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School of Business and Management
International Marketing Management

MASTER'S THESIS

**INTEGRATION OF MARKETING RESEARCH DATA IN NEW PRODUCT
DEVELOPMENT. CASE STUDY: FOOD INDUSTRY COMPANY**

Aleksandra Sharenkova

First Supervisor/Examiner: Professor Liisa-Maija Sainio

Second Supervisor/Examiner: Professor Sanna-Katriina Asikainen

ABSTRACT

Author:	Aleksandra Sharenkova
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The aim of this master's thesis is to provide a real life example of how marketing research data is used by different functions in the NPD process. In order to achieve this goal, a case study in a company was implemented where gathering, analysis, distribution and synthesis of marketing research data in NPD were studied. The main research question was formulated as follows: How is marketing research data integrated and used by different company functions in the NPD process?

The theory part of the master's thesis was focused on the discussion of the marketing function role in NPD, use of marketing research particularly in the food industry, as well as issues related to the marketing/R&D interface during the NPD process. The empirical part of the master's thesis was based on qualitative explanatory case study research. Individual in-depth interviews with company representatives, company documents and online research were used for data collection and analyzed through triangulation method.

The empirical findings advocate that the most important marketing data sources at the concept generation stage of NPD are: global trends monitoring, retailing audit and consumers insights. These data sets are crucial for establishing the potential of the product on the market and defining the desired features for the new product to be developed. The findings also suggest the example of successful cross-functional communication during the NPD process with formal and informal communication patterns. General managerial recommendations are given on the integration in NPD of a strategy, process, continuous improvement, and motivated cross-functional product development teams.

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1 INTRODUCTION

The introduction chapter suggests the reader to get familiarized with the case background and explains the significance of the study. The literature review defines the research gap and is followed by the objectives of the study and research questions. Theoretical framework is also explained in the introduction chapter as well as the main concepts used in the research. Finally, delimitations and the thesis structure are given in the chapter.

1.1 Background

In order to maintain leading positions on the market, large corporations fight for the innovation leader title. Product innovation is an essential prerequisite for company development, growth and expansion. Food industry and markets nowadays are changing and expanding rapidly (Foley, 2010) and therefore numerous opportunities for new product development are emerging. Importantly, today's consumers determine success or fail of product innovations in the food industry. Growing awareness of food production, consumption, own health and environment consciousness made consumer highly critical – these factors highly affect consumers' product choice, buying decision and hence level of adoption of a new product category. (Costa et al. 2001) Thus, development of a new product in a large food industry corporation is a crucial activity that requires high level of investment and thorough analysis at each step of the process.

A new product can be defined as a product itself, product modifications, product improvements, and new brands. The frequency of new product failure is very high and quite costly for the companies. Even though organizations work on management issues and improvement of the success of new product development (NPD), estimated failure rates of new product ranges from 37% to 80% (Shah, 2010). Such a high failure possibility and cost of NPD makes it vital for organizations to seek better methods for the innovation and development of new product. NPD is one of the key activities for most companies to keep business

competitive in the changing market conditions or to seek for the new market opportunities.

Current research is looking at the new category development process using a case of a large food industry corporation that is developing a new product category for several international markets. The goal for the company is to become an innovation leader on the markets of operations. In order to reach this goal, marketing research and thorough analysis are needed, especially at the early stages of the NPD process.

The new product development process is a highly multi-faceted process that involves collaboration of several functions in the organization and follows the strict algorithm of development phases and decision-making points. Current research is taking the marketing angle, so the phenomenon that is going to be in the center of the study is a marketing research, and its role in the NPD process. Marketing as a function plays an essential role at different stages of NPD when it comes to the communication issues, strategic orientation and market study. In the literature review, closer look will be taken at the role of the marketing function and specifically at the role of the marketing research and various sources of marketing information on the different stages of NPD.

Importantly, marketing research is particularly critical in such a market driven industry as food industry. Current retailing and changing consumer preferences determine demand for products with longer shelf life, better quality and packaging. Adapting new products to customers' needs and preferences has to begin at the very early stages of NPD – at the concept generation stage, by testing product concepts with marketing research. Thus, the gathering, integration and synthesis of data from different marketing research sources in the new food product development at the concept generation stage is the key focus of current research, and hopefully important managerial implications and general theoretical contributions might be made based on the results of the research.

1.2 Literature review

The majority of the literature on NPD is dedicated to the research of the NPD success factors, as the main concern of academics and practitioners is decreasing a failure rate of new products. Success factors of the NPD are very diverse and context-dependent. However, the main concepts of the research has been reflected in the literature, and analyzed from the viewpoint of facilitating the NPD success. Literature review highlights the main theoretical discussions on the subject.

NPD management

There are three broad chronological stages that NPD management research and practice can be classified into.

In the 1970-80s NPD was perceived by many researches and practitioners as a process, mostly variations on the Stage-Gate process developed and presented by Edgett and Cooper (1985,1990). Stage-Gate system proposed by Cooper includes 6 main stages: discovery, scoping, building the business case, development, testing and validation, and launch. At the each stage multiple functions in the company are involved, and there are gates between each two adjacent stages. The gates function as checkpoints for quality control. The quality issues that are checked at the gates are: quality of execution, business justification, and action plan quality.

Throughout the 1980-90s the strategy was emphasized significantly in NPD. Companies realized that not only the process was important, but rather an appropriate direction for the process (Roussel, Saad, & Erickson, 1991; Matheson & Matheson, 1998).

The recent years showed that literature and practice focus switched to measuring results. Executive boards and top-management are mostly concerned about the NPD performance and the return on investment. Thus NPD metrics and their

application have gained more prominence compared to the previous decades (Cooper, Edgett, & Kleinschmidt, 2002; 2004a, 2004b). Taken into consideration the previous research and practice, today ultimate challenge in NPD management is the integration of strategy, process, performance measurement, and importantly, continuous improvement.

Out of the great deal of literature on NPD management and practices, very little is dedicated particularly to the food industry (Earle & Anderson, 1985; Earle, Earle, & Anderson, 2001; Fuller, 2004; Side, 2002). However this does not comprise a substantial problem for the food industry companies, as most of the essential principles and practices of successful new product development are common across the industries (Lu and Yang, 2004).

Marketing research in NPD

The earliest researches in this area highlighted the weight of market issues over technical ones for product development to be successful (Brown and Eisenhardt, 1995). For example, Myers and Marquis (1969) studied the successful development of products in various industries, and their principal finding was that market pull was considerably more substantial to the success of the products compared to technology push. Thus, a key component of product success was a cross-functional view. Following researches took into account examples of failed new products (Rothwell, 1972; Rubenstein, Chakrabarti, O'Keefe, Souder, & Young, 1976). The authors came up with a number of factors considerably related to the new product success, among which were named: attention to the market, understanding users' needs, senior leadership, efficient development.

Later, other researchers have recognized certain rational planning aspects that correlate with product success, such as predevelopment planning (Dwyer & Mellor, 1991) and a focus on marketing and R&D involvement (Hise, O'Neal, Parsuraman, & McNeal, 1990).

It has been widely discussed in a literature that information plays a central role in minimizing NPD failure risks (Urban and Hauser, 1993; Verhage *et al.*, 1981). Degree of new product innovativeness is proportional to the amount of information that is going to be required. Basic questions that have to be answered are: what kind of product to develop, how to design and how to market it. To obtain this information, numerous tools has been developed and empirical research revealed rather unfocused way of using them by managers at different stages of the NPD process (Davis, 1993; Schelker, 1976; Mahajan and Wind, 1992) whenever they see fit. The marketing research data is either gathered by companies themselves or with the help of outsourcing. Presence of own market research department in the company has not necessarily been a reason not to use external market research agencies. (Nijssen and Frambach, 1998)

Scholars and practitioners have asked for many years whether marketing research could reduce the new products failure rate — and naturally, the marketing literature provides a market-driven view, arguing that an extensive market research is a key driver for successful NPD (Booz, Allen and Hamilton, 1982). The pros of this approach to the NPD process have been widely expressed and are commonly accepted (Cooper, 1990 and Kotler, 1998). But von Hippel and Thomke (1999) as well as Elliot and Roach (1991) suggest that in the case of discontinuous product innovations, the validity and use of market and marketing research is doubtful. Also Tauber (1974) debated that such approaches discourage the development of major innovations – less, rather than more, market research is needed if major product innovations are required. This approach is categorized as “technology push” model of innovation. Technology push model suggests that new products are developed with little consideration of the market, as a market for the product may not yet exist at all. Often times, consumer is unable to comprehend the new technology and perceives new products as a threat to existing way of operating. The debate about product innovations factors and whether they are initiated by technology push or market pull will continue for the predictable future and the subject of market research in the NPD will remain controversial (Trott, 2001)

One of the important findings from the literature, reviewing NPD success factors – is that where successful innovations took place, customer needs have been identified, which is self evident (Littler, 2006). The major concern for practitioners here is in understanding the suitable analytical and other methodologies to apply, so that the “needs” would be identified before major investments in NPD are made.

Marketing's Interaction with other functional units

In 1980s the researches aimed at understanding the relationships between marketing and other functions in a company, has increased in numbers (Ruekert, Robert W. and Walker, 1987). The importance of marketing personnel in NPD projects was underlined there, as it often plays a coordinating role, and links consumers' demands from outside with the functions inside the organization that are capable of satisfying those demands. The source of motivation for inter-functional communication from a marketers' viewpoint is the aspiration to achieve both the common objectives of the company and specific marketing objectives as well as individual goals (Hussain, 2010).

NPD has always been perceived and researched as a cross-functional teamwork process. Numerous previous studies stated that higher level of cooperation in NPD team results in better NPD performance. It is also proved by previous researchers that communication between functions, particularly between marketing and other functions, is among the most important issues contributing to the commercial success of the new product in firms. (Moenaert and Souder, 1996; Ruekert, Robert W. and Walker, 1987) The research of cross-functional interaction in NPD, involving R&D, manufacturing, and marketing people (Crawford, 1994; Song and Parry, 1992; Song and Dyer, 1995; Urban and Hauser, 1993) resulted in detecting particular techniques that enhance this interaction, hence the likelihood of a product success: cross-functional new product teams, quality function deployment, simultaneous engineering and other (Griffin and Hauser, 1993; 1994; Song and Dyer, 1995).

Since decades organizations have become gradually interested in motivating, facilitating, and sustaining successful cooperation practices between the various functional areas during NPD (Hussain, 2010). Ruekert and Walker (1987) have studied in depth the problem of horizontal interactions between marketing and other functions taking the system-structural perspective. They defined the major dimensions by providing the conceptual framework, which describes the interaction between marketing and other functional personnel on the basis of the system-structural perspective (see Figure 1). So, different dimensions of the marketing/R&D interface have been researched: cross-functional cooperation, communication between marketing and other functions, interaction and collaboration.

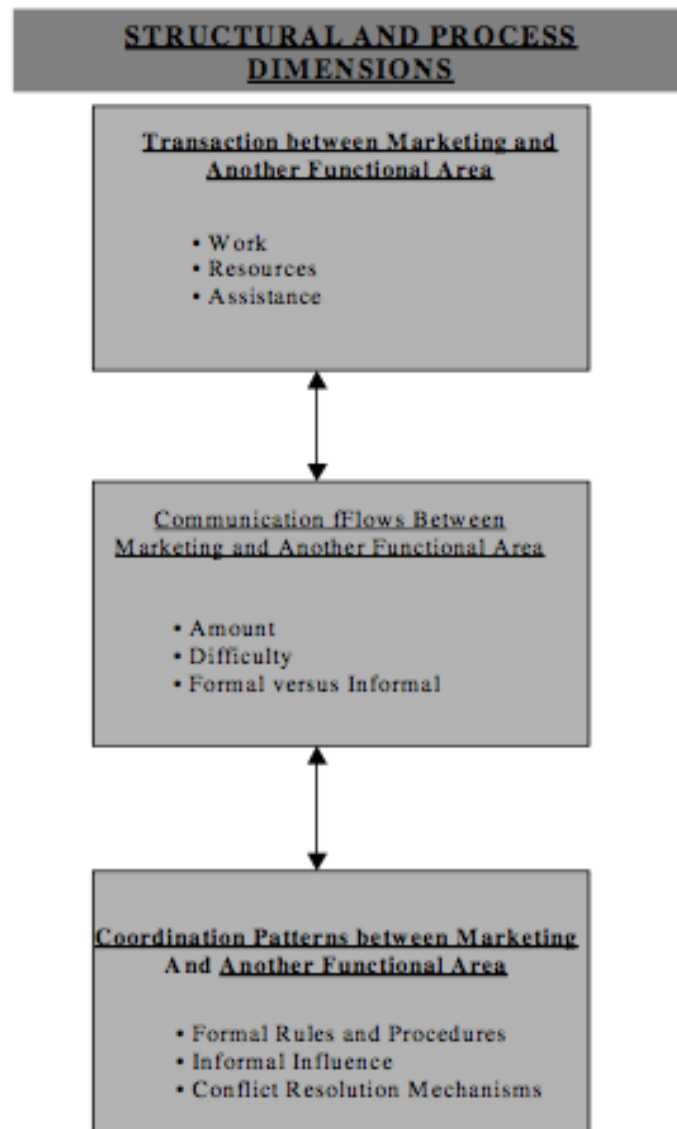


Figure 1. Framework for assessing marketing's interaction with another functional areas (Ruekert and Walker, 1987)

Social behavior theory proposed that “the awareness of another’s behavior increases the probability of engaging in that behavior” (Bargh, Chen, & Burrows, 1996). In the NPD context this means that when employees from diverse functions identify a higher level of significance on cross-functional cooperation, they are more eager to conduct this cooperation (Lu and Yang, 2004). The discussion on the marketing function in the NPD process, the role of marketing research and cross-functional communication issues will continue in more detail in chapters 2, 3 and 4.

1.3 Research objectives and questions

The objective of this research is to provide a real life example of how marketing research data is used by different functions in the NPD process. Using a particular case project in a particular case company allows studying the issues in a greater detail. The case study is expected to result in a clear picture of how marketing research data was gathered, analyzed and used by the case company in the case project, as well as how cross-functional communication happens and facilitates the NPD process.

Thus, the research question of the study is:

How marketing research data is integrated and used by different company functions in the NPD process?

And research sub-questions are:

- 1. How to gather and synthesize data from the multiple marketing research sources in the NPD process?*
- 2. What are the main patterns in marketing/R&D communication and marketing research information exchange during NPD?*

1.4 Theoretical framework

Figure 2 illustrates the theoretical framework for the current research. It is visible, that marketing research is the main concept of the thesis, and synthesis of the data from several sources, its integration and use by marketing and R&D functions in the NPD at the company level is the main subject of the study.

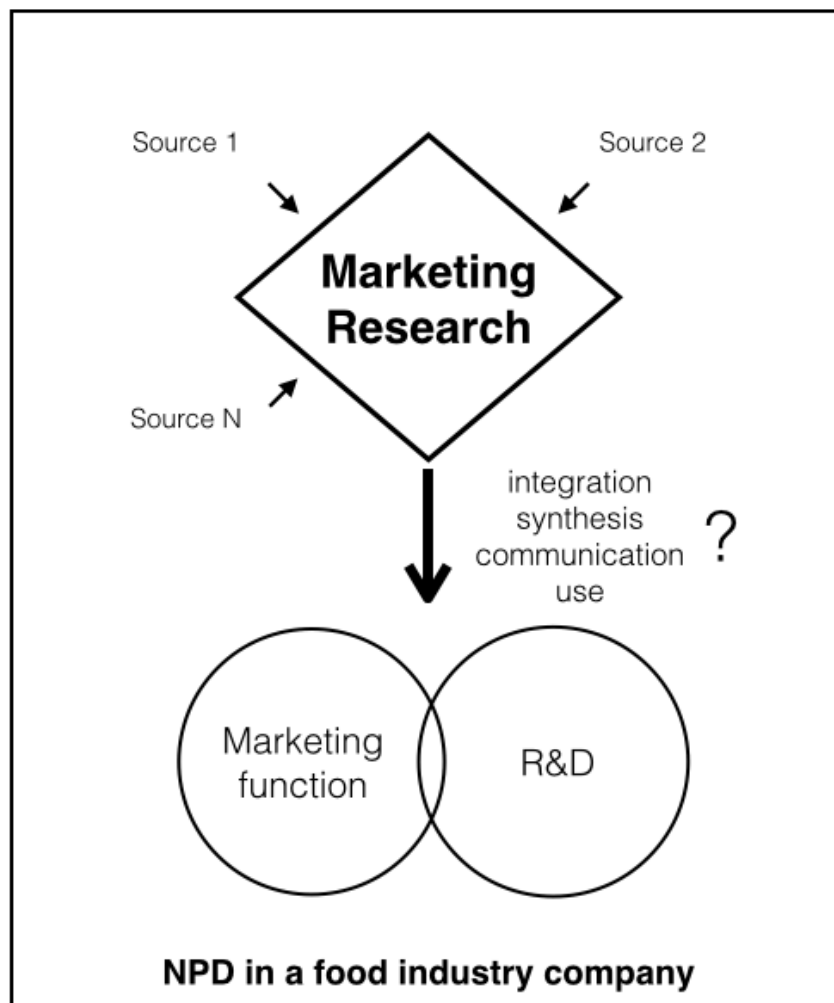


Figure 2. Theoretical framework

1.5 Definition of key concepts

Marketing research – *the function that links the consumer, customer, and public to the marketer through information – information used to identify and define marketing opportunities and problems; generate, refine, and evaluate marketing actions; monitor marketing performance; and improve understanding of marketing as a process. Marketing research specifies the information required to address these issues, designs the method for collecting information, manages and implements the data collection process, analyzes the results, and communicates the findings and their implications.* (American Marketing Association, 2004)

Data synthesis – *the process of deductive reasoning, as from cause to effect, from the simple elements to the complex whole.* (Dictionary of Collective Nouns and Group Terms, 2008)

New Product Development – *the process of bringing a new product to the market, transformation of a market opportunity into a tangible or intangible product available for sale.* (Trott, 2010)

Food Industry – *the industry concerned with processing, preparing, preserving, distributing, and serving of foods and beverages.* (Agricultural Information Management Standards, 2015)

1.6 Delimitations

NPD may be analyzed from a number of perspectives; current study focuses on a marketing perspective and partly R&D perspective in a context of interrelationship with marketing. Therefore, the technical, financial and production elements, which are undoubtedly an essential part of the NPD concept, are out of the scope of this study. NPD process model will be limited to a general representation without thorough examination of the different models.

The study is implemented at the company level, whereas company represents a food industry.

At the moment of the beginning of current research, the NPD project was at the early stages of the development. Thus, the empirical analysis of the thesis is primarily focuses on the concept generation stage and the use of marketing research there. In addition, the number of marketing research sources is limited by three most important sources, defined by the individual in-depth interviews results.

1.7 Thesis structure

Figure 3 is the visual representation of the thesis structure. After the introduction, the theory chapters are presented to reader. Such issues as Marketing functions and NPD, Marketing research in food NPD and Marketing/R&D interface are going to be discussed in the theory chapters 2, 3 and 4. The chapter 5 explains the research methodology applied in the study: research approach and design, data collection and analysis techniques, as well as research evaluation criteria. Chapter 6 suggests the empirical analysis of the case company NPD, marketing research data synthesis in the NPD project and marketing/R&D interface during the NPD, supported by the theory reflected in chapters 2, 3 and 4. The discussion and conclusions part summarizes the findings and provides answers to the research questions of the study.

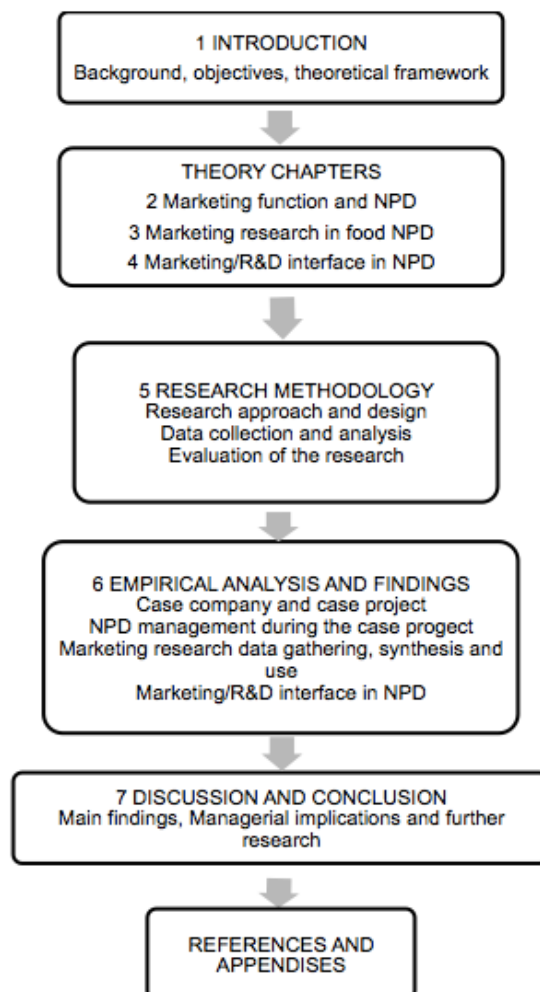


Figure 3. Structure of the study

2 MARKETING FUNCTION AND NPD

2.1 Understanding NPD

Understanding and representation of the NPD varies in the academic literature and from company to company, as the process is very practical and may be seen from the different perspectives. However, a holistic examination of the NPD frameworks by Shepherd and Ahmed (2000) revealed that most of them retain common features and general logic. All the NPD frameworks examined are aiming at following: bringing products to market on time; optimization of the business results in terms of cost- and time-efficiency; managing the programs in accordance to the business plans over the product's life-cycle.

The common characteristics of the NPD frameworks generally include:

1. A form of a structured development process, providing the specific guidelines, entry and exit criteria between key program milestones, main tasks, timetables and resource assignments. Figure 4 presents a common linear model of the NPD, described by Trott. (2012, 433)



Figure 4. Commonly presented linear NPD process (Trott, 2012)

2. A team of senior executives that provide supervision of the programs by solving cross-project issues, defining project priorities, managing issues and

making Go/Kill decisions. The team normally consists of the chief executive officer, chief operating officer, the heads of the marketing, finance, engineering, and operations areas.

3. Use of cross-functional execution teams that operate under a product leader and reporting to the appointed senior management supervision board.
4. Phase (stage/gate) reviews at key development milestones, where funding, resources and project timetables are approved or rejected by the assessment board.

2.2 Marketing function in NPD

Griffin et al (2013) highlight the importance of marketing function in the innovation process arguing that it plays an integral role in the process and its outcomes. Each of the functions is aimed at securing a reliable, continuous and sufficient flow of resources from external players to support the firm's activities. General marketing role in the company is to deliver cash to the company by satisfying long-term customer needs by serving as the interface between customers and the firm. Thus, marketing is said to be central to the innovation process, as customer insights shape the NPD to a high extent, particularly in the food industry. The marketing knowledge about current and future, customer needs is crucial to the success of innovation projects. Marketing also applies pressure on other functions in the firm to embrace the marketing concept that results in improved organizational learning and culture. Innovation outcomes benefit this way as well (Griffin et al., 2013).

The research implemented by Griffin et al. (2013) studied marketing's role(s) in the innovation process, resulted in following findings:

1. *The discipline of marketing is uniquely situated to play an active role in this continuing dialog regarding innovation's importance, necessity, and process.*
2. *As the representative of the customer to the firm, the marketing department serves as a vital conduit for unique market intelligence that is essential for successful innovation. As such, marketing should continue to work to demonstrate its value and importance in the innovation domain.*

There are three central functions described in the literature (Cooper 1988, 1990; Trott, 2012; Suwannaporn & Speece, 2002) that marketing department carries out during NPD process:

1. Cross-functional communication and collaboration, e.g. integration of the marketing issues into the NPD process
2. Strategic orientation of NPD, e.g. managing the marketing strategy issues such as customer orientation and market acceptance
3. Marketing research

Review of the literature on the NPD success factors (Conn, 2005) describes the importance of the marketing activities and competencies underlined by the key researchers of NPD process. Thus, marketing function directly affects the NPD success through implementing following activities: business and financial analysis, marketing research that acquire knowledge of the market, competitors and customers through detailed market assessments and forecasts; the market and competitor focus where understanding the customer is key factor for NPD success; boosted organizational effort and resource allocation to the product launch that is preceded by a trial launch and test marketing efforts.

It can be concluded, that the marketing function in NPD is versatile and affects the success of a new product launch to a high extent. However, use of marketing research is repeatedly said to be the most important determinant of the NPD success, especially in the consumer-driven industries.

Cross-functional communication in the NPD process, as described earlier, normally takes nature of cross-functional teams working on the project. The Figure 5 below illustrates how cross-functional in nature process of NPD benefits from the internal communication experience over time by accumulating a know-how and channels of cross-functional interaction. Cross-functional teams are argued to be a source of the creativity in the company by several researchers (Bunduchi, 2009; Shah 2010; Trott 2012)

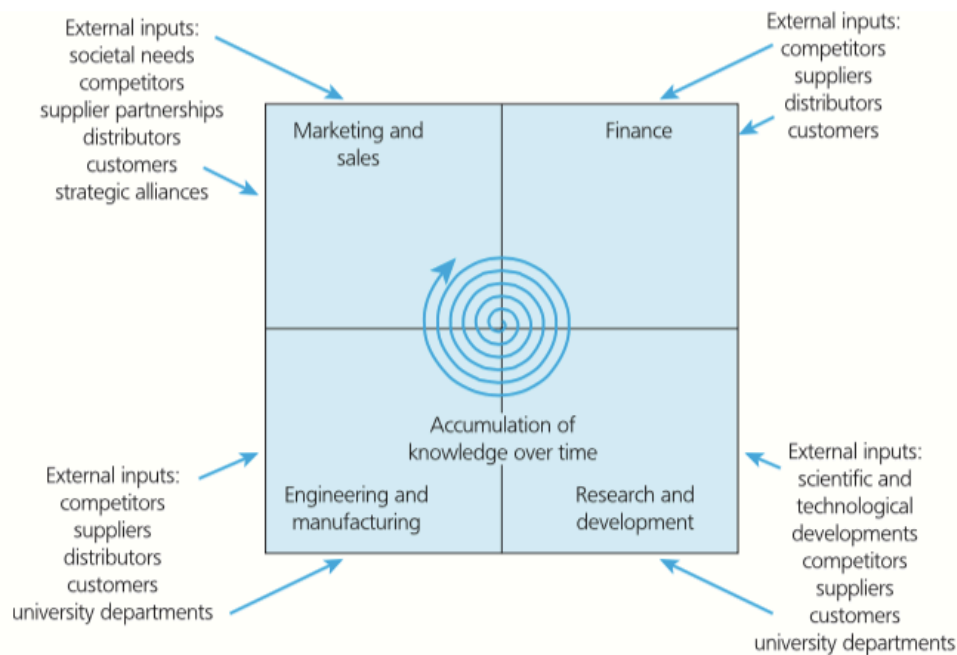


Figure 5. NPD process network (Trott, 2012)

Different functional areas are created for implementing NPD activities. The increasing need of cooperation work among divisions is being observed due to the competition intensifying in the industries. Better execution of the development activities is more likely to give a birth to successful new products with high customer value. In recent decades the need to understand the internal relationships between marketing and other functions in organizations has increased in significance. This is explained by Ruekert et al. (1987) so that coordinating role of marketing personnel is crucial in connecting demands from outside the company with the functional department inside the organization that are able to satisfy those demands. Inter-functional interaction is driven not only by the desire to achieve the broad and common objectives of the firm, but also by specific marketing objectives and individual goals of a marketer. This aspect relates to the strategic function of marketing in the company as well, which is discussed further on.

Thus, the key marketing role in cross-functional communication is upturning of creativity in NPD, hence leading to higher product innovativeness and shorter development time; the improving the communication flow as from outside as well as inside the company is worth mentioning as well.

In the NPD context, *strategic orientation* often reflects the strategic choice of types of products to develop in relation to the markets, internal competencies as well as the choice of resource allocation to functional strategies. As NPD literature reviews (Reid & Brady, 2012; Conn, 2005), marketing function here is to define a clear NPD strategy, where goal setting and project prioritization are important parts as well as the proficiency of the planning process itself. Marketing function displays a strategy's long-term focus and commitment as well as strives to communicate it clearly throughout the organization.

The cross-functional teams discussed earlier in the chapter, specifically play following roles in the strategic orientation of the NPD process:

- Establishing the vision
- Decision-making
- Cultivating the product development process
- Motivation
- Recruiting the best development staff (Shepherd & Ahmed, 2000)

In the consumer-driven industries, market orientation establishment is the function of marketing. Establishing of a market orientation in the NPD projects legitimizes the need to have customer input into both the strategy that guides NPD program efforts and in the upfront activities that support the design of the NPD process. Further on, a market orientation enables cross-functional communication and coordination of projects in the program and guarantees that employees understand the need to focus on creating value for customers. Market orientation contributes (Reid & Brady, 2012) to gaining the firm-wide commitment to the primary values natural for this orientation and to developing the necessary skills, incentives, new systems and processes, as well as to ongoing learning of how to implement the core values.

Thus, in relation to the NPD process, a strong market orientation stimulates mechanisms to enable early customer involvement and input, speeds up the definition of the market opportunity as well as the understanding of value looked-

for by customers. Importantly, this ensures activities of ideation and concept development to be market focused.

3 MARKETING RESEARCH IN FOOD NPD

3.1 Marketing research in NPD

Market research and marketing research

Terms market research and marketing research are often used as synonyms in the literature. Understanding of and relationship between these two concepts are important for the current research, and therefore going to be explained below.

According to the American Marketing Association (largest marketing association in North America) marketing research is:

The function that links the consumer, customer, and public to the marketer through information – information used to identify and define marketing opportunities and problems; generate, refine, and evaluate marketing actions; monitor marketing performance; and improve understanding of marketing as a process. Marketing research specifies the information required to address these issues, designs the method for collecting information, manages and implements the data collection process, analyzes the results, and communicates the findings and their implications (American Marketing Association, 2004).

Market research is defined by ESOMAR (the world organization for market, consumer and societal research) as following:

The systematic gathering and interpretation of information about individuals or organizations using the statistical and analytical methods and techniques of the applied social sciences to gain insight or support decision making. The identity of respondents will not be revealed to the user of the information without explicit consent and no sales approach will be made to them as a direct result of their having provided information (ICC/ESOMAR international code on market and social research, 2007).

Although both explanations overlap noticeably, the AMA definition describes marketing research as a function (e.g., a department in an organization), whereas the definition by ESOMAR focuses on the process. Thus, the market research is a narrower concept; it is a specific tool of a wider concept – marketing research. This logic is applied in the study.

Marketing research dilemma in NPD

Market research is an important source of the market information that is used for all stages of a new product development.

Numerous marketing research industry representatives say that thorough consumer testing of new products can help to avoid large losses and thus underline the importance of the marketing and marketing research. (Trott, 2012) Skeptics may object that the industry is simply promoting itself. Nonetheless, it is widely accepted that 80 per cent of newly introduced products fail in the market after two years because of the lack of the consumer research. (Barrett, 1996) Given the intrinsic risk and complexity, the essential question here is whether this could be reduced by the use of marketing research. The marketing literature obviously takes a market-driven outlook, which nominates a thorough marketing research to be a key driver. In other words, the market-pull approach to innovation ensure that companies are consumer oriented and new products are more successful since they are developed to satisfy an apparent need rather than to take advantage of a new technology. If sufficient research is implemented the probabilities of failure are reduced – this is the approach taken by many companies regarding marketing research. (Trott, 2012)

The matter of marketing research in NPD is controversial. The marketing literature has conventionally represented NPD as basically a market-driven process, but nonetheless numerous large market innovations are technologically driven in practice. The role of market research in NPD is most evidently doubtful with product innovations with no existing market. There potential customers are incapable of understanding the product adequately and therefore the market research answers would be negative. Also, consumers often have difficulties

articulating own needs and lack foresight. The market research dilemma summed up by King (1985) neatly:

Consumer research can tell you what people did and thought at one point in time: it can't tell you directly what they might do in a new set of circumstances.

It can be concluded that the type of innovation and the industry determine the role of the marketing research in the NPD process.

Marketing research at different NPD stages

The most demanding NPD stage for the marketing research is the concept stage, where customer insights on ideas for a new product or modifications of a current product are gathered. (Clow and James, 2014) In the Figure 6 this stage is expanded into a series of further activities. As can be observed from the diagram, it is extremely challenging to divide the activities of concept testing, prototype development and product testing. The activities are related closely and interconnected, considerable amount of repetition is observed. As Trott (2012) outlines, product concepts are developed into prototypes only to be rapidly redeveloped with following technical inputs from production or R&D. Early product prototypes may be transformed almost on a daily basis as a wide variety of market inputs are received.

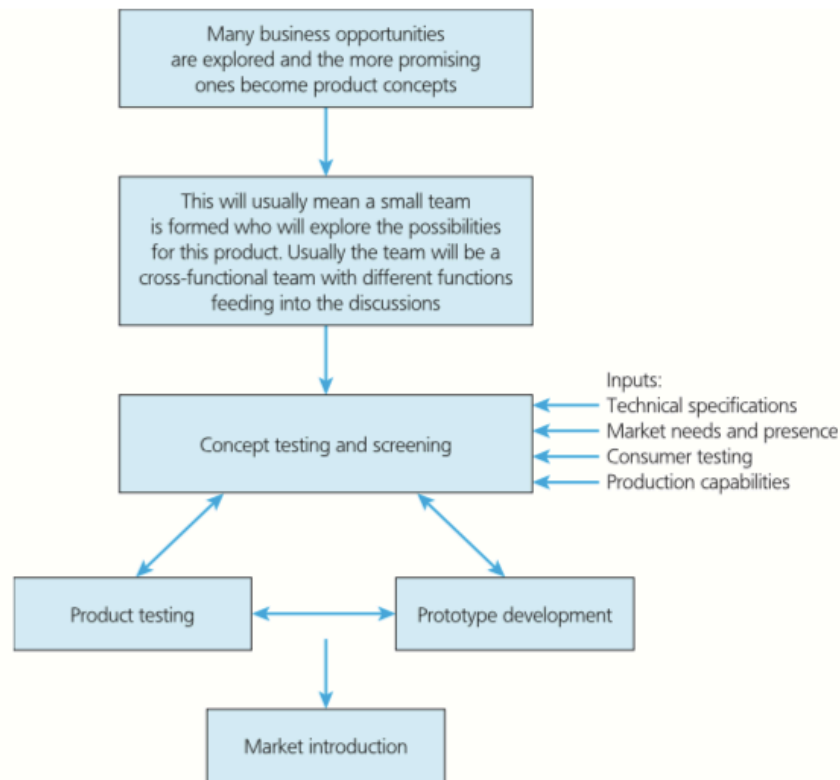


Figure 6. New product concept and prototype testing (Trott, 2012)

In order for the project to move towards the marker introduction stage, series of marketing research activities have to be implemented, namely – new product testing activities. The main objective of these activities is to forecast the market’s reaction to the new product, before moving to potentially expensive production stage and promotional costs. A number of other factors (Trott, 2012) are to be considered in order to achieve this objective could be found in the Table 1.

The market	Purchase intention	Improvements to the new product
current buying patterns;	trial and repeat purchase;	overall product concept;
existing segments;	barriers to changing	features of the product
customer’s view of the products available	brands;	concept
	switching costs	

Table 1. Aspects of new product testing activities

All these factors are linked and referred to as *customer needs and preferences*. This, however, raises an important issue: the type of required needs would surely depend on the type of product under consideration and the consumer. King (1985) argues that customer needs can be classified into three types:

- Basic needs - those that a customer expects;
- Articulated needs - those that a customer can freely express;
- Exciting needs - those that would surprise customers and are not satisfied by anyone currently.

Van Kleef et al. (2005) suggests the following characteristics for the effective consumer research at the opportunity identification stage of NPD:

1. Comprehensiveness in providing a detailed insight into the relation between product features and consumers' need satisfaction and behavior.
2. It helps to identify, not just understand really new product ideas; it anticipates consumers' future needs and desires that might not be articulated yet.
3. It is presented in an actionable form to make NPD decisions based on consumer research.
4. It is performed on a continuous basis, taking into account possible consumer's circumstances and preferences changes.

Marketing research plays an essential role in the decision making along the NPD process.

3.2 Food industry context

It has been stressed in the earlier chapters that innovation and NPD in particular are context dependent. The type of product being developed and the industry determine the management of the process. A simplified way of looking at this is to divide the wide range of NPD activities into technical and marketing activities.

Figure 7 shows the NPD activities divided into the two categories. Variety of industries placed against illustrates the different balance of activities. It becomes clear that in the food industry marketing activities significantly overweight technological activities. There will be much more emphasis on marketing research, voice of customer, promotion and packaging issues etc. (Trott, 2012)

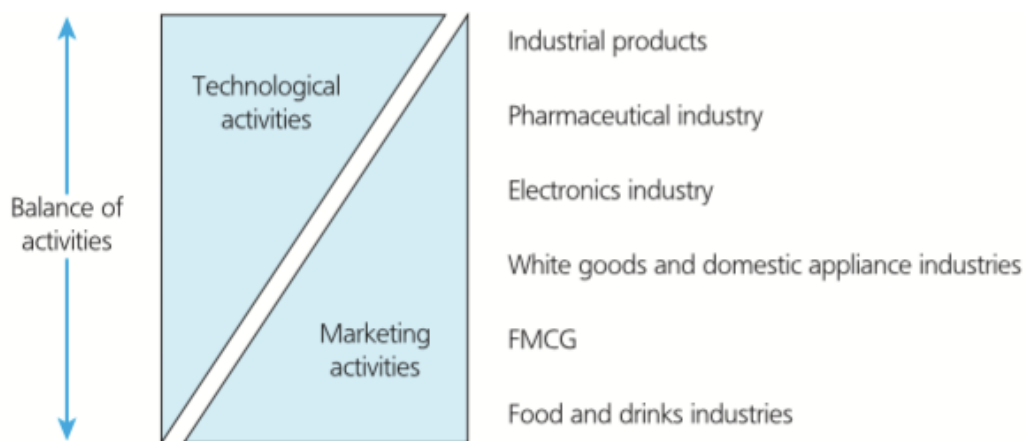


Figure 7. Classification of new product development activities across different industries (Trott, 2012, 572)

Food manufacturers are constantly seeking to add value to their products as this clearly increases their profit margins, though fierce competition and retailers bargaining power have been able to put pressure on food industry players to keep prices down. NPD enables to add value, command a higher price and therefore keep competitive positions. Frequently the success of the new food products lies in the packaging.

Particularity of a food industry in terms of marketing research comes to the fact that companies have to be critical about information, methods and technique they need for developing a successful new product. The huge amount of information is available for the companies nowadays: food industry is supported by various consultants that observe trends, provide companies with comprehensive data on what people eat and buy (e.g. Nielsen, IRI). Consumer research may simultaneously be conducted in-house and be outsourced (Mohr et al. 2010).

It is proved by previous research (Suwannaporn, 2002) that broad integration of marketing research into the food NPD does indeed result in greater success rates in new product introduction and even is called the most important factor contributing to success in NPD organization. In her study, Suwannaporn argues that the use of marketing research is proved to allow companies to set quantitative goals for new products, and evaluate more carefully performance after the launch. Nonetheless the importance of internal information flow and communication is relatively high as well. The study has also brought out that marketing research at the earlier stages of NPD results in higher new product success rates as it guides formulation, and helps in prototype testing. Whereas using marketing research at the late stages of NPD process results in risks of having a product that does not fit the market, when adjusting the positioning and a product launch marketing actions is already more challenging. (ibid.)

Nijssen and Frambach (1998) raised the question of the growing importance of the market research (MR) companies in NPD research. This is explained by need for carefully designed, aimed and implemented research as an essential prerequisite for the successful product development. Even large corporations that possess resources for implementing own marketing researches, tend to buy the marketing research data from MR companies in order to use it for the NPD planning. The results of the research (ibid.), show that carefully designed and aimed marketing research deliver valuable NPD information that improves performance. It is not marketing research in general that facilitate successful NPD projects, but rather marketing research executed at the initial stages of the NPD process; further marketing researches have to be carefully implemented in an ad-hoc manner in order to be effective for the NPD project. However, the findings of Nijssen and Frambach confirm both that MR companies play a significant role in the NPD process of companies and that NPD research specifically is a growing area for MR companies.

Dozens of marketing research methods and sources are used in a food NPD. Based on the empirical results and following the inductive reasoning of the research, some or the marketing research techniques are detected to be more

important for the food NPD and are going to be described below. The most important, fundamental and major sources that ensure and shape a successful development at the beginning of a new food product are called to be: trends monitoring, retail panels and consumer insights. (Respondent 1, 2015)

Trends monitoring

Trends monitoring is a set of marketing information that is normally gathered by companies that work in a market research industry, e.g. Mintel who provides the product Global New Products Database (GNPD). GNPD screens product innovation and commercial success in consumer packaged goods markets internationally. (Gnpd.com, 2015) Trends monitoring databases offer coverage of new product releases and activity, as well as information on food and beverage consumption, consumer behavior, motivators and attitude, in order for companies to monitor competitors, stay aware of categories and generate new product ideas. The companies offering such a product ensure accuracy, reliability and vast coverage, making it easier for companies to manage NPD process, specifically at the idea generation stage.

Retail panels

Retail panels measure what consumers buy and their buying behavior in general using retailer scanner-based sales information and causal data gathered on a weekly basis from retail outlets. The information gathered supports marketing decisions concerning what has to be changed in a product sales strategy and why. Modern technologies allow gathering price and sales data from major retailers virtually. Field audits are implemented wherever electronic data is not available. The importance of the retail panels for the marketing function in a food manufacturing company is about providing a holistic picture of a retailer performance; hence it helps marketers upon defining retailing marketing strategies. Food manufacturers marketing departments might order a panel study in order to determine a new product development ideas and opportunities. Big players normally use the services of a marketing research companies that specialize in this kind of research, and provide retail panels information regularly. (Nielsen, 2015)

Consumer insights

Consumer insights as a source of a marketing research data provide comprehensive information on understanding consumer behavior, emotions, opinions, preferences and potential. This information, naturally, helps a business to acquire, develop and retain their customers; therefore vast consumer insights knowledge is crucial for the NPD process from the very beginning.

In order to gather consumer insights, a company partners with clients and explores, what attitudes and motivations move customer through the purchase decision journey. Different approaches and tools in consumers' insights collection generate a complete view of customers that fosters innovation and uncovers the most prospective sources of growth, helps in developing successful new products and brands. (Mckinsey, 2015)

Søndergaard and Harmsen (2007) conclude that in order for FMCG companies to implement a truly market-oriented approach in their NPD, more focus should be made on taking the right decisions concerning the type of market information needed in product development.

4 MARKETING/R&D INTERFACE IN NPD

Interaction of marketing and research and development functions during the NPD is a subject to investigate in the current study, since marketing research directly affects engineering and technological decisions for the new product creation. Previous research (Moenaert et al., 1994) says that different aspects as project formalization, project centralization, role flexibility and inter-functional climate shape the communication patterns between R&D and marketing functions during product development and impact on the commercial success of a project.

It has been stressed in the literature (Moenaert et al., 1994; Kang, Kim and Park, 2007; Pereira and Sequeira, 2007) that marketing and R&D functions, being leading functions in the innovation process within companies, have to work tightly and jointly in order for the new product to be successful on the market. Existing literature on this subject, usually discusses how failure/success of an innovation derives from these two functions interaction.

The main obstacles in an effective Marketing/R&D interface have been discovered to be perceptual, organizational and cultural factors (Trott, 2008). The differences in the background and previous trainings, different perceptions on the recognition, incentives and professional language barrier results in these inter-functional communication shortcomings.

Ruekert and Walker (1987) have studied in depth the problem of horizontal interactions between marketing and other functions taking the system-structural perspective. They defined the major dimensions by providing the conceptual framework, which describes the interaction between marketing and other functional personnel on the basis of the system-structural perspective (see Figure 1). So, different dimensions of the marketing/R&D interface have been researched: cross-functional cooperation, communication between marketing and other functions, interaction and collaboration.

4.1 Cross-functional cooperation

The broad definition of cooperation – coordination of behavior, and cross-functional cooperation refers to interdependency and information exchange between the different functions in the company. In the NPD context, the predisposition for conflict between the functions is high (Crittendon et al, 1993; Shapiro, 1977). Shapiro (1977) also doubts that marketing and R&D, generally speaking, have analogous organizational goals – both functions are interested in creating change through new products.

Figure 8 visualizes how different functions exchange critical information in NPD process (Moenaert et al., 1990a, 1990b). There must be a good level of cooperation between functions for this pattern of information exchange.

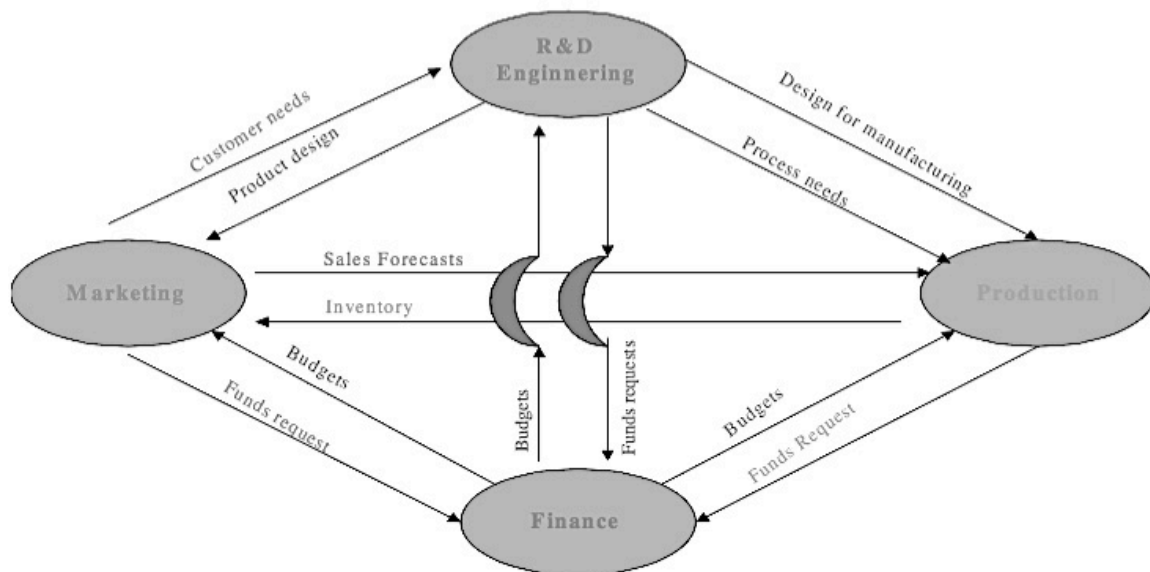


Figure 8. Cross-functional cooperation (adopted from Urban and Hauser, 1993)

Hussain (2010) comments on the figure, outlining the main motives and agenda of the functions in interfunctional collaboration: *“R&D is rewarded for creating new products, whereas marketing is rewarded for creating and maintaining markets and satisfied customers. Manufacturing is charged with efficient utilization of*

resources, cost minimization, and meeting objective quality standards. Marketing wants broad product lines to satisfy every customer. Manufacturing typically prefers narrower product lines to gain economies of scale and minimize changeover problems. R&D wants to develop break-through, (patentable) revolutionary new products. Marketing wants rapid product delivery across a wide mix of products, whereas manufacturing is moving toward just-in-time delivery systems that minimize inventory investments. Manufacturing wants accurate sales forecasts and frozen design specifications. Marketing wants fast, fluid response to customer demands. R&D strives toward elegance and perfection in product design.”

4.2 Communication between Marketing and other functions

Previous researches proved that communications between marketing and other functions are one of the key factors contributing to the commercial success of a technological product and innovation project (Moenaert and Souder, 1996). Each person involved in a NPD project, carries out a functional role. The question of utility of information that process participants receive arises. The previous studies show that the usefulness of received information is defined by many components related to one of the four elements (see Figure 9) of the source-channel-message-receiver model of interpersonal communication.

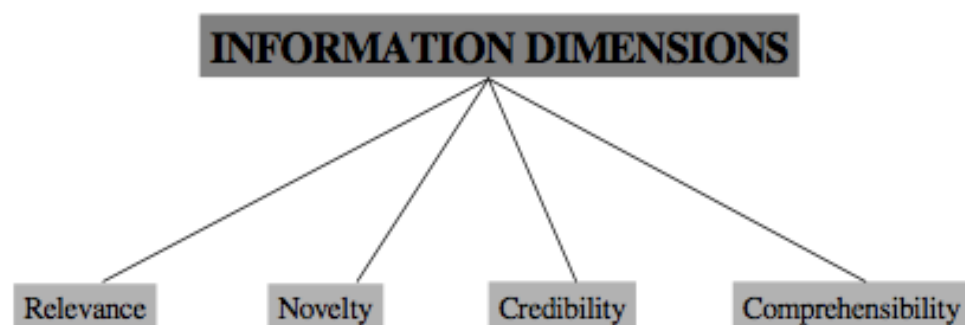


Figure 9. Information dimensions (Moenaert and Souder, 1996)

- Relevance – an extent to which the information is seen to be appropriate to the user’s application or task.

- Novelty – the number of new insights the receiver perceives in an information stimulus.
- Credibility – the degree to which information is truthful to the receiver's judgment.
- Comprehensibility – the ease for receiver to understand and decode the information.

Within NPD teams, relevance, novelty, credibility and comprehensibility of information may be essential precondition for information to be considered useful. Importantly, Moenaert and Souder (1996), have established that the biggest issue R&D managers distinguish with marketing information is that it reveals a lack of understanding of product design tradeoffs such as between price and the product features.

The analysis of the originating of the four information dimensions in the NPD context revealed that the quality of the relationship between marketing department (message source) and R&D (information receiver) has a strong positive influence on the perceived comprehensibility and the perceived credibility of extra functional information. Also, study discovered: the more senior the informant in relation to the message receiver – the more novel the information was perceived to be. Prior experience of the source in the function of the receiver (e.g., the marketing person with a prior experience from R&D) had a positive impact on the perceived comprehensibility. But, it had a negative impact on the perceived credibility (ibid.).

4.3 Interaction and Collaboration

Hussain (2010) in his article suggests, that interaction can be defined as structural in nature and formally coordinated activities between departments, such as routine meetings, telephone and video conferencing, routine conference calls, memos, and the exchange of regular documentation. In sum, the interaction is a structural process because it increases arrangement to how functions interrelate. The interaction-based philosophy branches from a transaction-based philosophy, which has established much of business theory and managerial practice. Thus, it

favors the kind of communication between departments, that encourages manager to hold more meetings and establish greater information flows between departments.

Collaboration represents the unstructured, emotional nature of cross-functional relationships – it is defined as a volitional, affective, mutual process of two or more departments working together, where they have shared understanding, vision, resources, and willingly achieve collective goals (ibid.). The collaboration philosophy in a way matches the relationship marketing philosophy that is currently trending in the marketing discipline. The collaboration philosophy stresses continuous relationships, but not just transactions between functions. The strategic alignment happens through collective goals, a shared vision, joint rewards, along with an informal structure.

As a result, “departments are considered interdependent, which facilitates a shared vision across departments and encourages departments to achieve mutual goals. Because goals are similar across departments, penalties for dealing with other departments are nonexistent. Thus, the company’ s internal environment is one of cooperation, not competition.” (Hussain, 2010)

Pereira and Sequeira (2007) suggest the research, using a case of a Portuguese beverage firm, where they study the perceptions of marketing and R&D departments on the innovation process and company performance, using an innovation audit.

Importantly, they state previously found argument that communication flows, collaboration, and close integration of the Marketing and R&D departments in a company, positively affect the NPD process. Nicely defined by Souder (1988), product innovations are the outcome of the interface and interdependence of R&D and the Marketing department, through the mutual conflicts arising between them. The typical way to overcome these conflicts is through meetings, involvement and increased sharing of information, which should result in better NPD performance.

It also has been found that the information that R&D receives from marketing relates significantly with project success, while the information marketing obtains from R&D did not. The reason for that kind of relation lays in the high dependence of R&D on inputs from the commercial side of the company to accomplish sufficient progress. Whereas information flows from R&D to marketing has more of an informative nature rather than prerequisite for the marketing activities. (Moenaert et al., 1994)

Important managerial applications of the previous research underline the significance of a customized product planning system for each organization. The system design would depend on a company's specific needs and shows that inter-functional climate affects strongly inter-functional communication. The project leader's responsibility is to cultivate a positive climate between the R&D team members and marketing team members. (Moenaert et al., 1994)

The tools that facilitate better integration between R&D and Marketing, according to Pereira and Sequeira (2007) are: personnel rotation, informal social systems, physical facilities design and relocation, incentives and rewards, organizational structure, and formal integrative management methods.

5 RESEARCH METHODOLOGY

5.1 Research approach and design

Qualitative research allows researcher to observe and understand the context where decisions and actions happen. Whenever there is a need to study a subject in depth, for instance using the example or case of one organization, such as current research — qualitative research serves the best. However, its significant drawback is that it can't be generalized to a larger population (Myers, 2013).

The research takes form of a case study, looking at the specific project company is working on at the moment. Case studies are acknowledged to be scientifically important because they are able to provide a source of new hypotheses and paradigms at once. When there is already a large amount of literature on the topic, case studies could be used to test and compare theories, or to develop casual explanations (Myers, 2013).

Current qualitative research is an explanatory case study; they are normally executed to describe and explore certain phenomena or to explain causal relationships and develop theory. Explanatory case studies should contain a reliable description of the facts, reflections on alternative explanations, and a conclusion based on trustworthy explanations that are corresponding to the facts of the case study (Mills, Durepos and Wiebe, 2010). In the section 5.3, closer look is taken at the evaluation and criteria of the case study research.

The case study is cross-sectional, representing a snapshot of one point in time, however the findings might provide important managerial implications that could be used in the future company projects in order to improve the use and synthesis of marketing information and the collaboration between company functions.

General biases about qualitative research are often expressed towards explanatory studies, namely: nonrepresentativeness, subjectiveness and nonsystematic design; quick answers to the questions are needed and wanted in many cases.

The Table 2 below gives an idea of what sources are usually used in the case study researches with corresponding sources used for the current research. (Cooper and Schindler, 2013)

Case study research sources	Current research
Information from organization's database	NPD and Innovation process, project development
Published studies (usually focused on the results of surveys or on case studies featuring one or a few incidents)	Theory part
Document analysis	Megatrends report (Intel)
Individual in-depth interviews (IDI's) with individuals involved with the problem	IDI's with marketing and R&D function representatives: category manager, brand manager, chief technologist

Table 2. Sources used in case study researches

5.2 Data collection

"Triangulation is the idea that you should do more than just one thing in a study" (Myers, 2013). It could be several research methods, two or more techniques of data collection, or even combining qualitative research with quantitative. Triangulation is great when author wants to look at the topic from several different angles. Naturally, it provides you with a fuller and bigger picture of the research subject and serves the purpose of increasing reliability and validity of the results. Research through triangulation is particularly important in the case study method, so that researcher would get a holistic and contextual portrait of research object; triangulation is also useful in international business research to check for the method bias (Ghuri and Grønhaug, 2010)

Methodological triangulation suggests the use of two or more methods of data collection and is widely used in social sciences (Mitchell, 1986). Current study uses methodological data triangulation for its data collection, as shown at Figure

10. Three data collection methods were used; semi-structured individual in-depth interviews, online research and company documents.

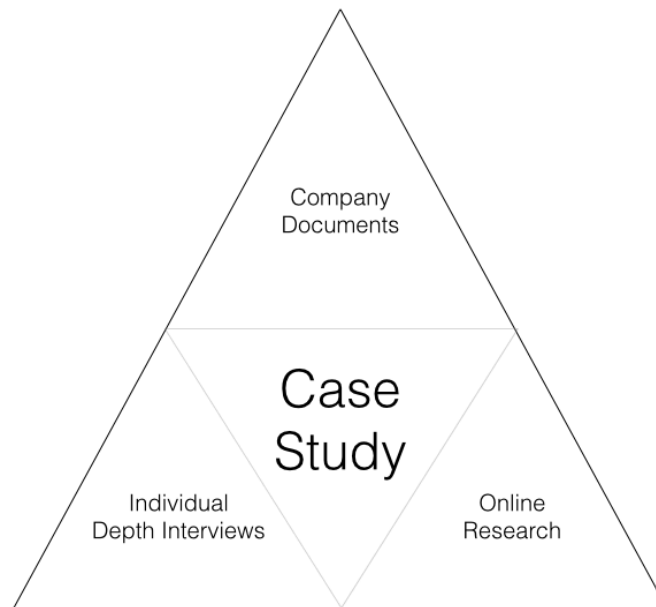


Figure 10. Methodological data triangulation in the research

Individual In-depth Interviews

Semi-structured individual in-depth interviews (IDIs) were implemented in order to obtain primary research data on the project, and marketing information use in the project.

Participants for IDI were chosen because their attitudes and experience would reflect the full scope of the research subject. Table 3 below summarizes the background of respondents.

Respondent #	Background
Respondent 1	Vice President for Frozen & Long-Shelf-Life Business Development, Key informant for the research, has been working in a case company for 10 years, 8 of which at the position of Marketing Director at one of the key markets. Directly involved in the case project management.
Respondent 2	Brand Manager, works for the case company for 5 years in the marketing department. Highly familiarized and works with innovation management tools in the case company. Represents marketing function throughout the NPD process.
Respondent 3	Chief Technologist, represents R&D department, works for the case company for 18 years. Directly involved in the case project product development.

Table 3. Background of the respondents

All three informants take positions in the company with a high level of responsibility and direct involvement in the decision making process in the NPD and particularly in the case project. The data from three interviews, 30 minutes long each, was audiotaped and transcribed which resulted in 12 pages of text.

Bottom-up approach to the data analysis was taken, as the data that has been collected resulted in specification of particular important for the research concepts. At a time of conducting the interviews, the aim was set at implementing a depth analysis rather than trying to reach greater number of data sources.

However, pre-set codes, identified from the literature and raised from the questions themes were used. Based on a codebooks built (see appendix 2), the models were constructed that interpreted how concepts, themes, practices and constructs are linked to each other within the company in the context of the case project.

Company Documents

Part of the data for the research was gathered from company documents. Using documents, as a data collection technique is advantageous when it comes to cost- and time- efficiency, however it is recommended as an additional source of data (in addition to interviews, fieldwork) rather than independently.

Documents such as emails, corporate records, company presentations and other electronic documents are used as a data source for the current study. There are certain criteria for assessing the quality of documents as social or business research evidence (Myers, 2013): authenticity, credibility, representativeness, and meaning.

The list below outlines the documents provided by the case company for implementing the research:

- Company presentation of the case project
- Company presentations on consumers' insights
- Company presentations on concept creation process
- Company presentation on innovation process in the company
- Mintel Trends Monitoring Report on bakery trends
- Innova Summary on Snacks, Chips and Crackers Trends

The documents mentioned are authentic, credible and representative since they provide first-hand comprehensive information from within the company about the case project; there was no difficulties understanding them, hence the meaning criterion is respected.

The contribution of the abovementioned documents is significant for the research, as they complete the picture needed for implementing a case study and provide important insights of the project.

Online Research

Online research implemented within data collection was aimed at the trends monitoring in online communities. Use of documents from the Internet, namely blogs, social media communities, is becoming increasingly important for qualitative researches. It allows acquiring vast amount of data in short terms (Myers, 2013). Online research is especially relevant when implementing a marketing research in the consumer-oriented industries, as food industry. Monitoring trending discussions and subjects of consumers' interest gives a researcher and a company cues on whether new product is going to be on demand and how to alter a product features in relation to consumers needs.

The online research implemented by thesis author had its goal to recognize the main trends in a home baking by analyzing blogs and online communities of target audience representatives. Total of 83 blogs and social media accounts at several international markets the project is targeted at, were analyzed. The analysis resulted in a list of strong universal trends in home baking that was offered to the company for consideration in the project development.

The online research as a primary data collection method concretely for the current research is significant, as it allows to explain and exemplify how the marketing research data collected for the case project was integrated and synthesized with other marketing research sources during the NPD process in the case company. Thus, very particular findings of the online research are used for analysis of the marketing research use in NPD, as this online research is the marketing research source itself, and the case company used it for the concept generation.

5.3 Evaluation of the research

The nature of qualitative research implies certain subjectiveness in evaluation the quality of the research. Traditionally, reliability and validity are the criteria to evaluate quantitative research, where reliability “focuses on standardizing data collection instruments” and validity examines the “degree to which an instrument measures what it is meant to measure” (Long and Johnson, 2000).

Brink (1991) suggests three checks of reliability for qualitative research:

Stability – set when asking an informant identical questions at different times and consistent answers are received;

Consistency – refers to the integrity of issues within a single interview, so that an informant’s answers on a given subject remain consistent.

Equivalence – tested by the use of substitute questions with the same meaning throughout a single interview, or by parallel observation of more than one researcher.

Reliability of the current research in accordance with the given criteria might be checked in terms of consistency: the issues within a single interview always remained integral, and informant and interviewer had a mutual understanding of the concepts that were discussed. This allowed avoiding the equivalence check. Stability check was partly applied, because there were several discussions with the Respondent 1 at different time points, and consistent answers and opinions were received. The case study has a descriptive character due to the nature of the research question; therefore the data collected mostly had factual character, and repetition of certain facts by different respondents also serves a reliability check. Thus, current qualitative research can be reasonably called reliable.

Hammersley (1992) defines a qualitative viewpoint of validity: “An account is valid or true if it represents accurately those features of the phenomena that it is intended to describe, explain or theorize.” There seems little difference between the definitions of reliability and validity perspectives. However, the validity of the current research, according to Hammerley’s definition, can be checked by how accurate findings and conclusion answer to the research question.

However, these methods seem to just standardize approaches to qualitative interviews or observation studies, whereas it might be inappropriate in terms of highly variable qualitative data collection methods (Long and Johnson, 2000).

Myers (2013) suggests more applicable guidelines for evaluating case study research. He highlights irrelevance of a sampling logic for case study research justification, arguing that using three cases is no better than using one case, because sample size is still very small, and the sample itself from the beginning is not truly random. It is possible to generalize from a single case to the theory – a case study is not one occurrence of a much larger random sample. Thus, for business research cases evaluation author offers the following criteria. The case study must be:

- *Interesting*, meaning that it should tell the researches in a certain field something new they did not know before. Current research does create a new knowledge, providing the example of a particular company and particular case of NPD. The issue of marketing research in NPD is not new, and there have been a lot of previous academic discussions on it. However, explanatory case study serves to exemplify and test theory, so this particular research might provide a particular example of how marketing research data is synthesized by food industry company in NPD.
- *Display sufficient evidence*, for instance include supporting quotations from informants, it would make case more alive. Chapter 6 of the research is dedicated to empirical analysis; a lot of original quotations from informants are included there.
- *Complete*, meaning that everything possible to say about case has to be said after all the relevant evidence supporting (or disapproving) the theoretical point has been collected. Since current research is a Master's Thesis, there certainly are some limitations to the research; however, the degree of completeness is determined by how the research question is addressed, and whether the objectives of the study are achieved.
- *Consider alternative perspectives*, such as different viewpoints, theories, or disagreements between the informants. The case should reflect real life,

which is never neat and tidy, neither should be the case study; therefore some evidence that not necessarily support own theory might be included. Different viewpoints are presented as in the theory part, as well as in the empirical part, where informants express different opinions on the subject.

- *Written in an engaging manner*, some creative energy during writing would be great, so that the readers would be enthusiastic about the case. This criteria is quite objective, however the efforts to make the research interesting to read were certainly made.
- *Making contribution to knowledge*, meaning that the research case can be generalized to one or more theories or concepts. Current research can provide theoretical contribution to the NPD theory, providing a company level real life example of how marketing research is used in food NPD.

6 EMPIRICAL ANALYSIS AND FINDINGS

This chapter is seeking an answer to the research question defined in section 1.3 (research objectives and questions) through empirical analysis of the NPD project in the case company with the support of the literature revised in Chapter 2-4. Firstly, the profile of the case company and details of the case project are given; then, NPD process in the case company is described and reviewed, and finally empirical analysis of the project in relation to the research question is implemented.

6.1 Case company

Case company is a big food industry player, with bakery business being one of the key business activities. Current research concentrates particularly on the bakery business constituent of company activities. The company is taking leading positions as a bakery company in several international markets. Bakery export destinations count 20 countries around the world; in addition company has own bakeries located not only at the domestic market, but also abroad.

Key directions of company's current strategy could be summarized as following:

1. Securing company's ongoing competitiveness in order to create value and generate faster growing profits by continuous investment in and developing the company's existing businesses.
2. There is a huge potential in company's brands — they are trusted and respected. So, company's brand strategy is completely built on consumer insight, and concentrates on delivering to buyers what is promised.
3. Intention to remain best-in-class to expand and develop within sectors, as well as strive to a less dependency on the domestic market by growing in all the businesses outside the home country.
4. Creating and maintaining a high-performance corporate culture together with committed and competent personnel.
5. Focus on front-end solutions as a response to the changing business environment.

6. Snacking —important area of development, as it is a strong megatrend in a food industry.
7. Providing the growing segment of conscious consumers with natural, healthy, responsibly produced and locally sourced products; developing even further in producing ethical and sustainable products.

Thus, updated strategy takes into account pertinent shifts in consumer behavior and current economic setting. Company remains strongly consumer-focused and partners-oriented, concentrating on fresh and frozen products and aiming at growing into a category leader in home markets. (Anonymous, 2015)

6.2 Case project

Following current company strategy, new project has been introduced at the Q3 of year 2014. The main goals of the project are to ensure leadership in bake off and to crystalize and develop strong offering in consumer-frozen category: dough and bread. Grow drivers supporting development from the consumers point of view would be pursuing extra freshness and indulgence of the bakery as well as buying local, natural and authentic food, all of which corresponds to the company current strategy. From the retailers' perspective, main drivers would be key accounts' switch from pre-packed towards freshly baked; growing importance of convenience stores; production line booming; needs for new efficient shopping solutions (Anonymous, 2015b).

The situation with home-baking retail nowadays is so that the offering is spread across the store, there is no single "home-baking" leader, and therefore there is an opportunity to become one. Modern use of online mediums and social media supports the product idea, as it drives the change in baking behavior by bringing new dynamics through online inspiration, encouraging and willingness to share. Wide availability of recipe know-hows from celebrities, bloggers and other web resources enable to bake at home, try new things and spread the trend around.

Nearby categories, such as kitchen utensils, cooking magazines and books are growing their shelf space, empowering overall trend for home baking.

Company research (Anonymous, 2015b) has shown that that home baking innovations focus on convenience, offering ready baked products, ready-formed dough, ready to bake dough and mixes, combi-baking sets.

Thus, based on the market trends in the countries of company operations and its proven potential, the project was approved due to the high market attractiveness and perfect fit to company's strategy.

The table 4 below summarizes case project information.

Project Goals	<ul style="list-style-type: none"> - Developing a new product category of a branded premium segment as opposed to existing traditional and cheap non-branded products or product lines with a clear identity problem; - Developing one solution that is flexible enough for different local retailers and markets needs; - To create an inspiring concept for home-bakers as an alternative for baking from scratch or baking mixes; - To satisfy home baking needs at consumer's home.
Business Opportunity	<ul style="list-style-type: none"> - Creation of a new category and becoming an innovation leader on the key markets, followed by other company markets; - Keeping a strong focus on innovations to "shake up" an "uninspiring" category.
Product categories	<ul style="list-style-type: none"> - Pastry: sweet and savory; - Bread: loaf, buns, bread, and other.
Key Consumer Insights	<ul style="list-style-type: none"> - Level of activity in the baking aisle does not reflect consumers' level of enthusiasm and lacks easy navigation. - Consumers' passion for baking is not emotionally met by current brands – they would be willing to pay for quality products that also inspire them. - Category does not yet acknowledge that baking is not just

- about "with children" or "for children", but an adult hobby.
- Current decoration products focus on visual aspect rather than taste and are considered childish – they do not help to reflect one's personality or lifestyle through baking.
 - Convenience, quality ingredients and taste drive choices:
 - o Convenience is about portion sizes, easy to use packages; clear communication on the usage purposes guarantees success.
 - o Quality means taste, simple ingredients, short ingredient lists and freshness.
 - o Taste enables sense of accomplishment and is sought after by baking yourself (know what goes in) but also through brands that are trusted to deliver taste.

Table 4. Case project information summary (Anonymous, 2015b)

6.3 NPD management during the case project

The importance of developing own NPD system by organization, depending on the industry and size of the company has been emphasized in the reviewed literature (Trott, 2012; Shepherd and Ahmed, 2000). The case company, being a major player in domestic food industry has developed own innovation process model with specification of functions' roles at the different stages (Anonymous, 2015a). Figure 11 represents the funnel-alike innovation process scheme developed by the case company. P-diamonds mark gates of the NPD process.

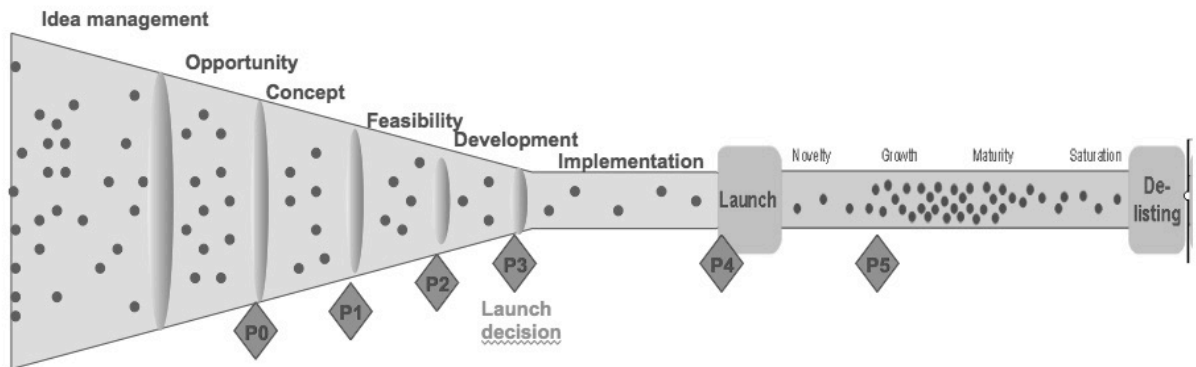


Figure 11. Innovation process in the case company (Anonymous, 2015a)

The company documents and the case project insights, provided by the respondents are used to analyze and describe below the NPD process in the case company:

- I. At the **idea management** stage possible new ideas emerge based on corresponding marketing information.
- II. **Opportunity** stage tests different ideas and develops some of them into the strong opportunities, with regard to the market and manufacturing capabilities.

“Once marketing department realizes from the research that certain category is growing on the market and consumer is willing to pay more for it, they conclude that the category might be interesting and profitable for the company. Based on these conclusions, a long-term (5 years ahead) plan for introduction of novel products is composed. New products and innovations plan becomes a part of a general marketing strategy for the company. The plan is corrected yearly, depending on the market reality” (Respondent 2)

- III. At the **concept** stage, one or several possible concepts for the new product are defined, market research is implemented and business case draft is presented. The NPD process itself starts here.

“Marketing function takes responsibilities first — it creates the concept for the new project, defines the target audience, and the situation for the product need and consumption. When the project is global — as the case project is — several possible concepts are developed and tested; when the most successful concepts are chosen, the project manager is makes a presentation for the board of executives at the gate meeting” (Respondent 1)

“We follow the timetable precisely: start of the strategy development starts in spring; then long-term plans are created; based on them, marketing function briefs R&D by filling in specific requests. On the basis of these requests R&D starts to develop a product.” (Respondent 2)

- IV. By the end of a **feasibility** stage, the objective is having a clear understanding what is needed to carry out the project and how does it affect the business case. Project manager takes responsibility to run the project, comes up with a timetable for feasibility with different functions and ensures that results are ready in time, as well as analyses the feasibility results. Project owner is responsible for business targets update based on feasibility results.

“Upon the project approval at the gate meeting, the feasibility stage begins. At this stage, other functions join the NPD project: R&D, production, purchase department, logistics, finance, and sales. The possibility of a product realization is checked. Project manager questions every function, e.g. what’s required from the logistics – whether new transportation means are needed, and the transportation conditions are satisfactory for the project needs; the purchase department reports whether any new or unique raw materials are needed, etc. Based on this information project manager reports at the following gate meeting, whether investments are needed and what kind of.” (Respondent 2)

The most important issues at the feasibility stage are: production possibilities, investments needed, defining the contract manufacturers if needed, resource availability; new materials needed; what is needed for Go-To-Market plan; total costs of the project; deeper understanding of risks and mitigating activities; update of product and package brief.

- V. The aim of the **development** stage is to develop the offering and secure its production possibilities. Project manager together with the project group is responsible for planning the timetable for development as well as ensuring that the project is ready for the following gate decision.

“At the next stage — development stage — R&D plays the key role. The function leads the project: it implements manufacturing trials, sends the recipes and formulations for the estimations to the financial department and then to marketing, for the profitability estimations. By the end of the stage — when manufacturing trials are implemented, package is approved — the final gate meeting is happening where the launch is agreed.” (Respondent 2)

The most important actions to be done are: develop the offering; ascertain that production possibilities are in commission; approve the availability and quality of all the materials; planning of the implementation phase and updating risks (and mitigating activities); go-to-market plan: development of the launch package; update the business case.

- VI. **Implementation** stage has several objectives, namely: to implement the product to production and start actual manufacturing; realize Go-to-Market plan; hand over the product to production after some production batches; evaluate the project results. At this stage project manager still oversees that the timetable is followed, but all the team members are responsible for their parts of the project according to RACI (Responsibility Assignment Matrix). Project owner together with Go-to-

Market project manager and local Go-to-Market teams are responsible for the business case and launch. After gate 4 responsibilities are transferred back to project owner alone.

- VII. After the **launch**, success of the product is followed one year, which is a post launch stage. Product success is tracked from business point of view and production point of view. Results are summarized, as validation and project owner is responsible for post launch information.

“Once the project is launched, the post-launch phase starts: the product officially becomes a new product. It remains a new product for 12 following months. Monthly executive board revises whether the plan for new products is met in terms of sales and volumes.” (Respondent 2)

Understanding role of the functions in the company in the NPD and innovation process is significant for discussion of cross-functional collaboration and marketing-R&D interface during product development process. After analyzing company documents (Anonymous, 2015a) relevant company functions' role (Finance, Sales, Supply Chain excluded) in the NPD process are depicted and summarized in the Figure 12.

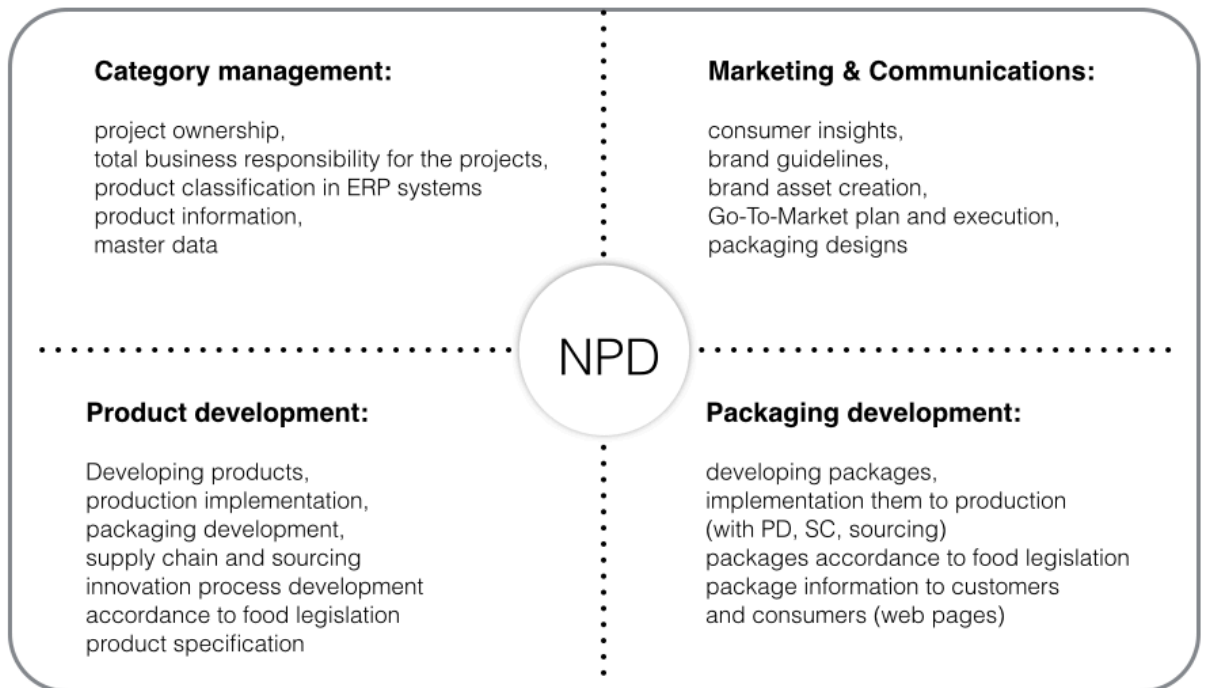


Figure 12. Company functions' roles in the NPD process

6.4 Marketing research data gathering, synthesis and use

After the case project is described and its development stages are analyzed, now we could take a closer look at how marketing information influences and shapes the NPD process. And thus, answer the research sub-question 1:

How to gather and synthesize data from the multiple marketing research sources in the NPD process?

The amount of marketing research sources, depending on a project can be countless, so in order to implement more focused research, the respondents were asked to name 3 most important in their opinion marketing research sources for the case project. Both of the informants that belong to the marketing side of the project agreed that the most important marketing research source for NPD is *trends monitoring*; it is followed by *retail panel audit*, *consumer insights* and *competitors' analysis*. The R&D-side informant — chief technologist — couldn't name any particular marketing research source that her department is using during the development of a new product.

General source of a marketing data for the NPD projects is the researches and reports implemented by market research companies that are released depending on a category monthly/once in 2 months/ every half a year.

The abovementioned particular marketing data sources are important, especially at the initial stages of project, because they help to detect the potential for the product category. This being a prerequisite for the further product development, the significance is obvious. Normally, later in a project timeline, project-specific ad-hoc researches are carried out (Respondent 1).

Let's take a closer look at each of the sources and analyze their role in the case project.

Trends Monitoring

Market research (MR) companies (Nijssen and Frambach, 1998) are argued to have an important role in the NPD research, improving performance of innovators, reducing risk and facilitating new product success. For these reasons, case company uses MR companies' reports on a constant basis. *“Such companies as GIRA and Nielsen provide globally monitored megatrends information and reports. Naturally, the company is interested in research implemented at the key markets of operations above all. At the yearly meetings megatrends are discussed in terms of integration to the company innovations. The information on megatrends is stored in commonly available sources.”* (Respondent 1)

Following the triangulation method, trends monitoring research was studied among other documents, provided by the case company, and the trends relevant for the case project were summarized and visualized in the form of presentation (Sharenkova, 2015a). Trend overview (Mintel Group Ltd., 2015a; 2015b) showed a strong tendency of home cooking and baking particularly becoming a hobby. Relevance of the trends, presented in the Mintel report is showcased in the Table 5 below:

Global trends	Reflection in the case project concept (Anonymous, 2015b)
<i>Convenience</i> for gourmets: consumers are looking for convenience, such as time and cost saving, without sacrificing taste quality and appeal => an increasing demand for home cooking products, new DIY products for home baking from scratch, with focus on clean label, transparent package, trendy recipes.	Convenience in portion sizes, easy-to-use packages, clear communication on the usage purposes, guaranteed success of the outcome. Taste enables sense of accomplishment and is sought after by baking yourself and also through brands that are trusted to

	deliver taste
<i>Clean and clear label:</i> desire for more transparency from customer, a need to know the source of ingredients origin and understand what is in the product consumers eat.	Quality in taste, simple ingredients, short ingredient lists and freshness.
Health is not a primary focus within indulgent segments of baking	
<i>Marketing to millennials</i> importance: the most socially-engaged and tech-savvy generation => an absolute must of social media and online communication integration into the marketing activities	Making use of how online and social media drive the change in baking behavior: new dynamics through inspiration and sharing Recipe know-how from celebrity chefs in addition to heritage resources => use of online channels for the product category support: recipes, hashtags.
Reminding people the benefits of baking such as a relaxing recreation activity, the way to ensure the use of quality and natural ingredients, a possibility to <i>innovate</i> with new and stand-out formats.	Consumers' passion for baking is not emotionally met by current brands. They would be willing to pay for quality products that also inspire them.
Fresh look at <i>frozen</i> products: focus on freshness, wider choice varieties available. New frozen categories: soups, sauces, finger foods, bakery, drinks. Boring and budget image of frozen products is switched to innovative, premium-class and retaining nutritional values	Presence of frozen components in a new bakery category, emphasis on freshness, time-efficiency and easement in cooking of complicated bakery recipes.

Table 5. Reflection of the global trends in the new product concept

Retailing Audit

Retail panels measure what consumers buy and their buying behavior in general using retailer scanner-based sales information and causal data gathered on a weekly basis from retail outlets. The information gathered supports marketing decisions concerning what has to be changed in a product sales strategy and why.

Case company obtains the international retailing audit data from the market research companies Nielsen and MEMBA internationally, and at some particular markets — from the local market research companies. Data is collected from pilot points and is extrapolated to the whole market. Audit information is updated depending on the frequency of panel updates (different panels are updated monthly/once in 2 months/half-yearly).

“Retail panel information helped to discover what is already on the market, and how new product could successfully compete against already existing categories. Also, retail panel data gives the project team an idea whether there is a market for a new product.” (Respondent 1)

Retailing audit resulted in finding that at the moment home-baking retail offering is spread across the store, and there is no single “home baking” leader present at the stores at the key markets of company operations. The main home baking related categories that are currently offered: basic ingredients, decorations, accessories (utensils, cookware, books), and pre-prepared bakery. (Anonymous, 2015b) Thus, the potential of the unique offering – a new category that would get across already present categories was revealed. The data gathered through the retail audit has noticeably been reflected in the case description (section 6.2, as well as in the appendix 3 – the product concept). Thus, it can be deduced, that the analysis of the retailing audit is critical for the justification of the important decisions at the opportunity identification as well as at the concept generation stages.

Consumer Insights

Case company receives consumer insights data from market research companies, such as Euromonitor, Future foundation, and other. Yearly consumer insights are discussed reconsidered at the meetings where category manager, marketing director and Business Area manager discuss relevant for the bakery business platforms. The data is formalized and visualized in tables, pictures, text, and charts and available in common access for the company workers as a particularly designed document, so when the new product development is started – they are available for use. (Respondent 1)

Consumer insights research allows figuring out what substitutes already exist on the market, what consumers prefer, what is relevant and would be demanded. At some markets, where retailing audit data is not available – consumer panel methodology is applied, for instance — a household audit: representative sample of households within relevant geolocaion is taken and participants are asked to fill in the diaries regularly, about their shopping and consumptions patterns, reasoning behind a buying decisions and consumer behavior. Results are extrapolated to the whole market.

Summary of the key consumer insights gathered by the case company and the main outcomes for the case project are presented in a Table 6 below:

Consumers' perception of home baking	<ul style="list-style-type: none"> - Traditional household activity, especially for women - The most important value is to get positive emotions - The main motive is to deliver the best taste or indulge loved ones, to be appraised - Consumer do not like having risky experiments with new products or recipes, because of a fear of failing - Final personal touch is the most important in the process - The least preferred baking stages: dough mixing and product forming
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What consumers currently use?	<ul style="list-style-type: none"> - Semi-ready products (shortcuts) are used in baking – there are no big barriers to using it, nevertheless consumers tend to choose healthy products without artificial additives => clean label would be potentially interesting; - Shortcuts are used in the case where it is challenging to make something by yourself, when it saves time and deliver a guaranteed result; - Consumers are open to test new product types with obvious or significant advantages that would make the baking process more joyful and easy.
Outcomes for the case project	<ul style="list-style-type: none"> - Emphasis on convenience, time-efficiency by offering semi-ready solutions, attractiveness of a clean label. - Home Baking ingredients category is underdeveloped and non-branded yet => strong opportunity for the case company and it's strong brand to become a category leader. - There is no clear understanding among consumers about what new products for baking do they need => company will have to create a new demand in the consumers' mind.

Table 6. Key consumer insights for the case project

Online research

There are qualitative and quantitative researches designed specifically in an ad-hoc manner, once the concept of the product and the project goals have been defined more clearly.

Online research on the bakery trends was implemented in order to recognize strong trends in home baking by analyzing online communities. The research was

focused at popular recipes and trends in flavors and ingredients use that are a subject of vivid discussions and interest of consumers present online.

The Table 7 below presents results of the online research: trending recipes and fashions in flavors preferences, that are popular at the key markets the project is designed for.

Trending home baking recipes (Mutual at both markets)	Trending ingredients and flavors
<ul style="list-style-type: none"> - Cheesecakes - Carrot cakes - Mud cakes, lava cakes - Brownies - Cupcakes - Muffins - Macaroons - Hybrid-concepts brookie (brownie-cookie) brownie-cheesecake 	<ul style="list-style-type: none"> - Use of unconventional flavors and colors: ginger, lavender, lavender, violets, matcha tea; - Country-specific flavors: licorice, lingonberry, eucalyptus-chocolate - Trending flavors for pies, cheesecakes, cakes, muffins: lemon, chocolate, blueberry, cottage cheese, banana, coffee and cinnamon - Trending seasonal flavors: pumpkin (pumpkin pie, pancakes) - Apple pie, cinnamon buns – classics that are always on trend - Use of alcohol in bakery (especially cookies, cakes) - Interest for new recipes from another countries

Table 7. Results of the online research, summarized

The online research provided useful insights that are to be taken in account when defining product features, so that the demand for it would be guaranteed. The case company has used the findings provided by the online research for justification the flavor choices of the new product category, as well as a source for

the social media and online strategy that will provide the popular and trending recipes for the brand's online-followers.

6.5 Marketing/R&D interface in NPD

Both, marketing and R&D department (Respondents 1-3) expressed that informal relationship between functions is healthy and effective. This evidences that inter-departmental collaboration that is characterized by Hussain (2010) as strategic alignment through collective goals, a shared vision, joint rewards along and informal structure is successful, and hence the overall spirit of cooperation is present. However, interaction-based philosophy of marketing/R&D interface is more applicable and important for the timely and strict project implementation as it favors formal communication.

“Involvement of the R&D function to the product development starts with the request for the development of the products needed for the case project. The company is a certified company, therefore there are specific standards, accordingly to them the formal request is filled in. Based on these formal requests, R&D starts to develop the products in the laboratory, and after that marketing department implements the tasting. Based on the tasting results, the development direction is approved or corrected accordingly. If needed, the product is developed further, after that the opportunities for manufacturing the product are checked.”
(Respondent 3)

During the case project functions interact the same way as during any other projects: at the very beginning R&D receives the tasks from marketing, there might be some comments on the product development from the technology perspective. Product manager explains his/her vision on the product, and during the discussion the product features that would satisfy product manager, and at the same time could be developed and realized at the production department are worked out.

R&D takes a very active part in the NPD process particularly at *the idea creation stage*. Thus not only marketing function creates the idea — it is created in collaboration of two functions. When the long-term plans are designed, there are specific graphs in the forms for the R&D function, where R&D specialists define whether this or that concept can be realized from the technical viewpoint.

“The marketing research information that R&D receives from the marketing takes form of the requests for the development where basic requirements such as appearance, mass and filling are indicated. At the product development meetings, marketing function gives a presentation to R&D, suggesting a plan for the product development corresponding to the company strategy with the extended comments, such as approximate look of a new product, ratio of the filling to pastry, etc. in great detail.” (Respondent 3)

Monthly the project manager gives R&D a presentation on the product. With the time the information gets more detailed, R&D learns about the present at the market competing products. R&D department representative from the case company is absolutely satisfied with the amount, quality and depth of information that marketing function communicates to them.

The interaction of two functions is regular and tight: there are a lot of meetings besides gate meetings; at some points of the product development they happen even on a daily basis. Chief technologist is in a close and constant collaboration with the product manager, communication happens via phone, email, in person.

Before the gate meetings, inter-functional communication happens at the product development meetings (once or twice a month), where project manager from the marketing function, gathers 1-2 representatives of each function involved. Operational questions are discussed at these meetings, project by project: timing, stage progress, what needs to be done. Responsible representatives report on the progress, then timing is adjusted accordingly. If the project goes according to the plan, project manager announces about the approaching gate to the following stage.

The theory reflected that the importance of the information received by functions from each other is not equal. Thus, the information that R&D receives from marketing relates significantly with project success, which is explained by dependence of R&D on inputs from the commercial side of the company to accomplish sufficient progress. Meanwhile information from R&D to marketing has more of an informative nature rather than prerequisite for the marketing activities. (Moenaert et al., 1994) However this does not necessary result in deeper understanding of R&D personnel of the marketing activities, as the empirical analysis shows. R&D representatives are very specific about concrete information that is needed for the product development, which is a simplification and adaptation of all the marketing research activities that has been implemented.

7 DISCUSSION AND CONCLUSIONS

The final chapter summarizes the empirical findings and concludes the study. It provides answers to the research questions and reflects the overall objectives of the thesis. The chapter firstly presents the visual answer to the main research question, and following paragraphs open it up in a greater detail, addressing the research sub-questions, stated at the beginning of the thesis.

7.1 Main findings

This thesis was designed to provide a real life example of how marketing research data is used by different functions in the NPD process by using a case study method. Figure 14 below visualizes the main findings of the thesis and the answer to the main research question:

How marketing research data from several sources is integrated and used by different functions in the company in the NPD process?

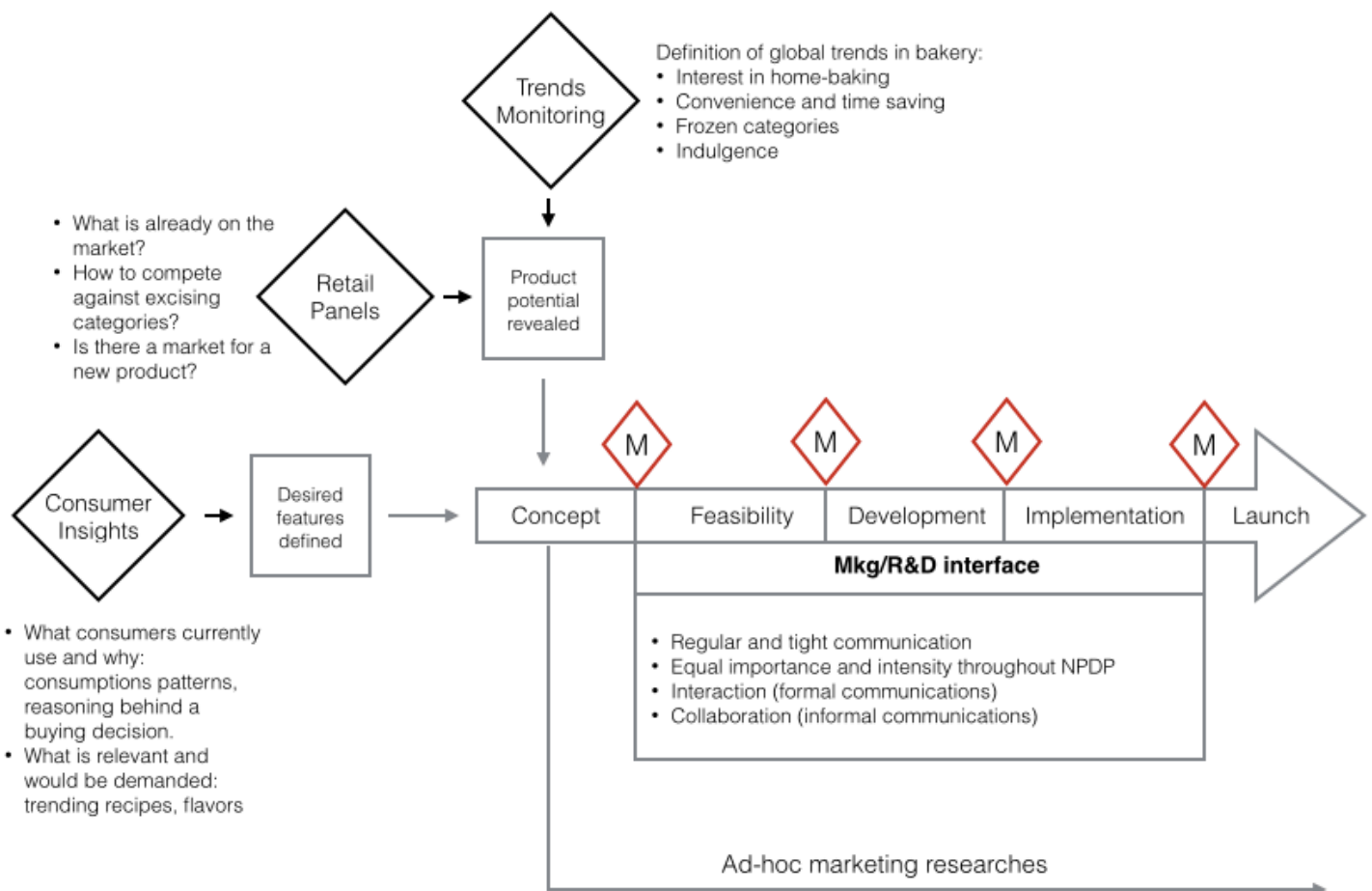


Figure 13. Main findings of the thesis

The clear picture of how marketing research data was gathered, analyzed and used by the case company in the case project, as well as how cross-functional communication happens and facilitates the NPD process is the result of the research.

Marketing research is one of the key functions of marketing department in the NPD and it is particularly important for the food manufacturers, who are constantly seeking to add value to their products in order to increase profit margins. NPD enables to add value, command a higher price and therefore keep competitive positions.

Food industry companies have to be extremely critical about information, methods and technique they need for developing a successful new product. The huge amount of marketing research data is available and gathered by companies nowadays. However, the empirical analysis has shown that the most important, fundamental and major sources that ensure and shape a successful development of a new food product are: trends monitoring, retailing audit and consumer insights.

The most demanding NPD stage for the marketing research is the concept stage (Clow and James, 2014), and this stage requires gathering, synthesizing and analyzing the most of the marketing research data.

How to gather and synthesize data from the multiple marketing research sources in the NPD process?

The case study research resulted in the knowledge that marketing research data is mostly gathered through the external market research companies that regularly provide comprehensive marketing research reports. There was a discussion in the theory part about growing importance of the market research companies (Nijssen and Frambach, 1998). This is explained by need for carefully designed, aimed and implemented research as an essential prerequisite for the successful product development. Even large corporations that possess resources for implementing

own marketing researches, tend to buy the marketing research data from MR companies in order to use it for the NPD planning. Importantly, reports and marketing research data sets purchased from the company serve as a general base for NPD planning, and used in every NPD project,

The informants from marketing function, directly involved in the NPD process, provided valuable information on the marketing research sources importance. Both of the marketing function representatives agreed on the following importance hierarchy:

1. *Trends monitoring*
2. *Retailing audit*
3. *Consumer insights*

R&D representative — chief technologist — couldn't name any particular marketing research source that her department is using during the development of a new product. This fact raises an issue of comprehensibility in cross-functional communication that is discussed further on.

Trends monitoring, retailing audit and consumer insights data is gathered by external marketing research companies with particular regularity. At the yearly meetings megatrends are discussed in terms of integration to the company innovations. The information on megatrends is stored in commonly available sources. It is a must-condition in the case company that NPD projects would meet the megatrends outlined in these reports. The role of the trends monitoring (including bakery industry trends) for the case project was in recognizing such global trends as: *growing interest in home-baking, seeking for convenience and time saving, changing perception of the frozen categories, clean labels consciousness, strong integration of online marketing communication* – that resulted in the new category potential reassurance.

Retailing audit measures what consumers buy using retailer scanner-based sales information and causal data gathered on a weekly basis from retail outlets. The

information gathered supports marketing decisions concerning what has to be changed in a product sales strategy and why. The role of this marketing research source for the case project was in defining whether there is a market for a new product, how to compete successfully against already existing categories. Thus, the absence of a single home-baking category leader was revealed, which again, reassured the potential for the new category.

Consumer insights research allows figuring out what consumers already use, how and why. The consumer insights data together with consumer panel audit resulted in important understandings of who are the target customers of a new category, how do they perceive home baking, what products do they currently use, what do they bake and on what occasions. All these insights are extremely important in order for the new category to be appealing, relevant and interesting for the consumers.

Thus, these three marketing research sources that were marked as the most important, significantly shape the new product concept at the concept generation stage of the NPD (Edgett and Cooper, 1985). They helped to reveal the potential for the new category and to shape important features and the concept (see Appendix 3) of the new product.

What are the main patterns in marketing/R&D communication and marketing research information exchange during NPD?

NPD has always been perceived and researched as a cross-functional teamwork process, and higher level of cooperation in NPD team was proved to result in better NPD performance. It is also proved by previous researchers that communication between functions, particularly between marketing and other functions, is among the most important issues contributing to the commercial success of the new product in firms. (Moenaert and Souder, 1996; Ruekert, Robert W. and Walker, 1987)

The empirical research resulted in finding that marketing and R&D functions collaborate and communicate tightly throughout the whole NPD process up to the launch. The importance of exchanging the insights with each other is crucial, as the connection of the consumer needs and demand information from the outside has to be completed with the inside information on the technical capabilities of the R&D in order to develop a common vision of the new product.

The importance of both formal interaction and informal collaboration has been stressed in the literature (Hussain, 2010). The case company provides a great example of both: interaction-based communication happens via regular formal meetings, conferences, documents exchange and other managers-initiated interactions. The exchange of the marketing research information happens in terms of interaction-based communications: at the regular presentations, product development meetings, stage-gate meetings, via formal request and other written communications.

Informal collaboration takes form of a shared vision and understanding of the mutual goals and company strategy, which enables positive and motivating organizational culture within the cross-functional team.

7.2 Managerial Implications

Current research is more likely a relevant research rather than rigorous (Myers, 2013), as it is relevant to business practices, rather than scientific standards. Thus, its practical contribution is more noticeable than theoretical contribution.

As the case company is among leaders in domestic food industry, it might be concluded that the system of marketing research data gathering, synthesis and analysis works fine there. The success of the case project might be estimated only after the launch, which has not taken place yet. However, company practices might be a source of benchmarking or serve educational purposes in the issue of marketing research in NPD.

Food industry is dependent on the consumer to a very high extent, therefore it is essential to implement thorough marketing research in order to reveal the potential for the new product and avoid possible future losses. However, marketing research implementation depends a lot on the company size, resources and goals.

The case company provides a great example of how marketing research data is gathered, synthesized and analyzed at the early stages of NPD. The importance of keeping focus on a bigger picture is emphasized: constant monitoring of changing trends of an industry, as well as in consumer behavior and modern technologies provides a complex understanding of where NPD strategy should go. For instance, integration of online marketing communication and extensive presence of social media content related to the new product that has not been launched yet, exemplifies a complex approach to the modern marketing communication channels and forward thinking. The ultimate challenge in NPD management today is the integration of strategy, process, performance measurement, and importantly, continuous improvement.

The importance of a robust cross-functional team in NPD cannot be underestimated. From the managerial point of view, encouraging the collaboration spirit, and cultivating a positive and motivational environment within the organization and product development team is essential. Some of the tools facilitating better integration between R&D and Marketing are: personnel rotation, informal social systems, physical facilities design and relocation, incentives and rewards, organizational structure, and formal integrative management methods. Its application will result in better interpersonal communication, and hence better level of information exchange and its comprehensibility.

The issue of comprehensibility however is controversial in the context of marketing/R&D interface. The information that R&D receives from marketing relates significantly with project success, while the information marketing obtains from R&D did not (Moenaert et al., 1994). However, the R&D representative of the case project could not name the marketing research sources their department use

in the development. Supposedly, this kind of information is irrelevant for R&D professionals who request very specific information needed for their work. However, current research might serve the educational purposes and increase understanding of NPD process and importance of the marketing research in it.

7.3 Limitations and further research

Master's theses are never perfect, and certain aspects could have been developed better than they are in order to provide more significant theoretical contribution. One of the research limitations is related to the research method: the results of the company level analysis do not allow the generalization of the findings, so current research could be criticized for nonrepresentativeness and subjectiveness. This also is related to the limitation by the amount of informants used for data collection – naturally, greater amount of interviewees would result in deeper insight. However, the explanatory nature of the research required mostly descriptive information from the informants, which is less likely to be subjective.

The case represents a snapshot of one point in time; the fact that the project is not launched yet limits the possibility to follow what actual outcomes and application of the marketing research data on the final product are. The empirical study of the correlation between the marketing research implemented for the project and its commercial success might be interesting.

Future research should cover the marketing research sources synthesis into NPD process in a number of other companies from within the industry in order to be able to generalize findings to the broader theory. Repeating patterns of the marketing research data synthesis in different companies of certain industry could provide important applications for the practitioners.

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APPENDIX 1: SEMI-STRUCTURED INTERVIEWS WITH MARKETING AND R&D REPRESENTATIVES

Topic: Marketing Data gathering, use, Marketing and R&D interface, NPD process

Time: 30-45 minutes

Medium: Skype, Phone

Sample Size: 3 managerial positions

1. Your position in the company, how long have you been working there?
2. Tell about your involvement in the case project. (Areas of responsibility, role, specific tasks that you've carried out, what function do you represent). What stage the project is currently, and how your function is involved in NPD at the moment?

MARKETING SOURCES:

1. Does the case company have a specific system/interface of gathering the marketing information? Describe how the process goes.
2. What are the most important of marketing information sources and methods that were used in collecting the marketing data for developing a new product (category) and for the case project particularly? (name 3)
3. How each of them affected the decision making for the NPD project? Describe in details: what happened after this information was gathered? How marketing team is processing it?
4. Was all of the information gathered of some use, or not? If not – what kind of information, why?
5. If we speak of particular data: *bakery and food industry trends monitoring report, online research on bakery trends* – what was its role in the project, importance, what happened to this information once gathered?

MARKETING&R&D INTERFACE:

1. How would you describe the relation between the R&D and marketing personnel during the development of this project? What kind of connections and interactions are there, at what points?
2. How the decisions are made in the case company during NPD projects (meetings at each gates, go/no-go decisions) who is involved in making decisions? What do stage-gate meetings look like? How communication is happening between R&D and marketing reps?
3. What marketing research information R&D receives from the marketing function and vice a versa?
4. Provide a particular example of the marketing information (from Q3-6) use by R&D department, how is it integrated in the NPD process. What stages of NPD involve the highest interaction between Marketing and R&D functions?

APPENDIX 2: CODEBOOK FOR THE COLLECTED DATA

Marketing Sources (importance)	<p>CONSUMER INSIGHTS</p> <ul style="list-style-type: none"> - Euromonitor, Future foundation, other companies provide consumer insights data. Scandinavia, Finland, Russia (European part) is being monitored. - Yearly, consumer insights are being reconsidered at the meetings where category manager, marketing director and Business Area manager discuss those platforms, what of them are relevant for bakery.
	<p>TRENDS MONITORING</p> <ul style="list-style-type: none"> - GIRA, Nielsen collect megatrends, monitored worldwide. We are interested in Scandinavia, Finland, Baltic countries, Russia. - Yearly meeting, discussion, but no priorities, as they are MEGAtrends. Stored in commonly available sources.
	<p>RETAILING AUDIT</p> <ul style="list-style-type: none"> - Nielsen or MEMBA; in Russia – Opinion; Walk Line. - Panel research, supported by constant periodical data collection from pilot points. Extrapolated to the whole market. Panels types: retailing, cash-and-carry, HoReCa, consumer panel (used in the countries where retail panel cannot be used, e.g. in Finland). There are 2 strong retailers and by manipulation and mathematical calculations from the retail panel you could easily go to the profitable operations, so it is prohibited to use the retail panel. - Consumer panel - used for the bread category in Russia (no company carrying out retailing audit) => Household audit: representative sample of households is taken (relevant geolocaion - Moscow, St-P, North-West region), participants fill in diaries and write down whatever they buy, consume etc. Results are extrapolated to the whole market. - HoReCa panel (hotels, restaurants, catering). All the retailing catering outlets are monitored, its turnover and categories that present. Audit information is updated depending on the frequency of panel updates (monthly, once in 2 months, half-yearly).
	<p>OTHER</p> <p>In the categories where case company is not so active, it buys s bake-data. This panel data covers a past year information, not freshly gathered. Used to understand a long-term trend for categories, how to build a category strategy or to asses the category and its attractiveness (e.g. porridge). The rest are ad-hoc researches, implemented for a specific particular topic.</p>

	<p>IMPORTANCE:</p> <ol style="list-style-type: none"> 1. Trend overview 2. Retail panel 3. Consumer insight <p>All together – the potential was detected. Later on – project-specific researches. Category is non-existent, therefore project was aimed at the creation of a new category</p> <ol style="list-style-type: none"> 1. market trends monitoring 2. consumer insights 3. competitors' analysis <p>R&D couldn't name sources.</p>
<p>NPD process</p>	<p>New product projects MUST meet universally accepted MEGATRENDS, otherwise there should be a special ground why this project is launched.</p> <p>The innovation process: Once we realize that certain category is growing on the market and consumer is ready to pay more money for it, we make the conclusion that the category might be interesting and profitable for us.</p> <p>Basing on it, we create a long-term plan for introduction of novel products (5 years ahead). All the new products and the plan are coming out of a strategy that is to become a general marketing strategy for the company. The plan is being corrected yearly, because the market reality is that we have to adjust the plan sometimes, and sometimes not.</p> <p>As it's mentioned in the presentation (FIGURE), there's a specific timeline: spring – start of the strategy design; then long-term plans are being created and based on them we brief our colleagues from R&D in a form of specific requests that we write for them.</p> <p>On the basis of these requests R&D starts to develop a product. Then there are several stages of the NPD process:</p> <ol style="list-style-type: none"> 1. Marketing function goes first, it creates the concept of the NP, defines the TA, situation of consumption. Then the concepts (or several concepts if the project is big) are tested. E.g. in a project case – Global project, there were several concepts, it was tested, then the best ones are chosen and tested again. Once the best ones are chosen and tested, the project manager is approaching the gate – a meeting, where the project is presented to the board of executives. <p>Once the project is approved, the feasibility stage begins. At this stage, other functions join the NPD project: R&D, production, purchase department, logistics, finance, sales. The possibility of a product realization (=feasibility) is being checked. Project manager questions every function, e.g. what's required from the logistics – whether new transportation means are needed, and the transportation conditions are satisfactory for the project needs; purchase department: do we need some unique raw material, or it is easily found on the market. So, some kind of checkpoints.</p> <p>Once project manager is ready for the gate, he/she goes there and</p>

	<p>reports whether investments are needed or not and what kind of. Next stage: R&D plays the key role, they lead the project — make manufacturing trials, sent the recipes and formulations for the estimations to the financial department. Finances then send it to marketing, so that we'd estimate the profitability. When everything is finalized (manufacturing trials, package are approved), we go to the final gate and agree on the launch.</p> <p>The moment when R&D and marketing do collaborate tightly: marketing works on the image, if the promotion will be planned. The whole package is brought to the gate – ready product, mock-up of the package, promotion plan with all the calculations for the investments needed, and the project is being discussed and approved. At the same time, R&D is developing the product itself. Once approved, everything's launched and the post-launch phase starts, the product officially becomes a new product. The new product remains a new product for 12 following months. Monthly executive board checks the plan for new products: whether it is met (sales, volumes).</p> <p>Marketing and R&D always are in a tight cooperation, moreover, R&D takes a very active part in the NPD process particularly at the idea creation stage. Thus not only marketing function creates the idea — it is created in collaboration. When the long-term plans are being designed, there are specific graphs in the forms for the R&D function, where R&D specialists define whether this or that concept can be realized from the technical viewpoint.</p>
Marketing and R&D interaction	<p>- The project team, Business Area level (over countries). All the countries and functions (branding, category management, NPD (which is not everywhere a part of marketing), supply chain, production, finances and sales (later)). Once in 2 weeks – always – meeting of a project group; steering committee - decision makers where the project goes, based on the info gathered by the project group. Finnish and Russian R&D Technologists are always present (most important markets). Video-meetings normally. The most important (when R&D tests the prototype) – life.</p> <p>CHECK PPT – concept creation, later – PD process.</p> <p>Key meetings – gate meetings. In all the countries – BA management team where the project manager presents the project. Decision making: There is the main team and an extended team – those who are involved sometimes. The executive group makes decisions. Everyone is to be present on a decision-making. Executive group consists of VP LSL category, country GM, financial director and the head of the bakery business in case company.</p> <p>Points of collaboration:</p> <p>Once the project is approved, the feasibility stage begins. At this stage, other functions join the NPD project: R&D, production, purchase department, logistics, finance, sales. The possibility of a product realization (=feasibility) is being checked</p> <p>Ready-made decision for executive board to approve or disapprove</p>

is carried to the gate. At the meeting there's no communication between Marketing and R&D, people come with the ready decision that is made within each of the functions. Project manager (marketing) presents the project including the financial metrics, product. R&D reps are there and ready to answer any technical questions if needed. The board makes decision based on certain criteria whether the project moves on or it has to be closed or revision.

Marketing presents what has already been achieved, what checkpoints are implemented, e.g. manufacturing tests, quotations, etc, and at do we need from the executive board, e.g.: approve the launch or just approve the product concept and get the permission to work further on.

Before the gate meetings, inter-functional communication goes as following: there are meetings. Project manager (mkg) gathers reps (1-2) of all the functions involved. Sometimes once a month, sometimes – twice. They implement PD (product development) meetings, where all the operational questions are discussed, project by project: timing, what stage, what needed to be done, responsible person reports on own tasks and whether they are implemented or not (why, the reason), depending on that timing is adjusted.

If everything goes according to the plan, project manager announces that we are about to come to the gate of the following stage.

Marketing and R&D always are in a tight cooperation, moreover, R&D takes a very active part in the NPD process particularly at the idea creation stage. Thus not only marketing function creates the idea — it is created in collaboration. When the long-term plans are being designed, there are specific graphs in the forms for the R&D function, where R&D specialists define whether this or that concept can be realized from the technical viewpoint.

R&D: From the marketing function I got request for the development of the products needed for this specific project. You know that our company is certified, so the request is filled accordingly to specific standards. Based on this requests I start to develop the products: firstly — in the lab, after which the marketing department implements the tasting, and based on the tasting results we conclude whether the direction of the development is right or not. If needed – we develop products further, and then look for opportunities to launch the products at the manufacturing.

Relationship, interaction: Of course we have good relationships. In this project we interact same way we interact during other projects: as I mentioned, we get the tasks, we provide samples, there might be some comments on the product from my side, if there's any kind of misunderstanding. Product manager explains his/her vision on the product, and during the discussion we figure out the product features that would satisfy product manager, and could be developed and realized at the production department.

	<p>Marketing research information that R&D receives from the marketing: Request for the development (with basic requirements – mass, fillings), presentation, plan for the development by the company with the extended comments (LTP – approximate look, pictures, ratio filling: pastry, in great details).</p> <p>Monthly Julia gives us a presentation on the product, the information gets more detailed and full, we catch up on the present competition an the products on the market, we are not the first ones. Information is more than enough, detailed, full.</p>
Case project	<ol style="list-style-type: none"> 1. Trend overview: home making and home baking trend is becoming hobby (Mintel, Gira, New Foundation, other recourses) 2. Retail panel – what is already on the market. We need to understand whether there is a market for a new product. (Data from the retail panel) 3. Consumer insight – what exists, what is relevant. <p>All together – the potential is detected. Later on – project-specific researches. Category is non-existent, therefore project was aimed at the creation of a new category</p> <p>Retail panels - earliest stages - to detect a potential. Once goals are set – qualitative and quantitative research are designed specifically ad-hoc for the goals. At this point – product development stage by R&D for testing on the end consumer.</p> <p>E.g. in a case project – Global project, there were several concepts, it was tested, then the best ones are chosen and tested again. Once the best ones are chosen and tested, the project manager is approaching the gate – a meeting, where the project is presented to the board of executives.</p> <p>R&D: From the marketing function I got request for the development of the products needed for this specific project. You know that our company is certified, so the request is filled accordingly to specific standards. Based on this requests I start to develop the products: firstly — in the lab, after which the marketing department implements the tasting, and based on the tasting results we conclude whether the direction of the development is right or not. If needed – we develop products further, and then look for opportunities to launch the products at the manufacturing.</p> <p>Stage of the project ATM</p> <p>Development stage — laboratory development, preparation of the lab samples.</p> <p>There are a lot of meetings besides gate meetings; they could be on a daily basis. We collaborate with a product manager a lot - via phone calls, email, in person. It's a constant work.</p>

	<p>Decisions are made by our top management. They listen to the presentation, comment their doubts, suggestions and decide whether the project goes further.</p>
<p>Marketing data synthesis, use</p>	<p>Yearly, consumer insights - reconsidered at the meetings where category manager, marketing director and Business Area manager discuss those platforms, what of them are relevant for bakery. Then they are formalized and visualized in tables, pictures, text, charts; available in common access for the company workers as a formalized document so when NPD is started – they are available. Now it's BLM database; marketing portfolio for the international team is in the team room, available for the marketing team. Retail panels are used at the earliest stages, always relevant in order to detect a potential. Once goals are set – qualitative and quantitative research is designed specifically ad-hoc for the goals.</p>
<p>Marketing data gathering</p>	<ul style="list-style-type: none"> - Euromonitor, Future foundation, and other companies provide consumer insights data. - GIRA, Nielsen work on megatrends. Megatrends are monitored worldwide. Naturally were interested in Scandinavia, Finland, Baltic countries, Russia. - Retailing audit.- Nielsen or MEMBA. In Russia – Opinion, Walk Line. Collected from pilot points and is extrapolated to the whole market. Retailing, cash-and-carry (separately), HoReCa, consumer panel - Consumer panel - used for the bread category in Russia (no company carrying out retailing audit) => Household audit: representative sample of households is taken (relevant geolocaion - Moscow, St-P, North-West region), participants fill in diaries and write down whatever they buy, consume etc. Results are extrapolated to the whole market. - On one hand we use marketing research that are made depending on a category monthly/once in 2 months/ once in half year, implemented by special companies. Also we use the experience of our Finnish colleagues, the synergy works here as in we see the potential in some product presented on a Finnish or Swedish market and adopt it to the Russian market. We also get the ideas from the relevant exhibitions we visit in Russia or abroad.

APPENDIX 3: THE NEW PRODUCT CATEGORY CONCEPT

Many people enjoy baking, but it can be time-consuming, messy and sometimes even difficult. It's also hard to find inspiration to bake something different.

We introduce a new baking concept, where we have done all the rough work, like preparing dough, fillings, toppings and decorations. You can skip directly to the fun and creative parts of baking: shaping, filling, assembling, decorating, and simply adding your personal touch to it.

The product concept understands and reinforces the joy of baking & discovery, sharing and sense of accomplishment - no matter how good a baker you are.

We embrace the fact that every baker seeks the perfect result in their own way, emphasizes different things in the process and bakes at their own skill level.

Our products can be used in many ways to inspire and encourage creativity and help bakers feel proud of the end result. They will always taste delicious.

Product discovery and usage is supported by strong, easy-navigation and contemporary range design, on-pack and online recipes, on-pack cross-promotional tips and tools for sharing.

Our products will be found in the baking aisle and in the frozen when it helps to deliver freshness. At peak seasons we are more prominently displayed. We also help bakers to identify applicable confectionery products for home-baking.