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**New Product Development: Idea Evaluation and the Differences
between Ideas having High and Low Levels of Innovation.
An Investigation in the Swedish Food Industry**

Authors: Melanie Hetzer & Almir Kraljic

Supervisor: Joakim Winborg

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Abstract

Title: New Product Development: Idea Evaluation and the Differences between Ideas having High and Low Levels of Innovation. An Investigation in the Swedish Food Industry

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Authors: Hetzer, Melanie & Kraljic, Almir

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Keywords: idea evaluation, evaluation criteria, fuzzy front end, new product development, levels of innovation, radical innovation, really new innovation, incremental innovation, food industry

Thesis Purpose: This study has a twofold purpose. First, the authors want to contribute to research on idea evaluation in the fuzzy front end by specifically shedding light on the food industry as this sector differs from other industries (Galizzi & Venturini, 1996; Tidd & Bessant, 2014; Triguero, Córcoles & Cuerva, 2013). Second, different evaluation criteria will be outlined for high as well as low levels of innovation.

Research Question: How does the background of ideas having high and low levels of innovation, respectively, influence idea evaluation in the fuzzy front end? Which criteria are used and how do they differ between radical and really new, and incremental new product ideas in the food industry?

Methodology: Comparing six cases within one case company the researchers iterated between an inductive and deductive approach. The data was obtained by seven in-depth qualitative semi-structured interviews.

Theoretical perspectives: *Levels of Innovation:* Garcia & Calantone (2002), Holahan, Sullivan & Markham (2013); *Fuzzy Front End:* Florén & Frishammar (2012), Koen et al. (2001); *Idea Evaluation:* Griffin & Page (1993), Hart et al. (2003), Magnusson, Netz & Wästlund (2014), Martinsuo & Poskela (2011), Ronkainen (1985)

Conclusions: The authors conclude this thesis with three major findings. First of all, differences regarding the criteria used for new product idea evaluation between high (market, product, strategic, technical, and intuition criteria) and low (market, product, and strategic criteria) levels of innovation could be recognised. Second, three distinct types of intuition, namely product, market, and product-market intuition, could be found. Last, the authors could see a relation between the background of the ideas and the criteria used for evaluating them. Especially, the purpose under which the new product ideas were launched influences market and strategic criteria.

1. Introduction

1.1. Background

Tidd & Bessant (2014, p.16) define the term innovation as “recognition of opportunities for doing something new and implementing those ideas to create some kind of value”. They also allege that due to constantly changing markets, technologies, and regulations, innovation becomes more and more challenging. Moreover, if organisations fail to follow the challenging demands, they risk to be overridden by their competition on the market (Tidd & Bessant, 2014).

Innovation on a product level has become vital to success, and important for a company's survival. Firms that rise are succeeding because of their decisions made in the last decade or two, regarding new products. However, companies that do not innovate, fail to keep their product portfolio current and competitive when compared to competition's (Cooper & Kleinschmidt, 1993).

Rudder, Ainsworth & Holgate (2001) stated that innovation and new food product development are the key to success and a way to attain advantage for food companies. In the food industry, manufacturers are challenged to meet “the ever-changing demands of food consumers as well as develop food products that are original and have the ability to increase their company's share of a particular market” (Rudder, Ainsworth & Holgate, 2001, p.657).

According to Kotler & Keller (2011) companies need to constantly work on developing new products, because of customers' changing needs, increasing competition, and shortening product life cycles. Therefore, firms are in need of a new product development (NPD) process. The new product development process can be described as a funnel that has many ideas at the beginning (idea generation) and finishes with some ideas at the end (commercialisation) (Kotler & Keller, 2011; Tidd & Bessant, 2014).

This process can be analysed as two sets of distinct processes. The first one is front end, in the literature usually referred to as fuzzy front end. It starts with idea generation and ends with a decision to either approve or disapprove a formal product development project (Florén & Frishammar, 2012). After the fuzzy front end, the idea proceeds to a more structured process. The most used structured process is called stage-gate system (Cooper, 2008). However, “the early design or concept creation phases of the process development have been underscored as critical to the final results, and promise large potential for cost savings and efficiency gains resides in these processes” (Frishammar, Lichtenthaler & Richtner, 2013, p.214). Therefore, this thesis will shed a light on the importance of new product idea evaluation in the fuzzy front end.

1.2. Problem Discussion

In Europe 90% of new products fail (Kotler & Keller, 2011). Cooper (2008) emphasizes the importance of selecting the right new products in order to stay and grow in the market and to avoid increased costs or crowded new product development processes as consequences of selecting products that would not be successful or selecting too many products.

The early stages of new product development are referred to as fuzzy front end and are clearly connected to the success of products (Florén & Frishammar, 2012). Florén & Frishammar (2012) also state that the fuzzy front end begins with idea creation for innovation and ends with a go or no-go decision on whether an idea will be continued in the NPD process. The decision process within the fuzzy front end where ideas are selected to proceed to new product development and where ideas can be parked is referred to as idea evaluation (Hart et al., 2003). More characteristics of the fuzzy front end were given by Florén & Frishammar (2012) who stated that front end activities can often be unclear, highly complex, uncertain, and informal.

When it comes to innovation and new products there are three different levels, radical, really new, and incremental that have been recognized by researchers. Garcia & Calantone (2002) define the first group of innovations, radical innovations, as ideas applying a new technology that leads to a new market infrastructure. The second category, really new innovations, are characterised by either technological or market discontinuity. However, a common issue is that radical and really new innovations are confused and misclassified. The third, incremental innovations are ideas that target an existing market with an existing technology. Many firms base their business on these innovations (Garcia & Calantone, 2002).

Supporting Garcia & Calantone (2002), Florén & Frishammar (2012) pointed out that there are differences between radical and incremental innovation. Holahan, Sullivan & Markham (2013, p.331) even claim that these projects “require different PD [product development] processes and project management activities throughout the PD process - from fuzzy front end to commercialization and postlaunch activities”. Selected radical innovations should be guided with more structure, tools and criteria instead of being managed with flexible processes (Holahan, Sullivan & Markham, 2013).

Having this in mind and the fact that ideas can range from product improvements i.e. incremental to totally new ideas i.e. radical ideas, it is implied that idea evaluation is different for the different levels of innovation (Booz, Allen & Hamilton, 1982; Schmidt et al., 2009).

Although research has been done on similar topics, most of it covered technological fields, computer science, mobile devices, machinery etc., and none was found to solely focus on the food industry. Hart et al. (2003), for example, did a study with 166 companies producing

industrial goods, however, none of them was in the food industry. Moreover, Ronkainen (1985) used four Fortune 500 companies producing high-technology items in his research. Some previous studies used samples that included companies from several industries, not focusing on any of them in specific. For instance, Jespersen (2007) conducted a study that involved 85 companies, of which 30 were declared as high-technology group including companies operating in telecommunication, personal computers, headphones, washing machines etc. The remaining 55 firms were a part of low-technology industries, among which were mostly companies in the food industry. However, innovation processes vary greatly among different industries (Malerba, 2005). Galizzi & Venturini (1996) claim that product innovation in the food industry has not been investigated enough. Furthermore, they state that researchers focus the most on industries where investments in research and development are high which is not the case in the food industry. Nevertheless, one of the industries with the highest numbers of new products is the food industry. Food consumers are the ones that guide an industry and its level of innovation. Regarding food, consumers tend to only buy products which are similar to products they know. Hence, the food industry is characterised mostly by having incremental innovations (Galizzi & Venturini, 1996). This is one of the reasons why “product innovation in the food industries has been rather neglected by economists” (Galizzi & Venturini, 1996, p.1).

Whereas, in the food industry innovations are strongly influenced by consumers, need pull, other industries such as technology-focused sectors rely more on high degrees of research and development intensity, knowledge push (Galizzi & Venturini, 1996; Tidd & Bessant, 2014).

Moreover, Triguero, Córcoles & Cuerva (2013, p.287) investigated in this field and concluded the following:

“In broad terms, the main difference between food and other manufacturing firms in terms of the determinants of innovation lies in the environmental and market-related factors. In the food sector, the probability of innovating depends more on these kinds of variables compared with the role played by the firms’ resources and capabilities”.

Hence, the authors of this thesis believe that criteria used for the new product idea evaluation in the food industry will differ from other sectors. Due to the lack of research done in this field in the Swedish food industry, the thesis at hand will shed light on this topic. In specific, this thesis will give a new proposition for evaluating new product ideas in the food industry, comparing incremental with radical and really new innovations at the fuzzy front end. The findings of this thesis should help companies in the food sector to better evaluate ideas and to find suitable criteria for ideas with different levels of innovation.

1.3. Research Question

Jespersen (2007) raises the need for further research on the complexity of screening decisions and the factors used for evaluation.

This thesis focuses on idea evaluation in terms of differentiating between ideas on their level of innovation. The purpose of the thesis at hand is to enlighten the problem of handling different ideas in terms of level of innovation, comparing incremental ideas with really new and radical ones, in the idea evaluation phase and to determine different criteria used for evaluating them.

The deployment of the research question was done using the guidelines given by Bryman & Bell (2011). For this reason the research question is: clear, researchable, establishes theory and research, contributes to knowledge, and is neither too broad nor too narrow (Bryman & Bell, 2011).

Research Question:

How does the background of ideas having high and low levels of innovation, respectively, influence idea evaluation in the fuzzy front end? Which criteria are used and how do they differ between radical and really new, and incremental new product ideas in the food industry?

1.4. Purpose

The purpose of this paper is twofold. Firstly, the authors want to contribute to knowledge on the fuzzy front end of new product development, more specifically on idea evaluation. Up to now research on this topic has been done in various industries. However, industries differ greatly regarding their new product development process (Malerba, 2005). This is why this thesis will be a contribution to the knowledge on idea evaluation in the fuzzy front end of new product development in the food industry. Secondly, this thesis will outline different evaluation criteria used at different levels of innovation. The authors will compare criteria for radical and really new innovations, one the one hand, and incremental innovations, on the other hand.

The authors used a retrospective case study design and conducted research in the case company Pågen, market leader in the Swedish baking industry, for several months. As the food industry is merely characterised by incremental innovations this company was chosen as a case company due to the fact that it also evaluated and launched radical and really new

ideas making it possible for the authors to conduct research on this topic (Galizzi & Venturini, 1996). A more detailed description of the case company can be found in subchapter 3.1.3.

1.5. Key Concepts

Based on the research question and the purpose of the thesis the following key concepts have been identified. This thesis investigates in idea evaluation being a part of the fuzzy front end which is the very beginning of the NPD process, right before the stage-gate system or a formal innovation process, respectively, starts. Furthermore, the correct differentiation and classification of incremental, really new, and radical innovation plays a major role. Lastly, it has to be mentioned that the authors of the thesis make no difference between the terms idea evaluation and idea screening and treat them as synonyms.

Concept	Description	Source
Innovation	“Recognition of opportunities for doing something new and implementing those ideas to create some kind of value”	Tidd & Bessant (2014, p.16)
NPD Process	A funnel with a large number of new product ideas at the beginning (idea generation) and only a few in the end (commercialisation)	Kotler & Keller (2011)
Stage-Gate System	“Conceptual and operational model for moving a new product from idea to launch” consisting of stages and gates which comprise inputs, exit criteria, and outputs	Cooper (1990, p.44)
Incremental Innovation	Innovations operating in an existing market with an existing technology and are essential to many firms	Garcia & Calantone (2002)
Really New Innovation	Innovation characterised by either technological or market discontinuity, but not both	Garcia & Calantone (2002)

Radical Innovation	Innovations applying a new technology that leads to a new market infrastructure, new competitors and new industries arise	Garcia & Calantone (2002)
Fuzzy Front End	Stage on the very beginning of the NPD process where idea creation and development takes place	Florén & Frishammar (2012)
Idea Evaluation	“A process used to evaluate innovative product ideas, strategies and marketing trends”	Business Dictionary (2016)
Criteria	“Idea screening criteria are used to determine compatibility with overall business objectives and whether the idea would offer a viable return on investment”	Business Dictionary (2016)

Table 1. Key Concepts

The structure of this thesis is as follows. First of all, an in-depth analysis of the main concepts of previous literature is given in the second chapter. Starting with the five generations of innovations and the new product development process, the topic will be narrowed down to the fuzzy front end of innovation and idea evaluation as a part of it. The third part will deal with methodology, explaining the approach of the empirical analysis. In a next step the results of the investigation in the Swedish food industry will be presented, analysed, and discussed. Finally, conclusions, limitations, and implications based on the literature review and the analysis conducted will be given.

2. Literature Review

2.1. Introduction and Approach

Taking the research questions as a basis there are two major research areas which are of interest, the levels of innovation as well as idea evaluation. However, in order to understand the specificities of idea evaluation, a broader view has to be taken on this topic. Therefore, research on development of the innovation process, new product development, and the fuzzy front end of innovation will be analysed and synthesised in addition to the levels of innovation and idea evaluation. The following subchapters will follow this structure starting with an overview of the five generations of the innovation process, followed a description of the new product development process as a whole, as well as the focus on the fuzzy front end. Moreover, the differences between radical, really new, and incremental innovations will be depicted and lastly previous research done on the topic of idea evaluation will be presented.

Exhibit 1 presents an overview of the reviewed literature areas leading to the focus topic idea screening and evaluation respectively.

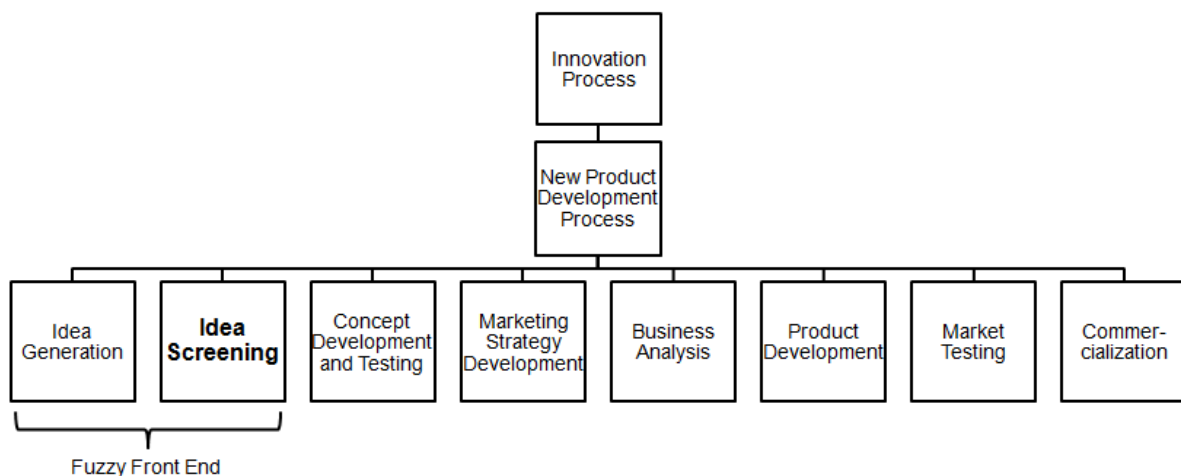


Exhibit 1. Overview of Literature Research Areas (Adapted from Kotler & Keller, 2011, p.573)

A literature review was conducted in order to identify the key concepts of previous research. Lund University library which has access to a great number of databases such as EBSCO and Emerald was used to perform the search on academic journals in English language. Additionally, Google Scholar was applied to determine pertinent research streams on a particular topic. The keywords employed were as follows: “innovation process”, “innovation management”, “new product development”, “stage gate”, “radical innovation”, “incremental

innovation”, “fuzzy front end”, “idea evaluation”, “idea screening”, and “evaluation criteria”. These keywords were used in different variations and combinations. The articles chosen for the literature review of this master thesis present either key literature on the topic or are recent contributions to research in this field.

2.2. The Development of Innovation Process

The innovation process changed significantly during the last 70 years. Rothwell (1994) divides the development of this process into five generations.

The *first generation* taking place between the 1950s and mid 1960s is characterised by technology push. After the Second World War the economy faced rapid growth through industrial expansion and new industries emerged due to upcoming technologies. Basic science is the first step of the process followed by design and engineering, manufacturing and marketing and ending with sales. In general, the first generation worked under the strong belief that more R&D will generate more successful new products.

With the years manufacturing productivity rose and competition increased. From mid 1960s until early 1970s the *second generation* innovation process, called market pull, took place. The majority of ideas did not come from R&D anymore but rather from the market. In a next step the company reacted on the market need, developed, manufactured and sold the product.

In the 1970s inflation and demand saturation dominated the economy. Companies had to rethink their strategies and put an emphasis on cost control and cost reduction. The key to successful innovation was found in the *third generation* coupling model, also known as interactive model of innovation. This model consists of various functionally interacting independent stages creating a net of intra- and extra-organizational communication paths which link science and technology to the market as well as the different in-house functions to each other.

Between the early 1980s and the early 1990s the *fourth generation* innovation process, the integrated innovation process, took over. The economy was recovering and companies were able to focus on their core businesses and technologies again. Along with shorter product life cycles came the urge to increase the speed of development in order to stay competitive on the market. The integrated innovation process suggests collaboration between the different departments of a company.

Developing the concept of the fourth generation further Rothwell (1994) introduced the *fifth generation* innovation process which uses “a powerful electronic toolkit to enhance the

efficiency of these [fourth generation] operations”. “5G represents a more comprehensive process of the electronification of innovation across the whole innovation system”. The key aspects of the process can be characterized as “integration, flexibility, networking, and parallel (real time) information processing” (Rothwell, 1994, p.25).

However, the innovation models also show some weaknesses. First of all, the first and second generation show a sequential, linear process which is to a high degree simplified and not valid in practice. Many activities take place at the same time and feedback loops are not seldom to occur. Secondly, the models do not consider the environment and thus not include external parties such as customers, suppliers or competitors. Moreover, the models lack information on what is happening within each stage. Lastly, the process is implied to be rational and hence does not include alternative pathways (Hobday, 2005).

Regarding the third generation Hobday (2005) criticises the insufficient integration of environmental factors like the science and technology environment or government regulations. Furthermore, he mentions issues regarding the differences between product and process innovation as well as different industries.

Finally, the fourth and especially the fifth generation have weaknesses in terms of the downsides of IT such as high costs and learning curves that are difficult and long (Hobday, 2005).

An overview of the five generations of innovation processes as well as criticism on each of the stages is given in Table 2.

Innovation Process	Time Frame	Characteristics	Criticism
First generation	1950s - mid 1960s	Technology push; emphasis on R&D	Linear process, not valid in practice; environment not taken into consideration; assumption of rational process; lack of details on what happens within each stage
Second generation	Mid 1960s - early 1970s	Market pull; market as source of ideas	
Third generation	Early 1970s - mid 1980s	Coupling or interactive model; balance between R&D and marketing	Environmental factors not considered sufficiently; application not in all industries possible; major difference between product and process innovation

Fourth generation	Early 1980s - Early 1990s	Integrated; integration between R&D and manufacturing; horizontal collaborations	Negative aspects of IT (e.g. high costs, learning curves that are difficult and long, unrealistic claims); strong internal capabilities are needed
Fifth generation	Post 1990s	Advanced information technology in addition to characteristics of fourth generation	

Table 2. Five Generation of Innovation Processes

2.3. New Product Development

Multiple definitions exist for the term 'new product'. Booz, Allen & Hamilton (1982, p.8) define the following six categories:

- (1) New to the world products (10%);
- (2) New product lines: new products that for the first time, allow a company to enter an established market (20%);
- (3) Additions to existing product lines: new products that supplement a company's established product lines (26%);
- (4) Improvements in/revisions to existing products: new products that provide improved performance or greater perceived value, and replaced existing products (26%);
- (5) Repositioning of existing products that are targeted to new markets or market segments (7%);
- (6) Cost reduction: new products that provide similar performance at lower cost (11%).

For all these six categories applies that the new product development process consists of multiple stages beginning with an idea and ending up at a successful product, service or process (Murthy, Rausand & Østerås, 2008; Tidd & Bessant, 2014).

Kotler & Keller (2011) describe eight steps in the new product development process. The first step is called *idea generation*. The question there is whether the idea is worth considering. Secondly, ideas pass the *idea screening* step where internal and external alignment is assessed. In a third step, a concept is developed and tested (*concept development and testing*). If ideas succeed to pass this step they arrive at *marketing strategy development* where it is looked for a cost-efficient and affordable marketing strategy. Fifthly, a *business*

analysis where the profitability of the product is examined is conducted. In a next step the product is developed (*product development*). After this step *market testing* takes place. The question at this step is whether the product sales have met the expectations. If yes, the product can be commercialised (*commercialisation*).

As described above, new product development is a highly complex process that needs to find the balance between the costs of new options with an uncertain future and the risk of discontinuing fruitful projects. However, new product development more and more becomes an indispensable element of a company's activities. Due to shorter product life cycles and the demand for an extended product portfolio companies feel the increasing pressure for investigating in new product development (Tidd & Bessant, 2014). "Decisions [on which projects to follow] can be made on an ad hoc basis, but experience and research suggests some form of structured development system, with clear decision points and agreed rules on which to base go/no-go decisions, is a more effective approach" (Tidd & Bessant, 2014, p.182).

2.3.1. Stage-Gate Systems

One of the most famous and well-known models in new product development is probably Cooper's (1990) stage-gate system (Exhibit 2). This structured process consists of a number of stages and gates being quality control checkpoints before entering next stages. Each gate comprises inputs (deliverables), exit criteria, and an output (decision). Project leaders have to bring certain deliverables to a gate which will be measured on a set of criteria. The output symbolises the end of a gate and is generally a go/kill/hold/recycle decision (Cooper, 1990; Cooper, 2008).

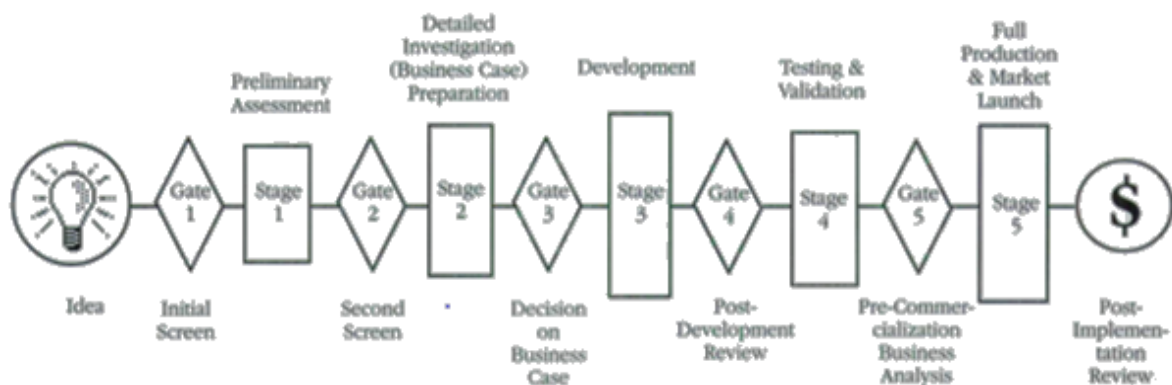


Exhibit 2. Typical Stage-Gate System by Cooper (1990, p.46)

Cooper & Kleinschmidt (1993) mention the benefits of the stage-gate system based on a study examining 21 divisions in companies that implemented the system. First of all, due to the use of multifunctional criteria at each stage, cross-functional teamwork improves significantly. Second, quality checks help to reduce recycling and rework. Also, Brown & Eisenhardt (1995) support this argument by stating that predevelopment activities are an important factor when it comes to the disclosure of conflicts in early stages. Third, improved success rates were mentioned as another benefit. Del Vecchio, White & Phelan (2013) found that the chances of product success increase and the time of development decreases with the time and effort invested early. Moreover, the stage-gate system has the ability to detect failures earlier. As marketing planning and other marketing activities play a key role in the system better launches were reported. Last, all these advantages result in the major benefit of shorter life cycle times.

However, the stage-gate system also entails disadvantages. Cooper (2014, p.20) himself pointed out the flaws stating:

“The world has changed a lot since the first Stage-Gate system was implemented – it is now faster paced, more competitive and global, and less predictable. In this context, Stage-Gate has attracted a number of criticisms: It is accused of being too linear, too rigid, and too planned to handle more innovative or dynamic projects. It's not adaptive enough and does not encourage experimentation. It's not context-based—one size should not fit all. Its gates are too structured or too financially based, and the system is too controlling and bureaucratic, loaded with paperwork, checklists, and too much non-value-added work”.

In 2008 Cooper reacted to the criticism of the stage-gate system he had received from many companies over the years. Introducing two variations to the process, namely 'Stage-Gate XPress' and 'Stage-Gate Lite', he recommends to use these for extensions, modifications, and improvements as well as sales-force and marketing requests, respectively (Cooper, 2008).

2.4. Incremental and Radical Innovations

As stated by Booz, Allen & Hamilton (1982) and also Cooper (2008) a differentiation between the different types of innovations has to be made.

In order to delineate the terms from each other Holahan, Sullivan & Markham (2013) use an uncertainty matrix (Exhibit 3). Labelling the axes technological and market uncertainty from low to high, the matrix is divided into four quadrants. Radical innovations are characterised by both high technological and high market uncertainty and contain new to the world

products. On the opposite, are incremental innovations with low technological and low market uncertainty including modifications of existing products, product redesigns, and repositionings. The remaining two quadrants, the more innovative projects, are characterised by either high market or high technological uncertainty. “These may be product lines that are new to the firm (but not new to the market), additions to existing product lines, and next generation advances of products currently produced by the firm” (Holahan, Sullivan & Markham, 2013, p.332).

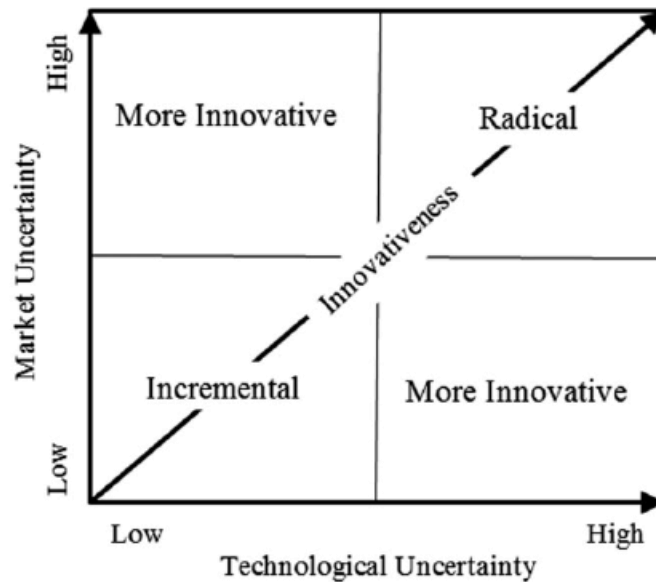


Exhibit 3. Uncertainty Matrix (Holahan, Sullivan & Markham, 2013, p.332)

In line with the differentiation in the uncertainty matrix Garcia & Calantone (2002, p.124) “suggest that the labels ‘radical’, ‘really new’, and ‘incremental’ are appropriate classifications for signifying diminishing degrees of product innovativeness.” The authors define radical innovations as innovations applying a new technology that leads to a new market infrastructure, new competitors and new industries arise. Also, these innovations often do not fulfil consumer needs but rather create one. Really new innovations, on the other hand, are characterised by either technological or market discontinuity. However, radical and really new innovations are regularly confounded and thus misclassified. Finally, incremental innovations are innovations operating in an existing market with an existing technology and are essential to many firms (Garcia & Calantone, 2002).

Also, in the field of radical innovations are design-driven innovations (Exhibit 4). Emerging through a design process these innovations characterise a radical new concept that describes the meaning of a product in people’s lives. Mapped on a graph with the x-axis

'meaning' and the y-axis 'technology' design-driven innovations are found on the outer right end ranging from incremental to radical change in technology (Verganti, 2009, in Tidd & Bessant, 2014).

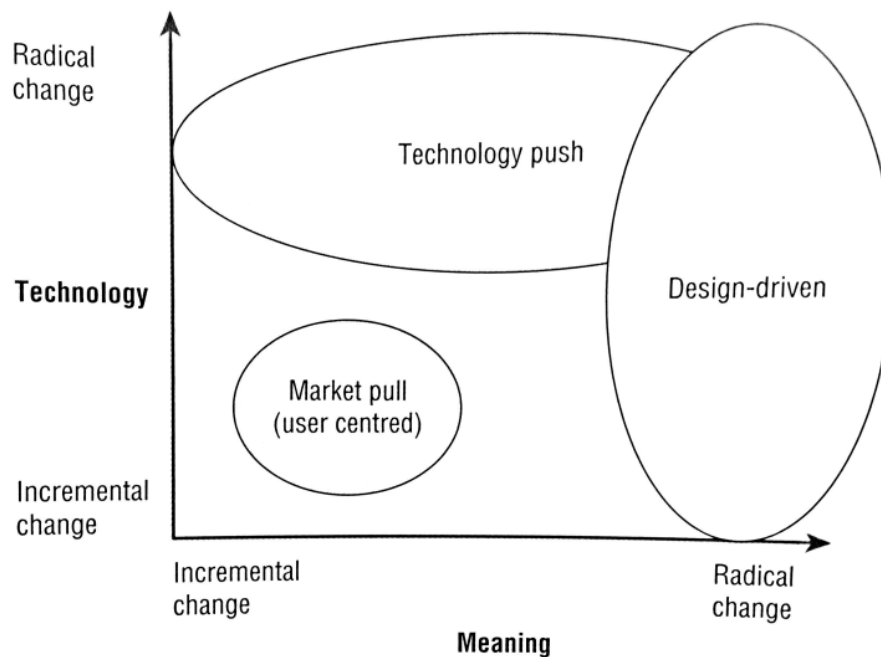


Exhibit 4. Design-driven Innovation by Verganti (2009, in Tidd & Bessant, 2014, p.114)

According to Magnusson, Netz & Wästlund (2014) what differs between radical and incremental ideas is the relevance of the business potential. They claim that the business potential is more relevant for incremental than for radical ideas as radical ideas are often not in line with current strategies and thus the business potential cannot be assessed. Lastly, the authors found out that “more of the business perspective will be taken into account during holistic criterion (intuitive) assessments” (Magnusson, Netz & Wästlund, 2014, p.322). More on intuition and other common criteria researchers studied for evaluating new product ideas can be found in subchapter 2.5.

2.5. Fuzzy Front End

“The front end of innovation, or what is often called the Fuzzy Front End (FFE), presents one of the greatest opportunities for improving the overall innovation process” (Koen et al., 2001, p.46). Many new product development projects are predestined to be unsuccessful due to flaws in the front end of the process. “Front end activities largely influence the outcomes of new product development processes, because it is here that firms create new ideas, give

them direction, and set them in motion” (Florén & Frishammar, 2012, p.20). Thus, the fuzzy front end is considered to be the stage on the very beginning of the NPD process where ideas are created and further developed. It ends with a go or no-go decision about whether the idea will or will not be continued in the NPD process. Front end activities are often unclear, highly complex, uncertain, and informal in terms of the organisational setting as well as the decision making approach (Koen et al. 2001; Florén & Frishammar, 2012).

The following two subchapters will describe two concepts depicting the activities on the fuzzy front end.

2.5.1. An Integrative Framework for the Front End of NPD

Florén & Frishammar (2012) build their model on three key activities which have to be undertaken in order to create corroborated product definitions (Exhibit 5). First of all, companies need a thought-through *idea and concept (I/C) development* process consisting of the two sub-activities I/C refinement and I/C screening. Whereas I/C refinement is dealing with elaborating on a preliminary product idea I/C screening filters ideas based on their relevance. Secondly, firms need to align their ideas internally, guaranteeing a fit between the idea and the product portfolio and product strategy, as well as externally, with competitive product offerings, technology, and the market environment (*I/C alignment*). The last activity of this framework is *I/C legitimisation* incorporating the socio-political context a company is in, meaning “that an emerging idea/concept must be made legitimate and perceived as relevant by key stakeholders (Florén & Frishammar, 2012, p.23).

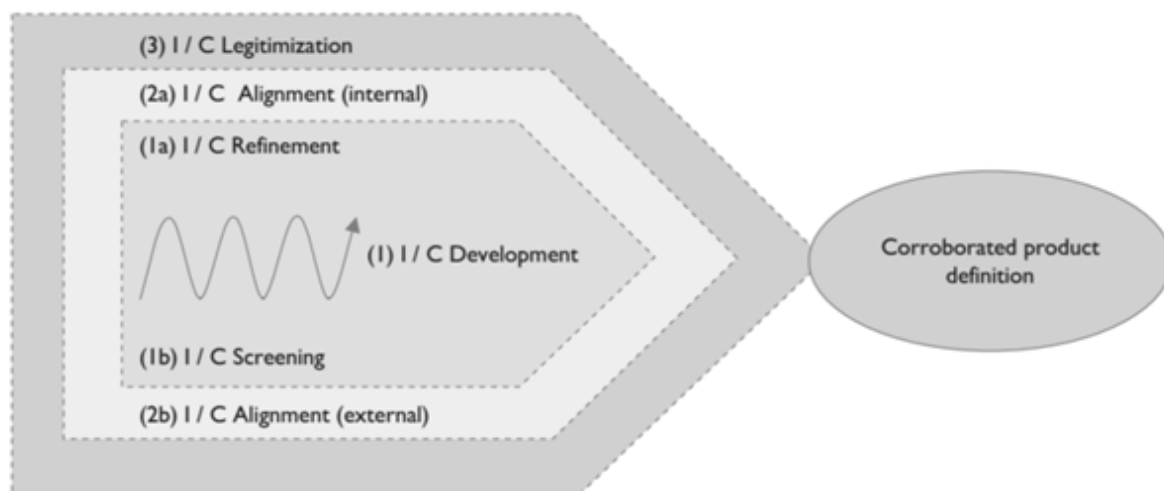


Exhibit 5. A Concept for the Fuzzy Front End by Florén & Frishammar (2012, p.22)

Considering this concept in the light of radical and incremental innovation some distinctions have to be made. Concerning the first activity I/C refinement often is less explicitly defined and calls for individual rather than organisational initiative when it comes to radical innovations. Whereas, incremental innovations call for formal market research and the collaboration with customers, radical innovations are dependent on informal market research and the collaboration with lead users. The main difference between radical and incremental innovations in terms of I/C screening is the utilization of prior experiences. Companies can very well base their screening procedures on past experiences for incremental innovations. For radical innovations, however, probing and learning is of greater importance. Due to their nature, radical innovations cause change and call for new competences within firms which might confront the company with unique challenges regarding the internal alignment. External alignment, on the other hand, offers companies the opportunity to include information and knowledge about market, competitors, and technology which is key, especially for radical innovations. Finally, a firm needs to manage legitimisation for both radical and incremental innovations (Florén & Frishammar, 2012).

2.5.2. New Concept Development (NCD) Model

Identifying the issue that neither a common language nor consistent definitions of the key elements of the fuzzy front end exist, Koen et al. (2001) developed the New Concept Development Model (Exhibit 6). This framework comprises of three key elements: First, the inner area which consists of the five front end elements opportunity identification, opportunity analysis, idea genesis, idea selection, and concept & technology development; second, the engine representing senior and executive-level management support which boosts the five elements; and last the environment or the influencing factors consisting of organisational capabilities, business strategy, competitive factors, and the maturity of technologies and affecting the decisions of the first two (Koen et al., 2001).

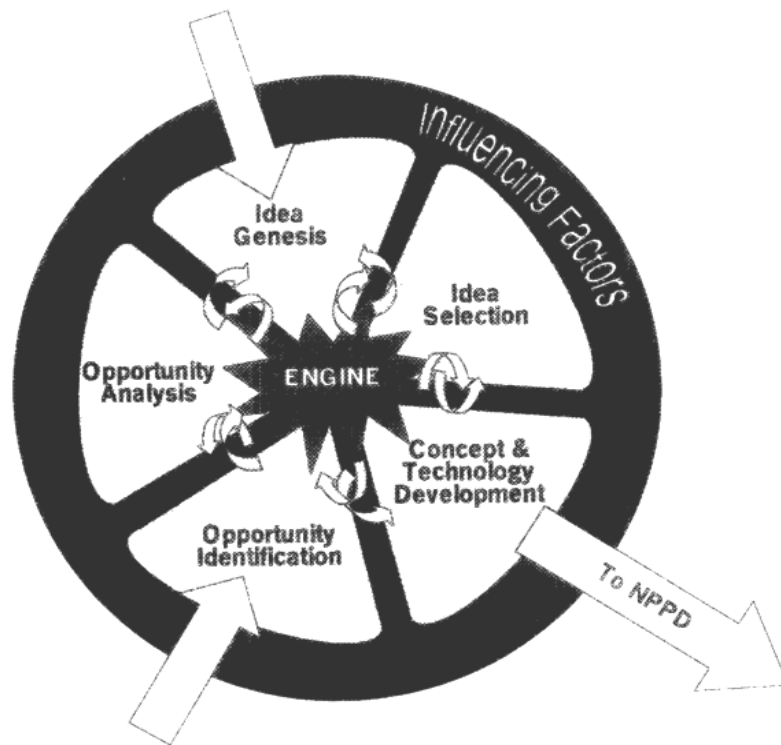


Exhibit 6. The New Concept Development Model by Koen et al. (2001, p.47)

Getting into more detail on the five front end elements Koen et al. (2001) define *opportunity identification* as the stage in which a company formally or informally recognises an opportunity which it might want to make use of. After that the opportunities get assessed in terms of their market and technological uncertainty in order to specify them into specific technological and business opportunities. This step is called *opportunity analysis*. The next stage, *idea genesis*, describes the process in which the idea is further developed, refined, modified, and upgraded. In the majority of companies a lot of ideas reach this stage and therefore ideas which will bring the most value to the business have to be actively selected in the *idea selection* element. The last step, known as *concept and technology development*, defines the “development of a business case based on estimates of market potential, customer needs, investment requirements, competitor assessments, technology unknowns, and overall project risk” (Koen et al., 2001, p.51).

2.6. Idea Evaluation and Idea Screening

Idea screening is defined as the first evaluation in the new product development process and starts after the idea generation phase (Hart et al., 2003). “In most businesses there are so many product/process ideas that the critical activity is to choose which ideas to pursue in

order to achieve the most business value” (Koen et al., 2001, p.51). “Selecting the right ideas and concepts for product development projects is among the major decisions that product development directors must make” (Martinsuo & Poskela, 2011, p.896). Even though it is a critical activity and major decision, initial screening was the weakest one having the lowest value on the proficiency scale in a study by Cooper & Kleinschmidt (1986). Moreover, the findings of this study have shown that there is a great need for improvement in this phase. An effective screening procedure in the beginning of the development project can diminish the risk of following poor product concepts (Martinsuo & Poskela, 2011). However, a more formalised approach is hard to take because of the limited information available at this stage (Koen et al., 2001). In their study Cooper & Kleinschmidt (1986, p.77) found that the majority of companies take up a “group decision based on an informal discussion” (59.5%). Also, the approach that the decision is made by a single individual on an informal basis is rather popular (23.7%). In their literature review Martinsuo & Poskela (2011, p.899) summarised the different dimensions idea evaluation models can take:

- Unstructured question list (Hall & Nauda, 1990; Cooper, Edgett & Kleinschmidt, 2002);
- Structured scoring models (Henriksen & Traynor, 1999);
- Anchored scales (Davis et al., 2001);
- Analytical hierarchy processes (Calantone et al., 1999; Englung & Graham, 1999);
- Computer-based expert systems (Liberatore & Stylianou, 1995);
- Mathematical models (Loch et al., 2001).

Many companies, however, look for improvements in the initial screening process. According to Cooper & Kleinschmidt (1986, p.77) 39.6% of firms desire a “better assessment of the market” and “more external inputs at this early screening stage”. Moreover, 23.1% think that “more formal and consistent procedures” and a “more detailed evaluations” would be beneficial (Cooper & Kleinschmidt, 1986, p.77).

Reviewing previous research literature showed that evaluation criteria among the following seven dimensions were commonly used: customer, market, product, technical, financial, and strategic as well as intuition (Table 3). Griffin & Page (1993), for example, identify customer acceptance, financial performance, and product-level measures as core dimensions for measuring product success or failure. Among those they found out that the majority of firms use customer and financial criteria. However, it has to be mentioned that this study merely focuses on after-launch evaluation.

Ronkainen (1985, p.173) divides the decision making criteria in three basic groups, namely “product, market(ing), and financial criteria”, whereby he concludes that market criteria are

the most important criteria in the concept phase. This is based on the result of his research where he found that all companies except for one examined put the largest weight on this set of criteria (Ronkainen, 1985).

Surveying 166 managers of British and Dutch firms Hart et al. (2003) evaluate twenty criteria at seven different NPD gates, among them idea screening. Their study showed that “technical feasibility¹ is the most frequently used criterion for idea screening purposes” and that “intuition² also plays a major role” (Hart et al. 2003, p.28). Furthermore, companies indicated to use the following criteria at the idea screening gate: product uniqueness³, market potential⁴, customer acceptance⁵, and product performance⁶ (Hart et al., 2003).

Recent research has found out that the context in which evaluations are made plays a major role for intuitive decisions. This is regardless of the level of innovation. “Intuition is a context-dependent construct, not a homogeneous concept” (Magnusson, Netz & Wästlund, 2014, p.322).

Based on previous literature Martinsuo & Poskela (2011) take strategic, market, and technical criteria into consideration when formulating and testing their hypotheses. Their research showed that both market and technical criteria are positively associated with competitive potential and that there is a positive relationship between strategic as well as technical criteria and future business potential.

Despite the kinds of criteria in use, criteria change at the different new product development evaluation stages (Hart et al., 2003; Ronkainen, 1985). Lastly, previous research questions “the use of formal assessment systems, especially when pursuing strategic opportunities in the context of radical innovation” (Martinsuo & Poskela, 2011, p.910).

¹ The Netherlands: 70%, United Kingdom: 75%

² The Netherlands: 54%, United Kingdom: 62%

³ The Netherlands: 51%, United Kingdom: 75%

⁴ The Netherlands: 52%, United Kingdom: 73%

⁵ The Netherlands: 46%, United Kingdom: 54%

⁶ The Netherlands: 51%, United Kingdom: 33%

	Customer	Market	Product	Technical	Financial	Strategic	Intuition
Griffin & Page (1993)	X		X		X		
Hart et al. (2003)	X	X	X	X			X
Magnusson, Netz & Wästlund (2014)							X
Martinsuo & Poskela (2011)		X		X		X	
Ronkainen (1985)		X	X		X		

Table 3. Dimensions of Evaluation Criteria in Previous Literature

3. Methodology

This chapter will demonstrate how the research was conducted. It is divided in three parts. The first part will show how the overall research design looked like and how the process was performed. The second part will present how the cases were selected, in terms of products and interviewees. In the next section the analysis for the collected data will be presented.

3.1. Overall Research Design and Process

3.1.1. Nature of the Research

Bryman & Bell (2011) raise the importance of researchers' awareness when selecting the nature and purpose of any management and business research. The nature of this thesis is in line with qualitative research. This approach was selected in order to examine different perspectives and approaches for evaluating radical and really new and incremental new product ideas in a case company.

A combination of inductive and deductive research was used. Firstly, specific fields of interest were studied focusing on different levels of innovation, fuzzy front end as part of new product development and idea evaluation in specific. In a second step, the authors were on the one hand guided by theory and on the other hand by the outcome of their research. Analysing the background of all new product ideas theory was developed on the basis of the patterns recognised. However, when analysing idea evaluation the authors were guided by the seven categories of criteria found in previous literature. The researchers followed an inductive approach only for one part of idea evaluation, namely for intuition.

Based on a qualitative approach, the thesis provides concrete answers and a better insight in how criteria differed when evaluating ideas having high and low levels of innovation.

3.1.2. Research Design

The authors of this thesis were assigned to an internship at Pågen AB, the market leader in the Swedish baking industry. Conducting research in this firm for five months the authors followed a case study design. In total, the authors reviewed and analysed six different cases within the sweet/snacking segment, three new product ideas with high levels of innovation and three with low levels of innovation.

Due to the fact that the research was done over a period of several months this qualitative research is characterised by a retrospective design. Conducting research in the case study

for several months by mainly interviewing in an unstructured and semi-structured way the researchers looked back to the time when idea evaluation for the specific cases took place (Bryman & Bell, 2011).

In a first step, twenty unstructured interviews were conducted in the timeframe of seven weeks. These interviews mainly served to get an overview of the company. The unstructured interviews guided the selection of levels of analysis, i.e. which groups of employees, or which individuals to include in more detailed, semi-structured interviews.

Secondly, semi-structured interviews were held with seven selected individuals that were involved in the new product development and evaluation of the specific cases, working mainly in product development and marketing. The interviews focused on identifying ways of evaluating ideas and criteria for evaluating radical and really new as well as incremental innovations.

The specific criteria for interviewee selection and a presentation of the interviewees for the unstructured as well as the semi-structured interviewees will be given in subchapter 3.2.2.

Besides interviews the authors did observations, spending one night in the bakery as well as one day with sales in the field, observing crucial processes of the company.

3.1.3. Description of the Case Company and Research Process

As mentioned above, the authors of this thesis were assigned to the biggest bread producer in Sweden, Pågen AB. The company is privately owned and operates in various categories such as dark bread, light bread, snacking, and sweet products (Pågen AB, 2016). Interviewing a member of the Product Development department (Unstructured Interview PD1, 21 January 2016) provided the authors with the insight that the company launched many new products several times a year.

Looking at the new product development process of the case company informal and formal processes have to be differentiated. The formal new product development process at Pågen makes use of Cooper's (1990) stage-gate system, beginning with the hand in of a business case, a concrete description of the idea including facts about technical feasibility and customer needs, at gate 1 and ending with the launch of the idea after gate 4 (Unstructured Interview PD1, 27 January 2016). However, no model or rule was made on how to generate and select ideas. Thus, the informal process, meaning the fuzzy front end, starts with idea generation and ends in the selection of ideas which were qualified to proceed to gate 1 of the formal new product development process.

As the case company was not confronted with any difficulties in generating ideas and had a pool of new product ideas the authors set their focus on idea evaluation. Responsible for evaluating ideas and leading them to finished products were brand managers solely.

Furthermore, there was no distinction between different types of innovation, as suggested by Booz, Allen & Hamilton (1982). This led to frequent product drop-outs from the innovation process, losses, and inefficient resourcing (Unstructured Interview PD1, 27 January 2016). The topics of the unstructured interviews and the common issues pointed out directed the selection of literature as suggested by Bryman & Bell (2011). Finally, an approach of iteration between interviews and literature reviews led the authors to drafts of research questions. With the use of guidelines given by Bryman & Bell (2011), and grading the contribution to knowledge, a final research question was determined.

The next steps of the research included the selection of appropriate cases, the development of interview guides, and the selection of the right interviewees using the suggestions from Eisenhardt (1989). Seven semi-structured interviews were held and the data was collected using notes and audio recordings. Interviews finished giving an extensive result and high volume of data. In the following chapters, the results of the research (Chapter 4), the analysis (Chapter 5) and the conclusion (Chapter 6) will be presented.

3.2. Data Collection

This chapter will present how the data was collected and how cases and interviewees were selected. Lastly, it will give an overview of the interview guide.

3.2.1. Case Selection

In the beginning the authors want to clarify the codes given to the new product ideas. An “H” refers to ideas having high levels of innovation, whereas an “L” stands for ideas with low levels of innovation. The number in the code indicates which new product ideas belong together. Thus, Product H always refers to as the parent product of Product L which is a line extension of this new product idea. Additionally, Product 3 Saffron is mentioned. This stands for another flavour of Product 3.

As mentioned above unstructured interviews were held guided by the suggestions of Bryman & Bell (2011). The interviewees were stimulated to talk openly and the interviewers only responded to move the conversation forward (Burgess, 1984, in Bryman & Bell, 2011). The interviews held in this way, resulted in a long list of new product ideas, referred to as cases which were developed under different circumstances. The list included the names of the cases, people who were involved in their development and people that are at the moment responsible for the finished products, i.e. current brand managers.

According to the definitions of Garcia & Calantone (2002) for radical, really new, and incremental innovations, all cases were categorised based on their level of innovation. Radical and really new innovations are commonly mixed up and misclassified. Therefore, the authors decided in favour of a research design comparing three cases having high levels of innovation, radical and really new ideas, with three cases with low levels of innovation, incremental ideas, resulting in the selection of six cases in total (Exhibit 7).

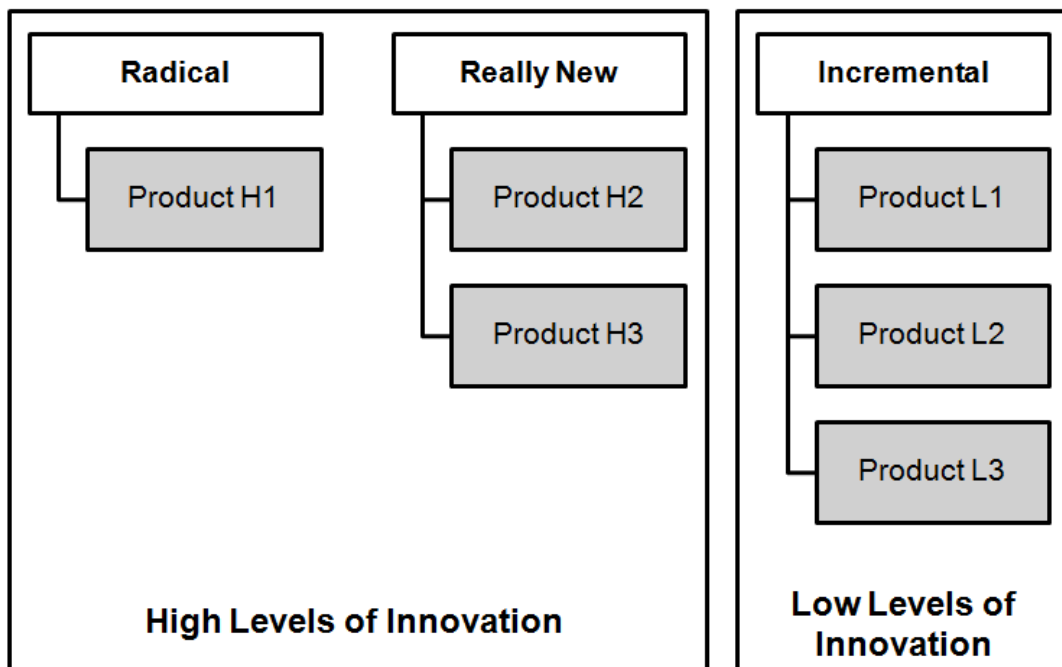


Exhibit 7. Research Design

In line with Eisenhardt's (1989) suggestions, the cases were carefully selected based on several criteria. First, it was important to the researchers to be able to get an appropriate amount of data for each case. This meant that interviewees could be found within the firm that participated in the development and evaluation of the product idea. Second, the authors were looking for cases that mainly differed regarding their level of innovation. Hence, all cases selected could be found in the sweet/snacking segment. Last, all cases should have gone through the whole innovation process and have been successfully introduced to the market.

Product H1 was the company's most radical innovation. Working for approximately four years on technical and product specifications Pågen combined two technologies in a novel way which no other company has done before. Moreover, the introduction of Product H1 created a new market, sweet filled soft buns, which did not exist before for companies with

this big scale (Unstructured Interview PD1, 9 March 2016). Therefore, the authors define Product H1 as a radical innovation.

Product H2, on the one hand, created new markets outside Sweden as this product was not known in countries like France, for example, which has the highest export rates of Product H2 today. Product H3, on the other hand, is a new concept for a cinnamon bun which was discovered by accident. This concept created a new a new market in the sweet snacking segment (Unstructured Interview PD1, 9 March 2016).

Lastly, many incremental cases were recognised. Different flavours of bread, sandwich buns, and sweet products could have been selected. The chosen ones, Product L1, Product L2, and Product L3, all represented additional flavours to the original products (Unstructured Interview PD1, 9 March 2016).

The reason why the authors selected the mentioned cases to build their research on was that they all belonged to the sweet/snacking segment and were already launched on the market. The researchers selected new product ideas that mainly differed regarding the focus of this study, the differences between idea evaluation of ideas having different levels of innovation.

3.2.2. Interviewee Selection

For the thesis at hand, two rounds of interviews were run, first in an unstructured way followed by semi-structured interviews.

The unstructured interviews were conducted over a period of seven weeks. The researchers interviewed employees from various departments and different levels within the organisation (Table 4). The interviewees were selected according to a wide range of criteria. Firstly, the researchers wanted to get an overview of the whole company and therefore talked to employees from ten different departments. Secondly, the researchers were looking for opinions from employees working on different organisational levels. Thus, board members as well as middle management and regular employees were interviewed. Thirdly, it was important that the interviewees were working with product ideas, products, or selection in some way. This was the reason why Human Resource Management was included in the research as this department was responsible for the selection of appropriate and qualified employees for the company. The focus, however, remained on departments that closely work with new product development. Hence, seven employees from the marketing department were selected.

Interviewing employees from different departments and organisational levels in an unstructured manner gave the authors the opportunity to get an overview of the case company and find out which people to select for the semi-structured interviews in next step.

Department	Interviewee
Marketing	Brand Management 1
	Brand Management 2
	Brand Management 3
	Brand Management 4
	Brand Management 5
	Brand Management 6
	Marketing 1
Export	Export 1
	Export 2
	Export 3
Sales	Region Management 1
Human Resources	Human Resources 1
Management Board	Management 1
Procurement	Procurement 1
	Procurement 2
Product Development	External Product Development 1
	Product Development 1
	Product Development 4
Production	Production 1
Quality Management	Quality Management 1
Technical Management	Technical Management 1

Table 4. Overview Interviewees for Unstructured Interviews

After conducting unstructured interviews and having a list of products for different levels of innovation as well as knowing who affects decisions in different evaluation stages in the innovation process, a purposive sampling approach was applied for the semi-structured interviews (Bryman & Bell, 2011).

The interviewees selected for the semi-structured interviews needed to fulfil several requirements. The first and most important one was that they were in some way part of the development or life-cycle management of the specific case. A second criterion was that the interviewees could elaborate on the evaluation of the new product idea in the informal process before gate 1. Finally, it was important to the researchers that approximately the same amount of interviewees, between three and four, were asked for each case. In the end, seven interviewees were identified to fulfil the criteria (Table 5).

Level of Innovation	Case	Interviewee
Radical	Product H1	BM1 - Brand Management 1
		PD1 - Product Development 1
		PD2 - Product Development 2
Really New	Product H2	BM2 - Brand Management 2
		EX1 - Export 1
		EX2 - Export 2
		PD3 - Product Development 3
	Product H3	BM1 - Brand Management 1
		EX2 - Export 2
		PD1 - Product Development 1
Incremental	Product L1	BM1 - Brand Management 1
		PD1 - Product Development 1
		PD2 - Product Development 2
	Product L2	BM2 - Brand Management 2
		EX1 - Export 1
		PD3 - Product Development 3
	Product L3	BM1 - Brand Management 1
		PD1 - Product Development 1
		PD2 - Product Development 2

Table 5. Overview Interviewees for Semi-structured Interviews

3.2.3. Interview Guide

The interview guide for the semi-structured interviews (Appendix 3) was designed in a flexible manner according to the suggestions of Bryman & Bell (2011). In order to provide some structure it was divided into three major categories, (1) introduction, (2) innovation pot, and (3) level of innovation. Whereas parts (1) and (3) consisted of one or more subsections part (2) can be seen as an extension of the introductory part. The researchers decided to split the interview guide in these sections aiming for gaining general information about the interviewees in a first step and secondly specific data on the topic of the research question.

The first part of the interview guide served as an orientation and overview of the content of the interview. The topic and purpose of the interview was presented by the researchers. Moreover, introductory questions about the function and career of the interviewee and the innovativeness of the case company in general were asked.

The second section extended the first part asking introductory questions specifically concerning Pågen's innovation management system, the innovation pot.

The third part of the interview guide was the key section. It contained questions about the selected cases which served to answer the research question. This section consisted of six subparts, one for each case. The questions in these subparts, however, are the same in order to facilitate analysis across cases and levels of innovation. When asking about criteria for idea evaluation the categorisation into customer, market, product, technical, financial, and strategic criteria as well as intuition, found in previous research such as Griffin & Page (1993), Hart et al. (2003), Magusson, Netz & Wästlund (2014), Martinsuo & Poskela (2011), and Ronkainen (1985), was applied.

Additionally, the interviewees were asked questions from a fourth part as well. This section, however, was added due to the fact that the authors at the same time conducted a business development project for which they were partly seeking for information among the same interviewees.

As different interviewees had specialised knowledge on different cases they were therefore asked only the appropriate set of questions in the third part. Hence, for each interview the interview guide was individually tailored to the interviewee's specialty in advance. Appendix 1 gives an overview of the set of questions asked for each interviewee.

3.3. Method for Data Analysis

In this subchapter the method of analysis for the collected data will be outlined. The method of analysis used was the within- and cross-case analysis model proposed by Eisenhardt (1989).

However, it has to be stated that for the inductive part of the research throughout the five months - in line with Eisenhardt (1989) - data analysis was a re-occurring process that was carried out in an iterative way. Moreover, the authors followed a deductive approach for the other part.

After phrasing a research question, selecting the cases and interviewees, writing the interview guide, and conducting interviews the obtained data was analysed by within-case analyses (Chapter 4). Hence, all recordings were listened to carefully several times and the sections of interest were transcribed in order to guarantee “a more thorough examination of what people say” (Bryman & Bell, 2011, p.481). Due to the fact that the majority of interviews were conducted for a business development project, at the same time, these interviews were not transcribed entirely. The within-case analysis served as a process to detect the unique pattern of each case separately before they are merged and synthesised across cases (Eisenhardt, 1989). It has to be mentioned that all quotes stated in the following chapters are actual quotes from the interviewees taken from the interview transcripts. The segments of interest were labelled into two themes and similarities and differences for each case were explored and patterns recognised. Hereby, the authors iterated between an inductive and deductive approach. Whereas, patterns were recognised without any influence of literature for the background of the ideas, the authors were more dependent on the seven categories of evaluation criteria found in previous literature. These categories were a result of the authors' analysis of Griffin & Page (1993), Hart et al. (2003), Magnusson, Netz & Wästlund (2014), Martinsuo & Poskela (2011), and Ronkainen (1985).

A cross-case analysis (Chapter 5) was conducted in order to overcome the bias of initial impressions and look at the data in a divergent manner (Eisenhardt, 1989). Juxtaposing the six different cases, the cases were compared in relation to their level of innovation (Garcia & Calantone, 2002). After within- and cross-case analyses “tentative themes, concepts, and possibly even relationships between variables begin to emerge” (Eisenhardt, 1989, p.541). These results will be presented in the following chapter.

4. Presentation of Results

This chapter will focus on the findings of the research conducted. In the following subchapters the results of each case will be presented separately distinguishing between the backgrounds of the ideas in general and the evaluation of the ideas in the fuzzy front end. In the end, an overview of all cases and patterns recognised during the within-case analyses will be given.

Details on dates and location when and where the interviews were conducted can be found in Appendix 2. If the same results were also mentioned by another interviewee this will be marked as “supported by” in the following subchapters.

4.1. Product H1

4.1.1. Background

The product idea of Product H1 came from the owner of the company. He liked the traditional Swedish buns filled with vanilla and wanted to produce something similar (*“It was our owner. It was his product. [...] He had this idea that we should make buns with a filling inside” - BM1; supported by PD1*). However, the owner planned to make some improvements to the product. First of all, he wanted the bun to be a small, bite-sized snacking product (*“They [company] combined the idea of snacking and the idea of vanilla in a bun” - PD1*)

Secondly, the company saw the need to have more products in the sweet/snacking assortment next to Product H3. (*“It was sort of an extension of Product H3. We wanted another product that could become a similar success as Product H3 is” - BM1; supported by PD2*). Moreover, the company saw the opportunity to introduce a new product to the European market (*“The background is to make something new on the sweet assortment that does not exist on European market” - PD2*).

Being an opportunity driven company Pågen decided in favour of Product H1 after recognising the chance to introduce something new to the market (*“It was more like ‘Ok we see an opportunity as we’re having progress. Let’s make this [Product H1]’” - BM1; supported by PD1*).

However, Pågen faced some challenges regarding the production process as this product and its technology did not exist on the market. This is why the company analysed different applications on how to produce products with filling (*“So they [company] found tortellini and looked into different kinds of pastas that are filled. They got an idea of making the same process” - PD1*). Having found a company that was capable to deliver suitable machinery

Pågen had to take big investments and build a whole new production line. Although, the investments in the new product idea Product H1 were high the company felt secure as this very production line could make Product H3 as well (*"We dared to actually buy the equipment even though it is extremely expensive, because it could also produce Product H3 and other things. So it was a safety line"* - BM1; supported by PD2).

Due to the customised machinery and unknown product Pågen was confronted with new risks regarding the production process and product quality. It was unclear, for example, whether a certain shelf life can be reached (*"It was a risk regarding shelf life, product quality, process, and the marketing insight"* - PD2). Furthermore, the owner's preference in taste dominated the development process. Because of his strong influence, the size of the market that shared his taste was unclear (*"The uncertainties we saw were mostly about consumer benefit, consumer taste. We developed to reach the owner's taste palette and we had to find consumers and enough consumers so that we can get good volume"* - PD1).

4.1.2. Idea Evaluation

Intuition rather than research played a very big role when evaluating the new product idea of Product H1 (*"The whole process was very intuitive. It wasn't a lot of research. It was more 'let's do this' which happens when he [the owner] is involved"* - BM1; supported by PD1). However, this idea is also considered to be a strategic launch as it offered the opportunity to strengthen the position and widen the product range in the sweet snacking assortment (*"We saw strategic potential to get ourselves more snacking volumes from the market without any cannibalisation of Product H3. [...] This was the first time that we could expand our own snacking position on the market"* - PD1; supported by BM1).

However, Pågen saw a threat in talking to its customers, the supermarket chains, about Product H1 in the idea stage because the company feared that competition or the supermarket chains themselves would make similar products under their brands or private labels (*"We don't really have a lot of contact with our customers before the product is all done pretty much. [...] But it is also hard, because once you've started talking to our customers our competitors will get the information as well"* - BM1). As Pågen did not see any competition regarding this idea when evaluating it, the company tried to bring the product as fast as possible to the market (*"We looked upon it [the competitive situation] slightly and we decided that there is no competition at all. So, we just got in a hurry to do it good and before anyone else"* - PD1; supported by BM1 and PD2).

Throughout the whole evaluation process, product features played a key role. The vanilla cream had to have a specific taste which was liked by a broad consumer group. Moreover, the product needed to reach a certain shelf life and contain only few food additives (*"The*

most important criterion [for idea evaluation] was to find vanilla cream that could have several months of shelf life on room temperature, half of the E-numbers than products have on the market and to find the right taste of Scandinavian vanilla flavour” - PD2). What also was important was the uniqueness of the product as the company was the first one producing this product (“It’s a unique product and we’re the only ones who’re making it. [...] It was seen as a great opportunity” - BM1; supported by PD1 and PD2).

Lastly, as the owner was not only initiating but also strongly supporting this new product idea financial matters did not have a big impact on the evaluation of it (“I think both the fact that it was the owner who decided we’re gonna do this and he actually paid, I am not sure how much, but a lot himself. Therefore, the financial criteria were not that important for Product H1” - BM1). For Product H1, technical criteria played a crucial role, but having strong support from the owner all the risks were accepted including the use of a new technology and market acceptance (“Yes, of course [technical criteria were important], buying like a whole new production line is like a whole list of different risks involved” - BM1; supported by PD2).

4.2. Product H2

4.2.1. Background

A similar product like the new product idea Product H2 was present in the company for many years due to the fact that this type of product was a traditional product not only in Sweden, but in multiple countries (“Skorpor [Product H2] is a generic Swedish word for a very very old type of product, basic idea which exists in many countries” - EX2; supported by EX1). Pågen considered the shelf life of this dry product as an opportunity to use it for export (“The whole idea with Product H2 was that we wanted to test export and it is a good product because the shelf life is nine months” - PD3; supported by EX1). Following the trial and error approach of the company the product was branded and commercialised in a test launch (“They [company] said ‘Let’s try this’. It is all the time this combination of moving forward in entrepreneurial spirit and trial and error matched with a strong belief in brand building and being thinking long-term and being very strict loyal to the basic idea” - EX2; supported by BM2).

Pågen was led by entrepreneurial spirit of a strong owner. For this reason the company tried the new product idea Product H2 on the market (“Since it is a private owner they tried it [Product H2] out and it was a success” - BM2). After the test launch the potential of Product H2 was recognized by retailers in other countries who initiated a partnership (“It was a wish from a Danish retailer, IRMA in Denmark. They asked for whole bread rusk” - EX1;

supported by EX2). Back then, however, the product had a different shape. The current shape of Product H2 came as a wish from one of the consumers who was in close relation to the company. One baker's wife along with many others dipped her rusk in coffee. A new, smaller design for coffee cups became popular on the market, so the original shape of the rusk did not fit in the cup any longer. This is why the rusk got its lengthy shape (*"It was a round rusk and then some baker's wife thought it was hard to dip it into her cup of coffee"* - BM2; supported by EX1 and EX2).

As the product had a very strong background in Sweden the only risk the company faced at that time was regarding consumer acceptance in other countries (*"In Sweden they [company] knew how it will rock, but in Europe, that was a risk"* - PD3).

4.2.2. Idea Evaluation

As Product H2 is one of the oldest products within the company's portfolio the most important criterion for evaluation was intuition. Intuition was important not only for the product specifications in the idea stage, but also when it comes to marketing and branding the new product idea (*"It was very much going on gut feeling. Intuition is strong in this company. People have worked with baked products all their lives, they have a very strong feeling. My intuition is in the marketing which is intuition, but of course it is also a trained attitude with having worked in a professional marketing environment 15 years before coming here. So, when I say intuition, it is nothing that I had with me as a child. It is an intuition that you get from experience, but certainly that has been a key component"* - EX2; supported by EX1).

However, technical criteria were of lower importance during the evaluation of Product H2 (*"No, [technical criteria did not play such a big role], but, we saw the expansion and I made a volume projection and said we must build new production lines"* - EX2).

But while evaluating the new product idea behind Product H2 product specifications were looked upon very closely. Several criteria regarding the product itself as well as the feeling when it was eaten, needed to be met in order to have an appealing product (*"The quality of the product [was important], because we used the best raw materials in combination with good shelf life. [...] The role of product success was that this product brings something new to the market, something crispy, crunchy product, wholesome. It was healthy as well, no added sugar as well"* - EX1).

Besides that, recognising the potential of having a unique product on the market gave the company the confidence to think about a global expansion (*"I am such a strong believer, from the background that I have, having unique products with unique consumer values. I realised very quickly that Product H2 and the Pågen Skorpor was a unique product in the export markets. There was no such a product. Nowhere"* - EX2; supported by PD3).

Internationalisation was considered from the very beginning in the idea evaluation process. Moreover, the strategy of the company was to build a strong international brand (*“The strategic idea was that we want to build an international brand and that’s why the brand was introduced in all the markets all over the world where we were selling” - EX2*).

Lastly, the company considered financial criteria as important for the new product idea Product H2 (*“Of course it is important to have a good calculation, that there was money left” - EX1*).

4.3. Product H3

4.3.1. Background

The company was producing cinnamon buns. One day, however, there were problems at the production line and the rolls were turned for 90 degrees and baked. This led to a different shape of the original cinnamon buns which was then tried to be sold. Therefore, the new product idea Product H3 was a coincidental luck that Pågen had (*“Product H3 actually started off when we made classic cinnamon rolls. [...] It flipped over and then they said ‘Hey, this is actually really good’. [...] So, it was actually a failure that became a success” - BM1; supported by EX2 and PD1*). At the time when Product H3 was discovered, retail companies were not spread over whole Sweden, but rather covered small areas. This was the reason why the case company could make test launches when it wanted to try a new product (*“Pågen could work much easier in small geographical parts of Sweden with trials, so it [Product H3] was just a test sale” - PD1*).

Due to its uniqueness Pågen saw an opportunity in the new product idea (*“The potential was in the pure novelty of having a cinnamon bun in another way” - PD1*). The company was uncertain about consumer acceptance, but followed the approach of trial and error (*“It’s always gonna be a risk of the product not selling, but I think that at that time it was just a matter of ‘Let’s try it and see what happens” - BM1*). At the same time the company was aware of another risk attached to it, namely a possible cannibalisation on classic cinnamon rolls which it tried to mitigate by making the new product idea a smaller snacking product (*“The only risk Pågen thought about in that period of time was cannibalisation, because it had cinnamon buns and a way of minimising that risk was to make Product H3 smaller and make them a snacking product, because cinnamon buns were not a snacking product” - PD1*).

4.3.2. Idea Evaluation

As Product H3 was an idea that started as a failure, intuition played a big role (*"It was just a matter of trial and error" - BM1; supported by EX2 and PD1*). From a technical perspective, Product H3 was even easier to produce than cinnamon buns and Pågen was the first company that discovered this (*"It turned out that competitor companies did not realise how easy it was to make a Product H3" - PD1*). As there were no investments needed to produce this new product idea, financial criteria did not play a role for Product H3 (*"They didn't think so much about having good finances or how much they needed to invest in the product, because it was so easy to test and it was so easy to produce" - PD1*).

Besides that, the uniqueness of the product was important as something like this did not exist on the market (*"It was a unique product. There was nothing like this and everyone who tried it really liked it" - EX2; supported by PD1*). The quality was also a big influential factor for having the product launched on the market. It was seen as product that would stand out next to the original cinnamon roll, because of its taste and moisture (*"Product H3 is pretty much the centre of a cinnamon roll. I think something they saw in that product was that 'Ah, this is different and actually better than a cinnamon roll, so let's try it'. That was unique, unique taste and moisture" - BM1*).

Moreover, Product H3 provided the company with the opportunity of changing its image and increasing sales (*"That [product success] was the main reason for having the product. It could gain high volumes on the market and it could give the company, not a modern image, but a kind of new step of doing new sweet products" - PD1*). This was also of strategic importance as it opened up the possibility to strengthen Pågen's position on the market and enter a new segment, snacking (*"It was a very new product and a unique product, so strategically it was very good for the company to be seen as 'Oh, they bring this very new product to the market and no one has seen it before'. So, strategically it was seen as a very good product" - BM1; supported by EX2*).

4.4. Product L1

4.4.1. Background

Since Product H1 was already on the market for two years the company saw the need to extend the product line (*"The original Product H1 was launched in 2014 we felt that it was the time to add a new flavour" - BM1; supported by PD1*). The product was important not only for attracting existing and new consumers, but also for engaging the company's sales team (*"Also internally, if you talked about the internal politics it is good to come up with number*

two. Otherwise, our salesmen may think 'It is not something we need to work with', because nothing happens. So something had to happen. It is important"- PD1).

Before the company decided to produce Product H1 with a raspberry-vanilla filling the firm thought of having Product H1 with a chocolate-hazelnut filling as a line extension. The new brand manager, however, saw a better fit between a lighter vanilla filling and a fruit or berry taste in addition (*"We have developed a special heart, [...] with hazelnut [chocolate-hazelnut] filling. [...] And then it came to the new brand manager. [...] We had everything ready, but they stopped it. [...] She said 'I have talked to the managing director and the owner. I think Product H1 should not be with a heart, it should be vanilla and some jam on top'" - PD2).*

The idea of having a raspberry-vanilla taste was derived from market research and how the consumers perceived the original Product H1 (*"We started thinking about also how we differentiate Product H1 from Product H3. And then we started thinking about flavours and textures and how do you feel when you eat the product" - BM1).*

After doing proper research Pågen decided in favour of the idea Product L1 and saw the investment for this product as safe due to the fact that the production line could always produce Product H1 or Product H3 as well (*"We didn't see really any larger risks. We had to buy some new equipment. [...] We can still use the equipment for other things. So, it wasn't a big risk and it wasn't a big investment either" - BM1; supported by PD1).* However, the critical part of the investment was the capability of the equipment. The question was whether the machinery could put the right amount of filling on the dough (*"It was a big risk all the time, to find the right technique for putting the jam. It looks easy now, but it took three alternative solutions before we made the right solution" - PD2).* Moreover, the company feared that the new flavour could cannibalise on the existing one, Product H1 (*"I thought then that this product Product L1 was too close to Product H1" - PD1).*

4.4.2. Idea Evaluation

Planning the development of Product H1 Pågen thought that a line extension could keep up the market's attention. By having two products the company would have the possibility to expand its marketing campaigns and hence could increase the sales of the product range (*"Mainly the focus was to add a new flavour. We felt that we needed to bring attention to the product and the brand by launching a new flavour, just so we can have bigger store campaigns. [...] We needed an additional product to be able to drive volume" - BM1).* Furthermore, the introduction of an additional flavour for a product which was solely produced by Pågen would create an even greater barrier for new entrants in this segment (*"The strategic criteria were important to block eventually future competitors. [Product L1 was] For the future, investing for the future" - PD2).*

Among others, some criteria on which the product idea was evaluated were connected to the occasion in which the parent product is consumed. Product H1 was consumed mostly during summer which had an influence on the selection of the flavour of the filling used in the product. By having a summer flavour the company wanted to strengthen the image of the brand (*"We sell Product H1 mainly during the summer season. We wanted to keep that summery feeling, so my thought was then to make the connection to summer even stronger by only using summery flavours and also to keep the product very light. [...] We looked at the trending fruits and berries in the Nordics. Whereas, raspberry and strawberry are the two biggest flavours and I think it was 94% of the Swedish population that really liked raspberry"* - BM1; supported by PD1). Furthermore, the company saw the criteria product quality and taste as highly important (*"The criteria were still to get as much vanilla and fruit as possible in the product. [...] The criterion was a really nice product that can taste vanilla separately and fruit separately"* - PD1). However, product uniqueness did not play a role for Product L1 as it was a line extension of the parent product, Product H1 (*"This is just like an additional flavour, so no, it [product uniqueness] wasn't that important"* - BM1; supported by PD2).

Evaluating the idea previous market research was used in order to get a better understanding of consumers, their likings, the market and popular tastes (*"We tried to just look online to see what we could find about flavours and then we found some research to support that. Also we did ask our consumers at midsummer last year, who is eating them [Product H1], 'do you eat them by yourself or with others'"* - BM1).

However, customers were not assessed during the evaluation phase. It was considered that retailers would accept the product due to the fact that it is a line extension of Product H1 (*"Role of the customer was not important, because this was more a me-too product. It is more widening the range"* - PD2; supported by BM1).

Technical criteria played a big role in the evaluation phase. Technical feasibility was important, because the project was dependent on the machinery and its capability (*"We evaluated the technique in idea stage very much, because if we could not get anyone to solve technique for us we could not get out of the idea stage"* - PD1; supported by PD2).

Regarding financial criteria interviewees had different views on the importance of this category. On the one hand, product development claimed that the financial aspects were not assessed, because the equipment that the company would use for producing Product L1 was already bought for Product H1. The additional filling unit that needed to be purchased was not supposed to be a big investment (*"We already had everything, it was only the cost of the specific equipment for the jam"* - PD2). On the other hand, brand management saw financial criteria as important as targets and margins had to be reached (*"Of course we have*

to meet our targets when it comes to margin. We did a few changes to assure that we would meet the same margin as we have with the Product H1” - BM1).

Lastly, intuition did not play a role either. Product L1 was developed on the basis of market research and consumer preferences (*“If intuition wins it would have been the chocolate [chocolate-hazelnut] one [line extension]. This time it was more reason behind the brand strategy than it was intuition” - PD1).*

4.5. Product L2

4.5.1. Background

Product H2 was a product that was mainly produced for export and for France in specific. Therefore, Pågen involved the French importer to develop a new taste together. The importer raised the idea of adding a brioche flavour which is popular in France to the existing product line (*“It [the idea] came up in discussions mainly with the French importer, because in France brioche is a common flavour. [...] We [export department] are always discussing with main customers what could be the next flavour. They [importer] have in the last ten years asked for brioche” - EX1; supported by BM2).*

In order to pass the evaluation stage with this idea various parties needed to actively influence the progress of Product L2. On the one hand, the importer’s opinion was of great importance. On the other hand, the brand manager needed to convince others in order to take it to gate 1 in the formal innovation process (*“It was the brand manager [who pushed the idea]. We in the export department have the contact with the importer. They are pushing us to come up with something new” - EX1).* Based on that, another reason in favour of developing this idea was to sustain the good relationship with the French importer (*“It was strategically important to keep the good partnership with the French” - PD3; supported by BM2).*

However, there were also risks and uncertainties related to the new product idea Product L2. First, brioche is a taste that includes the flavour of butter. This fact makes Product L2 more expensive than pure grain rusks. Hence, it was unsure whether the consumers were willing to pay a higher price for the product (*“That [uncertainty] was will the market accept price premium in this low-priced category. I think that was the biggest worry” - BM2).* Second, due to the similarities in taste between brioche and classic wheat Pågen feared a decrease in sales on its wheat rusk (*“The biggest risk was on the wheat roll, that it might take market from them” - PD3).*

4.5.2. Idea Evaluation

As described above this new product idea started with the need to provide the French importer with a new sustainable taste for Product H2 (*“[The most important criterion was] the need for something for our distributor to offer to the trade in France. [...] We have not given the distributor anything for so many years” - BM2; supported by PD3*). Moreover, the new taste needed to meet certain strategic criteria. Pågen saw it as important to introduce a flavour to the segment of rusks that did not exist before (*“The strategy was to have a fourth flavours, to come up with something new, interesting and to be the first with this flavour for rusks” - EX1*).

Regarding the quality of the product the company wanted to maintain high standards set by its parent product. Especially the shelf life was seen as a crucial factor (*“[The second most important criterion was] that we can keep the quality. This is more sensitive product, the other ones have nine months of shelf life, but this we can only have six months” - EX1*).

The goal was to come up with a new product idea that could increase sales (*“It [most important criterion] was to have something bringing volume, something adding to the range, something interesting, something new to the consumers as well” - EX1*). And due to the fact that brioche was a popular flavour in France Pågen saw market potential for the new product idea Product L2 (*“It [evaluation criterion] was not really intuition, because it was quite sure that, if we could keep the quality, should be a good selling flavour” - EX1*).

However, a criterion hindering the company to take this idea further in the innovation process was related to finances and costs. Adding additional ingredients required manpower and thus higher production costs (*“Everything comes in pipelines, flours, salt, yeast, water, and as soon as we are doing something extra we need to add some new people staff to add ingredients. So, it is always making products more expensive” - EX1*).

4.6. Product L3

4.6.1. Background

Christmas is a special season for retail, many new products hit the floor space and consumer preferences change. As Product H3 were in the shelves Pågen felt the need to get additional display areas on the floor in order to compete with the various Christmas cookies (*“The reason we wanted to launch these was that we found it quite hard to get those extra display units in store during the Christmas season, because everywhere you would just find gingerbread cookies, pepparkakor” - BM1*). Being aware of this issue the owner wanted to address it by introducing Christmas products to the market (*“The idea started with the owner.*

He has an expression, he says 'I want Pågen to own Christmas'" - PD1). Pågen combined its biggest seller, Product H3, with the biggest flavour during the Christmas season, gingerbread, and created the new product idea Product L3 ("We just had an idea of the most Christmassy taste with our most liked product" - PD1).

Moreover, it was important for the company to introduce a novel product that is liked by a younger consumer group than Product 3 Saffron which was another Christmas flavour of Product H3 ("We wanted to have a more modern product compared with the Saffron Product 3 that is more for elder people" - PD2).

However, the company was confronted with several risks related to the new product idea Product L3. Firstly, this idea was expected to cannibalise on Product H3. Analysing this risk the company saw a decrease in volume because of gingerbread cookies and decided that the introduction of a gingerbread flavour would improve Product H3's sales during the Christmas season ("I think the only risk would be that it would cannibalise on cinnamon, but then again we lost a lot of volume to the normal gingerbread cookies. So, this was just trying to gain some of it [volume] back" - BM1). Secondly, the company faced the uncertainty of consumer acceptance in the idea stage as the flavour of gingerbread was not combined with a bun before ("You never know if it's gonna sell, because it is a bit of a weird mix when you think about it, to have a sweet bun with gingerbread flavour" - BM1; supported by PD2). Finally, having spices in the filling opened up a whole range of microbiological risks as the product drying out, for example ("There could be bacterial or micro bacterial risks, because [...] spices always dry out products" - PD2).

4.6.2. Idea Evaluation

When evaluating Product L3 the performance of the range Product H3 in total during the Christmas period played an important role. As the stores were filled with gingerbread cookies and other Christmas cookies Pågen saw a decrease in volume on Product H3 and planned to get back volumes. Therefore, intuition did not guide the idea of Product L3 ("The whole idea was to you know just to get some volumes from the traditional gingerbread cookies" - BM1). In order to mitigate this development the company decided not make a unique product, but instead maintaining the market awareness of the Product H3 brand by adding a new Christmassy flavour ("It is a me-too product, more to keep the consumer and the customer open minded and also to wider the range, the Christmas" - PD2).

Other companies were launching products with gingerbread flavour and Pågen saw the need to follow the trend in order to stay competitive ("In that time in Sweden, companies started to play around with Christmas tastes, we got ice cream, so it was important for us to be in that flow of working with tastes in new ways" - PD1).

In the idea stage the company's focus was to create a product that would have a great taste. Based on its experience Pågen was aware of the fact that having a great taste and keeping the freshness of the product would lead to success. (*"The first and not the only one but most important one [criterion] is it really had to be tasty, it really had to be tasty. The second was it had to manage shelf-life, so it had to have the feeling of a fresh product for three to four weeks"* - PD1).

Despite this, not having customers as an interested and supportive party would have led to the new product idea not achieving its full potential and Pågen's goal with this it. Thus, customers played an important role in the evaluation of the new product idea Product L3.

Finally, no clear result can be seen regarding financial criteria. Product development argues that when it comes to the economical return of the launch, financial factors were evaluated as less important. The focus rather was on being part of the Christmas sales (*"Customer need fulfilment was important as well, in Sweden mostly. Because if we wanted to own the Christmas we needed to do that together with customers otherwise we would not be allowed to do this, so it was important. [...] The finance came later"* - PD1). In contrast, brand management saw the use of the financial criteria as important for Product L3 (*"Of course it [Product L3] needs to meet the margin and targets that we have set"* - BM1).

In the following table an overview of the results is given for each case using the patterns recognised by the researchers.

First of all, regarding background the authors recognised that the inspiration for all radical and really new cases was derived from tradition. Whereas the initiator of the ideas differed between the cases the purpose for ideas with low levels of innovation was clearly strategic and mostly trial and error for ideas with high levels of innovation. Moreover, it could be seen that radical and really new cases lacked insights regarding consumer acceptance which the company had for the majority of the incremental ideas.

In terms of idea evaluation the results showed that criteria in the categories market, product, and strategy were evaluated and important, respectively, for all cases reviewed. Additionally, criteria within the technical and intuition category were taken into consideration for ideas having high levels of innovation.

Patterns / Cases	Product H1	Product H2	Product H3	Product L1	Product L2	Product L3
Background						
<i>Inspiration</i>	tradition	tradition	tradition	intuition and market research	popular taste	tradition, market
<i>Initiator</i>	owner	export partner	misfortune	brand manager	importer	owner
<i>Purpose</i>	strategy	trial and error, test export	trial and error	line extension	sustain good partnership	get floor space in stores
<i>Occasion</i>	snacking	coffee bread	snacking	summer snack	coffee bread	Christmas snack
<i>Capability</i>	unclear	not assessed	not assessed	feared	not assessed	not assessed
<i>Investment</i>	high, but safe	not assessed	none	assessed	none	none
<i>Consumer Acceptance</i>	unclear	unclear	unclear	assessed	assessed	unclear
<i>Cannibalisation</i>	not expected	not assessed	mitigated	feared on vanilla	feared on wheat	feared on cinnamon
Idea Evaluation						
<i>Customer</i>	not evaluated	involved	not evaluated	not evaluated	involved	involved
<i>Market</i>	opportunity, no competition	opportunity, market need, no competition	market potential, no competition	market potential	market potential	market share, market potential
<i>Product</i>	uniqueness, taste, shelf life	uniqueness, quality	uniqueness, taste, moisture	quality	taste, shelf life	taste, freshness
<i>Financial</i>	not important	important	not important	no clear results	evaluated	no clear results
<i>Technical</i>	important	evaluated, easy to implement	evaluated, easy to implement	important	not evaluated	not evaluated
<i>Strategic</i>	widen assortment	test export	new segment	line extension	widen assortment	get floor space
<i>Intuition</i>	big role	big role	big role	no role	no role	no role

Table 6. Overview of Presentation of Results

5. Analysis and Discussion

This chapter will focus on the analysis of the findings presented in chapter 4 including the literature covered in chapter 2. Firstly, the background of the selected cases will be analysed in subchapter 5.1. Secondly, the idea evaluation process with a focus on the evaluation criteria used of these cases will be reviewed and compared to the findings of Griffin & Page (1993), Hart et al. (2003), Magnusson, Netz & Wästlund (2014), Martinsuo & Poskela (2011), and Ronkainen (1985) in subchapter 5.2.. Lastly, in subchapter 5.3., the researchers will present the relationship between background and idea evaluation for high levels and low levels of innovation, respectively.

5.1. Background

Every new product idea that was researched started with an **inspiration**. The inspiration, however, could have different sources. The authors found that for new product ideas having high levels of innovation, Product H1, Product H2, and Product H3, tradition played a key role in influencing idea generation. *“Skorpor [Product H2] is a generic Swedish word for a very very old type of product, basic idea which exists in many countries” (Interview EX2)*. Not only Product H2, but all three cases showed a connection to a traditional Swedish product such as vanilla buns, rusks, or cinnamon rolls.

Ideas having low levels of innovation, Product L1, Product L2, and Product L3 were strongly influenced by the market conditions their parent products faced. Therefore, the launches of the incremental new product ideas examined were a reaction to changing conditions on the market. The researchers found that for all incremental ideas that were part of this study strategy was the main reason for why these new product ideas were launched. Product H1 existed on the market already for more than one year. Hence, Pågen needed to introduce a follow-up flavour in order to increase the number of campaigns in stores and thus consumers' interest in the brand. For Product L3 it was similar. *“The reason we wanted to launch these was that we found it quite hard to get those extra display units in store during the Christmas season, because everywhere you would just find gingerbread cookies, pepparkakor” (Interview BM1)*. During the Christmas season Pågen was driven back by gingerbread cookies. Due to the decrease in sales on Product H3 the company needed to react and launch a modern Christmassy product in order to stay competitive and gain floor space in stores. Lastly, for Product L2 the flavour was recognised to have a high sales

potential due to its popularity on the French market. Moreover, Pågen wanted to maintain the good partnership between them and the French importer.

To conclude, all new product ideas having low levels of innovation were launched on a strategic **purpose**. In contrast, ideas having high levels of innovation mostly followed a trial and error approach. One reason for this lies in the fact that at the time the really new ideas, Product H2 and Product H3, were launched the company had the possibility of test sales in small geographical regions due to the different retail landscape. *“Pågen could work much easier in small geographical parts of Sweden with trials, so it [Product H3] was just a test sale” (Interview PD1)*. Another reason is the private ownership of the company which allows Pågen to test the success of innovation. *“Since it is a private owner they tried it [Product H2] out and it was a success” (Interview BM2)*. Only Product H1 was a strategic launch. Product H2 and Product H3 started off as test launches. *“[...] It [Product H3] was just a matter of let’s try and see what happens” (Interview BM1)*. As the output for more radical ideas is new to the company and to the market the company relies rather on learnings, experiences, and a trial and error approach than on thorough research (Florén & Frishammar, 2012).

Having this approach leads to ambiguity regarding **consumer acceptance** for ideas with high levels of innovation because of the fact that radical or really new ideas, respectively, are characterised by a new market and/or a new technology (Holahan, Sullivan & Markham, 2013). The case company, however, saw the degree of innovation of the ideas as opportunities to gain market share. Therefore, the risk of uncertain consumer acceptance was endured. Florén & Frishammar (2012) also mention this trade off when they argue that companies are more willing to accept these uncertainties when being triggered by a promising competitive advantage due to early market entrance.

For incremental ideas the case company was not uncertain about the consumer acceptance for the majority of the new product ideas. Pågen only saw the market’s acceptance for Product L3 as doubtful.

For the majority of radical and really new cases consumers did play a role in the fuzzy front end. The reason for this is the fact that the occasion in which Product H1 and Product H2 would be used was clear from the beginning having the occasion as a set target influenced by individuals, meaning the owner when it comes to Product H1 and the baker’s wife in the case of Product H2. This contradicts Florén & Frishammar (2012, p.32) who state that “the front-end for radical development is not necessarily customer-driven” referring to customers as consumers.

The parties initiating (**initiator**) the examined cases greatly vary from strong personal wishes over strategic purposes to a production misfortune. No differentiation between ideas having high and low levels of innovation can be made. The cause for this lies in Pågen being an opportunity-driven company. *“It was more like ‘Ok we see an opportunity as we’re having progress. Let’s make this [Product H1]” (Interview BM1).* This again contradicts the arguments of Florén & Frishammar (2012, p.32) who state that for radical development “individual rather than organisational initiative is needed”. For the reviewed cases an individual initiator can clearly be seen for Product L3 or Product L1, for example. *“The idea [of Product L3] started with the owner. He has an expression, he says ‘I want Pågen to own Christmas” (Interview PD1).* Moreover, for two cases having high levels of innovation lead users having close relationships to the company were the driving forces in starting off the new product idea. They directed product specifications such as shape or taste confirming Florén & Frishammar (2012) who argue that companies are more dependent on lead users for novel concepts, meaning ideas with high levels of innovation. Lead users’ preferences are often adapted by a greater majority in the market in the future (Florén & Frishammar, 2012). This can be confirmed for the examined cases Product H1 and Product H2.

Moreover, the authors could see differences between ideas having different levels of innovation concerning the risks and uncertainties related to the new product ideas. First of all, **cannibalisation** was seen as a major fear for all incremental new product ideas. *“The biggest risk was on the wheat roll, that it [Product L2] might take market from them” (Interview PD3).* The reason for this is that all cases having low levels of innovation are me-too new product ideas targeting the same market. For the cases having high levels of innovation cannibalisation was not mentioned to be seen as a risk. Only Product H3 was expected to cannibalise on the existing cinnamon rolls. This risk, however, was mitigated by changing the size of the product and marketing it for a different occasion.

Second, the company’s **capability** of producing the product was only questionable for Product H1 and Product L1. *“Buying a whole new production line [for Product H1] is a whole list of different risks involved” (Interview BM1).* *“It was a big risk all the time, to find the right technique for putting the jam [for Product L1]. It looks easy now, but it took three alternative solutions before we made the right solution” (Interview PD2).* For Product H2 and Product H3 as well as for Product L2 and Product L3 the capability was not assessed as either the machinery was already in place or the new product ideas were new flavours for existing products.

In relation to the capability the **investments** were only high for the most radical idea, Product H1, which required a new production line. For all other cases regardless their level of innovation the risk of high investments did not play a major role.

In conclusion, the researchers could see clear differences between ideas having high and low levels of innovation regarding the background in terms of inspiration, purpose, the risk of cannibalisation, and uncertain consumer acceptance. Whereas, the inspiration for radical and really new ideas was tradition incremental ideas were more based on changes in the market followed by a strategic purpose to launch these ideas. Ideas having high levels of innovation are mostly characterised by a trial and error approach because of company having a private, entrepreneurial owner and the opportunity to do test sales. Furthermore, the authors found that cannibalisation was a risk mentioned for all new product ideas having low levels of innovation due to the fact that they were me-too products having the same target group. Ideas with high levels of innovation did either not fear cannibalisation or mitigate the risk. Moreover, radical and really new ideas were unsure about consumer acceptance. For incremental ideas, however, consumers and the market were not uncertain in the majority of the cases, so consumer acceptance was not considered as an issue which supports Florén & Frishammar (2012) who mention a higher willingness to accept uncertainties if companies expect a competitive advantage when entering the market early. Lastly, the researchers found no differences between ideas having high and low levels of innovation in terms of individual or organisation initiative, respectively. The reason for this lies in the opportunity-driven approach of the case company. This finding clearly contradicts Florén & Frishammar (2012) who argue that individual initiative is needed for more radical ideas.

In the table below an overview of similarities and differences between ideas having high and low levels of innovation will be given regarding the recognised patterns.

Theme		Description
Background	Similarities	<p>Initiator - products with both high and low level of innovation are initiated by individuals as well as the organisation.</p> <p>Capability - only for one product having high levels of innovation and one product having low levels of innovation this was questionable, for the other ones the</p>

		<p>capability was not doubted.</p> <p>Investment - only one product among high levels of innovation had a high investment, the other ones did not have high investments included. Products with low level of innovation also did not need high investments.</p>
	Differences	<p>Inspiration - ideas with high levels of innovation built on the basis of Swedish tradition, contrary to ideas with low levels of innovation that were inspired by the market their parent products belonged to.</p> <p>Purpose - products having high levels of innovation were mostly trial and error, while the purpose of ideas with low levels of innovation was strategic launches.</p> <p>Consumer acceptance - unclear for ideas having high levels of innovation and in most cases not uncertain for ideas having low levels of innovation.</p> <p>Cannibalisation - all ideas with low levels of innovation had that risk, whereas this was only feared for one of the ideas with high levels of innovation.</p>

Table 7. Similarities and Differences between High and Low Levels of Innovation for Background

5.2. Idea Evaluation

Reviewing previous literature on the topic of idea evaluation the authors recognised seven different categories of criteria for new product idea evaluation in the fuzzy front end, namely customer, market, product, technical, financial, strategic, and intuition. The same seven categories were found by the authors in the results of the study at hand. However, literature does not define what is meant under the term customer. Based on the case company's definition the researchers of this master thesis specify customers as retail companies whereas consumers represent the end users of the products.

Regarding **customer** criteria the authors found that those criteria were more important for incremental ideas than for ideas with high levels of innovation. For Product L2 and for Product L3, customers played a key role when evaluating the new product ideas. This could only be observed for one idea having high levels of innovation that is Product H2. The

analysis showed that for the examined cases the reason for this lies in partnerships. Establishing and sustaining export partnerships as well as retail partnerships was the intention behind including customer criteria in idea evaluation (Interview BM2; Interview PD1; Interview PD3).

Literature provides different views concerning the importance of customer criteria. On the one hand, Hart et al. (2003) found in their research that criteria such as customer acceptance and customer satisfaction played a minor role in the idea evaluation phase. Their study showed that only 31% of companies in the Netherlands and 38% of companies in the United Kingdom used customer satisfaction as a criterion in the fuzzy front end. However, the research of Hart et al. (2003) did only include the backgrounds of respondents and firms, but not of researched ideas. Hence, it cannot be seen whether there were any partnership intentions behind the examined launches. On the other hand, Griffin & Page (1993) argued for the importance of customer criteria. However, their study merely focused on post-launch evaluation. To conclude, the importance of customer criteria remains unclear.

One of the most important criteria for both ideas with high and low levels of innovation were **market** criteria. When evaluating radical and really new ideas on market criteria especially the expected competitive situation was taken into consideration. This was due to the fact that the case company saw unique opportunities with these new product ideas (Interview BM1; Interview EX1; Interview EX2). Moreover, the criterion market potential played a key role for radical and really new as well as for incremental ideas as Pågen defined themselves as a volume-driven company (Interview EX1; Interview PD1). However, only for incremental ideas market research was used in order to get information and to correctly evaluate their market potential.

This finding corresponds to previous literature. Hart et al. (2003), for example, stated that among other criteria market potential is one of the most important ones in the fuzzy front end. They found that market potential is used as an evaluation criterion by 73% of companies researched in the United Kingdom. Furthermore, Martinsuo & Poskela (2011, p.908) claimed that “the use of market criteria is positively associated with competitive potential”. Additionally, Ronkainen (1985, p.174) highlighted the importance of market criteria stating that “market criteria are the determining criteria during the concept phase, having been assigned the largest weight in all but one of the companies”. His study showed that particularly market size and expected competitive situation, both mentioned to be used by all companies in his study, are the key criteria in idea evaluation (Ronkainen, 1985). To sum up, the authors of this thesis support research done on this topic by stressing the importance of market criteria for ideas having high as well as low levels of innovation.

Out of the seven categories of idea evaluation criteria found the authors could see a clear difference between ideas with a high level of innovation compared to incremental ideas regarding **product**-related criteria. For radical and really new ideas product uniqueness was a very important criterion. Shape and size were mentioned as crucial for all of these ideas. Moreover, quality was an important criterion that was assessed for all ideas having high levels of innovation. Especially the taste of the product has to meet certain standards (Interview BM1; Interview EX1; Interview EX2; Interview PD1). For incremental ideas product uniqueness was not an important criterion in idea evaluation as the new product ideas themselves were not characterised by high degrees of uniqueness due to the fact that they were line extensions. Quality criteria such as taste and freshness, however, did play a role in most of the incremental cases (Interview BM1; Interview BM2; Interview PD1).

This contradicts the finding of Hart et al. (2003) who claimed that quality as a criterion in idea evaluation is of minor importance. Only 22% of British and 36% of Dutch companies use this criterion which makes it the least important among the product criteria in the research conducted by Hart et al. (2003). A reason for this difference could be found in the fact that the research for this thesis was conducted in the food industry where the quality of the product plays a key role as it is eaten or drunk, respectively. Nevertheless, product uniqueness showed the highest degree of importance being used by 75% of firms in the United Kingdom. The authors can only support this finding regarding ideas having a high level of innovation. Another criterion researched by Hart et al. (2003) was product performance which was not taken in concern by the case company when evaluating the new product ideas researched. Ronkainen (1985) found that regarding product criteria product exclusivity and product legality (patents, etc.), in particular, were highlighted.

On **financial** criteria the authors could record diverse results. First of all, for the majority of radical and really new ideas financial criteria were mentioned as not having been important in the idea evaluation stage. Only for Product H2 the criterion financial performance was important to assess (Interview BM2; Interview EX1; Interview PD1). Concerning incremental ideas the findings between product developers and brand managers diverged to a great extent. Whereas, interviewees from the product development department claimed that financial criteria did not play a big role brand managers stressed the importance to meet targets and reach margins (Interview BM1; Interview PD1; Interview PD2). This could be due to the differences regarding their scope of work, brand managers being responsible for the new product idea as a whole as well as the brand and product developers taking care of specific product features.

Ronkainen (1985) found that criteria in the financial category were perceived as the least important group of criteria after market and product criteria. Hart et al. (2003, p.29) also claim that “of interest is the lack of use of any financial criteria in the first two evaluation gates of the NPD process”. Both Ronkainen (1985) and Hart et al. (2003) support the authors’ findings for radical and really new ideas. This might be due to the fact that financial criteria were hard to assess for idea evaluation in the fuzzy front end (Koen et al., 2001). For two out of three cases for high levels of innovation the company did not emphasise the importance of financial criteria as these cases were done under the approach of trial and error modifying an existing product (Interview BM1; Interview BM2; Interview EX2; Interview PD1). Therefore, the authors did not identify distinct results on this category of criteria.

Regarding **technical** criteria the researchers could see that the role of this criterion is different for ideas with high and low levels of innovation. On the one hand, for Product H1 technical criteria were crucial to evaluate on as the equipment and the process were unknown. On the other hand, for Product H2 and Product H3, the really new ideas, technical criteria were evaluated, however, the importance was lower due to the fact that the machinery already existed within the company (Interview BM1; Interview PD1). Concerning incremental ideas technical criteria were not taken into consideration for Product L2 and Product L3, but they did play an important role for Product L1 (Interview BM1; Interview PD1).

These findings contradict literature which states that “technical feasibility is the most frequently used criterion for idea screening purposes” (Hart et al., 2003, p.28). 75% of British and 70% of Dutch companies claimed to use technical feasibility as a criterion for idea evaluation. Also, Martinsuo & Poskela (2011, p.908) found evidence for technical criteria being “positively associated with competitive potential”. Although, being such an important criterion, according to previous literature, it also has to be mentioned that assessing technical aspects is hard (Florén & Frishammar, 2012; Koen et al., 2001).

Comparing literature and the results of this study led the researchers to the conclusion that rather the idea itself than the level of innovation influences the use of technical criteria for idea evaluation in the fuzzy front end.

So far, previous literature did not spot much light on **strategic** criteria. However, the authors of this thesis found that strategic criteria did play a key role for all cases examined. The reason for including strategic criteria in idea evaluation for radical and really new ideas was related to the opportunities the company faced, widening the assortment with Product H1, testing export with Product H2, and entering a new segment with Product H3 (Interview BM1;

Interview EX1). To evaluate incremental ideas strategic criteria were seen as important in order to assess the ideas' potential to react to the market in terms of line extensions as it was the case for Product L1, widening the assortment with Product L2, and getting floor space in stores with Product L3 (Interview BM1; Interview BM2; Interview PD2; Interview PD3).

In their research Martinsuo & Poskela (2011, p.908) called attention to the importance of strategic criteria by supporting their hypothesis: "Use of strategic criteria is positively associated with future business potential".

Looking at the six cases examined the researchers conclude that there was a strategic purpose behind all of them, although Product H2 and Product H3 were launched under a trial and error approach, having an effect on the importance of strategic criteria. Therefore, the authors assume that the importance of strategic criteria for idea evaluation depends on the purpose under which the new product ideas were launched.

The last category of criteria the authors found was **intuition**. Analysing the two groups the researchers could recognise an obvious and clear difference between ideas with a high level of innovation and ideas with a low level of innovation. Intuition was mentioned to be the most important criterion for evaluating radical and really new ideas in the fuzzy front end. Gut feeling and an open mindset were seen as key drivers influencing the evaluation process for ideas having high levels of innovation (Interview BM1; Interview BM2; Interview EX1; Interview EX2). In particular, the researchers could define three different types of intuition. The first type is *product intuition* which was recognised for Product H1. The intuition originated from the vision to have a product similar to the traditional Swedish vanilla bun adjusted to modern consumer trends and needs. Therefore, the original product was key to this intuition. Secondly, *market intuition* could be defined for Product H2. With this new product idea the company saw the opportunity to enter new markets and bring the existing product to a new level. In general, this type of intuition is characterised by a new market. The third type is *product-market intuition* found in Product H3. This type of intuition can be seen as a hybrid of product and market intuition. A new product was created by modifying an old one and with this new product idea a new target group was addressed. Both the new product and the new market play a key role for this type of intuition.

Nevertheless, intuition played a negligible role for evaluating incremental ideas as there was a greater amount of research behind those ideas (Interview BM1; Interview EX1; Interview PD1).

Previous research stressed the importance of intuition as an evaluation criterion in the fuzzy front end. Focusing on idea evaluation Hart et al. (2003, p.28) claimed that "intuition also

played a major role". In more detail their research showed that 62% of companies in the Netherlands and 54% of firms in the United Kingdom used intuition as a criterion for evaluating new product ideas (Hart et al., 2003). However, no differentiation between radical and really new ideas, on the one hand, and incremental ideas on the other hand, was made. Furthermore, Magnusson, Netz & Wästlund (2014) argued that an intuitive assessment provides companies with a greater view on the business perspective.

This led the authors of the thesis at hand to the conclusion that due to the high level of uncertainty more radical ideas face, a holistic view and an intuitive evaluation is needed for radical and really new ideas. A reason why the criterion of intuition was not mentioned to be important for incremental ideas could be seen in the fact that these ideas were research-based.

The table below shows similarities and differences between radical and really new ideas, on the one hand, and incremental ideas, on the other hand categorised by the seven dimensions of criteria recognised.

Theme		Description
Idea Evaluation	Similarities	<p>Customer - taken into consideration when establishing or sustaining partnerships was important.</p> <p>Market - important criterion for all ideas.</p> <p>Product - quality (taste, freshness) evaluated for all ideas.</p> <p>Financial - no clear results for both ideas having high and low levels of innovation.</p> <p>Strategic - important criterion for all ideas.</p>
	Differences	<p>Customer - customer criteria were more important for ideas having low levels of innovation.</p> <p>Market - ideas having high levels of innovation rather evaluated the expected competitive situation whereas ideas having low levels of innovation focused on market potential.</p> <p>Product - product uniqueness was very important for radical and really new ideas.</p> <p>Financial - for incremental ideas there were differences in</p>

		<p>the perception of importance of this category between product development and brand management.</p> <p>Technical - evaluated and important, respectively, for radical and really new ideas, not important, for incremental ideas.</p> <p>Intuition - most important criterion for ideas with high levels of innovation, negligible for ideas having low levels of innovation.</p>
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Table 8. Similarities and Differences between High and Low Levels of Innovation for Idea Evaluation

Table 9 represents a summary of the categories of criteria used for evaluating ideas having high and low levels of innovation. An “X” shows that this category was evaluated, a bold “X” refers to a category that was not only evaluated, but also mentioned to have been important for idea evaluation. Blank fields name categories that were not taken in concern when evaluating nor mentioned to have been important.

First of all, no clear results could be seen for customer and financial criteria. Regarding customer criteria the intention to establish and sustain retail and export partnerships influenced the use of this criterion. Concerning cases, where partnerships played a key role, customer criteria were taken into consideration. For financial criteria the authors support literature which claimed that the assessment of those criteria is hard in the idea evaluation stage because of a lack of information and understanding in the fuzzy front end (Koen et al., 2001).

Secondly, market and strategic criteria were highlighted as important (bold “X”) for both levels of innovation. In line with previous research (Hart et al., 2003; Martinsuo & Poskela, 2011; Ronkainen, 1985) the authors also agree on the importance of market criteria. In the case company a reason for this could be seen in the recognition of opportunities for ideas with high levels of innovation and the volume-driven philosophy of the company regarding all new product ideas examined. Being of importance, strategic criteria are strongly connected to the purpose under which the new product ideas were launched like the recognition of opportunities for radical and really new ideas or the reaction to the market for incremental ideas.

Thirdly, product criteria were evaluated (“X”) for radical and really new ideas as well as incremental ideas. However, this category was stressed as being important (bold “X”) for ideas with high levels of innovation where the criterion product uniqueness was seen as a crucial factor. This supports the findings of Hart et al. (2003) who also highlighted the

importance of this criterion. However, they saw quality to play a minor role in idea evaluation whereas the authors of this thesis found it evaluated in all cases examined.

Furthermore, the evaluation of technical criteria only played a role (“X”) for ideas with high levels of innovation and were even mentioned as important for the radical new product idea examined. This goes in line with Hart et al. (2003) who even argued that technical feasibility was the most important criterion. The authors of this thesis, however, can only support this for radical new product ideas. Moreover, it has to be mentioned that the idea itself instead of the level of innovation influences the use of this criterion.

Finally, intuition was mentioned as the most important criterion (bold “X”) for ideas having high levels of innovation. A reason for this could be seen in the fact that radical and really new ideas face a higher degree of uncertainty and the need for the full picture which is not the case for incremental ideas. Moreover, three different types of intuition were recognised, namely product intuition, market intuition, and product-market intuition. Hence, the authors of this thesis can only support previous literature (Hart et al., 2003; Magnusson, Netz & Wästlund, 2014) regarding the importance of intuition for ideas with high levels of innovation.

	Category of Criteria Used for Idea Evaluation						
	Customer	Market	Product	Financial	Technical	Strategic	Intuition
<i>High Level of Innovation</i>	no clear result	X	X	no clear result	X	X	X
<i>Low Level of Innovation</i>	no clear result	X	X	no clear result		X	

Table 9. Summary of Categories of Criteria used for Idea Evaluation

6. Conclusions, Limitations, and Implications

6.1. Conclusions

The authors of this thesis identified a gap in research concerning the topic of new product idea evaluation for different levels of innovation in the fuzzy front end for the food industry. Having read studies of similar research done for the technology sector the authors believe that the food industry differs from other sectors as consumers are the ones guiding the industry. A need pull from the market can be recognised whereas, the technology sector is characterised by knowledge push where companies are more dependent on a high degree of research and development (Galizzi & Venturini, 1996; Tidd & Bessant, 2014; Triguero, Córcoles & Cuerva, 2013).

In their research design the authors compare three radical and really new ideas, on the one hand, with three incremental ideas, on the other hand. Conducting a qualitative study the researchers had seven in-depth semi-structured interviews with members of the following departments: brand management, export, and product development.

The researchers iterated between an inductive and deductive research approach. When analysing the background of all ideas, different patterns which have not been mentioned in previous studies were defined resulting in an inductive approach. For the analysis of the idea evaluation, however, the authors partly used a deductive approach being guided by the seven different categories found in research, namely customer, market, product, technical, financial, strategic, and intuition (Griffin & Page, 1993; Hart et al., 2003; Magnusson, Netz & Wästlund, 2014; Martinsuo & Poskela, 2011; Ronkainen, 1985).

The results of the study at hand showed that there are differences regarding criteria used when evaluating ideas which high or low levels of innovation, respectively. Market, product, and strategic criteria were used for all levels of innovation. Radical and really new ideas additionally took technical and intuition criteria into consideration. Therefore, the authors could recognise a more thorough assessment of ideas with high levels of innovation. This finding corresponds to Holahan, Sullivan & Markham (2013) who argue in favour of more structure and decision criteria for radical innovations. However, the authors want to stress the importance of intuition which goes in line with Hart et al. (2003) and Magnusson, Netz & Wästlund (2014). Furthermore, the thesis at hand showed that intuition was the most important criterion for evaluating ideas with high levels of innovation. Analysing this criterion the authors recognised three different types of intuition, product intuition, market intuition, and product-market intuition. Each of those has either the product, the market or both as a focus.

Regarding the relation between the backgrounds of the new product ideas and idea evaluation the authors saw that strategic and market criteria were influenced by the purpose under which the ideas were launched. Whereas, the purpose for ideas with high levels of innovation was the recognition of opportunities incremental ideas were launched as a reaction to changes in the market. For radical and really new ideas market potential and the expected competitive situation were named as important in order to evaluate ideas for the newly recognised opportunity. Due to the volume drive of the case company market potential was also seen as an important evaluation criterion for incremental ideas. Moreover, it could be seen that the criterion technical feasibility was strongly related to the capability of the idea. Thus, the authors believe that this criterion rather depends on the idea itself than on the level of innovation.

Finally, agreeing with Koen et al. (2001) the authors want to mention that due to the fact that this thesis deals with idea evaluation in the fuzzy front end only limited information on the ideas is available. Therefore, it can be hard to assess the ideas in a correct manner.

6.2. Limitations and Implications for Further Research

Conducting this research confronted the authors with some limitations leading to implications for further research. First of all, reviewing six cases, three for high levels of innovation and three for low levels of innovation, limited the generalisability of the outcome of the study at hand (Bryman & Bell, 2011). Hence, the differences between ideas having different levels of innovation needs to be further empirically researched by using a greater amount of cases. Taking the results of this thesis as a basis this could be done using a quantitative research design.

Secondly, the researchers encountered limitations regarding the selection of the cases having been confronted with a trade off between finding ideas with high levels of innovation in the mature bakery industry and conducting research on rather similar cases. All cases selected belonged to the sweet/snacking segment which was important in order to assess the way in which they differ regarding idea evaluation. However, the age of the new product ideas diverged to a large extent making it hard for the authors to obtain proper data. Moreover, the cases varied in terms of their target market, some being intended to be launched in domestic markets, others being proposed for export. In order to mitigate this issue the authors suggest future research to look upon a less mature segment within the food industry such as products that adapt to new trends and changes in the market like vegan products, lactose and gluten free products, or ready-made meals.

Thirdly, the researchers could see limitations regarding the interviewee selection. During interviewing as well as analysing the authors found slight differences in priorities between Brand Management and Product Development. Whereas Brand Managers focused more on the brand and the strategy of the company Product Developers were more concerned about product quality and performance when evaluating the new product ideas. Therefore, the researchers suggest a more homogeneous group of interviewees.

Moreover, in terms of the research approach used, the researchers decided in favour of a combination of inductive and deductive. The authors were led by the seven categories of criteria identified in previous research which might have biased them in finding new evaluation criteria. Therefore, the authors suggest the use of a solely inductive approach.

Another limitation of the master thesis a hand concerns the source of the empirical data. Only qualitative semi-structured interviews were used to obtain data on the topic. As the case company did not have any written documents about the idea evaluation procedure of the researched cases the authors were not able to use company documents in order to get information. However, this would be an implication for future research.

Lastly, the researchers saw the need for a more thorough investigation in the three types of intuition discovered as well as the differences between customer and consumer idea evaluation criteria as well as strategic versus tactical idea evaluation criteria.

6.3. Managerial Implications

The research at hand will end with managerial implications. The findings described and analysed may give a new perspective on new product idea evaluation, dissimilar for ideas with different levels of innovation. According to that several guidelines are given with the goal to help managers that deal with this major task. The recommendations are described below.

First, the authors suggest companies to adapt evaluation criteria to the ideas' level of innovation and therefore to use different criteria for ideas with high or low levels of innovation. To achieve this, firms need to be aware of how innovative their ideas are. Evaluating on different criteria will help companies to focus their resources in the best way and prevent costly idea drop-outs in later stages of the new product development process.

Second, this research found that several categories of criteria should be applied in order to get a holistic view on the ideas evaluated. Putting too much weight on one category of criteria might lead to a biased evaluation. Related to that is the issue of technical feasibility. Companies should not limit themselves or their strategic opportunities by technical feasibility.

If the new product idea seems to be incapable to produce within the firm the authors suggest considering to outsource that particular product.

Moreover, the researchers want to stress the importance of market criteria when evaluating new product ideas. The study at hand showed that market criteria are important to all ideas regardless their level of innovation. Thus, companies should continuously listen to consumers, and lead consumers in particular, and assess the market potential as well as the expected competitive situation of their ideas.

Also, companies should not underestimate their intuition as this can lead, especially for ideas having high levels of innovation, to successful new products on the market.

Finally, the results of this thesis showed that using tradition as a source of inspiration for new product ideas might help creating successful new products.

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Appendix

Appendix 1: Overview of Interviewees and Sections for the Interview Guide

	Introduction	Introductory Questions	Innovation Pot	Introduction to R, RN & I	R - Product H1	RN - Product H2	RN - Product H3	I - Product L1	I - Product L2	I - Product L3
	1.	1.1.	2.	3.	3.1.a.	3.2.a.	3.2.b.	3.3.a.	3.3.b.	3.3.c.
Brand Management 1	X	X	X	X	X		X	X		X
Brand Management 2	X	X	X	X		X			X	
Export 1	X	X	X	X		X			X	
Export 2	X	X	X	X		X	X			
Product Development 1	X	X	X	X	X		X	X		X
Product Development 2	X	X	X	X	X			X		X
Product Development 3	X	X	X	X		X			X	

Appendix 2: Interview Dates and Locations

Interviewee	Date of Interview	Location of interview
BM1 - Brand Management 1	12/04/2016 & 28/04/2016	Meeting Room
BM2 - Brand Management 2	12/04/2016	Meeting Room
EX1 - Export 1	18/04/2016	Meeting Room
EX2 - Export 2	20/04/2016	Meeting Room
PD1 - Product Development 1	08/04/2016 & 13/04/2016	Meeting Room
PD2 - Product Development 2	26/04/2016	Meeting Room
PD3 - Product Development 3	13/04/2016	Meeting Room

Appendix 3: Interview Guide

Interview Guide

(including all cases)

1. Introduction

Name:

[Give a short presentation of who we are and why we are conducting this interview.]

This interview will be about how new product ideas are evaluated before they reach gate 1 in the innovation process. This means we are still in the informal phase right after the ideas were generated and just before the innovation process starts. Please answer all questions precisely and honestly Give us your personal opinion. There are no right or wrong answers. If something is unclear please ask us to repeat the question.

Is it okay that we record the interview? Is it ok for you when your name is going to be published in our thesis?

1.1. Introductory Questions

- 1.1. Please explain your function at Pågen.
- 1.2. How long have you been working at Pågen?
- 1.3. Have you always worked in this function?
- 1.4. Where did you work before you started at Pågen? What is your background?
- 1.5. How do you look upon Pågen in terms of innovation?
- 1.6. How important would you consider yourself in the innovation process?
- 1.7. At which stages of the innovation process are you currently involved?

2. Innovation Pot

- 2.1. Do you have access to the innovation pot?
 - a. [If yes] How regularly are you looking into it?
 - b. [If no] How important would you consider it to have access to it?

- c. Why do you consider having access to the innovation pot as important/unimportant?
- 2.2. Have you ever submitted a new product idea to the innovation pot?
 - a. [If yes] How often have you submitted a new product idea to the innovation pot?
 - b. [If no] Are there any reasons why you did not submit a new product idea to the innovation pot?

3. Introduction to Radical, Really New, and Incremental

In the next section we will ask you questions regarding one or more specific products. We want to remind you that this interview will be about how new product ideas are evaluated before they reach gate 1 in the innovation process. This means we are still in the informal phase right after the ideas were generated and just before the innovation process starts.

3.1.a. Radical - Product H1

- 3.1.a.1. Tell us about the background of the new product idea that turned into “Product H1”.
 - a. Do you remember who came up with the new product idea “Product H1”?
- 3.1.a.2. Tell us about how the evaluation of the new product idea “Product H1” looked like before gate 1.
 - a. Who was responsible for evaluating the new product idea “Product H1” before gate 1?
 - b. Based on which data or knowledge was the new product idea “Product H1” evaluated on?
- 3.1.a.3. Tell us about the criteria by which the new product idea “Product H1” was evaluated.
 - a. Based on which criteria was the new product idea “Product H1” evaluated before gate 1?
 - b. What was the most important criteria when evaluating the new product idea “Product H1” and why?
 - c. What were the second and third most important criteria when evaluating the new product idea “Product H1” and why?
 - d. Do you think that other criteria should have been included?

- e. [If yes] Which?
- f. [If no] Why not?

3.1.a.4. Tell us about the risks related to the new product idea “Product H1”.

- a. Were there any risks such as high investments, market need, etc.? (*Florén & Frishammar, 2012*)
- b. [If yes] Which?
- c. Did you analyse or calculate risks for the new product idea “Product H1” while it was still an idea before gate 1?
- d. [If yes] How did you analyse or calculate risks for the new product idea “Product H1” while it was still an idea before gate 1?
- e. [If no] Why not?

3.1.a.5. Tell us about the uncertainties related to the new product idea “Product H1”.

- a. Were there any uncertainties such as customer satisfaction, competition, etc.? (*Florén & Frishammar, 2012*)
- b. [If yes] Which?
- c. Did you analyse and reduce uncertainties for the new product idea “Product H1” while it was still an idea before gate 1?
- d. [If yes] How did you analyse and reduce uncertainties for the new product idea “Product H1” while it was still an idea before gate 1?
- e. [If no] Why not?

3.1.a.6. We divided criteria in seven different categories. Please tell us how important the following categories when evaluating the new product idea “Product H1” before gate 1? (*Florén & Frishammar, 2012; Griffin & Page, 1993; Hart et al., 2003; Magnusson, Netz & Wästlund, 2014; Martinsuo & Poskela, 2011; Ronkainen, 1985*)

- a. [Customer] What do you think about the role of the customer?
 - How did you look upon customer acceptance?
 - How did you look upon customer need fulfillment?
- b. [Market] What do you think about the role of the market?
 - How did you look upon market potential?
 - How did you look upon the expected competitive situation?
- c. [Product] What was the role of product success?
 - How did you look upon product performance?
 - How did you look upon product uniqueness?
- d. [Technical] What role did technical criteria play?

- How did you look upon technical feasibility?
 - e. [Financial] What role did financial criteria play?
 - How did you look upon financial performance?
 - How did you look upon the development costs?
 - f. [Strategy] What was the role of strategic criteria?
 - How did you look upon strategic renewal?
 - How did you look upon the business strategy fit?
 - g. [Intuition] What role did intuition have, meaning your gut feeling based on your experience and knowledge?
- 3.1.a.7. Tell us about the internal fit of the new product idea “Product H1”. (*Florén & Frishammar, 2012*)
 - a. How important was the fit to the product portfolio when evaluating the new product idea “Product H1” and why?
 - b. How did you decide whether the new product idea “Product H1” fitted the brand?
 - 3.1.a.8. Tell us about the external fit of the new product idea “Product H1”. (*Florén & Frishammar, 2012*)
 - a. How important was the fit to the environment, e.g.competitive offerings, technological development, when evaluating the new product idea “Product H1” and why? (*Florén & Frishammar, 2012*)
 - b. How did you decide whether the new product idea “Product H1” fitted the competitive environment?
- 3.1.a.9. What role did hierarchy, authority, meaning socio-political factors, within the company play for “Product H1” in the innovation process before gate 1? (*Florén & Frishammar, 2012*)

3.2.a. Really New - Product H2

- 3.2.a.1. Tell us about the background of the new product idea that turned into “Product H2”.
 - a. Do you remember who came up with the new product idea “Product H2”?
- 3.2.a.2. Tell us about how the evaluation of the new product idea “Product H2” looked like before gate 1.
 - a. Who was responsible for evaluating the new product idea “Product H2” before gate 1?

- b. Based on which data or knowledge was the new product idea “Product H2” evaluated on?
- 3.2.a.3. Tell us about the criteria by which the new product idea “Product H2” was evaluated.
 - a. Based on which criteria was the new product idea “Product H2” evaluated before gate 1?
 - b. What was the most important criteria when evaluating the new product idea “Product H2” and why?
 - c. What were the second and third most important criteria when evaluating the new product idea “Product H2” and why?
 - d. Do you think that other criteria should have been included?
 - e. [If yes] Which?
 - f. [If no] Why not?
- 3.2.a.4. Tell us about the risks related to the new product idea “Product H2”.
 - a. Were there any risks such as high investments, market need, etc.? (*Florén & Frishammar, 2012*)
 - b. [If yes] Which?
 - c. Did you analyse or calculate risks for the new product idea “Product H2” while it was still an idea before gate 1?
 - d. [If yes] How did you analyse or calculate risks for the new product idea “Product H2” while it was still an idea before gate 1?
 - e. [If no] Why not?
- 3.2.a.5. Tell us about the uncertainties related to the new product idea “Product H2”.
 - a. Were there any uncertainties such as customer satisfaction, competition, etc.? (*Florén & Frishammar, 2012*)
 - b. [If yes] Which?
 - c. Did you analyse and reduce uncertainties for the new product idea “Product H2” while it was still an idea before gate 1?
 - d. [If yes] How did you analyse and reduce uncertainties for the new product idea “Product H2” while it was still an idea before gate 1?
 - e. [If no] Why not?
- 3.2.a.6. We divided criteria in seven different categories. Please tell us how important the following categories when evaluating the new product idea “Product H2” before gate 1? (*Florén & Frishammar, 2012; Griffin & Page, 1993; Hart et al.,*

2003; Magnusson, Netz & Wästlund, 2014; Martinsuo & Poskela, 2011; Ronkainen, 1985)

- a. [Customer] What do you think about the role of the customer?
 - How did you look upon customer acceptance?
 - How did you look upon customer need fulfillment?
- b. [Market] What do you think about the role of the market?
 - How did you look upon market potential?
 - How did you look upon the expected competitive situation?
- c. [Product] What was the role of product success?
 - How did you look upon product performance?
 - How did you look upon product uniqueness?
- d. [Technical] What role did technical criteria play?
 - How did you look upon technical feasibility?
- e. [Financial] What role did financial criteria play?
 - How did you look upon financial performance?
 - How did you look upon the development costs?
- f. [Strategy] What was the role of strategic criteria?
 - How did you look upon strategic renewal?
 - How did you look upon the business strategy fit?
- g. [Intuition] What role did intuition have, meaning your gut feeling based on your experience and knowledge?

3.2.a.7. Tell us about the internal fit of the new product idea “Product H2”. (*Florén & Frishammar, 2012*)

- a. How important was the fit to the product portfolio when evaluating the new product idea “Product H2” and why?
- b. How did you decide whether the new product idea “Product H2” fitted the brand?

3.2.a.8. Tell us about the external fit of the new product idea “Product H2”. (*Florén & Frishammar, 2012*)

- a. How important was the fit to the environment, e.g. competitive offerings, technological development, when evaluating the new product idea “Product H2” and why? (*Florén & Frishammar, 2012*)
- b. How did you decide whether the new product idea “Product H2” fitted the competitive environment?

- 3.2.a.9. What role did hierarchy, authority, meaning socio-political factors, within the company play for “Product H2” in the innovation process before gate 1? (*Florén & Frishammar, 2012*)

3.2.b. Really New - Product H3

- 3.2.b.1. Tell us about the background of the new product idea that turned into “Product H3”.
- Do you remember who came up with the new product idea “Product H3”?
- 3.2.b.2. Tell us about how the evaluation of the new product idea “Product H3” looked like before gate 1.
- Who was responsible for evaluating the new product idea “Product H3” before gate 1?
 - Based on which data or knowledge was the new product idea “Product H3” evaluated on?
- 3.2.b.3. Tell us about the criteria by which the new product idea “Product H3” was evaluated.
- Based on which criteria was the new product idea “Product H3” evaluated before gate 1?
 - What was the most important criteria when evaluating the new product idea “Product H3” and why?
 - What were the second and third most important criteria when evaluating the new product idea “Product H3” and why?
 - Do you think that other criteria should have been included?
 - [If yes] Which?
 - [If no] Why not?
- 3.2.b.4. Tell us about the risks related to the new product idea “Product H3”.
- Were there any risks such as high investments, market need, etc.? (*Florén & Frishammar, 2012*)
 - [If yes] Which?
 - Did you analyse or calculate risks for the new product idea “Product H3” while it was still an idea before gate 1?
 - [If yes] How did you analyse or calculate risks for the new product idea “Product H3” while it was still an idea before gate 1?
 - [If no] Why not?

3.2.b.5. Tell us about the uncertainties related to the new product idea

“Product H3”.

- a. Were there any uncertainties such as customer satisfaction, competition, etc.?
(*Florén & Frishammar, 2012*)
- b. [If yes] Which?
- c. Did you analyse and reduce uncertainties for the new product idea “Product H3” while it was still an idea before gate 1?
- d. [If yes] How did you analyse and reduce uncertainties for the new product idea “Product H3” while it was still an idea before gate 1?
- e. [If no] Why not?

3.2.b.6. We divided criteria in seven different categories. Please tell us how important the following categories when evaluating the new product idea “Product H3” before gate 1? (*Florén & Frishammar, 2012; Griffin & Page, 1993; Hart et al., 2003; Magnusson, Netz & Wästlund, 2014; Martinsuo & Poskela, 2011; Ronkainen, 1985*)

- a. [Customer] What do you think about the role of the customer?
 - How did you look upon customer acceptance?
 - How did you look upon customer need fulfillment?
- b. [Market] What do you think about the role of the market?
 - How did you look upon market potential?
 - How did you look upon the expected competitive situation?
- c. [Product] What was the role of product success?
 - How did you look upon product performance?
 - How did you look upon product uniqueness?
- d. [Technical] What role did technical criteria play?
 - How did you look upon technical feasibility?
- e. [Financial] What role did financial criteria play?
 - How did you look upon financial performance?
 - How did you look upon the development costs?
- f. [Strategy] What was the role of strategic criteria?
 - How did you look upon strategic renewal?
 - How did you look upon the business strategy fit?
- g. [Intuition] What role did intuition have, meaning your gut feeling based on your experience and knowledge?

3.2.b.7. Tell us about the internal fit of the new product idea “Product H3”. (*Florén & Frishammar, 2012*)

- a. How important was the fit to the product portfolio when evaluating the new product idea “Product H3” and why?
- b. How did you decide whether the new product idea “Product H3” fitted the brand?

3.2.b.8. Tell us about the external fit of the new product idea “Product H3”.

(Florén & Frishammar, 2012)

- a. How important was the fit to the environment, e.g.competitive offerings, technological development, when evaluating the new product idea “Product H3” and why? *(Florén & Frishammar, 2012)*
- b. How did you decide whether the new product idea “Product H3” fitted the competitive environment?

3.2.b.9. What role did hierarchy, authority, meaning socio-political factors, within the company play for “Product H3” in the innovation process before gate 1? *(Florén & Frishammar, 2012)*

3.3.a. Incremental - Product L1

3.3.a.1. Tell us about the background of the new product idea that turned into “Product L1”.

- a. Do you remember who came up with the new product idea “Product L1”?

3.3.a.2. Tell us about how the evaluation of the new product idea “Product L1” looked like before gate 1.

- a. Who was responsible for evaluating the new product idea “Product L1” before gate 1?
- b. Based on which data or knowledge was the new product idea “Product L1” evaluated on?

3.3.a.3. Tell us about the criteria by which the new product idea “Product L1” was evaluated.

- a. Based on which criteria was the new product idea “Product L1” evaluated before gate 1?
- b. What was the most important criteria when evaluating the new product idea “Product L1” and why?
- c. What were the second and third most important criteria when evaluating the new product idea “Product L1” and why?
- d. Do you think that other criteria should have been included?
- e. [If yes] Which?
- f. [If no] Why not?

- 3.3.a.4. Tell us about the risks related to the new product idea “Product L1”.
- a. Were there any risks such as high investments, market need, etc.? (*Florén & Frishammar, 2012*)
 - b. [If yes] Which?
 - c. Did you analyse or calculate risks for the new product idea “Product L1” while it was still an idea before gate 1?
 - d. [If yes] How did you analyse or calculate risks for the new product idea “Product L1” while it was still an idea before gate 1?
 - e. [If no] Why not?

3.3.a.5. Tell us about the uncertainties related to the new product idea “Product L1”.

- a. Were there any uncertainties such as customer satisfaction, competition, etc.? (*Florén & Frishammar, 2012*)
- b. [If yes] Which?
- c. Did you analyse and reduce uncertainties for the new product idea “Product L1” while it was still an idea before gate 1?
- d. [If yes] How did you analyse and reduce uncertainties for the new product idea “Product L1” while it was still an idea before gate 1?
- e. [If no] Why not?

3.3.a.6. We divided criteria in seven different categories. Please tell us how important the following categories when evaluating the new product idea “Product L1” before gate 1? (*Florén & Frishammar, 2012; Griffin & Page, 1993; Hart et al., 2003; Magnusson, Netz & Wästlund, 2014; Martinsuo & Poskela, 2011; Ronkainen, 1985*)

- a. [Customer] What do you think about the role of the customer?
 - How did you look upon customer acceptance?
 - How did you look upon customer need fulfillment?
- b. [Market] What do you think about the role of the market?
 - How did you look upon market potential?
 - How did you look upon the expected competitive situation?
- c. [Product] What was the role of product success?
 - How did you look upon product performance?
 - How did you look upon product uniqueness?
- d. [Technical] What role did technical criteria play?
 - How did you look upon technical feasibility?
- e. [Financial] What role did financial criteria play?

- How did you look upon financial performance?
 - How did you look upon the development costs?
 - f. [Strategy] What was the role of strategic criteria?
 - How did you look upon strategic renewal?
 - How did you look upon the business strategy fit?
 - g. [Intuition] What role did intuition have, meaning your gut feeling based on your experience and knowledge?
- 3.3.a.7. Tell us about the internal fit of the new product idea “Product L1”. (*Florén & Frishammar, 2012*)
 - a. How important was the fit to the product portfolio when evaluating the new product idea “Product L1” and why?
 - b. How did you decide whether the new product idea “Product L1” fitted the brand?
- 3.3.a.8. Tell us about the external fit of the new product idea “Product L1”. (*Florén & Frishammar, 2012*)
 - a. How important was the fit to the environment, e.g.competitive offerings, technological development, when evaluating the new product idea “Product L1” and why? (*Florén & Frishammar, 2012*)
 - b. How did you decide whether the new product idea “Product L1” fitted the competitive environment?
- 3.3.a.9. What role did hierarchy, authority, meaning socio-political factors, within the company play for “Product L1” in the innovation process before gate 1? (*Florén & Frishammar, 2012*)

3.3.b. Incremental - Product L2

- 3.3.b.1. Tell us about the background of the new product idea that turned into “Product L2”.
 - a. Do you remember who came up with the new product idea “Product L2”?
- 3.3.b.2. Tell us about how the evaluation of the new product idea “Product L2” looked like before gate 1.
 - a. Who was responsible for evaluating the new product idea “Product L2” before gate 1?
 - b. Based on which data or knowledge was the new product idea “Product L2” evaluated on?
- 3.3.b.3. Tell us about the criteria by which the new product idea “Product L2” was evaluated.

- a. Based on which criteria was the new product idea “Product L2” evaluated before gate 1?
- b. What was the most important criteria when evaluating the new product idea “Product L2” and why?
- c. What were the second and third most important criteria when evaluating the new product idea “Product L2” and why?
- d. Do you think that other criteria should have been included?
- e. [If yes] Which?
- f. [If no] Why not?

3.3.b.4. Tell us about the risks related to the new product idea “Product L2”.

- a. Were there any risks such as high investments, market need, etc.? (*Florén & Frishammar, 2012*)
- b. [If yes] Which?
- c. Did you analyse or calculate risks for the new product idea “Product L2” while it was still an idea before gate 1?
- d. [If yes] How did you analyse or calculate risks for the new product idea “Product L2” while it was still an idea before gate 1?
- e. [If no] Why not?

3.3.b.5. Tell us about the uncertainties related to the new product idea “Product L2”.

- a. Were there any uncertainties such as customer satisfaction, competition, etc.? (*Florén & Frishammar, 2012*)
- b. [If yes] Which?
- c. Did you analyse and reduce uncertainties for the new product idea “Product L2” while it was still an idea before gate 1?
- d. [If yes] How did you analyse and reduce uncertainties for the new product idea “Product L2” while it was still an idea before gate 1?
- e. [If no] Why not?

3.3.b.6. We divided criteria in seven different categories. Please tell us how important the following categories when evaluating the new product idea “Product L2” before gate 1? (*Florén & Frishammar, 2012; Griffin & Page, 1993; Hart et al., 2003; Magnusson, Netz & Wästlund, 2014; Martinsuo & Poskela, 2011; Ronkainen, 1985*)

- a. [Customer] What do you think about the role of the customer?
 - How did you look upon customer acceptance?
 - How did you look upon customer need fulfillment?

- b. [Market] What do you think about the role of the market?
 - How did you look upon market potential?
 - How did you look upon the expected competitive situation?
 - c. [Product] What was the role of product success?
 - How did you look upon product performance?
 - How did you look upon product uniqueness?
 - d. [Technical] What role did technical criteria play?
 - How did you look upon technical feasibility?
 - e. [Financial] What role did financial criteria play?
 - How did you look upon financial performance?
 - How did you look upon the development costs?
 - f. [Strategy] What was the role of strategic criteria?
 - How did you look upon strategic renewal?
 - How did you look upon the business strategy fit?
 - g. [Intuition] What role did intuition have, meaning your gut feeling based on your experience and knowledge?
- 3.3.b.7. Tell us about the internal fit of the new product idea “Product L2”. (*Florén & Frishammar, 2012*)
- a. How important was the fit to the product portfolio when evaluating the new product idea “Product L2” and why?
 - b. How did you decide whether the new product idea “Product L2” fitted the brand?
- 3.3.b.8. Tell us about the external fit of the new product idea “Product L2”. (*Florén & Frishammar, 2012*)
- a. How important was the fit to the environment, e.g.competitive offerings, technological development, when evaluating the new product idea “Product L2” and why? (*Florén & Frishammar, 2012*)
 - b. How did you decide whether the new product idea “Product L2” fitted the competitive environment?
- 3.3.b.9. What role did hierarchy, authority, meaning socio-political factors, within the company play for “Product L2” in the innovation process before gate 1? (*Florén & Frishammar, 2012*)

3.3.c. Incremental - Product L3

- 3.3.c.1. Tell us about the background of the new product idea that turned into “Product L3”.

- a. Do you remember who came up with the new product idea “Product L3”?
- 3.3.c.2. Tell us about how the evaluation of the new product idea “Product L3” looked like before gate 1.
 - a. Who was responsible for evaluating the new product idea “Product L3” before gate 1?
 - b. Based on which data or knowledge was the new product idea “Product L3” evaluated on?
- 3.3.c.3. Tell us about the criteria by which the new product idea “Product L3” was evaluated.
 - a. Based on which criteria was the new product idea “Product L3” evaluated before gate 1?
 - b. What was the most important criteria when evaluating the new product idea “Product L3” and why?
 - c. What were the second and third most important criteria when evaluating the new product idea “Product L3” and why?
 - d. Do you think that other criteria should have been included?
 - e. [If yes] Which?
 - f. [If no] Why not?
- 3.3.c.4. Tell us about the risks related to the new product idea “Product L3”.
 - a. Were there any risks such as high investments, market need, etc.? (*Florén & Frishammar, 2012*)
 - b. [If yes] Which?
 - c. Did you analyse or calculate risks for the new product idea “Product L3” while it was still an idea before gate 1?
 - d. [If yes] How did you analyse or calculate risks for the new product idea “Product L3” while it was still an idea before gate 1?
 - e. [If no] Why not?
- 3.3.c.5. Tell us about the uncertainties related to the new product idea “Product L3”.
 - a. Were there any uncertainties such as customer satisfaction, competition, etc.? (*Florén & Frishammar, 2012*)
 - b. [If yes] Which?
 - c. Did you analyse and reduce uncertainties for the new product idea “Product L3” while it was still an idea before gate 1?
 - d. [If yes] How did you analyse and reduce uncertainties for the new product idea “Product L3” while it was still an idea before gate 1?

e. [If no] Why not?

3.3.c.6. We divided criteria in seven different categories. Please tell us how important the following categories when evaluating the new product idea “Product L3” before gate 1? (*Florén & Frishammar, 2012; Griffin & Page, 1993; Hart et al., 2003; Magnusson, Netz & Wästlund, 2014; Martinsuo & Poskela, 2011; Ronkainen, 1985*)

a. [Customer] What do you think about the role of the customer?

- How did you look upon customer acceptance?
- How did you look upon customer need fulfillment?

b. [Market] What do you think about the role of the market?

- How did you look upon market potential?
- How did you look upon the expected competitive situation?

c. [Product] What was the role of product success?

- How did you look upon product performance?
- How did you look upon product uniqueness?

d. [Technical] What role did technical criteria play?

- How did you look upon technical feasibility?

e. [Financial] What role did financial criteria play?

- How did you look upon financial performance?
- How did you look upon the development costs?

f. [Strategy] What was the role of strategic criteria?

- How did you look upon strategic renewal?
- How did you look upon the business strategy fit?

g. [Intuition] What role did intuition have, meaning your gut feeling based on your experience and knowledge?

3.3.c.7. Tell us about the internal fit of the new product idea “Product L3”. (*Florén & Frishammar, 2012*)

a. How important was the fit to the product portfolio when evaluating the new product idea “Product L3” and why?

b. How did you decide whether the new product idea “Product L3” fitted the brand?

3.3.c.8. Tell us about the external fit of the new product idea “Product L3”. (*Florén & Frishammar, 2012*)

a. How important was the fit to the environment, e.g.competitive offerings, technological development, when evaluating the new product idea “Product L3” and why? (*Florén & Frishammar, 2012*)

- b. How did you decide whether the new product idea “Product L3” fitted the competitive environment?
- 3.3.c.9. What role did hierarchy, authority, meaning socio-political factors, within the company play for “Product L3” in the innovation process before gate 1? (*Florén & Frishammar, 2012*)