THE ORGANIZATION OF PRODUCT INNOVATION IN THE
FINANCIAL SECTOR

AN EXPLORATION IN THE NETHERLANDS

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ABSTRACT

This article discusses characteristic features and problems of product development processes in the financial services sector and relates these to the models and concepts of the modern new product development literature. It is based on a series of semi-structured interviews with product managers and IT personnel in 14 banks and 25 insurance companies (mostly in the area of life insurance). The interviews showed that most companies have adopted the concept of multi-disciplinary project teams to develop new products. However, the creation of such teams has seldom resulted in good communications between the various functional specialists involved. Frequently, problems of communication and collaboration arise between IT-specialists and marketing specialists and between actuaries and the other project team members. The development stages presented in the general literature on new product development can to some extent be discerned in the financial services sector as well. Quite frequently some of these stages are conducted in parallel in the sector. Notable is the dominant role played by marketing. However, the frequently proclaimed increased consumer orientation appears somewhat ambiguous, as very few companies involve final consumers in the innovation process.
INTRODUCTION

Services have moved to the center of economic activities in modern societies. Both the commercial services and the non-profit/government sector have grown to the point that they now employ well over 70% of the working population in most advanced countries [Quinn et al, 1997]. In the course of this growth process, many of these industries have changed beyond recognition. In the financial services sector, the rapid development of information technologies (IT) has not only enabled an enormous increase in transactions per employee but also created numerous opportunities for new processes and products. Banks and insurance companies are being confronted with new standards for the organization, speed and flexibility of their operations, but also with new distribution channels, new forms of competition and different types of products. Next to these technological changes, there are the powerful forces of European economic and monetary integration and indeed of globalization. They have caused an ongoing process of mergers and acquisitions in the financial sector worldwide. In Europe, most mergers and acquisitions have taken place within national boundaries, but cross-border activities are increasing and the financial institutions of a small country like The Netherlands are moving in the forefront here, because they can no longer expand in their home markets. Apart from being affected by technological and general economic trends, the Dutch financial sector has been influenced by changing national government policies in at least two fields [Den Hertog, 1995]. The first concerns the deregulation of the sector, which contributed to the fading of the boundaries between banks and insurance companies. The search for a profitable interpretation of ‘bancassurance’¹ is currently in progress. Secondly, there have been some changes in social security legislation implying a movement away from a collective welfare state towards a more individualized ‘insurance state’². This development creates numerous opportunities for new product development by insurance companies.

Research on the specific features and problems of innovation in financial services has been quite limited until recently, especially compared to research in the manufacturing industries. Recently, the body of literature has started to increase. Johne and Storey [1998] provide an overview of relevant

¹ The concept of bancassurance “refers primarily to banks entering the insurance sector by offering insurance products to their retail customers” [Hoschka, 1994: 1].
studies on product innovation in services. Their study shows that research has gone mainly in two directions. On the one hand, it has focused on the differences between physical products and (financial) services and on the implications of these differences for new service development [Easingwoord, 1986; Reidenbach & Moak, 1986; Scheuing & Johnson, 1989]; on the other hand, research has investigated key success factors that distinguish top performers from low performers [Cooper & De Brentani, 1991; Cooper et al., 1994; De Brentani, 1989].

Little has been said about the actual organization of new service development [some valuable exceptions are Johne, 1993; Drew, 1995; Lievens et al., 1999]. Usually the development process is presented, in line with the traditional manufacturing-based literature, as a number of formal phases or activities that are conducted more or less sequentially [e.g. Edgett & Jones, 1991; Scheuing & Johnson, 1989]. It is hardly ever specified what exactly happens in these phases, who are involved and how people collaborate, which is surprising since it is frequently argued that organizational factors contribute decisively to the success of new services [De Brentani, 1991; Edgett & Parkinson, 1994; Thwaites, 19920]. Edgett and Parkinson [1994: 34], for instance, claim that successful services “exhibited strong interfunctional co-operation and co-ordination”, implying that organizational factors were found to be a major leverage for success. The quantitative study by De Brentani [1991] also points to organizational factors as the second most important success factors. Although underlining the importance of organizational factors, these studies provide little or no detail of organizational arrangements involved. The aim of this paper is to analyze and describe some of the organizational factors in more detail. As very little research has been conducted on this specific aspect of service development, our study is of a predominantly exploratory nature. However, our study also serves a theoretical purpose. In our exploration we have taken the results of the existing literature on new product development in manufacturing industry as a starting point. We aim to find out to what extent the concepts and patterns found in the manufacturing based literature can be used fruitfully in a services environment. Our theoretical framework will be discussed in the next section. The subsequent section is concerned with the differences between manufacturing and services. We expected some important differences between the product development practices in both sectors to show up in the course of our research. The sections reporting on our empirical work will show that these expectations were only partly confirmed.

Due to a retreating government, insurance companies were able to offer individual social security to their customers. These new insurance products replaced or supplemented some traditional governmental services in the Netherlands.
THEORETICAL FRAMEWORK

We have chosen to use the concepts and issues raised in the literature on new product development in manufacturing as a starting point for our study, if only to phrase our questions and guide our search. As a result, our empirical investigation has served the double purpose of exploring the product development landscape in financial services and testing the actual usefulness or accuracy of traditional manufacturing notions for this particular sector.

Defining product innovation

A large body of literature focuses on new product development or product innovation. Various scholars have used the concept of innovation in slightly different ways but in general an innovation is defined as something new or perceived to be new, although the amount of novelty can vary considerably [Rogers, 1995; van de Ven et al., 1989; Zaltman et al., 1973]. This means that an innovation does not necessarily have to be a novelty to the world, a country or an industrial sector but solely to a company, a business unit or even an individual. In our study we define an innovation as a new product, process, distribution method, or a new combination of existing products (or product components), processes or distribution methods, perceived as new by the organizational unit concerned.

In this paper we focus on product innovations. More specifically, we investigate at “a micro level regarding how specific new products are developed” [Brown & Eisenhardt, 1995:343]. The product innovation process can be described as the range of activities that have to be undertaken in order to bring about an innovation. These activities are described extensively in the literature on new product development [Clark & Fujimoto, 1991; Wheelwright & Clark, 1992] as will be elaborated on later. On the basis of this literature, we distinguish three (broad) organizational notions that are widely expected to contribute to successful innovation: (1) ‘organic’ structuring of the organization; (2) integration and parallellization in the innovation process; and (3) multidisciplinarity and teamwork.

Organizational structure

Organizational structures can be a leverage or a hindrance for innovation processes. In their classic study of the Scottish electronics industry, Burns and Stalker [1961] emphasize that an innovative organization is characterized by an “organic” structure, with open communication lines, few sharply defined tasks and little emphasis on hierarchy. However, a mechanistic structure may

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3 This definition is derived from Diffusion of Innovations [Rogers, 1995].
subsequently be needed to control the implementation phase [Zaltman et al., 1973]. Schoonhoven and Jelinek [1997] do not make a distinction between initiation and implementation but they point out that they did not find organic structures in the innovative organizations they investigated. Instead, they found organizational structures with clear job descriptions and lines of authority. However, they also found a frequent use of project teams and product committees in the innovation process, which they call “quasi-formal” structures, reserving the word “formal” for the structure of the more routinized primary processes. Schoonhoven and Jelinek argue that innovation management should focus on managing these quasi-formal structures.

Organizational structure involves: “the formal allocation of work roles and the administrative mechanisms to control and integrate work activities including those which cross formal organizational boundaries” [Child, 1972:2]. The two key elements in this definition are division of labor and coordination. De Sitter [1998] identifies two traditionally dominant structures: the ‘functional’ and the ‘line’ structure. The main feature of the functional structure is the grouping of activities by function. This means that when a product has left the organization, it has passed all functional departments. Every department contributes its specific activities in the production process. Functional structures are also known for ‘throwing things over the wall from one department to the other’. Daft [1995] notes that functional structures can be very appropriate for organizations that operate in a stable environment. The line structure differs from the functional structure mostly because it is set up for the production of large numbers of identical or very similar products. As a consequence, the specialist departments can be dissolved into specialized work stations, which are lined up in the exact sequence of operations on the product. The product passes the entire production line, so workers do not have to leave their work station. Although these two traditional structures are often described as opposites, they are both based on functional specialization in operations [De Sitter, 1998]. In both cases, communication between functions is difficult and the organizations have to make use of vertical communication lines and hierarchy to coordinate the various specialized activities.

Alternatives to the functional structure were discussed already in the 1950s by the proponents of sociotechnical systems design, who emphasized the potential of self-regulation in semi-autonomous groups. Galbraith [1973, 1977] further explored these alternative concepts and pointed to the need for communication outside the traditional vertical hierarchy by means of ‘lateral’ relations. These lateral relations were an answer to “overloading hierarchical communication channels” [1994:89] and provided the opportunity to overcome “barriers between departments” [Daft, 1995:195]. If the necessary horizontal communication is not achieved by informal or ‘quasi-formal’ means, the next step is the
matrix structure [Galbraith, 1973]. In a matrix both functional and product/project manager are given equal formal authority, which means that the matrix is a dual hierarchy [Daft, 1995]. Every worker has two bosses. Product development is often conducted in project teams under a matrix structure. A matrix can only function effectively if information is shared and power is equally distributed among functional and product/project managers. Morgan claims that matrix organizations come in various sizes and shapes, “some of which look like modified bureaucracies while others have more free-flowing forms” [Morgan, 1997:52]. In these modified bureaucracies functional divisions are still in control. Innovative project tasks reaching across functional lines, cannot be conducted effectively in these organizations. Meanwhile, new types of organizational arrangements have been proposed, including such in which all work is carried out in projects and the role of functional managers is limited to aspects of human resource management and knowledge management [Brugman, 1999].

Previous research has indicated that “functional structures built on rigid hierarchical lines of control” are predominant in the financial sector [Johne, 1993]. Now that this sector is undergoing a process of radical change, it can be expected that these traditional structures will come under pressure and the first cracks will probably become visible where these traditional structures are least suitable: in product development.

Integration and parallellization in the innovation process

Researchers have focused frequently on the description (or prescription) of the various steps that have to be taken in the development of a new product. Cooper [1983] provides an overview of several models containing from four to over sixty steps in developing a new product. Although there is no consensus, most of these models consist of the following steps: strategy formulation, idea generation, idea screening, product concept development, business analysis, product design and prototype testing, process design and testing, final business analysis, full production, commercialization, and customer use and feedback [Booz et al., 1982; Cooper, 1983].

These traditional innovation models reflected the fact that the activities described above were in practice conducted sequentially. For every step in the process there was a functionally specialized department of the organization that would contribute its specific knowledge into the new product [Paashuis, 1997]. This sequential method of product development led to major advantages of specialization, but it also meant that the product was ‘thrown over the wall’ from one department to another. In the 1980s and early 90s the disadvantages of sequential product development were becoming increasingly noticeable. In their study of product development in the automotive industry, Clark and Fujimoto [1991] have pointed to several negative consequences of the sequential method,
among them long development lead times, communication problems and increased costs. Integrating the various activities in the innovation process can be a way to overcome these problems. In the late 1960s Lawrence and Lorsch [1967] already claimed that integration between functions was needed in order to facilitate coordination and communication. Recently, such thoughts have been applied to problems of product development. New concepts such as concurrent (or simultaneous) engineering, integrated product development, design for manufacturing and life-cycle engineering, all have in common that they integrate development and design activities with other business processes.

Integrated product development concepts aim at reducing communication problems and thereby lead times and costs by the early distribution of information between and the involvement of different functional areas [Clark & Fujimoto, 1991; Pisano, 1997; Wheelwright & Clark, 1992]. Because information is shared in an early stage of the innovation process, there is a reasonable chance that product characteristics can be better understood, which will avoid design errors [Jo et al., 1993]. Clark and Fujimoto [1991] argue that integration of upstream and downstream functions leads to richer, more frequent, bilateral and early communication which in turn lead to better manufacturability and quality.

**Multidisciplinarity and teamwork**

More and more companies (especially active product innovator firms) appear to be convinced that multi-disciplinary teams are a means to encounter the lack of communication between functional departments [Katzenbach & Smith, 1993]. They rely on such teams especially in the field of product development [Pinto & Pinto, 1990]. Allen [1977] was one of the first to study communication between project team members and argued that members should be closely connected in order to bring about a successful product development process. These multi-disciplinary teams are a “logical means to generate more creative, less problem-riddled solutions, faster” [Donnellon, 1993:377].

Despite the positive effects of teamwork, teams cannot be considered as a panacea to all the shortcomings of a functional organization. Researchers point at continuing communication and collaboration problems between representatives from various departments inside multi-disciplinary teams. In the background of these problems are “sociocultural differences” between these functional areas [Gupta et al., 1986:7]. These differences create barriers for working together actively and understanding the need for co-operation. Apparently, specialists from different functional departments do not speak the same language and create little understanding for each other’s activities. Dougherty argues that “departmental thought worlds” are a major constraint for a shared understanding between representatives from different departments involved in the innovation process.
[Dougherty, 1992; Dougherty & Hardy, 1996]. Due to the different backgrounds of individuals from various departments, these individuals do not share the same understanding of various aspects in the development process. Individuals develop ‘schemes’ based on assumptions about their work, the organization, and reality [Daft & Weick, 1984]. People in functional departments share their schemes to some extent since they often have more or less similar backgrounds (in education for instance). Because of this, departments create an identity, or “thought world”, that separates them from other departments, meaning that communication and collaboration are increasingly difficult to achieve. This leads to an increase in time-to-market and costs and a substantial decrease in quality [Berndes & Stanke, 1996].

Our exploration of the literature on product development points to the importance of organizational structure as an important factor in innovation processes. The matrix structure has been created to combine the advantages of functional specialization with the need for lateral communication and coordination on a project basis. Recently, debate about the organization of product development has moved beyond the matrix structure to emphasize integration and parallellization of specialist activities. Problems of communication between members of the resulting multi-disciplinary project teams are now receiving increasing attention. We started our investigation on the assumption that some of these trends, concepts and problems as found in the manufacturing-based literature would also be visible in the financial services sector, especially now that product innovation becomes more important there too. At the same time, however, we need to be aware of possible differences between manufacturing and services. Before turning to the results of our investigation, therefore, we will briefly discuss these differences.

**THE IMPACT OF SERVICE FEATURES**

The differences between physical products and services have been the subject of debate for some time [e.g. Ennew et al., 1992; Johnston & Bryan, 1993]. There are some researchers who claim that the differences should be ignored and they recommend to search for general solutions that would fit both manufacturing and service companies. However, the majority of researchers do specify the characteristic features of services as opposed to physical products and look for service-specific solutions to all sorts of problems. We will discuss the impact of these features on the organization of the development process.

Several authors [De Brentani, 1991; Easingwood, 1986; Shostack, 1984, 1987; Terrill & Middlebrooks, 1996] have argued that the specific features of services affect the new service
development process. The intangibility of services is considered a key factor here. Some argue that developing new services is easier than developing industrial products because of their intangibility [De Brentani, 1991]. But from an organizational perspective, similar issues arise. As in manufacturing, several people are needed to develop the new service [Shostack, 1984]. These individuals are representatives from functional departments and have to work together for some time in a project team. It may even be more difficult to perceive that different understandings of the same product are used in the group, because there is no physical object on which all can direct their thoughts. On the other hand, the extent to which a new product idea differs from existing products will probably be the main determinant of the level of communication problems. In the financial services sector, very few projects are concerned with radically new offerings [Johne, 1993]. If we would concentrate on the more radical product innovations, however, we would expect similar problems of communication between various functional specialists as in manufacturing.

Easingwood [1986] argues that the simultaneity of production and consumption has an important impact on the organization of new service development activities. He refers to the need for the front office to be involved in the decision making process due to its proximity to the customer. In banking and insurance, a clear distinction can be made between selling the product (convincing someone to take an insurance, open an account) and the actual delivery of the related services in subsequent years. Although definitions are not always the same in this field, one can argue that selling is done by the front office and at least part of the delivery by the back office. Close involvement and integration of front (but also back) office personnel in new service development is therefore considered highly desirable [Edgett & Parkinson, 1994].

The heterogeneity of services does not appear to give rise to important differences with physical products in the realm of product development. The fact that quite different perceptions may come to exist of the same service will obviously make it more difficult to develop, but to some extent this also holds for the development of new physical products and is in fact one of the core issues in any marketing exercise. Another aspect of heterogeneity is the delivery of the product. Because many services are people-based, the service will be different each time it is delivered. The fact that services cannot be stored obviously doesn’t mean that they cannot be developed in advance at the conceptual and infrastructural level.

The above leads us to the conclusion that the differences between services and physical products may have implications for new product development. However, there is no reason to assume that all insights developed by research in a manufacturing environment will be inapplicable in a services context. On the contrary, it is likely that many similar issues will arise and that many manufacturing
concepts will also be useful in services. The Product Development Management Association’s (PDMA) best practices research states that “many of the key factors for service NPD are identical to those identified for manufacturing firms” and “there are almost no organizational NPD practice differences between service and product producing firms” [Griffin, 1996: 434, 446]. This supports our choice to develop our theoretical framework on the basis of the manufacturing-based literature.

RESEARCH DESIGN AND METHODOLOGY

We already noted above that there appears to be little structured knowledge available on how banks and insurance companies organize the development of new products. Obviously, then, our research in the financial sector had to be of a broad and exploratory nature. This led us to the design of what can best be called a qualitative survey.

In a qualitative survey a relatively large number of cases (30-60) is studied through a single method of observation (for instance interviews, content analysis or observations) in which the central terms and conceptions are set up as 'rough ideas’ [Wester, 1987]. In qualitative research, these rough ideas are often referred to as sensitizing concepts [Glaser & Strauss, 1967; Strauss & Corbin, 1990]. A sensitizing concept serves the double purpose of keeping an open mind and focusing attention during the collecting of data. Our qualitative survey is based on the sensitizing concept “organization of the product innovation process”. Although many scholars have prescribed how innovation processes should be organized, it is not clear how companies in the financial services sector organize their innovation processes. Since “product innovation process” is still a broad concept, we decided to predefine several sub-concepts in order to structure the data collection. The sub-concepts were “structure”, “integration” and “teamwork”. The literature presented in the theoretical framework above served as a point of reference in defining these concepts. We did not exclude the possibility that other concepts would be added in the course of our research. By keeping an open mind in the research process, it is possible that concepts, or categories, that are not initially identified emerge from the collected data.

Sample

In this study the financial services sector comprises both banks and insurance companies. The survey was conducted in 39 companies that had recently introduced a new product, which was reported in the media and professional journals. It is therefore possible that innovative companies were overrepresented in this study, but in the light of our research aims this was not problematic. 42 companies were
contacted by phone, of which eventually 39 agreed to co-operate. The initial contact focused on finding the persons responsible for the development of the new product. Once these people were identified, appointments for interviews were made. The number and size of the participating banks and insurance companies (the latter were life insurance companies or the life insurance departments of larger insurance companies) are shown in table 1. All companies were located in the Netherlands. For the purposes of our study, this geographical limitation doesn’t appear to be problematic, especially since several Dutch companies have proved to be competitive on the world market.

…insert table 1 about here…

**Questionnaire, panel group and additional interviews**

A total of 39 semi-structured interviews (that lasted between one and a half and two hours), following a questionnaire with both open-ended and closed questions, were initially held with product managers, product developers or marketing managers, depending on which department was responsible for new product development. At the start of this study, a panel group of company experts had been formed. The panel group consisted of representatives from ten of the largest financial institutions in the Netherlands. This panel group assisted in the design of the questionnaire. The questionnaire served as a guiding tool for the interviews and was completed by the interviewer during the interview. After most closed questions an open-ended question in the form of ‘why’ or ‘how’ followed. The answers to the closed questions were simply counted and are (sometimes) reproduced as percentages in the next section. The open-ended questions were used to find the main reasons for the answers given to the closed questions.

Additional interviews with IT personnel were conducted in the 10 organizations represented in the panel group. The open ended questions in the questionnaire formed the basis for these interviews. The interviews were taped and the authorized transcripts amounted to approximately 150 pages of data. These transcripts were analyzed using an open coding procedure [Strauss & Corbin, 1990]. Open coding is the part of analysis that pertains specifically to the naming and categorizing of phenomena through close examinations of data. Each paragraph of the transcripts was analyzed on their content and provided with a label (key word) accordingly. If more labels were needed to cover the contents of the paragraph, sentences were a more appropriate level of analysis. This open coding resulted in more than 250 labels. After coding all transcripts, subcategories were built up from overlapping labels. After this

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4 The banks in this survey represented over 95% of the total Dutch market whereas the insurance companies accounted for over 75% of the total life insurance market in the Netherlands (in premiums paid). The other 25% were covered by more than 70 companies with market shares varying from 0.1% to 0.5% (Source: AM Statis Disk, 1998, Assurance Magazine Statistical Disk).
coding procedure, 10 categories remained, including one category (referring to specific product features) that was not considered relevant to the research questions. The remaining 9 categories were: organizational structure, project based working, communication and co-operation, priorities, conflicting interests between departments, teamwork, organizational culture, development process and bottlenecks. These categories are, to a large extent, related to the theoretical framework sketched out above. The categories ‘organizational structure’, ‘project based working’, and ‘teamwork’ are closely linked with organizational structures. ‘Development process’ is the main category for integration and parallelization. Multidisciplinarity and teamwork is related to ‘communication and co-operation’, ‘conflicting interests between departments’, ‘organizational culture’, and ‘priorities’. The latter two categories emerged from the data as relevant to the aims of this study. The final category, ‘bottlenecks’, was identified in all aspects of the theoretical framework.

RESULTS

Organizational structure

The organizational structures of the companies investigated were still predominantly functional in character, i.e. in many companies specialized departments were responsible for tasks in relation to all products of the company. However, there was a clear tendency to reorganize along product lines, with departments becoming responsible for all tasks in relation to a specific product (or customer) category. Several organizations indicated that they were functionally organized, but also had a project organization horizontally spread over the functional organization. The respondents from these organizations did not agree with the term ‘matrix’. In their perception a matrix organization was something different. Those organizations that did claim to have a matrix structure, also indicated that the project managers had no formal authority. The latter is, however, a main feature of a matrix organization. It was, therefore, very clear that most organizations were still functionally oriented or were ‘modified bureaucracies’ [Morgan, 1997].

Most organizations (32 out of 39) used a project team as a means to develop new products. Only some of the smaller companies did not do so. In the companies that did form project teams, several types of project teams were found: teams with a permanent composition; teams with a composition that was changing in the course of the development process (depending on specific activities needed in each

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5 The category ‘teamwork’ specifically dealt with a type of organizational configuration, whereas the theoretical notions on multidisciplinarity and teamwork were concerned with the ‘people issues’.
phase of the project); informal project teams that were not officially organized; and a ‘group of people’ to support the initiator. The two types mentioned first formed the dominant design (in 80% of the companies that used teams).

Although most companies worked with project teams, the project organization was not clearly defined in more than half of the companies, especially the small and medium sized companies. After a new product idea had been introduced to management, a first ‘go/no go’ decision was taken. After this decision a project leader was assigned who had to gather some people for his/her project team. In smaller organizations, this was mostly done in an informal way. Project leaders had to contact heads of departments to ask for a representative from the department concerned. In these larger organizations the project organization was much more formalized. Projects crossing functional boundaries tended to have the same hierarchical structure everywhere: a steering committee at the top, a core project team and, if needed, functional workgroups. The steering committee had mainly an advisory role, but sometimes also had the power to stop a project at specific moments. The core project team consisted of the project leader and representatives of functional departments who acted as the leaders of the functional workgroups. These workgroups were mainly occupied with specialist activities and the members of these workgroups hardly interacted with members of other workgroups. For smaller projects there usually was no steering committee, but merely a high ranking manager who was in charge of the project. The project leader had to consult with this manager when decisions had to be made. There was hardly any contact between this top manager and the other members of the project team. The ‘heavy’ project manager, as described by Clark and Fujimoto [1991], was hardly found.

Thus, new service development is often conducted in project teams, but the members of these teams remain first and foremost representatives of their functional departments. This point was also made by most IT managers, who claimed that the ‘rest’ of their organization had serious problems with project-based working. The IT managers also claimed that this was not the case for the IT representatives, since IT has a history of working in projects and IT employees always belong to a project instead of a functional department. This was clearly seen differently by the product managers we interviewed. The section on multidisciplinarity and teamwork below elaborates on the problematic effects of this ‘functional’ perspective of the team members.

Integration and parallellization in the innovation process

Most companies distinguished four stages in the innovation process (idea stage, product specification stage, product building stage (which can also be a part of the implementation), and
implementation stage). Each of these stages consists of several activities. The activities that financial companies pay most attention to are the design of information systems (mentioned by 22 out of 39 companies, i.e. 56%), the accurate description and design of the product (41%), the development of a clear concept on which management can base its decision (33%), the preparations for selling the product (36%), and the generation and screening of ideas (33%). There is little attention for regular and formal evaluation of the innovation process in the financial services sector. Only 8 companies claim to evaluate the innovation process. The most important stages will be discussed in the remainder of this section.

**Idea stage**

Various sources for new ideas were mentioned (figure 1). However, almost half of the companies (18) did not make a systematic effort to collect these ideas. The other 21 companies argued that they had a structured approach to gather ideas that ‘float around’ in the organization. About half of these 21 companies, however, claimed that people from various departments will spontaneously inform the department responsible for innovation about their ideas. This is of course difficult to verify. The results from the interviews also showed that almost 40% of the companies that claimed to structure the gathering of ideas, did not use the front and back office directly as a source for new ideas.

… insert figure 1 about here …

The screening of ideas is often based on a description of the characteristic features of the new product. The concept is then approved or disapproved by management. Management in some companies still approve or reject new projects on the basis of an annual budgetary cycle, but in most companies this is considered a thing of the past. In order to speed up developments more flexible arrangements have been devised. As noted above, in most companies it is only after the approval of a proposal by management that a project team will be formed.

**Product specification stage**

In most companies there are several decision moments, where products can be stopped, but the most important is the first go/no go decision, after which a project team is formed. The members of this project team will either individually or as a group conduct several activities to specify the product features. This results in an accurate description of what the product is and does. Almost all companies (87%) indicate that they make use of parallellization of activities, especially after the
product specification has been completed. Two separate parallel flows are frequently initiated: an automation/administration flow and a marketing/communication flow.

*Product building stage*

The automation/administration flow usually starts when the product specifications have been clearly described. The main task of the IT department is to prepare the administrative systems for the new product, but it may also include special software supporting the sales effort. The new product usually has to be fitted into the existing systems. Although most companies claim that IT is not determining what products will be developed, the incorporation of the new product into the existing information systems is the main bottleneck in the innovation process. It turns out to be difficult to describe the features of new products in clear terms for information technologists. The persons (from marketing) defining the products don’t know the requirements of the IT system and the IT people lack feeling for the product. As a consequence, numerous iterations are needed to fit the new product in the system. These iterations slow down the innovation process and use the same technical and human resources several times, reinforcing the already existing shortage in human and technical capacities. Surprisingly, the IT department was and often still is not directly represented in the project teams of our 39 companies. The interviews with the IT managers confirmed this state of affairs. They argued that the traditional practice of ‘throwing things over the wall’ was at least until very recently prevailing in their organizations. In their experience, product developers considered the IT part of new service development as something that could be simply ‘outsourced’. As a result, it happens frequently that the first time the IT department hears of the new product is after detailed product specifications have been approved by management, which means that they have no influence on the product’s features. And again, it often was not clear to information technologists what the product characteristics exactly implied. A final activity in this stage concerns testing. Although most organizations claim to pay some attention to this activity, the IT managers say unanamously that too little attention is paid to the testing process. However, accurately testing the new product often led to new insights in the shortcomings of the product specifications.

The marketing/communication flow in the building stage is led by the marketing department and includes packaging, brochure writing and finding an appropriate name. Whether a publicity campaign is undertaken to introduce the new product to the public, depends on the level of novelty of the product concerned. Although marketing plays a major role in this stage, top management usually makes the final decisions (much more so than in the automation flow, which is usually less well understood by top management).
Implementation stage

After these parallel activities have been carried out, the innovation process converges in the final implementation stage. This involves the introduction of the product to the distribution channels and the instruction of personnel and intermediaries. The introduction of the product to the intermediaries and/or branch offices is mostly organized by special training sessions for a large number of agents (intermediaries and representatives of the branch offices). Some of these agents have been involved in the generation of ideas or have seen preliminary concepts of the product, but most agents do not know about the product before it is ready for sale. Direct writers will also be concerned with the instruction of call center personnel.

Multidisciplinarity and teamwork

In the project teams various functional disciplines are represented, among others: marketing and/or product development and/or product management, automation (indirectly through the IT liaisons or integrators), front and back office (occasionally), management, legal affairs, branch offices and intermediaries, and actuaries (in insurance companies). The members of these project teams mostly conduct several specialist activities (a/o the description of the product specifications), mostly individually and occasionally with other team members and take care of the communication to the departments concerned. The members of the project team frequently involve other members of their department (depending on the size and impact of the new product). Thus, most of the actual work is being done in mono-disciplinary work groups. As a result of this organization principle the main communication flows are vertical and hardly ever horizontal.

Communication and collaboration problems appeared in three places: (1) between departments (or representatives from those departments in the teams); (2) between the ‘project oriented’ and the ‘functional oriented’ organization; and (3) between the proponents of the new product and the distribution channel (which can be an intermediary or a branch office). We already discussed the problems of communication between the worlds of IT and marketing. Some companies have trained their marketing employees to obtain more insight in information systems, as a means to make sure that future innovations connect better with computer systems and that product specifications can be described in ‘IT language’. Other companies have replaced part of their IT personnel by employees with more knowledge of organization and business administration to make sure that IT is more focused on the organization as a whole. A third solution we found was the installation of a special unit or department, which operates as an intermediary between marketing and IT. These liaison
persons are actively involved in the project team, but the real IT people are not represented. IT people (the designers) claim, however, that their contributions could be more valuable if they were included in the team because they are able to tell if certain specifications are possible to administrate in the existing systems. For true innovators this might be the reason for not involving IT designers in project teams.

Another important problem of communication arises at insurance companies between actuaries and representatives from other departments. More than half of the respondents in the insurance companies claimed that actuaries were an important source of problems in project teams. It seemed as if the actuaries always disapproved of the ideas coming from marketing/product development. This had often resulted in frustration in the marketing/product development department, especially so because the actuaries have difficulties explaining why certain product specifications are not possible. Exactly what an actuary does is very difficult to comprehend for the rest of the team members, and actuaries are often not capable of explaining it in a ‘normal’ language.

Generally, it can be noted that the introduction of multi-disciplinary project teams may reduce the communication problems between departments, but they are certainly no guarantee for a successful collaboration between individuals in the team. The individual members of the teams usually see themselves as representatives of functional departments and they remain specialists in their field. The fact that they are members of one team does not immediately increase their capacity to collaborate with other specialists. Nineteen companies experienced serious communication problems (marketing/IT and actuary/project team) and considered them a major bottleneck in the innovation process.

CONCLUSIONS

We noted in the beginning of this paper that very little research has been conducted with respect to the organization of innovation processes in the financial services sector. Our exploratory study therefore made use of some basic notions and concepts developed in the manufacturing-based new product development literature. However, we did take into account that some real differences exist between services and physical products, which may have an impact on the way product innovation is organized.

We found that in most financial companies the overall organizational structures are still mainly based on the traditional principle of functional specialization. In most organizations, multidisciplinary project teams are formed to develop new products, especially in the case of more
radical product innovation. The members of these teams come from various functionally specialized departments. In most cases, team members act primarily as representatives of their department and the teams therefore hardly function as teams with a shared understanding of its mission. Project leadership is correspondingly weak. Heavy project managers or product champions are a rare species in the financial sector. Although the vocabulary of teamwork is used, therefore, the supposed advantages of teamwork are hardly realized. This becomes clear in the persistence of all sorts of communication and collaboration problems between disciplines, the solution of which supposedly was the main reason for creating multidisciplinary teams.

Innovation processes are often described in terms of a number of more or less consecutive stages. Most companies in the financial services sector distinguish three or four stages in the innovation process: the idea generation stage, the specification of features stage, the product building stage, and the implementation stage. The idea generation stage is mainly the task of a single department. The financial companies tend to neglect some major potential sources of new ideas, especially front office personnel who are in close contact with customers. Some companies, however, do arrange special meetings with various front and back office representatives in order to gather ideas or ask for advice. Direct involvement of customers appears to be extremely rare. During the following stages of further specification and building of software and marketing material, functional departments (or representatives from these departments) conduct ‘their own’ tasks. Little collaboration between these activities, let alone integration seems to exist. Some activities are conducted in parallel, but not in the ‘concurrent engineering’ sense of close mutual support, but mainly autonomously of each other. Integrated product development, as described for instance by Clark and Fujimoto [1991], is not widespread in the financial services sector.

One could argue that the nature of the product makes such cooperation and integration unnecessary. However, all companies struggle with delays and failures in product development due to problems of communication and mutual understanding. Such problems appeared in three places: (1) between members of different functionally specialized departments, regardless of whether they were members of one team or not; (2) between the focus on functional specialization in the traditional organization and the focus on (new) products and customer needs in the newly developing organizational structures; and (3) between the proponents of a new product and the people working in the distribution channels (which can be intermediaries or branch offices). The first problem refers to the difficulty of creating a common understanding of the aims, properties and process-requirements of the new product. The other two problems refer to difficulties of fitting new products into the existing organization. Processes have to be changed and actors in the distribution channels have to be
convincing of the added value of the new product (for their customers, but also for themselves). In manufacturing new products often take the place of existing ones, but new financial products usually do not replace existing ones and the sales force may be reluctant to sell an additional product, if it feels that existing products are already generating sufficient business.

In manufacturing, communication problems tend to concentrate in two interfaces: between different technical disciplines on the one hand (i.e. mainly within R&D) and between marketing and R&D on the other. In the financial services sector, according to our findings, most communication problems tend to lie on the interface between marketing and information technology departments and (in insurance companies) between actuaries and the other project team members. It may be that the intangible character of these services makes it more difficult to come to a common understanding between persons with different backgrounds. Moreover, the fact that financial services are characteristically backed up by a complex administrative system that in some cases has to be kept functioning for several decades, may easily lead to the perception that the supportive information systems are the essence of the product. If this perception prevails in the IT department, communications with marketing are greatly impeded.

Our study shows that many of the concepts found in the literature on industrial product development can be applied also to service development. However, it appears that the financial services sector has not progressed very far in the practical application of insights derived from manufacturing practice. Only seldom do companies succeed in integrating functions and disciplines into a coherent product development system. To some extent this may be due to the simple fact that until recently, the financial market was quite stable, offering relatively limited opportunities for innovation. Increasing turbulence on the market and growing competition will probably force companies to improve their innovative performance. The specific features of services as opposed to physical products, however, also contribute to this state of affairs. The intangibility as well as the high information content of financial services appear to be at the basis of the substantial problems of communication and understanding arising in the product development process.
REFERENCES


21


### Table 1

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Figure 1

Figure 1 Sources for new ideas (number of companies, N=39)