project [26,57], which is likely to have a positive performance effect [10,36,65]. In contrast, when undertaking projects that embody a dramatic departure in technology and product category, complexity can be expected to have a negative effect. During NPD, developers must cope with product complexity in terms of increased likelihood of error and time required for solving technical and design problems [2,26]. During launch, companies must contend with customers who perceive the new product as complex because they don’t understand the new idea and its potential benefits, and possibly because they fear the unknown [9,41,54,65]. Indeed, for business services, the negative performance impact due to product complexity can be expected to be even more acute. This is because intangibility creates credence problems for even the simplest service product—that is, customers must rely on faith and trust when making the purchase decision [4,7,46]. Moreover, given the often active role of clients in service production and delivery, a highly innovative new service—one that incorporates complex and unfamiliar processes and technologies—can augment customer risk due to systems downtime, and the effort and costs required for new learning and employee retraining [6,7,31,39]. Of course, in the case of new business services, “complexity” can also mean that services are customized to meet the specific requirements of individual clients’ and this can have positive implications for the outcome of new service ventures [40,60].

3.2. Effect of innovativeness on market-related factors

Several market-related factors have been identified as significant in impacting new product outcomes and as having a differential effect on radical versus continuous innovations. One of these is market competitiveness. While viewed as having a negative effect on the performance of incremental new products, competition is seen as less critical in the outcome of discontinuous innovations. For the latter group, firms often have the opportunity to redefine markets or technological standards, thereby creating significant barriers to entry, which can result in a substantial competitive advantage [8,18,52]. In the case of incremental new products, competitive intensity presents a much greater performance threat. This is true for both pioneering firms (of earlier discontinuous innovations) that attempt to sustain their initial advantage through timely improvements and
adapts (to the original innovation), and for less innovative firms that try to gain market share through “new” products that take the form of “second-but-better”, imitations or minor variations of the original product [8]. When we consider services, the impact of the competitive environment can be seen as having both a positive and a negative impact on new product outcomes. Due to intangibility, the development of new services—including new-to-world services—usually takes significantly less time (50% less than manufactured goods, according to a recent study [26]) and requires fewer resources (less investment in physical assets); but, they are less protected from direct imitation by competitors (nonpatentable, lower start-up costs) [32,60]. This suggests that, for discontinuous service innovations, pioneering firms will benefit less from an initial competitive advantage (at least in terms of the time they have to enjoy the advantage of being first), but will find it easier to sustain an early advantage through the timely introduction of differentiating enhancements, repositionings, and unique bundlings of existing services [60]. Furthermore, because clients often use service provider identity and reputation as a proxy when evaluating new services, past successes at pioneering can play an important role not only in “decommoditizing” the new service offerings, but also in reducing the perceived risk of customers when they consider the purchase of new-to-the-world innovations [58,60].

Two additional market-related new product success dimensions include market attractiveness and customer/need-fit. But, how these factors operate for new products located at opposite ends of the innovativeness spectrum is somewhat less clear. Some authors suggest that responding to clearly defined customer problems/needs in a large and attractive market is both likely and essential for discontinuous innovations [36,66]. It is likely, because these types of innovations provide entirely new ways to solve customer problems and thus offer significant opportunities for differentiation and competitive advantage, giving them tremendous potential for market success [1,9,18]. It is essential, because discontinuous innovations—such as a radically changed product generation or an entirely new product category—typically entail high levels of investment for the development and creation of new technologies, new product platforms and new markets, making substantial market and profit potential inherent requirements for longer-term success [8,47].

Other authors hold that expecting a high degree of market attractiveness and a precise definition of customer need(s) for “really new” products is unrealistic and not always necessary. It is unrealistic because: (1) the new/emerging technologies that define radical innovations typically take a long time to develop to the point where they really solve customer problems [9,64] (e.g., digital technology has been around for many years, but is only now coming into its own with regard to market opportunities in the services sector); (2) technologies are often incompatible with customer values, systems and consumption patterns, and this leads to purchase risks particularly when the ultimate direction of the technology is unclear (e.g., Beta vs. VHS) [50,65]; and (3) demand is often only latent and market needs unclear, making the definition of customer requirements much more of a “visionary”, rather than an objective, scientific, exercise [9,57]. Moreover, especially in the business-to-business sector, despite what may initially be a market with low potential and a relatively “fuzzy” need-fit, lead users—that is, customer organizations that respond to the need for cutting-edge innovations before the majority of the market appreciates their potential [66]—can play an important role in the ultimate success of these types of new products. In effect, by taking part in quasi beta-testing—where the innovation is developed and tested in a specific customer application—lead users often provide developers with the opportunity to enhance core technologies and to augment their understanding of customer requirements through the creation of highly innovative solutions. This is especially relevant for business services, where customer participation in new service development is often a natural extension of the interaction that already exists between service provider and client during production and delivery of the service, and where the potential for service customization is great [28,31,60].

When we consider the other end of the spectrum—incremental new products—the market attractiveness/need-fit issue is different. Here, a very large market is often less important because new products tend to capitalize on prior investments and experiences and, thus, involve a much lower investment risk [8]. For most service products, there is not even an inventory risk. At the same time, there is no topic in the field of Marketing that receives greater emphasis than the need to understand and listen to the customer. Particularly when creating and marketing incremental, improvement-type, products, it is the development of in-depth insights about customer needs, preferences and values—and minute changes in these—that is the basis for successful product design and an effective competitive positioning strategy [27,63]. For incremental type of new services, it is especially critical to show business customers that they are gaining unique and worthwhile benefits; this, because competing services are difficult to distinguish, and because of the potentially high switching costs associated with changing service providers, even in the case of a direct substitute of a known service offering (e.g., accounting or auditing). For example, significant uncertainties and costs can result from the required adjustments to a changed system, from delays in getting it started, and changes to internal bureaucracies [28,31,68].

3.3. Impact of innovativeness on company-related issues

Company-related factors comprise a third category of dimensions whose effect can differ when developing “really new” versus incremental new products. One of these is the question of strategic and resource fit. “Best” performers
have been identified as firms that have a clearly defined new product strategy that guides each new product venture as well as the overall NPD program of the firm [15,26]. Thus, individual new product endeavors have a greater or lesser chance of success, depending on their fit with the firm’s new product strategy and planned portfolio of ventures. In the case of highly innovative new products, it is their strategic fit which is essential as these ventures not only determine the firm’s business over the long run, but considerably stretch its vital and scarce resources [15,34,57]. For incremental new products, resource and strategic fit are also important. A good resource fit can lead to more efficient, error-free, and also often more highly leveraged, new product development; a good strategic fit is important for planning and introducing derivatives or off-shoots of earlier, more pioneering, ventures by which the firm can sustain its competitive advantage [8,18].

Closely linked to overall strategic fit is the notion of company resource fit. Because a firm’s new product strategy is usually defined in dual terms of technology and market drivers [8,34], a key factor determining the success of a new product or service is the extent to which it uses and benefits from the firm’s core competencies and resources. Here too, the radicalness of the new product can be expected to have an impact. Discontinuous ventures typically have a lower resource fit than product improvements or line extensions. Because for “really new” products, these firms are usually operating in uncharted areas where prior experience is limited or inapplicable, they face significant threats due to high levels of uncertainty, error, and a longer, more costly new product development process [2,26,34]. Further, in the case of new business-to-business services, moving into fields that are unrelated to the experiences and competencies for which the firm is known can be problematic. Especially for services that are highly intangible, and of a professional and expert nature—where customers use the company’s reputation and past business history as a proxy when evaluating the new service itself [10,19,38]—launching an entirely different core offering, with a poor fit in terms of both corporate resources and reputation, can be detrimental to performance [60]. Conversely, new products that are adaptations, refinements and enhancements of existing products and/or delivery systems are often better performers because they build on established product platforms and because they leverage the known resources, skills and identity of the firm [8,34]. Particularly in cases where services rely on distinctive, but underused, company facilities or resources—for example, a major operating system or a specialized team of experts—a high degree of fit can be extremely advantageous from a cost, profit, and new product adoption perspective [21,32].

A third company-related success factor has to do with the type of new product development culture that permeates the firm. Creating an entrepreneurial and team-oriented climate, with strong support and involvement from top management, is considered important for facilitating successful innovation by firms [17,29]. For highly innovative new product ventures, senior manager involvement and “visioning”, cross-fertilizing teams of involved players, and support for venture champions who create excitement and commitment, are considered essential [9,30,38,65]. For incremental projects, on the other hand, a formal NPD system where project leaders are empowered to move things forward quickly and effectively by activating concurrent functional involvement and by minimizing expendable steps, is considered to make more sense [57,62]. For business-to-business services, two additional provisions have been shown to be important, particularly when dealing with radical innovations. One is the idea of viewing clients as “partners” in new service development [23,31], and the other concerns empowering the front line to handle process failures and respond to individual client problems/needs [6,58,60]. Both can play an essential role in helping clients to step out beyond the unfamiliar and in ensuring that the final service offering that customers actually experience is error-free and responds to their individual concerns and requirements.

3.4. Innovativeness impact on new product process factors

A final group of factors which researchers and practitioners link to new product success and failure deals with how firms undertake and manage the NPD process. One recommended practice for both new goods and new services is the application of a formal and planned NPD process. It is well established that firms with a high proportion of winning new products usually have in place, and actually use, a set of preplanned stages—beginning with establishing clear objectives, to involving customers in the “design” process (i.e., concept development and testing), to carefully mapping or “blueprinting” alternative processes (in the case of services [56,60]), to market testing, and to planning and tracking the launch—with formal “gates” at each level to ensure that the new product continues to meet company- and market-related performance criteria [11,17,21,26,56]. As with several of the other success dimensions, however, here too there is a difference of opinion about its likely impact and relevance when applied to “really new” versus incremental NPD projects.

As noted above, firms undertaking new product development are likely to be involved in, not one, but a portfolio of different types of projects. The question therefore is: should the same formal process be used when developing discontinuous innovations where entirely new technologies, markets and production/delivery processes need to be addressed, as for incremental projects where only minor adjustments are made to technology, design, or customer benefits? Some authors believe that implementing a planned and highly detailed NPD scheme for all types of new product development projects is not appropriate. Song and Montoya-Weiss [57], for example, indicate that: (1) when the new product is a direct extension of prior knowledge, a
bureaucratic system may actually be detrimental to success because the company becomes overly deliberative about things it already knows, and this loses valuable time-to-market (see also [45]); and (2) when the new product involves a radical innovation, a “probe and learn” approach—involving varying amounts of time, resources and commitment—may be more appropriate for dealing with the many uncertainties and complexities surrounding the market and technology (see also [9,41,50]). In a similar vein, Veryzer [65] argues that, while using a planned approach to getting up-front market input may be effective for incremental products, doing so for totally new products may be impossible or undesirable (see also [34]). This is because market opportunities tend to be unspecified and first need to be created, and because potential users are often unable to envision the true potential in a really radical innovation (consider, for example, the idea of “virtual banking” in the services sector).

4. The research

The objective of this research was to compare highly innovative and incremental new business services in order to discover what factors impact performance for each type of project. The study used the methodology developed by Cooper [11,12] and validated by several researchers doing similar studies [14,16,20,36,42,58], which compares large numbers of actual new product projects so that the factors which appear to be linked to performance can be identified. Thus, managers from a broad spectrum of business services were first identified and telephoned asking them to take part in the study, and then mailed a pretested questionnaire asking them to recall and to retrospectively rate two new service projects undertaken by their firm—one success and one failure. Each project was rated in terms of a large number of descriptive variables that potentially impacted the outcomes of the ventures. The sample of 184 firms, of which 115 eventually took part (67.3% response), were located in a convenient but representative geographic area—that is, Canada’s main business centers including Toronto, Vancouver, Ottawa and Montreal—and covered all major business service sectors. In total, the survey yielded 276 usable rated projects of which 150 were successes and 126 were failed new services ventures. The projects included in the study covered a broad spectrum of new products, ranging from minor modifications of current services, to imitations of competitive offerings, to new-to-the-world innovations.

Respondents used a 1–7 point disagree/agree (Likert) scale to rate 104 items which comprised the four categories of success/failure dimensions discussed in the previous sections. These were gleaned from the literatures on new product/service development, business-to-business and services marketing, as well as from personal interviews with new service development managers. In line with the research objective, several variables measured the degree of innovativeness of the new service projects (e.g., technological newness, service newness to the market, etc.). Managers also rated project performance using a number of specific dimensions (e.g., sales/revenue, profitability, market expansion, etc.) as well as an overall, or “global”, measure—that is, perceived overall degree of project success/failure—which ranged from +6 (“overriding success, exceeding all expectations”) to –6 (“totally unsuccessful, below all expectations”). Thus, although the research method relies on the knowledge and memory of single respondents, because the projects were relatively recent (last 5 years) and because the managers had been carefully selected (i.e., only those with an intimate knowledge of and involvement in the projects), on average, the results should be valid.

Based on the correlation analysis, which indicated that many of the variables were intercorrelated, a factor (principal component, varimax rotation) and reliability (Cronbach alpha) analysis was undertaken to group the variables into multiattribute constructs. This concluded with a set of 12 factors which were indicative of typical NSD-related descriptive dimensions [3,14] and which had the potential to distinguish between successful and failed new business service projects. Next, the projects were grouped according to their degree of innovativeness. As suggested in the literature (e.g. [64]), two descriptive variables—one measuring technological newness (i.e., “the new service exploited technology that was totally new to the firm”) and the other measuring newness to the market (i.e., “service is highly innovative; nothing like it on the market; replaces vastly inferior service”)—were employed for this purpose. Using ratings that were > or < 4 on both the technological-newness and the market-newness variable, two subsamples comprising 64 innovative and 84 incremental new service projects were identified (see Exhibit 1). Two phases of regression analysis followed. First, using degree of success/failure as the dependent variable and the 12 factors as independent variables, two new service performance models resulted: one for more innovative projects and the other for incremental new services. Next, combining the two groups of cases and running a regression analysis that also included the two product innovativeness variables, combined in the form of one independent (dummy) variable—in effect, as a moderator—permitted a comparison of the two models and an assessment of whether or not their regression coefficients are statistically significantly different [35]. This allows one to answer the question: are the factors which are linked to success in the case of highly innovative new services significantly different from those relating to the outcome of incremental projects?

5. Research results

The results of the descriptive analysis suggested 12 constructs by which the new service projects in this study could
be characterized. The constructs covered all four categories of success/failure dimensions described in the literature (discussed above) and had internal consistencies which, in most instances, ranged from good to excellent (i.e., Cronbach alpha reliability coefficients between 0.57 and 0.84 [48]). The constructs, together with the descriptive variables, are listed in detail in the Appendix and are briefly described below.

- **Product-related** dimensions: service complexity/cost, front line expertise, improved speed and service reliability, standardized service, and service quality evidence;
- **Market-related** dimensions: defined market/need-fit, attractive market potential, market competitiveness;
- **Company-related** dimensions: corporate strategy and resource fit, innovation culture and involvement;
- **NSD Process-related** dimensions: formal research and design process, formal testing and new product launch.

The regression analysis provided two models that describe the factors linked to success or failure for “really new” versus modification-type of new services. The results are highly significant ($p$ of $F$ for each equation $\leq 0.0001$) with adjusted $R^2$ of 0.47 and 0.57 for the two equations, high and low innovativeness, respectively. A comparison of the results, which are presented in Table 1, indicates that both similarities and important differences exist in the performance equations of these two groups of new service ventures. For high and low innovativeness projects, seven and eight descriptive dimensions, respectively, were found to be significantly ($p \leq 0.10$) tied to new service performance. Three of these factors appear to play a role in the outcomes of new business-to-business services, regardless of the project’s level of newness. Six others, however, were found to have a differential impact, depending on which end of the innovativeness spectrum the project was located. A presentation and discussion follows.

### 5.1. Similarities: high versus low innovativeness projects

Three factors were found to have a similar impact on performance for both discontinuous and continuous new service projects. These include:

- **Client Need/Fit** - extent to which new service is in line with client needs, values and operating systems, and changed requirements;
- **Front line Expertise** - extent to which firms use trained and skilled human resources for service production and delivery, as well as for creating new service offerings;
- **NSD: Formal Testing and Launch** - extent to which firms undertake prelaunch service testing, personnel training, and an internal and external promotional program during new service launch.

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<tr>
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<tr>
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<td><strong>Company-related factors</strong></td>
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<td>No. of factors in equation</td>
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Notes: * = coefficients in two equations are significantly different ($p \leq 0.10$); n.s. = not significant.  
Dependent variable = Degree of project success/failure (+6 to −6); Independent variables = rotated factors scores (raw scale: 1–7 disagree/agree).
First among the factors that appear to have a similar impact on new service outcomes, regardless of the degree of product innovativeness, is the market-related factor, Client/Need Fit. New services strong on this dimension satisfied clearly identified client needs, responded to important changes in customer requirements, solved important customer problems and were consistent with customer values and operating systems. For both types of projects—that is, both highly innovative and those of a more continuous nature—Client/Need Fit was strongly tied to new service outcomes \( p < 0.001 \), ranking either first or second in importance among the factors comprising the performance equation (see Tables 1 and 2). For incremental new service projects, past studies clearly support these results [9,57,63]. It is also important to remember that the services studied were business services where buyers are more likely to be expert. This means that customer needs, wants and operating requirements are clearly specified, and that buyers emphasize a precise product-need fit.

But, what about discontinuous innovations? Here, the comparative literature of high versus low innovativeness projects suggests that stressing an exact fit with customer specifications is less reasonable due to the “fuzzy” nature of both product concept and customer requirements at early stages of the NPD process [9,57,65]. Here too, the fact that this study deals with services destined for the business market provides some explanation. Services are not only more flexible—that is, more adaptable—than manufactured goods, but business services typically involve a high degree of client contact during service production and delivery [31]. This offers service providers the opportunity to adjust and fine-tune the new service to individual client needs and specifications. Moreover, longer term service relationships frequently become a source of inspiration for other, new-to-the-world, products as well as for continued improvements to current service offerings [4,28,66]. Thus, similar to Kleinschmidt and Cooper’s [36] comparative study involving new industrial goods, the findings presented here indicate that to be successful, new business services at both ends of the innovativeness spectrum must meet this essential market criterion.

A second success/failure dimension which the research results indicate has a similar performance effect for high and low innovativeness new services is Front line Expertise. In other words, for both types of new products, the more successful firms emphasize the use of highly trained and skilled personnel for both front line and production purposes, and for performing judgmental tasks during service creation and delivery. That this factor was highly significant \( p < 0.01 \), ranking third in importance, in both performance models is not difficult to explain. First, in the business-to-business sector, even the simplest products tend to be viewed as relatively “complex” and are purchased using expert, professional, resources [23,31]. Thus, matching the client’s expert buyer with your own expert front line is a clear requirement for success. Second, because services are often viewed as commodities by customers (due to intangibility), it is through the use of an expert front line that the company can underscore in what way(s) its new, modified service provides an improvement over competitive offerings and how it does a better job in responding to the customer’s operational needs [4,31]. Put another way, companies that rely primarily on potential customers, themselves, to identify and appreciate such differences are much less likely to succeed when introducing improved or slightly changed service offerings. Finally, for a discontinuous service to succeed, customers must understand how this unique service to succeed, customers must understand how this unique and totally foreign concept or technology will benefit them. Here also, service company experts can play a compelling role; this time, in helping clients take the risk associated with “stepping out” beyond the familiar and adopting a radical innovation.

A third construct with a similar performance effect for new service projects located at opposite ends of the innovativeness spectrum is the NSD process-related factor, NSD: Formal Testing and Launch. This factor describes a number of key NSD functions that typically occur near the end of the new product development process, including: undertaking prelaunch test marketing, extensive training of service personnel, internal marketing of the new service to the front line, and planning a formal promotion and launch strategy during the commercialization phase. For both groups of projects—innovative and incremental—this factor also plays a significant \( p < 0.01/0.05 \), respectively, and important (ranking: 4\textsuperscript{th} in both models) role in explaining new product success (see Table 1 and 2).

That a quality launch is important to the successful performance of new services was expected, since this dimension has emerged as a key success factor in virtually every study of new product success in manufactured goods [16,17,26,42,51] and in services [3,13,14,21,58]. For highly innovative and, particularly hi-tech, services, prelaunch testing is important. It is a means by which service providers can substantially increase the likelihood of launching an error-free, reliable, and user-friendly service and service delivery system [33,53]. Moreover, a proficient internal and external communication strategy during launch is essential for ensuring that both service personnel and customers are
knowledgeable about the benefits of the new-to-the-world service and that it achieves a high presence in the marketplace [58, 59]. Similarly, for imitative or adaptive new services, success is more likely when companies follow a carefully planned launch program. This is needed to effectively position the new offering vis-a-vis competitors and to provide a clear message by which customers can identify the service firm and be persuaded about the potential benefits of switching service providers [58]. The fact that, in the current study, NSD: Formal Testing and Launch is of somewhat lower importance (than the previous two factors) can be explained in several ways: (i) when service delivery involves an expert front line and/or when the new service is introduced to the market on a one-on-one basis (as is true for many business services), a formal testing and launch program becomes less relevant [14]; (ii) service firms, particularly in knowledge-based industries, are concerned about losing their advantage when they inadvertently provide prelaunch information to competitors [59]; and (iii) traditionally (and as shown in the recent PDMA “best” practices study [26]), service firms tend to use a less formal and less sophisticated approach in all stages of the NSD process.

5.2. Model differences

Several of the dimensions that describe the new service projects were found to have a unique performance impact, depending on whether firms were involved in developing a “really new” or an incremental new service offering. These “distinctive” success dimensions fall into two basic groups. One group of factors is significant in both performance equations, but with a substantially different impact in each. In the other group, the determinants are distinctive in that they are significant—although usually of secondary importance—in only one of the two models.

5.2.1. Primary differences

According to the regression results, three factors have a substantially different performance effect, depending on the project’s degree of innovativeness. These include:

- **Strategy and Resource Fit** - extent to which the new service “fits” with: managerial skills/preferences, company expertise and human resources, delivery and behind-the-scenes competencies, and marketing capabilities and financial resources;

- **Innovation Culture and Management** - extent to which company has: an innovative corporate culture, visionary new product championing, and expert, front line and senior management involvement in new service development;

- **Service Quality Evidence** - extent to which tangible features are used to identify the new service, and to help customer define and evaluate it.

<table>
<thead>
<tr>
<th>Table 3</th>
<th>Incremental versus discontinuous innovations—differences</th>
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<tr>
<td>Factors</td>
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<td>Strategy and resource fit (company)</td>
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<td>Innovation culture &amp; management (company)</td>
<td>6</td>
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<tr>
<td>Service quality evidence (product)</td>
<td>8</td>
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Note: # = importance rank in model; ***, **, *, + = 0.001, 0.01, 0.05, 0.10 level of significance.

**Strategy and Resource Fit** measures a broad set of corporate “fit” attributes including: fit with managerial skills and preferences, fit with the firm’s expertise and human resource capabilities, fit with service delivery systems and behind-the-scenes competences, and fit with the company’s marketing capabilities and financial resources. Although this factor affects performance in both models, there appears to be a significant difference in its relative importance to the outcome of “really new” versus incremental service innovations. In the latter case, **Strategy and Resource Fit** is highly significant (p < 0.001) and ranks second in importance, indicating that it is fundamental to achieving positive project outcomes for new services that are of a continuous nature. For discontinuous service innovations, on the other hand, this factor was last to enter the equation, apparently playing a much less important role (p < 0.10) in the ultimate success of these types of ventures (see Table 1 and 3).

For both types of projects, the research results are not difficult to explain. That new service projects involving line extensions, product improvements or adaptations have a strong fit with existing corporate capabilities and resources, and that this is likely to have a synergistic, and thus very positive, performance impact is not surprising. As discussed above, in these situations, companies clearly benefit from lower levels of uncertainty, error and cost during new product development, and are generally able to move the new service to market more quickly and more proficiently [2, 26, 57]. Moreover, in situations where customers rely substantially on their knowledge of and past experience with a service provider’s competence and reputation, when these customers attempt to assess the credibility and quality of a new service, a strong company resource fit can play a compelling and positive role [14, 31, 58, 65].

The result that for discontinuous service innovations, **Strategy and Resource Fit** also has a significant, albeit less fundamental, connection to new product success, is an outcome that can also be logically explained. Because highly innovative, new-to-the-world, products tend to have a much weaker fit with the firm’s established resources, they require greater learning, more sophisticated resource teams, longer cycle times, and thus clearly represent a more significant risk for firms [26, 36, 57, 64]. For discontinuous new service
projects, it is more likely that the strategic alignment—that is, the extent to which the new service contributes to the business strategy of the firm and is compatible with the "vision" of senior management—is the key [34,59]. Moreover, companies that are well known for service quality and that are frequent pioneers of new-to-the-world services, often develop a reputation for innovative competence. (Consider, for example, such highly innovative service firms as Nortel Networks or Oracle Corporation.) This corporate image, together with an internal company environment that fosters innovation through cross-functional teams (see below)—that often include the customer—creates a level of credence such that clients are willing to take the risk and try out new services that are unique and with which they are unfamiliar [31,60].

A second factor found to have a significant differential impact on new service outcomes, depending on the project’s degree of innovativeness, is the company-related factor, *Innovation Culture and Management*. The attributes making up this construct include: a highly innovative corporate culture, visionary new product championing, expert and front line involvement in NSD, support and involvement by senior managers, and cross-functional teams with excellent internal communications. Outstanding performance on this dimension, according to the study, is the primary key (p < 0.001; importance rank = 1) for achieving success in highly innovative, new-to-the-world, business services. For incremental or continuous new service projects, this factor is also significant, but of only secondary importance (p < 0.05, importance rank = 5) (see Table 1 and 3). This result is not dissimilar from what has been reported in studies of new manufactured goods [30,57,65] and can be explained by the complexity and uncertainty that typically characterize discontinuous innovations. For “really new” products—where pioneering, risk-taking and developing entirely new competencies define the new product function—companies need an internal environment where managers encourage entrepreneurship, where creativity and risk-taking on the part of service personnel is rewarded, and where project teams operate in a closely-knit, cross-functional, fashion so that they can learn about and develop highly creative concepts and technologies [17,50]. In service companies, where innovation plays an important and strategic role, this type of corporate culture calls for extensive involvement by senior managers (or partners, in the case of professional services) who must create the right kind of environment and champion innovative ideas, as it is typically their name, their vision and their unique approach to solving a type of customer problem on which the reputation of the firm is founded [10,23].

A third success factor which is relevant in both the high and low innovation equation, but which appears to have a stronger influence in one of the models, is *Service Quality Evidence*. According to this dimension, service providers can improve the success of new services by creating a clear product identity and by offering tangible cues or “evidence” (e.g., logo, pictures, colors, etc.) to help customers visualize and evaluate the new service. This finding clearly supports a well-established paradigm in service marketing about the importance of offsetting the conceptual nature of services by making them more tangible to customers [39,59]. In the case of incremental products, tangible evidence can help customers to distinguish the new service from competitive offerings. For highly innovative services, physical evidence that tangibilizes the service concept is of particular importance (p < 0.01) as it can play a role in facilitating both internal (service personnel) and external (customer) awareness and understanding of the new service concept [59] (see Tables 1 and 3).

### 5.2.2. Secondary difference

A second group of dimensions with a differential impact on outcomes of “really new” versus incremental new service projects includes three factors, where each is found to be significant in only one of the two models:

- **Service Complexity/Cost** - extent to which the new service is perceived by customers to be of a highly complex and high cost nature;
- **NSD: Formal Evaluation and Design** - extent to which companies undertake up-front market studies and customer concept evaluations, formal idea screening and business case analysis, detailed service “mapping” and exploration of alternate service designs;
- **Market Potential** - extent to which the new service is aimed at markets with a high growth rate and with high volume potential (as opposed to one or two initial clients).

In the model for low innovation services, two factors appear to be unique, although of only secondary importance. One of these is **Service Complexity/Cost**, which was found to have a significant (p < 0.05) and negative effect on new service outcomes (see Tables 1 and 4). The fact that this dimension significantly distinguished between successes and failures for incremental new services suggests that too many of the new services that failed offered customers only marginal additional benefits, but were per-
ceived by customers as costly and difficult to integrate with current operating systems. As mentioned above, this problem can stem from a company offering elegant, but too sophisticated and costly, solutions to relatively simple customer problems [8].

For discontinuous new service innovations, Service Complexity/Cost was not a significant performance factor. Despite the face validity that a high level of new product complexity/cost should have a negative performance effect [54, 61], the findings in this study suggest a different, possibly more provocative, view. Particularly in business services, many of today’s highly innovative service offerings are very complex and costly, incorporating both new-to-the-world and continuously evolving technologies (e.g., Canadian National Railway’s new electronic supply chain and management solution to shipping and transportation). At the same time, these new services frequently offer customers substantial value in terms of new opportunities for entering new product lines or new markets, for reducing costs, or for restructuring their operations (e.g., new internet-based distribution channels). Hence, customers are often prepared to undertake the required learning and to incur the costs associated with installing new systems because these give them an advantage in running their own business. Indeed, the revolution in information and computer technology has made the adoption of highly complex services essential for the continued success and, in some cases, the survival of many customer firms (e.g., Y2K services). Furthermore, because innovative new products often involve collaboration between service provider and customer (simultaneity and lead user relationship) [6, 60], this offers substantial potential for minimizing the negative effect of product complexity.

A second factor, which in this comparative study of new service ventures was linked to outcomes in only one of the two groups, is NSD: Formal Evaluation and Design. For incremental new service projects, this dimension ranks seventh (out of eight) in importance (p < 0.10), while for “really new” services, it did not enter the performance equation (see Tables 1 and 4). NSD: Formal Evaluation and Design includes activities such as: up-front market studies and customer concept evaluations, formal idea screening and business case evaluation, detailed service “mapping” during the design stage, and a planned approach to exploring alternate service designs. That this factor is part of the model for incremental new service projects complements the inclusion of two previously discussed factors—Client/Need Fit and NSD: Formal Testing and Launch—and also clearly supports past research findings. Virtually all studies of new product or service development conclude that implementing a formal NPD methodology and using sophisticated analytical tools for market studies, project evaluations and design purposes is tied to improved performance on this front [12, 14, 16, 20, 25, 26]. Yet, despite the apparent importance of this dimension, in the current study it was found not to be a success factor for “really new” services and apparently of only marginal importance for incremental products. The nonsignificance of the factor in the discontinuous new service scenario can partly be explained by the notion suggested by some researchers that it may be counterproductive for companies to impose an overly deliberative and bureaucratic NPD system on a development situation where market requirements are “fuzzy” and difficult to evaluate, where technological solutions are unclear, and where the eventual product offering is difficult to define [34, 57]. But, it is also possible that the true importance of this factor is underestimated in both models. This is because a large proportion of service firms still do not take full advantage of the benefits of a formal and well-planned NSD approach. Indeed, as indicated in the 1995 PDMA “best” practices research [26], approximately 57% of service firms (compared to only 33% for manufacturing companies) use an “unsophisticated” (i.e., “none”, or “informal”) NSD process and, similar to the study of new financial service development recently conducted by Cooper et al. [14], the raw data (as well as anecdotal evidence) in the current study show low mean ratings for most of the items comprising this factor. These results notwithstanding, the dimension was nevertheless significant in distinguishing between successful and failed new service ventures in at least one of the models. In other words, particularly for projects where firms have a good understanding of the new service, its technology and market (i.e., incremental projects), using a formal NSD process up-front, during design and during the launch stage can be beneficial for ensuring client fit, speeding up the development process and minimizing errors that can result from haphazardness and poor planning. Further, even though the results in this study indicate otherwise, given the complexity and high investments involved in many of today’s new-to-the-world services, it is very probable that, as in the physical goods sector, a formal and more “sophisticated” process would be of substantial benefit also for these more innovative new service projects [26].

The final factor found to have a differential performance effect, but this time only for high innovation projects, is Market Potential (p < 0.10; rank = 6 out of 7) (see Tables 1 and 4). In other words, for the two types of ventures, having high volume and high growth potential was found to have either a secondary (in the case of incremental projects), or no (in the case of discontinuous projects), effect on new product outcomes. This result can be explained. For “really new” services, investment in time, resources and technology—often involving entirely new product platforms—would appear to make long-term volume and growth potential important [14]. On the whole for business services, however, the key to success is to develop an intimate understanding of individual customer problems/needs and to create effective and competitively superior solutions for these. In most cases, large volume is not the norm [14], especially when one or a small number of lead clients can provide the required demand for the new product [66].
5.3. Nonsignificant factors

Three of the 12 dimensions that describe new business service projects in this study were not significantly correlated with success and failure for either highly innovative or for incremental types of new service projects. Two of these factors are product-related, including Improved Service Experience and Standardized Service; the third is market-related, Market Competitiveness. Each is briefly discussed below (see Table 1).

- **Improved Service Experience** deals with new service enhancements including a faster, more efficient service offering, and increased service reliability (i.e., fewer failpoints). How can the nonsignificance of this result be accounted for? In the business service sector, speed and reliability are extremely important; but are basic requirements of any service offering, which are expected under all circumstances [14,39]. Hence, this factor is less a feature that distinguishes successes from failures in new service development than a component that governs the long-term survival of the service firm itself.

- The **Standardized Service** factor includes a more uniform customer contact during service delivery and a more standardized behind-the-scenes service process. Nonsignificance here is also likely to be related to the research sample in question (i.e., business services). Because in the industrial sector, services tend to be more customized and involve greater collaboration between buyer and seller [31]—this was already apparent from the important role played by Client/Need Fit in both models—this could account for the result that service standardization is not a significant distinguishing factor in the performance equation for either incremental or new-to-the-world business services.

- The third nonsignificant factor is **Market Competitiveness**—that is, aggressive market and price competition, highly similar product offerings, frequent service introductions and modifications, and sometimes a dominant competitor with a large market share. Although one might expect this market-related dimension to have a negative effect on outcomes, particularly if the new product is of a me-too or incremental nature, the finding is consistent with the results of past studies in both goods and services where market competition was not directly linked to new product outcomes [3,16]. For business services, an added explanation might be that services often take less time to develop [26] (low investment in plant, equipment and inventory) and to imitate (not patentable, low barriers to entry [39]), and that they are often perceived as generic by customers. Moreover, although in recent years service companies have made serious headway in protecting their ideas and proprietary technologies through service branding and by nesting service offerings and expertise as integral parts of the corporate entity (as opposed to being connected to individual service personnel), at the same time, the barriers to entry by both newcomers to the service industry and across industry sectors have been substantially reduced. (This is true for traditional sectors such as financial or specialized consulting services, and certainly also for the “new economy” sectors such as e-commerce.) Thus, it is likely that intense competition is a basic fact of life that all service companies must cope with if they are to survive, and that they have probably adjusted to for all types of new product offerings, including totally new-to-the-world and continuous new service ventures.

6. Implications for managers: keys to new service development success

Business services is an economic sector offering tremendous potential for growth and profitability. Due to the variety of changes affecting the service industry—including major market expansion, globalization, industry deregulation and significant technological advances—firms face both the opportunity and the necessity to apply their resources and competencies in a creative way in order to take advantage of the unprecedented potential here. Indeed for many firms, the development of different types of new products for this market—ranging from simple product upgrades and adaptations to totally new-to-the-world services—is essential for long-term survival. But new product innovation can be costly and risky, and managers face the challenge of making new product development decisions that are successful for the firm. This study, which identifies the factors that are linked to performance when companies develop highly innovative versus incremental new business services, suggests some important keys to success for managers who are charged with these undertakings.

**Key no. 1 - degree of innovativeness impacts the new product development focus and approach**

Not unexpectedly, the results of this study support empirically what most of us already know intuitively: that radically different types of new product ventures require a different approach to achieving NPD success. In particular, when charged with the development of new products at opposite ends of the innovativeness spectrum, managers must adjust their focus and approach to account for differences in uncertainty, risk, company competencies and market reactions. The findings in this study indicate that there are two groups of project factors that affect new product outcomes. One group is of a more “global” nature in that
they have a similar performance effect regardless of the degree of innovativeness of the new service venture. In the second group, the factors differ both in relevance and importance depending on the newness of the project the company is involved in. The message for managers is clear. Both the approach used for developing new services and where they should place the greatest emphasis must be adjusted for different types of new service projects.

**Key no. 2 - understanding the customer comes first**

For business services, a most important success factor—and one that has a similar and strong performance impact for both modification-type and “really new” service projects—is understanding and responding to the specialized and long-term needs of customers. Especially for incremental new service offerings, this factor appears to play a pivotal role in discriminating between successes and failures. Clearly, for very similar, commodity-type, services, there is little incentive for business clients to change service providers since this can require time-consuming and costly efforts to recreate relationships that match the specific systems and requirements of both customer and service provider. Hence, to succeed in this type of new service venture requires that managers first focus on getting an in-depth understanding and appreciation of the customer’s operations, systems and needs. Only after such an evaluation, can the attention shift to the problem of differentiating the new service from those of competitors by creating augmentations that clients will perceive as having real value, by tactics to create unique “packages” of services, and through distinctive branding of the service offering.

Of course, for new services that are at the other end of the newness spectrum, a strong client/need fit is also essential. Only here, it has more to do with developing insights about the longer-term requirements of customers and with the ability to envision how changes in technology and market needs can be combined in the form of a totally new and creative problem-solving approach. To achieve this, firms need to emphasize long-term relationships with clients, particularly with lead users, in order to understand and invest in need-satisfying activities that will lead to service products with long-term potential for success.

**Key no. 3 - an expert front line is a primary company resource**

All too often, companies view their front line personnel simply in terms of an approach to providing their service—that is, a delivery system [60]. But, the findings in this study emphasize that, for both new continuous and new-to-the-world services, having highly trained experts who have an intimate knowledge of the product and the customer plays an important role in the success of these ventures. For highly innovative new services, investment in creating and enhancing this expertise can produce value during several stages of the NSD process. Early in the process, experts can be critical for gaining insights about client needs and opportunities; during the design stage, their knowledge of customers and of competitive offerings can help in defining the appropriate level of service customization, user-friendliness, and complexity; and during launch, it is their ability to educate and persuade clients about the benefits of a totally new way of solving a problem that can bring about the adoption of the new service. When companies develop less innovative services, however, having a knowledgeable and highly motivated front line is also important. Because services are intangible and typically involve interactions between producer and client firm, the front line can play an essential role in embodying the service itself, in differentiating it from similar competitive services, and in helping clients to make the switching decision.

**Key no. 4 - a well-planned NSD process can provide important benefits, particularly when developing incremental new service offerings**

When dealing with imitations or with modification-type of new services, using a systematic NSD process—that is, a formal “stage-gate” system, from idea generation through to post launch recovery—can be an important route to success. In this study, firms that achieved the best performance for low innovation type projects tended to implement a formal system that included up-front activities, such as: early market studies and customer concept evaluations, formal idea screening, as well as business case analysis. When it came to new service design, these companies carefully mapped out alternate processes and service patterns, identified opportunities for standardization/customization, and made plans for the recovery of services at potential fail points. In addition, the launch phase was well planned with special attention given to: prelaunch testing to ensure the proper functioning of the new service, careful positioning against competitive offerings, personnel training and internal marketing of the new service to the front line, and clearly communicating the value-adding features of the new service to clients. Because of the incremental, and therefore known, nature of these types of new service projects, managers are in a position to fully benefit from this methodical approach. Advance planning not only increases the likelihood of superior design and reduced error, but permits the simultaneous implementation of several NSD phases, which can help to speed up new service introductions. The findings are clear: particularly for incremental new service projects, firms have much to gain from becoming more highly structured and methodical in their approach to new service development.
Key No. 5 - Having an open and highly innovative new product culture within the firm is a primary route to success, particularly when developing discontinuous or “really new” services

Probably the single most important factor in achieving success for highly innovative, or new-to-the-world products, is the type of corporate culture and management attitude that permeates the firm. Success at developing highly innovative services that involve new technologies and completely different ways of dealing with problems, requires a corporate environment that encourages and supports creativeness and “stepping out” beyond the norm. Above all, it requires that senior managers become involved as visionaries and mentors in the NSD process. Particularly in industries such as business professional services, it is the founders and senior partners of these firms who must provide leadership and entrepreneurship when moving into uncharted areas. According to the results of this study, the message to managers is: successful innovation starts with senior management and results from an open, creative and entrepreneurial internal environment.

Key no. 6 - an excellent strategic and resource fit is critical for developing and marketing new services

For incremental new business services, ensuring that there is an excellent fit with the known capabilities and resources of the developing firm can be highly advantageous. This may seem obvious, but the findings show that for too many failed projects, companies are attempting to offer “new” products that are new, not to the market or technologically, but primarily to the developing firm. As a result, these firms do not reap the benefits that flow from a high degree of new product synergy including: lower development costs, reduced error, increased speed, and the ability of customers to use the firm’s reputation as a proxy when evaluating the new service. Further, incremental new services that have a poor fit with company competencies and experiences are likely to be more complex and higher cost than competitive offerings and this—according to the research results—is also likely to be linked to failure. For “really new” services, a low resource fit with the firm’s existing product line seems to be a much less serious concern. Here, what is important is the project’s strategic fit. The key question for a discontinuous project is: is the new service in line with our long-term business and technological objectives, and does it offer a route by which the firm can achieve a competitive advantage? In addition, although moving into uncharted areas can be risky and costly, it is often this pioneering capability of the service provider, and its reputation for this, that differentiate the firm from competitors and, in this way, can have a positive performance impact.

7. Summary and conclusions

This research focused on how new product development success factors for “really new” service products differ from those which are linked to the development of less innovative products in the business-to-business services sector. By comparing two subsamples of new business services—one from each end of the innovativeness spectrum—this study investigated the question: to what extent and in what way does a project’s degree of innovativeness impact the factors that are correlated with success and failure?

In line with past studies of product “newness” or “innovativeness”, this phenomenon was viewed as incorporating two key features: originality or uniqueness of the service concept to the market, as well as its technological newness to the developing firm. Thus, one type of development effort firms are frequently involved in is the incremental new product: that is, a new good or service that entails improvements, extensions or adaptations to a currently available product, but that does not take the firm or the customer into uncharted areas. Typically, for these types of projects, firms have a good understanding of the product itself, of the technology required to produce it, and of the specific customers for which it is destined. Opposite to the incremental product is the discontinuous innovation, which involves a venture that takes both developer and customer much farther afield in terms of knowledge and experience. These “really new” products typically offer customers unique benefits and involve technologies that are more advanced or are very different from industry norms.

In today’s growing and dynamic business environment, service companies are usually actively engaged in the development of an entire portfolio of new services in order to achieve continued growth or even to ensure long-term survival. The new service portfolio can include highly innovative projects, which are undertaken in order to be the first to benefit from radical changes in technology and customer needs, and thereby to achieve a substantial competitive advantage in the marketplace. But, incremental or continuous types of new service projects also play an important role. They ensure that the company’s product line keeps up with evolving technologies, changing customer demand, and new competitive offerings; and they are often part of a strategy by which the company can sustain a competitive advantage achieved through a previous introduction of a radical innovation. Thus, both incremental and highly innovative new service development is called for.

The results and the implications of the study are clear: depending on the degree of innovativeness, managers need to adjust their focus and their approach for developing successful new service products. A small number of the factors, linked to new service outcomes, appear to play a “global” role in that they have a strong performance effect in both types of development scenarios. These include:
• basing the development of new services on an intimate knowledge of customer needs, problems and operating systems;
• having a trained and motivated front line of experts who interact with clients during service introduction and delivery, and who are actively involved in the new service development process; and
• implementing an NSD process that incorporates a formal and well-planned new product testing and launch phase.

According to the research, a second set of factors are also linked to project outcomes, but differentially, according to the particular project setting—that is, “really new” versus low innovation services. These results have important implications for managers charged with the successful development of discontinuous and/or incremental new service products, suggesting the need for adjustment in NSD focus and approach for the two types of ventures. For incremental new services, the success factors that appear to be distinctively connected to positive outcomes include:

• that projects have a seamless fit with the firm’s strategy as well as with its specialized experiences, resources and reputation;
• a systematic approach at the front end and design stage of the NSD process—starting with up-front market studies and idea screening, to mapping out the planned new service, to testing it with customers prior to launch; and
• ensuring that efforts to distinguish the new service from past/competitive offerings do not result in higher costs and/or buyer perceptions of increased service complexity.

For discontinuous new service innovations, according to the study, the distinctive features in the success equation include, first:

• an open and supportive internal innovation environment within the firm, where involvement in new product development is encouraged and where senior managers play an important entrepreneurial role.

In other words, companies that are successful in the “pioneering” mode usually have senior managers—often partners/owners in the firm—who provide an all important visionary leadership for their organization, and who create a corporate culture that encourages new and different ways of viewing the world and of dealing with previously unsolved problems. Thus, when companies are involved in developing “really new” service offerings, the approach should probably be less concerned with the methodical implementation of a set of established NSD procedures, but should focus more on creating and managing an internal corporate environment where long-term vision, entrepreneurship, and strategic commitment to innovative problem-solving drive the development effort. Finally, two features also differentially linked to success in the high innovativeness NSD scenario include:

• using tangible evidence to help customers visualize and assess this new and very different service offering; and
• ensuring that there is adequate market potential to justify the costs and risks associated with the innovation effort.

In sum, success in developing both highly innovative and incremental new services is essential for the long-term performance of most business service firms. Because these two types of new products constitute substantially different development scenarios, it is important that managers understand the very different keys for achieving success in each type of venture. This study has attempted to provide some useful insights in this regard.

Notes

1. The term “product” is used as a generic term and stands for either a physical/manufactured good or a service. Thus, NPD stands for either/both New Goods or Service Development. NSD stands for New Service Development.
2. This 10% rate is unchanged from what was found by Booz, Allen and Hamilton [5] in 1982.
3. The sample comprised Canadian service firms only. This limitation notwithstanding, the research results should be applicable to a broader context (e.g., U.S.A.) given that Canadian firms operate in a similar business and competitive environment as firms in most developed economies, and that the results of past Canadian new product studies (e.g., Cooper [11]), Cooper and Kleinschmidt [16,17], de Brentani [20]) are highly accepted in the literature and have been replicated by researchers in the U.S.A. and other countries.
4. The performance indicators were analyzed to ensure that the global measure of degree of success/failure was a fair representation of the actual performance of the new service. Multiple regression analysis indicated that 83.6% of the variation in the global measure was accounted for by the specific performance dimensions.
5. The criteria of eigenvalue ≥1, scree test and factor interpretability were used to determine the appropriate number of factors [48].
6. A “combined innovativeness” dummy variable was created as follows: if Technological Newness > (<) 4 and Market Newness > (<) 4, then Innovativeness = 1 [0], where 1 = highly innovative and 0 = low innovativeness.
7. Full model: \( \text{Degree of S/F} = a + b_1f_1 + b_2f_2 + \ldots + b_12f_{12} + b_13f_1 + b_14f_{11} + \ldots + b_25f_{12} \)
where: S/F = success/failure; fn = descriptive factor (n = 1–12); a = intercept; b = beta coefficient; IN = innovativeness dummy (0/1) variable.

8. Three of the 12 constructs had $\approx 0.70$, the recommended cutoff score for confirmatory research [48]. These less ideal results, although a limitation of the present study, can be partly explained by the more exploratory nature of studies focusing on NPD in business-to-business services which have received much less attention than studies pertaining to manufactured goods.

References


**Appendix:**

**Descriptive factors of new industrial service projects**

<table>
<thead>
<tr>
<th>Factor Loadings</th>
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<tbody>
<tr>
<td><strong>Product-related Dimensions:</strong></td>
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<tr>
<td>Improved speed/reliability</td>
</tr>
<tr>
<td>((\times = 0.802))</td>
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<tr>
<td>Service expertise</td>
</tr>
<tr>
<td>((\times = 0.791))</td>
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<td></td>
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<td></td>
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<tr>
<td>Standardized service</td>
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<tr>
<td>((\times = 0.713))</td>
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<tr>
<td>Service complexity/cost</td>
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<tr>
<td>((\times = 0.631))</td>
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<tr>
<td>Service quality evidence</td>
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<td>((\times = 0.627))</td>
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<tr>
<td><strong>Market-related Dimensions:</strong></td>
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<tr>
<td>Market competitiveness</td>
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<tr>
<td>((\times = 0.799))</td>
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<td></td>
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<tr>
<td>Client/need fit</td>
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<tr>
<td>((\times = 0.765))</td>
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<td></td>
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<tr>
<td>Market potential</td>
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<tr>
<td>((\times = 0.568))</td>
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<tr>
<td><strong>Company-related Dimensions:</strong></td>
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<tr>
<td>Strategy &amp; resource fit</td>
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<tr>
<td>((\times = 0.841))</td>
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<tr>
<td>Innovation culture and management</td>
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<tr>
<td>((\times = 0.695))</td>
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<tr>
<td><strong>NSD Process-related Dimensions:</strong></td>
</tr>
<tr>
<td>NSD: formal evaluation and design</td>
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<tr>
<td>((\times = 0.816))</td>
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<tr>
<td>NSD: formal testing and launch</td>
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<td>((\times = 0.743))</td>
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