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REDEFINING THE PURPOSE OF IDEATION: THE IDEA MANAGEMENT SYSTEM AS A MOTIVATIONAL TOOL

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Abstract

Title: Redefining the purpose of ideation: the idea management system as a motivational tool

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Keywords: Idea Management (IM), Idea Management System (IMS), Employee motivation, Front-End of Innovation (FEI), New Product Development (NPD)

Research question: Can an idea management system be used as a motivational tool and if so, how can this process be facilitated?

Methodology: The presented single case study was conducted in a Swedish company in Malmö. The qualitative research approach followed an inductive method with small elements of deduction. Semi-structured interviews were used as the main method to collect empirical data but also less-structured interviews, a questionnaire and company documents.

Theoretical Perspective: The three main areas of research examined in this paper are Idea Management, Employee Motivation and the Front End of Innovation. The main theoretical perspective is the Idea Management System as a motivational tool.

Conclusions: Our study revealed that switching the classic IMS process to idea generation, development and lastly evaluation has a strong positive impact on spurring motivation. If the outlined steps are followed and key features, such as the introduction of a cross-functional team, reliance on organizational learning and a network connectivity solution for facilitating the entire process, are integrated then successful long-term innovation is extremely likely.

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"We would like to thank everyone at the case company for a keen insight into Swedish working culture and the accompanying it wide-spread caffeine addiction. Seriously, thank you for the wonderful opportunity, insightful advice, unwavering support and unlimited supply of coffee!

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Emil & Giovanni

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CHAPTER 1: INTRODUCTION

1.1 BACKGROUND

Today's turbulent business environment with ever-shorter product and business life cycles continuously delivers new challenges to companies of all sizes, across all industries (Kuratko *et al.*, 2011). When the loss or gain of a competitive advantage lurks behind the next corner, it is becoming increasingly important for companies, especially those relying on New Product Development (NPD), to engage in innovation and more specifically, idea generation. Ideas constitute the lifeblood for firms in generating new products or services, new business models, new processes, and bringing about general organizational or strategic change (Ende *et al*., 2015). Thus, the context of our examination is going to be the Front-End or the early phase of the innovation process, in which ideas are generated and evaluated, potential concepts are formulated, and potential development projects are initially planned (Kock *et al.*, 2015). Being able to navigate the Front-End of Innovation (FEI) is an integral part of ensuring a successful ideation, defined here as the practical process of facilitating idea generation. This interest is rooted in the strategic relevance of the Front-End of Innovation for the success of NPD projects, project portfolios, and eventually the organization as a whole (Ende *et al.,* 2015). In order to navigate the FEI and bolster their project pipelines, companies increasingly turn to Idea Management (IM) and more specifically Idea Management Systems (IMS). IM itself, could be defined as − systematic, manageable process of idea generation, evaluation and development, but the IMS as a tool kit or complex system which provides systematic, manageable process of idea generation, evaluation and development (Mikelsone and Liela, 2009). This has promoted the introduction by large firms of ideation systems to generate ideas for innovation (Elerud-Tryde and Hooge, 2014). The practical manifestation of those efforts often culminates in internal ideation mechanisms such as suggestion boxes. Unfortunately those mechanisms are often discarded due to their limited practical input into the NPD funnel. At this point it has to be said that due to a certain lack of research in the area, academic literature fails to categorically define and distinguish between terms such as ideation, idea generation and idea management. In this particular context **ideation** refers to the entire academic area, **ideation mechanisms** to specific practices, **idea management** to a

comprehensive system facilitating the process while **idea generation** is the first and arguably most prominent stage covered by idea management systems. This paper aims to examine how IMS contribute to innovation, questioning whether a direct contribution to the project pipeline is indeed the primary function of the process. The thesis aims to maintain a balanced view, in terms of research implications, for both management and employees, seeing the two as indivisible in an ideation context since both are required to contribute equally and subsequently benefit accordingly. All considerations will be examined objectively, taking both perspectives into account. Overall, this paper examines the purpose and effects of introducing an IMS and all the inherent challenges the process brings, with view of contributing to this understudied area of academic research while also considering managerial implications for practitioners planning to embark on a similar journey.

1.2 PROBLEM DISCUSSION: IDEA MANAGEMENT AND MOTIVATION

This thesis goes on to challenge some well-established views on ideation, which is why it is crucial at this stage to clearly and extensively outline the chain of causality. This section discusses the problem at length, incorporating theory in a way typically reserved for a literature review. Nevertheless, we consider this level of immersion necessary for substantiating the stance taken by the thesis.

Mikelsone and Liela (2009) suggest that ideas constitute the raw material for innovation, while idea management can be seen as the core of innovation. On an overall level, the literature related to innovative idea generation and identification is extensive, drawing on theories about creativity, learning, and innovation (Bjork and Magnusson, 2009). Simply said, idea generation captures employees' recognition of an opportunity or problem and the generation of technical ideas to address the identified need (Bammens, 2016). As has already been established, globalization and increased speed in business intensify competition, and most firms need to continuously innovate to ensure long term competitiveness so consequently, they also need a continuous stream of ideas as fuel for innovation (Bjork and Magnusson, 2009). It is thus not surprising that the early stage of the innovation process, where innovation ideas are generated and identified, has been recognized as an important phase that has high impact on the success and costs of innovation (Ibid.). Thus, for the

purpose of the paper, idea management is a tool employed in the Front-End of Innovation.

In this context, defining and formulating an ideation strategy means that companies explicitly align their idea generation and selection activities with their innovation strategy (Ende *et al.,* 2015). The innovation strategy provides collective guidance for all innovation activities of the firm (Talke *et al.,* 2011), and it is especially important for both the Front-End and ideation. The reason behind this is given by the fact that innovation strategy is future directed and it provides the orientation with which new product ideas are judged (Ende *et al.,* 2015). As seen traditionally, ideation mechanisms are employed for the purpose of spurring innovation and their success is also, traditionally, measured against their contribution to successful innovation in terms of effectiveness and efficiency. On the one hand, front-end effectiveness considers the quantity and quality of implementable ideas and in addition to the pure number of ideas, their potential for value generation (such as revenue potential and strengthening the competitive positioning of the firm) is also included in front-end effectiveness (Ibid.). Efficiency, on the other hand, means speed of idea screening, the translation into concepts, and finally the conversion into project proposals (Ibid.).

Another key consideration is that in order for ideation mechanisms to be fully utilized, a certain level of commitment on the part of employees is crucial. It is clear that the innovative behaviour of employees can be stimulated by fostering a social work context in which employees feel motivated to generate, promote, and realize innovative ideas and concepts (Bammens, 2016). Clearly, ensuring some form of management support and motivation is a fundamental first step because if employees lack support and autonomy for creative activity, they might regard the strategic vision and future direction expressed in the ideation strategy as an empty cliché (Ende *et al.,* 2015). Thus, taking all of this into account, the common perception of the entire innovation process is such:
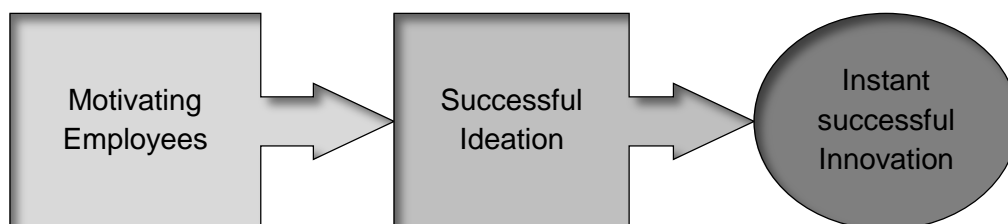
Figure 1. Traditional approach to ideation

In other words, companies see idea management systems as a rowing boat. They first try to motivate their employees, then man the boat and hope that it will spearhead the innovation effort and lead to instant innovation. Subsequently when the boat is not moving fast enough, they discard it or stop taking interest. What if the prevailing perception, as to the purpose of ideation, is too limited? We on the other hand see idea management systems as a rowing machine, which is why we do not expect it to move. Instead we see employees building up muscles, which motivates them further, which in turn will inevitably be useful when it comes to rowing in the flagship. As will be shown further in the thesis, there is plenty of evidence to suggest that ideation is not a tool solely for increasing innovation but instead primarily a tool for increasing motivation. Even though studies reveal that firms struggle to implement the ideas generated in idea generation campaigns, findings suggest that internal idea generation campaigns fulfil two roles when used internally: (1) they are a means of supporting employee creativity in the generation of innovative ideas, and (2) they provide a means of involving the whole firm in the innovation process (Elerud-Tryde and Hooge, 2014). It has been suggested that even if ideation does not lead to a significant number of new developed products, because of the reciprocity norm, employees will feel obliged to "return the favor" by increasing their commitment and engaging in pro-organizational activities (Bammens, 2016). Overall, if used correctly, the increased levels of transparency, freedom of choice, inspiration, creativity as well as feedback and visible results that inherently come with ideation lead to much higher levels of commitment. We suggest that perhaps the entire process should be reconsidered and instead look like:

Figure 2. Proposed approach to ideation

In the context of product innovation, success depends largely on the quality of product development. Innovation can be seen as ideas that have been developed and implemented (Van de Ven, 1986). The prevailing notion is that such a perspective means that all innovations originate from ideas and that, to successfully innovate, firms need to have a sustainable flow of ideas from which to choose (Boeddrich, 2004). This is perfectly logical in the sense that the more ideas are generated, the higher the probability of selecting a very good idea should be (Mikelsone and Liela, 2009). However, research has shown that people do not perform optimally at idea selection and that ultimately ideational output may not contribute much to creative idea selection (Mikelsone and Liela, 2009). A good idea, if developed poorly is always going to fail while even a poor idea can be successful if executed well enough. Assuming such a causal relationship would mean that innovation depends more on excellent NPD processes rather than ideation. It is clear that the amount of input is irrelevant in the absence of excellent NPD processes. For good reasons, the early phase of innovation, in which ideas are born, is often considered the "fuzzy stage" (Ende *et al.,* 2015). The front-end process is indeed highly informal, knowledge-intensive, and erratic (Frishammar, Florén, and Wincent, 2011). These characteristics indicate that the outcome of the idea-generation process is highly uncertain and as a consequence, managing this phase of innovation is delicate and can turn out to be detrimental to firms' innovation processes and ensuing performance, unless strategically managed (Ende *et al.,* 2015). Therefore we believe that the purpose of ideation is to improve output as opposed to simply increasing input. We believe that this can be done by using ideation as a motivation tool. It should be pointed out that the successful ideation should ultimately always result in successful innovation just not in the way it is commonly thought. It is detrimental to see idea generation as directly influencing innovation. Our main belief is that idea generation leads to innovation indirectly and long-term, through increased motivation.

If in both cases the end result is innovation, why does the specific causal order matter? If our beliefs are confirmed, it would mean that there is no need to incentivize ideation, instead we simply have to make it an indivisible part of daily working life. In other words, ideation is not the culmination of management support efforts but the seed that facilitates it.

Inevitably the introduction of idea generation mechanisms leads to increased levels of social connectedness, encourages knowledge sharing, aligns employees with the strategic orientation of the organizations, inspires creative thinking and as will be shown later on leads to numerous other positive effects. Business organizations capable of fostering an innovation-supportive social work environment may realize a sustained competitive advantage with respect to innovation, as the social complexities associated with creating such a work climate likely hamper imitation (Bammens, 2016). Thus, ideation might not lead to the next big idea but it can lead to numerous good ones and strongly increased employee motivation which means that ultimately, employees will be much more experienced, prepared and motivated to successfully develop the next big idea once it does appear and enter the formal development process. The premise is that the more times the individual has attempted to pursue new ideas in the company, the more they have likely developed implementation approaches that work (Kuratko *et al.,* 2011). So far, the success of IMS has always been measured against innovation, specific results and number of successfully developed ideas. If suddenly we start measuring the success of IMS against increase of employee motivation, it can change the entire field, leading to a wider adoption of ideation mechanisms and ultimately, higher levels of innovation.

1.3 PURPOSE

An important reason to study the Front-End of innovation is that it fundamentally differs from later phases of the innovation process, which have been researched intensively and are much better understood (Ende *et al.,* 2015). In turn, idea management is clearly a fundamental part of the Front-End of innovation. Surprisingly, however, ideation plays only a minor role in the NPD literature. According to the meta-analysis by Page and Schirr (2008), only 5% of the identified innovation research addressed ideation and creativity, and research investigating how managerial practices influence ideation activities and outcomes is even more rare (Ende 2015). Indeed, employee engagement in the innovative process of generating, promoting, and realizing novel ideas (Scott and Bruce, 1994) also deviates from other types of pro-organizational behavior (Bammens, 2016). To date, we have a limited understanding of the motivational antecedents of employees' innovative behavior and how specific facets of the social work environment activate or suppress innovation-relevant

motivational states (Ibid.). Our conceptual understanding of the motivational mechanisms linking organizational expressions of care to employees' innovative behavior remains underdeveloped (Bammens, 2016). A big part of our inspiration came from one study in particular, which examined the introduction of idea generation mechanisms in two top companies. Surprisingly, for them, in both cases finding good ideas for innovation was a secondary goal and the virtual idea campaigns were used to promote innovation by stimulating collaboration among employees (Elerud-Tryde and Hooge, 2014). Thus the introduction of an idea generation mechanism was seen as managerial tool to deepen the commitment of employees to innovation and also to generate new ideas (Ibid.). However, in relation to the ideas that resulted, neither firm found it straightforward to implement them and in fact, both firms demonstrated surprisingly low rates of conversion of the generated ideas (Ibid.). These findings suggest that idea generation campaigns support the innovation process in large firms mainly because they involve the relevant stakeholders in the generation and selection of innovation ideas (Ibid.). Thus we would also like to examine how such initiatives support innovation in companies as well as to assess whether and how certain facets of IMS affect employee motivation.

Overall, the purpose of the paper is to contribute to the academic literature on the (1) Front-End of Innovation (2) Idea Management and (3) Employee Motivation. Most crucially, the paper will examine the relationship between employees' motivation and idea generation. The ultimate aim of the paper would be to challenge the common perception of the purpose of ideation and how its success is measured. Apart from contributing to existing literature we want to engage the academic community in a debate on ideation by examining it from a perspective that is rarely seen, thus inspiring further research to shed more light on the matter. The paper hopes to serve as a valuable and enriching case study on the one hand and on the other as a source of insights for practitioners planning to embark on the journey of introducing IMS for their employees.

1.4 RESEARCH QUESTION

Motivation and idea management are wide areas of research. After a series of interviews at our case company, we clarified our focus and selected a specific issue to examine. Motivation is usually seen as an input while idea generation as an output directly feeding into tangible innovation. We would like to investigate this relationship and challenge the common hypothesis. Thus, based on the purpose of our study as outlined in section 1.3, the guiding research question of the paper is:

Can an idea management system be used as a motivational tool and if so, how can this process be facilitated?

It is clear that the research question will not yield simple answers. However, it connects to established literature and tries to explore the relationship between idea management and motivation in the context of the Front-End. Those concepts, while important and heavily researched in the past, have never been examined together and from the particular perspective that we are suggesting. We expect an affirmative answer to the first part of the question as well as to find a sufficient amount of data to help us envision an idea management system that is optimally geared towards bolstering motivation and in turn long-term innovation.

1.5 CASE COMPANY

Our research was conducted entirely within a Swedish company headquartered in Malmö, which has been operating internationally since 1988. The case company nowadays is the leading European provider of alarm and high-tech connected services and it operates in 14 Countries: the largest markets being Sweden, Spain and South America. The main competitive advantage of the company lies in their innovative business model and customer-centric approach. They have a very well developed R&D process and are very successful in the late stages of new product development, yet are lacking in ideation. Ultimately, what sets the case company apart is that it is extremely successful and innovative, yet lacking a comprehensive internal idea management strategy. Employees at the Swedish department are clearly capable of generating a lot of ideas, however unlike in the later, formal stages of

product development, there are no mechanisms in place to facilitate the process. The result is that few ideas are ever suggested and most of those that somehow percolate are not pursued and not developed further. Employees in turn feel neglected, lacking sufficient empowerment, transparency and opportunities to exercise creative freedom. This feeds into the larger problem of sustaining employee motivation in light of the continuous growth of the company and the inherent problems that go with it such as excess formalization of processes and bureaucracy. The company's Innovation Lab on the other hand exhibits many of the features typically seen in IMS, allowing for great creative freedom, constant idea generation and innovation. The Innovation Lab, which is the main focus of our examination, was "envisioned" in 2015 and "embodied" in fall 2016. In 2015, thesis workers did the first "prototype" of the prototyping platform, while in the spring of 2016, the development of the labs platform started. Later on, the prototyping platform opened for employees (an internal labs community, initially of around 20 people). Subsequently, the company held ideation sessions with the labs community in order to innovate and inspire usage. Finally, in the first quarter of 2017 the first labs "experiment" was deployed in production.

The Lab employs a form of a stage-gate approach where ideas are gradually refined while progressing through the different stages: 1) "Ideas" 2) "Prototypes" 3) "Experiments" and 4) "Production". So far, they have generated around 40 ideas, built around 8 prototypes, resulting in 3 experiments (2 still ongoing) and one idea has made it into production.

There is a very small core team of developers and designers, building the platform, driving the various prototyping and experimental activities. However, they sometimes develop concepts that are currently not in the roadmap or they develop a pilot to run an experiment for a business manager in projects where there is uncertainty about the concept (like, for example, delivery services). But the core team is 1 developer & 1 designer. Then there are contributors: 5-10 people in the "labs community" who have contributed with ideas, built a prototype or two for their own personal use but are not active otherwise. Out of those currently in the case company, only a very limited number have been involved in a tangible way that is worth investigating.

We would like to examine the paradox of the lab's low output in terms of implemented ideas and projects yet ultimate, albeit indirect, contribution to innovation and generally higher motivation of its employees. A key justification for maintaining a focus on motivation throughout this paper is the uniqueness of our case company. Since the company sees offices in other countries as their prime idea generators and can continuously rely on them to feed into the NPD funnel, they can afford to see ideation as more than a cog in the NPD wheel but a way to bring about a deeper transformation of the company and its employees. Overall, the case company is an ideal place for examining the possible effect of IMS on employee motivation and in turn, long-term innovation.

1.6 KEY CONCEPTS

In order to simplify and clarify some definitions used in our research the following table lists the most important concepts of this paper.

Key Concepts	Definition	Authors
Front End of Innovation (FEI)	The period between when an opportunity is identified and when it is considered ready for further development.	Koen *et al.,* (2001)
Idea Management (IM)	Systematic, manageable process of idea generation, evaluation and development	Mikelsone and Liela, (2009)
Idea Management System (IMS)	A tool kit or complex system which provides systematic, manageable process of idea generation, evaluation and development.	Mikelsone and Liela, (2009)
Motivation	A set of psychological forces that determine how much efforts a person will put in an organization, his behaviours and his level of persistence in facing problems.	Jones *et al.* (1998)

Table 1: Key Concepts

1.7 OUTLINE OF THESIS

The thesis outline proceeds as follows: chapter two is representative of the previous literature contributions in the main fields of our study: the Front-End of Innovation, Idea management and Motivation.. The discussion will cover the relationships that are evident among these elements, trying to capture the significance of Idea Management practices. Chapter three is about the methodology used to collect and analyse data as well as how the theory is constructed. Our key findings will be presented in chapter four while chapter five will concern analysis. Lastly, chapter six will present our conclusion, recommendations, limitations and implications of our study, as well as areas for further research.

CHAPTER 2: LITERATURE REVIEW

This chapter will set the scope of the thesis by examining the main theoretical considerations in regard to the overall framework governing ideation and more specifically our three main areas of study, namely the Front-End of Innovation, Idea Management and Employee Motivation. All of the discussed concepts will offer insights that will later be instrumental for outlining our findings in a comprehensive manner. The literature review also aims to present an exhaustive list of all the relevant concepts that will aid our subsequent analysis.

2.1 FRONT-END OF INNOVATION (FEI)

This section will review literature on the Front-End, first in more general terms and subsequently in the more specific context of its relationship with motivation and idea management theory.

The Front-End of Innovation (FEI) represents the period between when an opportunity is identified for a new product or service and when it is judged ready for further development. Koen *et al.* (2001) through the New Concept Development theoretical structure, provide a common language and definition of the key components of the FEI. First of all, he changed the previously used terminology, in particular the commonly used Fuzzy Front-End (Reinertsen, 1999; Khurana & Rosenthal, 1998; Kim and Wilemon, 2002; Floren and Frishammar, 2012; Zhang and Doll, 2001; Jou and Yuan, 2016; Stevens, 2014), removing the word "Fuzzy", since it implies uncertainty and uncontrollable conditions. In this study we will refer to the new term, the Front-End of Innovation. Here, there can be identified five different elements that continuously interact and relate to each other, namely: (1) the Engine, represented by leadership, culture and business strategy (2) the Inner spoke area and (3) the Influencing factors, which might be the organizational capabilities, the outside world etc. As shown in the following figure, the model they have created has a circular shape since ideas are expected to flow, circulate, and iterate among the five elements defined by the Inner area, which are (1) Idea generation & enrichment (2) Idea selection (3) Concept definition (4) Opportunity identification and (5) Opportunity analysis.
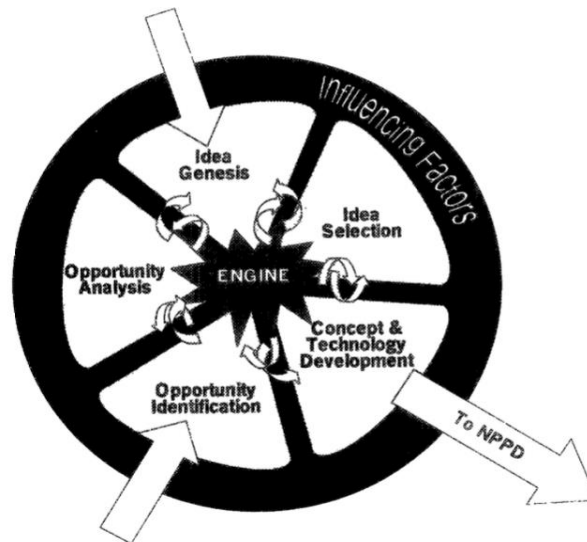
Figure 3. The New Concept Development Model (NCD) provides a common language and definition of the key components of the Front End of Innovation. The engine, which represents senior and executive-level management support, powers the five elements of the NCD model. The outer area denotes the influencing factors that affect the decisions of the two inner parts.

First it must be noted that the early stage of innovation where ideas are generated and developed is mostly seen as a 'black box' so the mechanisms within it need to be exposed in order to create the capabilities to generate ideas which are quantitatively and qualitatively measurable (Hesmer *et al.*, 2011). Additionally, the Front-End of innovation has been characterized as highly uncertain and creative, thereby requiring high levels of freedom and independence for those executing front-end activities (Poskela and Martinsuo, 2009). Regardless, the front-end of innovation is recognized as a driver for successful product innovation and business success because organizations are facing increasingly shorter innovation cycles; thus, they must be proficient in their predevelopment activities to generate high-quality ideas and quickly convert them to promising product concepts that will bring long-run success in the market (Kock *et al.,* 2015).

The front-end is regarded as the most troublesome phase of the innovation process and at the same time as one of the greatest opportunities to improve the overall innovation capability of a company (Poskela and Martinsuo, 2009). On the one hand, companies must generate a sufficient number and variety of high-quality ideas to obtain a well-balanced portfolio of potentially successful innovation projects while on the other hand, companies must strictly

select and prioritize promising ideas and concepts because resource constraints do not allow for the pursuit of every idea (Kock *et al.,* 2015).

The main problem in the context of this paper is that many previous studies have not investigated the front-end phase and the development project phase separately, which has generated conflicting research results and has caused difficulties in their interpretation (Poskela and Martinsuo, 2009). Several studies have shown that the nature of the front-end is different from that of the NPD project in terms of task characteristics and people involved (Koen *et al.,* 2001), and research should therefore consider different phases of the innovation process separately (Poskela and Martinsuo, 2009). As the front-end of innovation is largely about information searches, exploration, and iteration of initial ideas, its performance should be estimated with criteria specific to the front-end and not to a development project (Ibid.).

Perhaps motivating employees is one such criterion. The front-end phase in particular contributes also to organizational learning and the organization's ability to be prepared for challenges in the future (Ibid.). In addition, the know-how and new information created in terms of target markets and used technologies are enablers of strategic renewal (Ibid.). Thus, navigating the front-end of innovation is about much more than input into the product development funnel.

The important point is that instead of artificial facts and measures that assume complex causalities in the innovation process, the explorative nature of the front-end requires putting emphasis on more immediate and perception-based criteria (Ibid.).

2.2 IDEA MANAGEMENT

This section will discuss the main considerations in regard to Idea Management and will highlight key features, typically exhibited in motivation-inducing IMS, such as cross-functionality and organizational learning.

Companies of the 21st century must generate a sufficient number and a wide variety of high-quality ideas to obtain a well-balanced portfolio of potentially successful innovation projects. At the same time, they must strictly select and prioritize promising ideas and concepts because resource constraints do not allow for the pursuit of every idea (Kock *et al.*, 2015). The term 'idea generation' is very broad and it embraces many different concepts. In the simplest terms, the ideation process itself is one of discovering 'what' to make, 'for whom', and understanding 'why' it should be made (Hesmer *et al.*, 2011). Overall, however, idea generation is only part of the broader concept of idea management.

Idea management is based essentially on the generation of new concepts, by combining organizations knowledge and collective intelligence, aligned by the organization's contextual factors (Mikelsone and Liela, 2009). Thus, in its ideal form, the idea generation mechanism is to be seen as a device for the advancement and utilization of the creativity of all persons involved in an organization (Ibid.). Accordingly, there is a wide range of direct and indirect idea generation mechanisms currently employed by companies across the world. These can be drawn from an array of case studies on market and innovation leaders such as Google, Samsung, Nokia, Prysmian, BBC, Cow Chemicals Group etc.

There are numerous specific mechanisms employed by those companies with varied degrees of success such as incentivized contests, internal review meetings, founders' award, extended barter incentives, Google's 70/20/10 initiative, product strategy forums etc. Another very beneficial approach when it comes to intrapreneurship is creating a champions program. Such a program encourages ambidextrous and talented entrepreneurs from throughout the organization to suggest, develop, champion, and implement new products, services and processes (Kuratko *et al.*, 2011). There are also a number of slightly broader tools that can be used, such as making a company social networking site the focal point of ideation efforts as

well as adding gamification elements. Frequently, an IMS is more advanced than a simple advice and recommendation mailbox, it could also encompass real life activities, for example, simple idea submission boxes or idea submission to managers (Mikelsone and Liela, 2009). According to Gamlin, Yourd and Patrick (2007) such a system allows to submit ideas regarding a variety of themes and questions, but there is an ongoing tendency for quality and quantity of ideas to decline after their implementation, and the submitted ideas often fall short in terms of conformity with what is expected from the organizers (Mikelsone and Liela, 2009). A question arises: is this necessarily a hindrance?

The key is that large firms seek to improve their capability to continuously develop and bring innovations to the market so traditionally firms keen to maintain high rates of innovation need continuous flows of new ideas (Elerud-Tryde and Hooge, 2014). One study in particular examined the introduction of idea generation mechanisms in two top companies. Surprisingly, for them, in both cases finding good ideas for innovation was a secondary goal and the virtual idea campaigns were used to promote innovation by stimulating collaboration among employees (Ibid.). Thus, the introduction of an idea generation mechanism was seen as managerial tool to deepen the commitment of employees to innovation and also to generate new ideas (Ibid.). However, in relation to the ideas that resulted, neither firm found it straightforward to implement them and in fact, both firms demonstrated surprisingly low rates of conversion of the generated ideas (Ibid.). These findings suggest that idea generation campaigns support the innovation process in large firms mainly because they involve the relevant stakeholders in the generation and selection of innovation ideas (Ibid.).

It also has to be said that introducing cross-functionality is a common feature of IMS and also one that is partially employed by our case company. Cross-functional teams are often seen as key for innovation projects (Blindenbach-Driessen, 2015). Developing appropriate project goals, empowering the team with the needed decision-making power, assigning the appropriate human resources, and creating a productive climate are all related to fostering team success (McDonough and Edward, 2000). Of these four factors, an appropriate project goal is mentioned most often as being associated with success, followed by empowerment (Ibid.). Additionally, a number of researchers have suggested that team leaders, senior

managers, and champions provide enabling support to cross-functional teams in achieving success (Ibid.). Team leadership is the most frequently mentioned enabler, according to these findings, followed by senior management support (Ibid.). Overall, cross-functional innovation teams can make novel ties between functional domains, integrate up and downstream knowledge to facilitate the transition to production and break down knowledge barriers between functional departments (Blindenbach-Driessen, 2015). In the innovation literature, the general assumption is, therefore, that cross-functionality contributes positively to the performance of innovation teams (Ibid.).

Ultimately though, for internal IMS, research points to the importance of particular characteristics and learning behaviors of the individual idea generator (Ende *et al.,* 2015). This is why no idea generation mechanism can ensure successful product innovation. What can however be done is to encourage organizational learning through those mechanisms so that individuals gradually hone their intrapreneurial spirit and creativity. Apart from individual and task-related factors, an organization's encouragement of new idea generation and expression is the most frequently mentioned organizational condition that facilitates creativity (Ibid.). If one shifts focus and sees those benefits as the overriding purpose of idea generation it will directly transcend the limited notion that ideation without focus is useless because it will generate many irrelevant and non implementable ideas (Ibid.). Clearly, new product ideation is an important capability for enhancing product innovation performance by shaping what enters the new product development (NPD) funnel (Spanjol *et al.,* 2011). Nevertheless this should not be seen as its only function,

Overall it can be said that idea generation is only part of the innovative process, and the availability of creative ideas is a necessary, but insufficient condition for innovation (Mikelsone and Liela, 2009). Idea generation campaigns support innovation in large firms mainly by (1) encouraging employee creativity in idea generation and (2) involving employees and top managers simultaneously in the innovation process (Elerud-Tryde and Hooge, 2014)

2.3 EMPLOYEE MOTIVATION

This section will discuss the main considerations in regard to Employee Motivation and will highlight key features, typically exhibited in motivation-inducing IMS, such as formalization and incentives. The section also aims to present a broader perspective on motivation, covering not only the classic intrinsic versus extrinsic debate but also suggesting that just like any other HRM tool, a motivational tool can have a strong impact on competence building.

Firms in the 21th century need to be more adaptive through bottom-up self-organization, increasing the degree of autonomy for employees and creating incentives for innovation (Foss, 2003; Makadok and Coff, 2009; Zenger, Felin, and Bigelow, 2011). Now, more than ever, it is fundamental for any firm to secure the loyalty and trust of their employees in order to attract talents and to prevent skilful employees from quitting their jobs. At the heart of the following discussion is the premise that a relationship of mutual exchange exists between the employees that are contributing and the employer that can benefit of their time, skills, ability and talent. That being said, stimulating ideation and the creation of corporate entrepreneurship as a whole is an induced process in organizations through which the management attempts to develop the competencies of the employees using human resource management and organizational development projects (Sundbo, 1999). Clearly, for the purpose of the thesis, motivation is considered in a broader context, also taken to encompass aspects of competence building. A motivational tool is much more than a simple reward system and in an ideational context can be seen also as a tool for building competences or contributing to the ability of the employee to recognize the value of new, external information, assimilate it, and apply it (Tidd and Bessant, 2014).

In this sense it is also important to ensure equal creative encouragement for every single employee. Creative encouragement is defined as the managerial support and autonomy that is given to employees to allow them to pursue creative tasks (Amabile *et al.,* 2004). Managerial support means encouraging individuals to voice their concerns, providing feedback, and facilitating employee skill development (Ende *et al.,* 2015). It is clear that the innovative behavior of employees can be stimulated by fostering a social work context in which employees feel motivated to generate, promote, and realize innovative ideas and concepts

(Bammens, 2016). Clearly, ensuring some form of management support and motivation in particular is a fundamental first step because if employees lack support and autonomy for creative activity, they might regard the strategic vision and future direction expressed in the ideation strategy as an empty cliché (Ende *et al.,* 2015). Literature suggests that organizing for innovation requires the creation of a dual organization where there is a management structure to steer the innovation process as well as a structure of employees who function as 'free' corporate entrepreneurs (Sundbo, 1999). This way employees can pursue projects of interest at their own pace while also having the security that they are working in the right direction and their time is well spent. This point, in particular, shows how interconnected and mutually dependent management and employees are in the context of ideation.

Another key consideration is to create a more flexible organization by decentralizing innovation activities in order to free up more initiatives on the part of the employees (Ibid.). Crucially, one has to consider that innovation through empowered corporate entrepreneurship demands an increase in the knowledge and learning capability of each individual employee (Ibid.). This can be achieved in a number of ways. For example HRM methods such as education and motivation programs and training for innovation activities contribute to creating a favourable environment for innovation (Ibid.). Clearly, the major challenge is how to motivate people involved in processes to participate in generating, evaluating and developing ideas (Hesmer *et al.*, 2011). Overall, finding related ideas and people is the backbone of enhancing companies' ability to generate successful innovations so to assure the participation of ideators within the early-stage innovation and enhance the efficiency of idea generation, numerous approaches can be successfully used (Ibid.). Solutions can range from a pat on the back to a grant or a promotion. The important thing to consider however is that many of those are inherently tied to IMS and if not, can be easily incorporated.

Before digging deeper, we first need to establish exactly what is meant by motivation. Blaskova *et al*. (2015) consider motivation as a dynamic and complicated phenomenon influenced by internal and external factors. Motivation is a cause to move, a set of psychological forces that determine how much efforts a person will put in an organization, his behaviours and his level of persistence in facing problems (Jones *et al.,* 1998). Of course,

motivation varies over time and depends on people's preferences and needs. Maslow (1970) and Herzberg (1968) theories on motivation are the most accepted and put the basis for further researches: the basic idea is to distinguish between extrinsic reward and intrinsic reward. Extrinsic motivation represents the set of behaviours driven by external tools and techniques, such as incentives or punishment, while intrinsic motivation can be defined as the set of behaviours driven by personal interest and passion (Cerasoli *et al.,* 2014). Intrinsic motivation permits employees to give the maximum possible efforts in their work just for the satisfaction of a job well done.

Employees can be intrinsically motivated when their work per se provides them satisfaction, interest and pleasure, without the need of external influences and incentives (Deci, 1989). The Self-determination theory was built on the latter distinction and proposes the two following models: the continuum model, which examines extrinsic motivation and the autonomous one that focuses on intrinsic motivation. According to the theory, both intrinsic and extrinsic motivations are associated with high employee performance both in the physical and psychological aspects of life. In this sense, motivation is a crucial factor for the development of any organization, since the more employees are motivated and stimulated in their jobs, the better their performances.

Work performance, in turn, can be defined as behaviours or actions that result in useful outcomes for the aim of the organization (Campbell, 1990). Different studies also revealed that employees' motivation is positively associated with work performance (Pinder, 2011), but the debate regarding which type of motivation is more efficient for better job performances is still open. Researches showed that the nature of incentives depends on the nature of the activity, the level of training, the work conditions, the expectations of employees and the objectives of the organization (Padurean, 2004).

For example, Lazear (2000) suggested that extrinsic motivation is more effective than intrinsic motivation when it comes to job performance, since people need money in order to live with a proper dignity. Branch (1998) however, made a distinction and stated that employees will be mainly worried about money just in the initial phase of working, but then other factors will determine if they are going to quit their job over time, such as

empowerment. Gagné (2010), Dysvik and Kuvaas (2013) suggested that intrinsic motivation is the main driver for better work efforts, job satisfaction and well-being. Amabile (1983) also agrees that the most salient factor for motivating creative and innovative behaviors is intrinsic motivation. It is employees' inner passion in devoting their time, effort and resources into the task at hand that motivates incremental progress towards a meaningful contribution to innovation. Intrinsic factors promote a creative flow for employees in fostering the opportunity for personal and professional development as well as achievement. Gupta (2009) for example, is convinced that employees who are intrinsically motivated to innovate enjoy their work based on self-fulfillment, personal interest and an innate quest for taking on challenging work. However, employees also need interesting tasks, the appropriate working conditions as well as the opportunity to feel empowered in order to perform well (Tampu, 2015). For example, a favourable working environment of openness and fairness, where people can easily communicate and a well-designed job with good opportunities for growth and learning have been proved to be essential for motivating employees and in turn for enhancing organizational effectiveness (Kempegowda and Purushotham, 2016).

It is also important to note that firms cannot implement every idea, which is why the presence of an internal selection regime that screens and selects employee ideas for further development is of crucial importance (Foss, 2003; Løvås and Ghoshal, 2000; Tat *et al.,* 2007). The big dilemma in this regard is the extent to which the process is formalized. However, whether it is more fruitful to formalize ideation work or to try to use informal social structures in a more subtle manner is a question that does not seem to have a simple answer (Bjork and Magnusson, 2009). Formalization of ideation activities can provide direction and attention to the important work of generating new innovation ideas and may also allow management to explicitly support their development (Ibid.). Some authors stress the importance of setting specific and challenging strategic goals for development work and emphasize advantages of improved communication and coordination created by process formalization (Poskela and Martinsuo, 2009). On the other hand, several disadvantages have been connected with process formalization: decreased innovativeness; increased corner-cutting; negative attitudes among employees; excess bureaucracy; and decreased flexibility (Ibid.). Formalization might impede creativity and ideation because it decreases the

incentives to proliferate ideas and increases the incentives for convergent thinking (Amabile *et al.,* 1996). Formal processes are often connected with bureaucracy and rigidity, which hamper creativity (Poskela and Martinsuo, 2011). Radical ideas, in particular, are more likely to be filtered out (Ende *et al.,* 2015). A clear direction may have a negative impact on the ideation work spontaneously taking place in the informal network of an organization but just like many other questions related to innovation, this one also may in fact be a matter of balancing counteracting forces, where the answer rarely is to be found in one of the extremes (Bjork and Magnusson, 2009).

Overall, there are few general areas that managers should focus on in order to boost motivation and competence building in an ideational context: firstly, training and development. Staff development and training that focus on entrepreneurial facets have a positive influence on corporate entrepreneurship (Schmelter *et al.*, 2010). When coupled with empowerment of employees, organizational learning is a very powerful tool for fostering innovation (Sundbo, 1999). Oldham & Cummings (1996) also stress the importance of a learning environment that continuously educates employees and align employees with the current strategic needs of the organization. On-going development in a learning culture is imperative in motivating employee innovative thinking by targeting improvement in specific skills that allow them to be more and more prepared for the next innovations. Another area is performance appraisal. Given that risk implies failure, appraisal and reward systems should reflect tolerance of failure and offer some employment security (Kuratko *et al*. 2011). Lastly, we have compensation and rewards. Often these are financial which in itself is crucial but it is also important to take into account all that employees look for, including the desire to be challenged, development opportunities, social relations at the workplace etc.

In theory all of these can be accounted for through a comprehensive IMS thus eliminating the need for complicated implementation across the organization. If purpose of fostering motivation is taken into account from the beginning, the ideation process itself can easily become the prime motivating factor.

In this chapter, one by one, we presented the three main areas of research deemed to be applicable to our thesis. We have presented all concepts relevant for our subsequent analysis,

trying to illustrate both the symbiotic relationship between management and employees as well as the interconnectedness of the three areas. However, an even more comprehensive examination of the relationships between the three areas is to follow in chapter 5. We believe that our analysis is the perfect context for demonstrating how these areas complement and interact with each other.

CHAPTER 3: METHOD

3.1 OVERVIEW

This chapter aims to present and justify all research methods that were employed in the process such as sampling, methods of data collection and methods of data analysis. It is important to note from the beginning that in order to ensure the validity of our research, we decided to cross-validate data by relying on more than one method of data collection. In our approach, which can be referred to as triangulation (Bryman and Bell, 2015), we cross-checked findings deriving from both quantitative and qualitative research with the purpose of capturing different dimensions of the same phenomenon since: "from a combination of methods emerge the most valid and reliable way to develop understanding of a complex social reality, such as the corporation" (Ibid.). The main reason behind the collection of different types of data was to extensively examine different aspects of organizational reality. Through the use of a questionnaire, interviews, company's document and observational data, we tried to combine the specificity and accuracy of data by collecting different types of data related to different cultural elements, from values to material artefacts (Ibid.). Despite the limited time we spent in the company, we were able to collect and compare data from different sources, leading eventually to a triangulation approach that, in our opinion, was the best fitted approach to improve the validity of our findings. Having this in mind is important in order to understand how initially we employed less-formal and unstructured data collection methods to get a picture representative of the entire organization, while later we relied on a more formal approach to gain a deep understanding of processes in the Innovation Lab, the focus of our thesis. This allowed us to examine the Lab in the correct context while also using it as proof of concept to validate our findings.

3.2 RESEARCH DESIGN AND PROCESS

3.2.1 Epistemology and Ontology

Our research, in terms of epistemological considerations, will be focused on reliable past events, leading to a more credible arguments and conclusions (Taylor *et al.,* 2009) and will be conducted following an interpretivist approach, where we suppose that data generated from interviews are not strictly objective. We will analyse data trying to realise the world from different perspectives, trying not to underestimate the different experiences and views of social actors, leading to more holistic results. Ontological considerations must also be taken into account when referring to the social entities, which are, in this specific case, organisations. In fact, we have realized that adopting a constructionist approach is more effective and beneficial here, since it accepts that social constructions are influenced by the social actors within them (Bryman and Bell, 2015). Not surprisingly, employees of the company represent the main factor that influences it, and not the other way around. Moreover, we would refer to an inductive approach where we will infer implications of our findings for the theory that prompted the whole exercise. This choice seems to go hand in hand with the qualitative nature of our research. Lastly, we would like to take a slightly more functionalist approach, based on a problem-solving orientation which leads to rational explanation rather than focusing too much on the conceptions of social actors (Ibid.).

3.2.2 Research strategy, approach and design

Our research is qualitative in nature and tries to understand different ways in which people interpret their social world (Bryman and Bell, 2015). This also means that an inductive approach will be mainly used in the relationship between theory and research, emphasising the generation of new theories. Since our research question is qualitative in nature, we would like to treat theory as something that emerges out of the collection and analysis of data. The overall research design would naturally be a single case-study design, which entails the detailed and intensive analysis of a single case, which is a single organization: [Case company]. We would also like to take the stance that the goal of the case study should be to concentrate on the uniqueness of the case and to develop a deep understanding of its

complexity (Ibid.). Using a questionnaire and company documents regarding employee turnover over time has helped us add quantitative aspects. Through our research question, we provide a specific statement in which we explicitly present what we want to know, analyse and investigate.

3.2.3 Research process

Our research process is inductive, with small elements of deduction, implying that data collection precedes theory development and testing (Bryman and Bell, 2015). In line with the grounded theory we generate new theory from a systematic gathering and analysis of data, leading to a close fit between theory and data (Ibid.). We initially based our data collection on observations, informal interviews and company documents. Subsequently, we searched for existing literature that could be helpful for our research and we finally identified research gaps as well as matches between our observations and existing theoretical concepts. Naturally, every area of research was directly linked to current literature; our main concern was to find the perfect combination or link between the company and existing literature, in this way allowing our research to present a valuable contribution to current literature. At the same time, we wanted to raise problems and discussion about the topic trying to find a perfect match between [Case company] issues and all the other organizations in the same industry. The initial background research guided us and once we reached a degree of theoretical saturation we chose to concentrate on the Innovation Lab and designed an appropriate interview guide, subsequently employing a more formal and structured approach. It also has to be said that we were given near full access to both data and employees so apart from maintaining good time management, there were no particular challenges when it came to data collection.

A summary of our research approach can be found in the following table:

DIMENSION	CHOSEN DESIGN	EXPLANATION
Research strategy	Largely Qualitative	Focus on words (Bryman and Bell, 2015).
Epistemology	Interpretivism	Research cannot be strictly objective. Methods need to be adapted when investing social phenomena (Bryman and Bell, 2015).
Ontology	Constructionism	Organizations are social constructions, which are influenced by social actors withing them (Bryman and Bell, 2015).
Approach	Largely Inductive	Generation of new theory rather than testing of existent theory (Bryman and Bell, 2015).
Overall research design	Single case-study design	Case study in a single company.

Table 2: Overview research methodology

3.3 DATA COLLECTION

BACKGROUND

As established, the main focus of this paper is to examine whether an idea management system can be used as a motivational tool and if so what the best way of facilitating this process is. In order to do that we decided to use the Innovation Lab as the focal point of our research. As was explained, the Lab is essentially an IMS that is focused on the front-end. However, before conducting our central research, we wanted to gain a deeper understanding of the organization as a whole, focusing on front-end practices, experiences and views on ideation, as well employee motivation. This way we could analyse our findings in a sufficiently broad context while also having enough data to compare practices and suggest solutions. Overall, it is fair to say that accumulating this background knowledge strongly guided us in our subsequent efforts.

In terms of data collection for the background research, we used two different methods and had various sources of information, each of which gave us a unique perspective on the subject of ideation. We had a broad sample that is arguably very representative of the organization. First, we reached out to the management team who gave us an extensive view of the processes in their own departments as well as personal remarks on ideation. Additionally we interviewed a number of key personnel who specialize in innovation, new product development and ideation who were especially helpful in terms of fleshing out existing practices in idea management as well as providing valuable suggestions regarding future development. In the subject selection process we made initial contact with a small group of employees who were relevant to the research topics and subsequently we used these to establish contacts with others, as for snowball sampling (Bryman and Bell, 2015).

All interviewees, names are omitted due to confidentiality considerations, and their position at the case company are listed in the following table:

INTERVIEWEE	POSITION AT CASE COMPANY	DATE
Interviewee 0	Technology & Development Director North	19.01.2017
Interviewee 1	Head of System Design	01.02.2017
Interviewee 2	Director of Innovation and Planning	03.02.2017
Interviewee 3	Director Consumer Insights	10.02.2017
Interviewee 4	Project Manager	13.02.2017
Interviewee 5	Product Specialist	16.02.2017
Interviewee 6	Team Leader Application Development	21.02.2017
Interviewee 7	Product Department Manager	28.02.2017
Interviewee 8	Application Specialist	03.03.2017
Interviewee 9	Quality Assurance Officer	06.03.2017

Table 3: Selected interviewees for less-structured interviews

Lastly, we distributed a questionnaire among employees in order to cover every possible perspective which ultimately added tremendous value to our data by confirming our previous findings. We conducted the questionnaire so as to add quantitative aspects and acquire a sample truly representative of the entire organization. The questionnaire was sent to 305 people and the response rate was 36%, giving us invaluable data from 112 employees. Data collected was vast enough to validate the results. It is also evident that employees at case company really care about innovation and want to contribute to making this process simpler and more noticeable.

For the interviews we relied on a semi-structured approach. Employing the semi-structured interview format meant that we as interviewers had to be intimately familiar with the topics and the covered themes. This is in contrast to a structured interview where the interviewer may need no prior knowledge on the issues discussed. This view stems from the fact that a

semi-structured interview is a more flexible discussion where the order of the questions may be altered and extra questions may be added where a response is particularly significant (Bryman and Bell, 2015). In terms of aggregating the data and analysis we relied on a methodology inspired by and largely based on Gioia *et al.,* (2012). The process was not adhered to strictly due to the nature of the project as advocated by the authors themselves, who envision the approach as a ''methodology,'' rather than a ''method'' and see it as a flexible orientation toward qualitative, inductive research that is open to innovation, rather than a ''cookbook'' (Gioia *et al.,* 2012). As a consequence, although recorded, the interviews were not strictly transcribed resulting in a slightly less formal approach in comparison to our core research.

We used an approach that allowed for a systematic presentation of both a ''1st-order'' analysis (i.e., an analysis using informant-centric terms and codes) and a ''2nd-order'' analysis (i.e., one using researcher-centric concepts, themes, and dimensions) (Ibid.). Taken together, the tandem reporting of both voices - informant and researcher - allowed not only a qualitatively rigorous demonstration of the links between the data and the induction of this new concepts but also allowed for the kind of insight that is the defining hallmark of high-quality qualitative research. Just like Gioia *et al.* (2012), in the 1st-order analysis, which tried to adhere faithfully to informant terms, making little attempt to distill categories. As the research progressed, we started seeking similarities and differences among the many categories we had gradually created. We then gave those categories labels or phrasal descriptors (attempting to retain informant terms) and considered the array before us (Ibid.). In the 2nd-order analysis, we were now firmly in the theoretical realm, asking whether the emerging themes suggest concepts that might help us describe and explain the phenomena we were observing (Ibid.). Once a workable set of themes and concepts was in hand we investigated whether it is possible to distill the emergent 2nd-order themes even further into 2nd-order ''aggregate dimensions'' (Ibid.). However, due to the nature of our investigation we decided to retain the 2nd order themes, finding them sufficiently explicit for our purposes. Instead of the more general dimensions we aggregated the data in terms of how often the said themes were mentioned by the interviewees, highlighting their added value. The most often mentioned themes and those that were less popular were marked accordingly. We also

grouped themes in two categories: Information about the current state of the company and views on how an IMS should look. In turn, we respectively split those into positive and negative as well as 'Dos' and 'Do nots'. The resulting data structure not only allowed us to configure our data into a sensible visual aid, but also provided a graphic representation of how the themes rank in terms of importance.

Analysis of this data provided us with a solid background and base for comparison. Once reacing theoretical saturation, this knowledge helped us design our core research approach, which is aimed at the Innovation Lab, and will be outlined presently.

3.3.1 Interviewee selection

Once again, semi-structured interviews were used as our main source of information. We used purposive sampling guided by the research question where we sampled employees because they exemplified a dimension of interest (Bryman and Bell, 2015). The main criterion in terms of interviewee selection was involvement in the Innovation Lab. Within those, we differentiated between people involved full time in the Lab and those who only participate part-time. Currently, there is a core team of developers and designers, building the platform, driving the various prototyping and experimental activities. However, they sometimes develop concepts that are currently not in the roadmap or they develop a pilot to run an experiment for a business manager in projects where there is uncertainty about the concept (like, for example, delivery services). But apart from the director overseeing the project and the head, the core team is made up of one developer and one designer. Then there are the contributors: 5-10 people in the "labs community" who have contributed with ideas, built a prototype or two for their own personal use but are not active otherwise. Out of those currently in the case company, only limited number have been involved in a tangible way that is worth investigating but on the positive side, this allowed us to interview all of them. We believe that both groups offer invaluable insights. The first group has more experience with the Lab and is likely to offer more detailed information into how exactly it functions while the second group is much more aware of the contrast between the Lab and the rest of the organization. Ultimately, we wanted to find out how ideation mechanisms stimulate and motivate employees, and in order to do so, we compared the Lab, which attempts to

incentivize ideation, to the rest of the organization where employees often feel neglected and lacking in opportunities for personal development. There are some answers to our questions that may not be directly related to the specific issue, but can result in useful information in an indirect way. The following table lists all the interviewed employees, once again names are omitted due to confidentiality considerations, distinguishing them as per the criteria.

Interviewee	Position at case company	Criterion 1 (Full-Time)	Criterion 2 (Limited time)	Date
Interviewee I	Product Specialist and Head of Innovation Lab	X		02.05.2017
Interviewee II	Software Test Engineer		X	03.05.2017
Interviewee III	Software Developer		X	03.05.2017
Interviewee IV	Software Developer	X		04.05.2017
Interviewee V	Technology & Development Director North	X		05.05.2017
Interviewee VI	Software Developer	X		05.05.2017
Interviewee VII	Former Mobile App Developer		X	05.05.2017

Table 4: Selected interviewees for semi-structured interviews

3.3.2 Interview preparations

Basing our work on semi-structured interviews, we developed an Interview guide that contains questions regarding our final thesis. Our research question requires as much information as possible in order to generate accurate and credible answers, which is why we have asked many different questions regarding different areas of interest. Interviews will be recorded and transcribed subsequently for an accurate analysis. We also used multiple interviewees in the interviewing process. As Bechhofer, Elliott and McCrone (1984) suggest, there are multiple advantages to having more than one interviewer to interview each respondent such as creating a more informal atmosphere, akin to a discussion between three

people rather than an exchange between two persons (Bryman and Bell, 2015). One person took the role of an 'active' interviewer, actually conducting the interview, while the 'passive' one would take extensive notes, assess the overall development of the interview, keep an eye on topics to be covered and wait for the appropriate moment to take over (Ibid.). Also, the idea of an interview guide is much less specific than the notion of a structured interview schedule which is why we aimed to give ourselves an appropriate amount of flexibility when designing it, including a series of follow up questions on specific issues. (Ibid.). Every time we talked with employees we were gentle in the approach and in the words used, trying to make the interviewees as comfortable as possible. Most of the meetings were held at the meeting rooms at the case company in Malmö, which are all equipped with the technical tools we needed and which were also the most convenient meeting place for our interviewees. We also kindly offered the anonymity option for the interviews to all the employees, but not the veto right to the information and publication (Gioia *et al.*, 2012). The following bullet points show and explain how the interview guide is aimed to help us to answer the research questions, and it presents what we are going to capture, topic by topic:

- *Topic 0: Interviewee's role and position at [Case company]*
  The first topic is mainly used to make the interviewee feel comfortable and relaxed, and to understand which is his/her position at the company, as well as his/her background and work experiences. Additionally, experience and cross-functionality are correlated with understanding of company processes. It would also be beneficial to examine how the level seniority affects interviewees' perspective

- *Topic 1: General information about the Innovation Lab*
  Through Topic 1 we are going to understand how the Innovation Lab works, as well as what is its main purpose, its processes and how ideas are generated, selected and implemented. We will gather information and compare multiple answers from employees working both full-time or part-time in order to gather and analyse different points of view. This topic is particularly useful for determining the extent to which the Lab functions as an IMS as outlined in chapter 2.

- *Topic 2: Personal thoughts about the Lab*

  In Topic 2 we are going to ask personal questions about the Lab, trying to understand if the Lab stimulates innovation and how it does so. We are going to capture if the Lab provides learning opportunities and if the cross-functional team works efficiently. In a broader sense, we will analyse what are the positive and negative features of the Lab. Here, we determine the extent to which the lab employs practices commonly associated with IMS and how successful it is in doing so.

- *Topic 3: Comparing the Lab with the rest of the company*

  This represents a crucial topic since it will provide us with potential answers to our research question. Through this topic we will be able to compare the Lab with the rest of the company, understanding if the Innovation Lab is more effective in motivating employees and in generating, evaluating and developing new ideas . As a consequence, if our initial assumptions are right, we will also notice a greater efforts, enthusiasm, interest and commitment from the employees involved in the Innovation Lab. Additionally, our previous research helped us identify a number of problems associated with ideation in the case company so through this topic, we are going to determine the extent to which the Lab offers corresponding solutions.

- *Topic 4: Motivation*

  The last topic is strictly focused on motivation. Here we try and capture what mainly motivates interviewees and which are the incentives that lead to the higher level of commitment, performance and in general motivation. Employees also indicate the extent to which the Lab fulfills their needs in terms of both intrinsic and extrinsic motivation.

3.4 DATA ANALYSIS

In terms of data analysis we once again used the Gioia methodology and mainly in the way described above. This time however we took a much more formal approach and did not stop at 2nd order themes. Once a workable set of themes and concepts was in hand we investigated whether it is possible to distill the emergent 2nd-order themes even further into 2nd-order ''aggregate dimensions'' (Gioia *et al.,* 2012). As per Gioia, when we finally got the full set of 1st-order terms and 2nd-order themes and aggregate dimensions, then we had the basis for building a data structure. The data structure provided a graphic representation of how we progressed from raw data to terms and themes in conducting the analyses—a key component of demonstrating rigor in qualitative research (Ibid.). The template that our data structure is based on is shown in the following figure along with an explanation of what exactly each column represents:
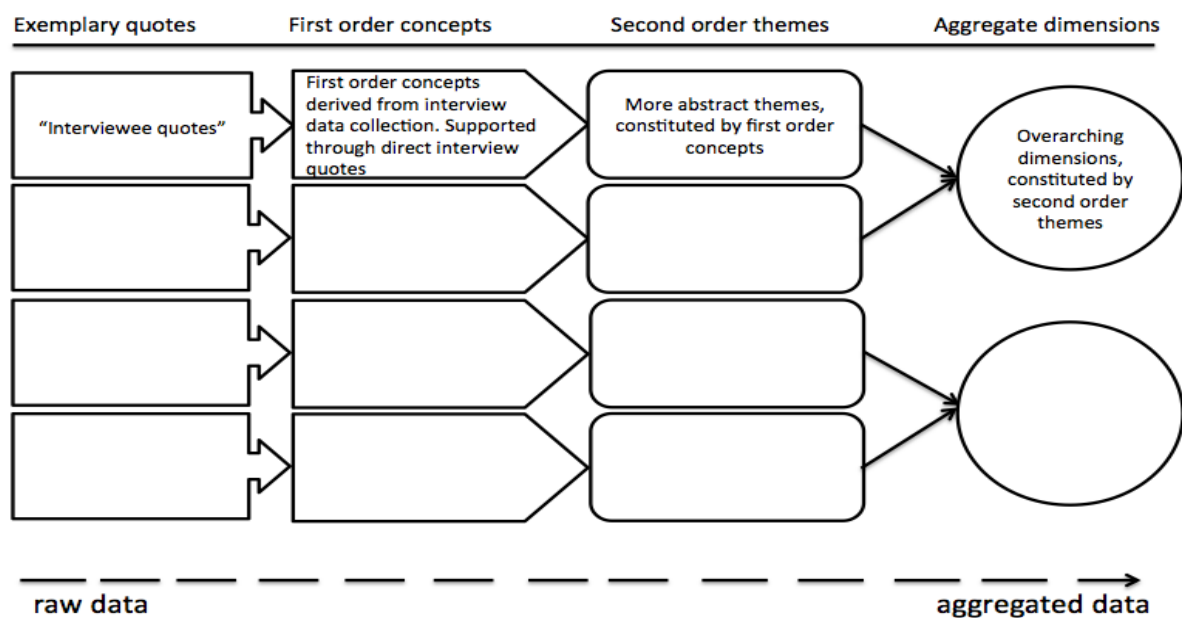
Figure 4. Data structure by Gioia *et al.* (2012)

It has to be said that we also considered using other methodologies for analysis such as the Eisenhardt (1989) case study approach. This approach, while applicable in many ways, is much better suited for cross-case analysis which in this context was not possible. Reaching

theoretical saturation within a case study framework would require the analysis of multiple cases (Eisenhardt, 1989). Additionally, the approach is strongly focused on hypothesis building and testing which, for the authors, arguably would have led to too much confirmation bias. The framework-provided tools for within case analysis were also found to be somewhat limited and generally lacking. Considering the thesis data sample, greater familiarity with Gioia, its flexibility, the great value of a graphic representation of the data structure, ease of within case analysis and the additional advantages listed above, the Gioia methodology was deemed to be the superior tool in this particular context.

In terms of analysis of the quantitative data, we employed univariate analysis. Since we are not analyzing the relationship between multiple variables, the analysis is descriptive as opposed to explanatory. We present both the distribution and central tendency in terms of averages through descriptives such as the mode, mean and median. We also explore the dispersion of data through standard deviation. Due to the univariate nature of the data, more sophisticated methods of analysis such as correlation, regression and analysis of variance are not only unnecessary but also impossible to perform.

CHAPTER 4: FINDINGS

The most important findings of our research are presented in this chapter. As already explained, we mainly relied to Gioia methodology (2012). In turn we are going to examine the data from the first, less-structured interviews, the questionnaire and lastly the semi-structured formal interviews.

4.1 LESS-STRUCTURED INTERVIEWS

The data received from the less-structured interviews is presented in two tables. The first table concerns findings regarding the current state of the case company and is split into positive and negative findings. It is important to note that for this stage the selected interviewees are higher level employees many of which are in management positions while the rest are ideation, innovation or front-end specialists.

On the positive side we discovered that the company sees offices in other countries as their prime idea generators thus ensuring a steady and predictable flow of new ideas. This allows the company to examine ideation and use IMS in a much broader context, namely to stimulate motivation. On this note it is important to mention that employees are predominantly intrinsically motivated and very willing to engage in innovation. There is currently a degree of empowerment and once formed, teams seem to operate with a lot of autonomy. Perhaps this is why, internally, departments are self-sufficient and well functioning. It was also made clear to us that employees have an immense capacity to generate ideas while the company has the competencies required to develop a lot of potential ideas internally. Additionally, although never in the context of ideation, the company often engages in organizational learning initiatives through workshops, hackathons etc. Finally, the most strongly supported finding is that the case company is strongly regarded as very innovative by its employees.

On the negative side, employees believe that as a market leader, the company has no reason to engage in radical innovation which makes it too focused on the core business and narrow-minded when it comes to exploring new ideas. In fact, the current idea suggestion practice is

to go to the closest manager who usually does not have time or authority to act upon the suggested ideas. As a result, only the most vocal internal champions are given the opportunity to contribute. A part of the problem is that generally, not enough people are involved in the front-end of innovation. Additionally, the organization is experiencing over-formalization of processes, which has a negative impact on overall motivation. In an attempt to remedy some of those problems the company decided to employ an idea suggestion box of sorts which unfortunately failed due to lack of attention and sustainable processes in the evaluation, selection and implementation phases. Lastly, an overwhelming majority of employees see the current software solution for network connectivity as counter-intuitive and generally too complicated.

Current state of the company

Positive	Negative
***Case company is a very innovative company	***Current software solution for network connectivity is counter-intuitive and too complicated
**The company does often engage in organizational learning in the form of internal training and workshops but never in the context of ideation and innovation	**Idea suggestion box did not work well at all, mainly due to the selection and implementation phase
**Currently countries are the main contributor when it comes to new ideas and the output into the NPD funnel is more than sufficient to sustain the company	**The current idea suggestion practice is to go to the closest manager who usually does not have time or authority to act upon the ideas
**Employees have the immense capacity to generate new ideas	**The organization is experiencing over formalization of processes, which has a negative impact on overall motivation
*Employees are predominantly intrinsically motivated and very willing to engage in innovation so no incentives are needed	*Only very vocal internal champions are heard when it comes to suggesting new ideas
*Internally departments function well, the problem is bringing them all together	*Currently not enough people are involved in the front end of innovation
*Once given authority, teams in the organization function with a lot of autonomy	*As a market leader, the company has no reason to take the risk and engage in more radical innovation
The company has the capacity to develop a lot of ideas internally	The company focuses too much on its core business and refuses to explore new ideas

Table 5: *** = majority (at least 8 interviewees) agree; ** = many (6-7 interviewees) agree; * = some (4-5 interviewees) agree; No asterisk = few (2-3 interviewees) agree

The next table concerns employee suggestions regarding both desired and undesired features of a potential IMS. On the one hand employees would appreciate having more freedom to develop new innovative projects in their own time. However they also appreciate that they could benefit from more entrepreneurial knowledge so as to generate higher quality ideas. This is in line with the fact that there is a lot of tacit knowledge but the company could benefit from codification. More specifically, it is very important to integrate various insights from sales and customers into the mechanisms so that employees can offer more insightful ideas. Employees also indicated that it is important to include a business case in new idea proposals and that they should be generally more developed so as to ease the selection and evaluation processes. At the same they recognize that it would be prudent to start with a slow input of ideas so as not to disappoint employees with poor selection and evaluation. We were continuously reminded that it is crucial to focus on the selection criteria so that people are aware of why their ideas were or were not implemented. In this sense, for them, transparency of the whole process is the key. From a more practical point of view, employees told us that using a software solution would definitely be a good idea. Additionally the focus should be on designing an on-going company-wide solution but should integrate some physical event-based ideation as well. Lastly, the findings also suggest that some incentives would benefit the ideation process and that having an innovation champion, someone to lead and oversee innovation efforts, is absolutely essential.

On the other hand we found that the company is not ready for engaging in open innovation at this stage. Additionally, one should not force employees to participate in the ideation process since not everyone has a desire to be involved. In this sense, another key finding is that employees would not respond well to internal competition, and instead the focus should be on collaboration. Lastly, we were made aware that small monetary incentives are likely to be counterproductive if used to stimulate idea generation.

Advice about the ideation mechanisms

What to do	What not to do
**Having an innovation champion, someone to lead and oversee innovation efforts is essential **It is crucial to focus on the selection criteria so that people are aware of why their ideas were or were not implemented **Very important to integrate various insights from sales and customers into the mechanisms so that employees can offer more insightful ideas **Transparency of the whole process is the key *A software solution is a good idea *There is a lot of tacit knowledge but the company could benefit from codification *Some incentives would benefit the ideation process Employees need more freedom to develop innovative projects in their own time Start with a slow input of ideas so as not to disappoint employees with poor selection and evaluation Focus on designing an ongoing solution but should integrate some physical event-based ideation Important to include a business case in new idea proposals and they should be generally more developed so as to ease the selection and evaluation processes Employees need more entrepreneurial knowledge so as to generate higher quality ideas	*Employees would not respond well to internal competition, should focus on collaboration Small monetary incentives are counterproductive Should not force employees to participate in the process since not everyone has a desire to be involved The company is not ready for open innovation at this stage

Table 6: ** = many (6-7 interviewees) agree; * = some (4-5 interviewees) agree; No asterisk = few (2-3 interviewees) agree

4.2 QUESTIONNAIRE

As mentioned, we also decided to conduct a questionnaire so as to add quantitative aspect and acquire a sample truly representative of the entire organization. The questionnaire gave us invaluable data from 112 employees. Most importantly it has to be noted that what makes this portion of the data so valuable is the fact that a representative sample of all employees shared the views of management and strongly confirmed most of our previous findings.

It was particularly valuable to couple more generic statements such as 'employees have an immense capacity to generate new ideas' with specific numerical data which in this particular instance indicated that 85% of the respondents had had an idea that they believed would benefit the entire organization. In terms of more novel findings, we discovered that employees believe that they should all strongly contribute to innovation, 92% believe that peer collaboration, communication and feedback are extremely valuable and there is also a clear 50/50 differentiation between the importance of generation and implementation. Perhaps the most valuable and interesting findings were acquired through the last, open-ended question regarding thoughts, comments and recommendations. The main issues according to those employees are selection and prioritization, as well as a strict top-down culture too focused on tech/product innovation. Respondents shared different suggestions for simplifying the process of idea generation such as having more time to work on new projects, workshops and cross-team idea generation. Most of them also stressed the importance of a good communication strategy coupled with feedback and an easily accessible system for sharing ideas.

Questionnaire results

First of all, it must be pointed out what are the *Mean, Mode* and *Standard Deviation*.

- The *Mean* represents the average and it is computed as the sum of all outcomes divided by the total number of events. (See 'Appendix II - Questionnaire results' for calculation procedure).

- The *Mode* is the number with the highest frequency.

- The *Standard Deviation* describes how spread out the data is. If the data all lies close to the mean, then the standard deviation will be small, while if the data is spread out over a large range of values, then the standard deviation will be large (see 'Appendix II - Questionnaire results' for calculation procedure).

Note that all numbers are rounded to the decimal (e.g. $5.65 \rightarrow 5.7$)

Response rate 37%, receiving 112 responses out of 305 sent (all respondents are anonymous).

Question 1: How much do you think employees should contribute to Innovation? (Scale from 1 to 5, where 1 stands for "Not at all" and 5 "Very much")
Mean: 4.6   **Mode**: 5   **Standard Deviation**: 0.5 It is evident from responses that overall, people are convinced that everyone should contribute to Innovation within the organization. In fact, majority of respondents (68%) assigned to it the maximum point (5), while the rest of them opted for 4.
Question 2: Would you say you are more intrinsically (inner motivation) or extrinsically (tangible rewards) motivated? (Scale from 1 to 5, where 1 stands for "Mainly Intrinsically" and 5 "Mainly Extrinsically")
Mean: 2.5   **Mode**: 3   **Standard Deviation**: 1 Here, based on results, there are two main considerations. First of all, majority of employees (38%) opted for 3, meaning that they are looking for the right balance between inner and external motivation. Moreover, if we compare intrinsic and extrinsic motivation, most employees are driven mainly by intrinsic motivation, since 48% gave us as response 2 or 1, compared to the 14% that went for 4 and 5.
Question 3: Would you like to spend more of your working time on new creative projects? (Scale from 1 to 5, where 1 stands for "Not at all" and 5 "Very much")
Mean: 4.1   **Mode**: 4   **Standard Deviation**: 0.9 Despite the fact that 17% of the people opted for 3, seeing it as an indifferent matter, most of them (80%) seem willing to participate in new projects. The fact is extremely useful and convinced us of the value of having a cross-functional team to manage the ideation process.
Question 4: Have you ever had an idea that you think would benefit the company?
The fact that 85% of people gave a positive response clearly illustrates the huge potential of employees. However, there should be a way or a process to exploit this potential, and the company is struggling to do so.

Question 5: Have you ever shared an idea?
Results show that 77% of employees have shared an idea. This means that - basing on Question 4 where 85% of people had an idea - only 8% of people did not eventually share their ideas. It is also important to consider that even though employees share their ideas there is no evidence to point to the fact, suggesting that ultimately the process achieved close to nothing which in turn points to the need of a comprehensive mechanism
Question 6: Is it important for you that your ideas are heard? (Scale from 1 to 5, where 1 stands for "Not at all" and 5 "Very much")
Mean: 4.3   **Mode:** 5   **Standard Deviation:** 0.8
Responses say that management will have to deal with 85% of employees who really care about having a voice in the company.
Question 7: Do you think the company should put more effort in educating employees about innovation and idea generation? (Scale from 1 to 5, where 1 stands for "Not at all" and 5 "Very much")
Mean: 4   **Mode:** 5   **Standard Deviation:** 0.9
Here we have 70% of employees who are convinced (4) or strongly convinced (5) that Innovation should be taught to employees, while 30% are indifferent (3).
Question 8: How much do you think you would benefit from your colleagues feedback on your ideas? (Scale from 1 to 5, where 1 stands for "Not at all" and 5 "Very much") Collaboration
Mean: 4.4   **Mode:** 4   **Standard Deviation:** 0.5
Peer collaboration, communication and feedback are crucial to employees (92% of them selected 4 or 5)
Question 9: Do you think it is more important to be able to be able to suggest new ideas or that new ideas are implemented?
As expected, a 50-50% result. This is reflected in the fact that both suggestion and development of ideas are crucial and mutually dependent. No one will propose ideas if they know in advance that the ideas will never be implemented and, at the same time, organizations cannot implement something new if they do not have fresh ideas.
Question 10: How would you feel more comfortable sharing your ideas, through a physical or a software solution?
Most of the respondents opted for the software solution (62%). However there are many people that prefer a physical solution (38%), in the sense of a meeting or a workshop. Trying to balance the two mechanisms and take the best from each of them is the key.
Question 11: Any additional thoughts or comments? Feel free to add any recommendation on how to improve the actual idea generation system.
We included an open-ended question in order to let employees share their opinions on idea generation. More than 15% of respondents (17 of them) took their time to write a comment and, summing up, it can be said that the problem is not generating new ideas, as already shown in question 5. The main issues are selection and prioritization, as well as a strict top-down culture too focused on tech/product innovation. Respondents shared different suggestions for simplifying the process of idea generation such as having more time to work on new projects, workshops and cross team idea generation. Most of them stressed the importance of a good communication strategy coupled with feedback and an easily accessible system for sharing ideas.

Table 7: Questionnaire results

More detailed information about the questionnaire results and calculation methods for Mean, Mode and Standard Deviation can be found in 'Appendix II - Questionnaire Results'.

4.3 SEMI-STRUCTURED INTERVIEWS

Next we will look at the focal point of our data collection efforts, namely the semi-structured formal interviews focused on the Company Innovation Lab. Through Gioia (2012), we compiled a list of seven aggregate dimensions: Lab as an Idea Management System, Key Features of the Lab, External Perception of the Lab, Lab Performance, Impact of the Lab on Company, Impact of the Lab on Employees and Vision of the Lab. Here we will examine each of them in turn, outlining key findings, and will present both the data structure for each dimension as advocated by Gioia as well as a table coupling second order themes with representative quotes from data collection. Note that only the most relevant first order concepts are included in the graph. Additionally, some might present contradicting views which we believe is important in order to illustrate the nuance in our findings. All contradictions offer fascinating discussion points and will be resolved in the analysis chapter. For additional information and an overview of the entire data aggregation process please consult 'Appendix III – Data from Interviews'.

1) THE LAB AS AN IDEA MANAGEMENT SYSTEM

The first aggregate dimension to be discussed is the Lab as an Idea Management System. Classically, IMS is seen as a complex system that provides systematic, manageable process of idea generation, evaluation and development (Mikelsone and Liela, 2009). We discovered that indeed the Innovation Lab can be examined as an IMS because it facilitates those three core stages of idea management. The second order themes were formed accordingly and in order to enable the structured presentation of findings, placing the Lab in the context of a classic IMS.
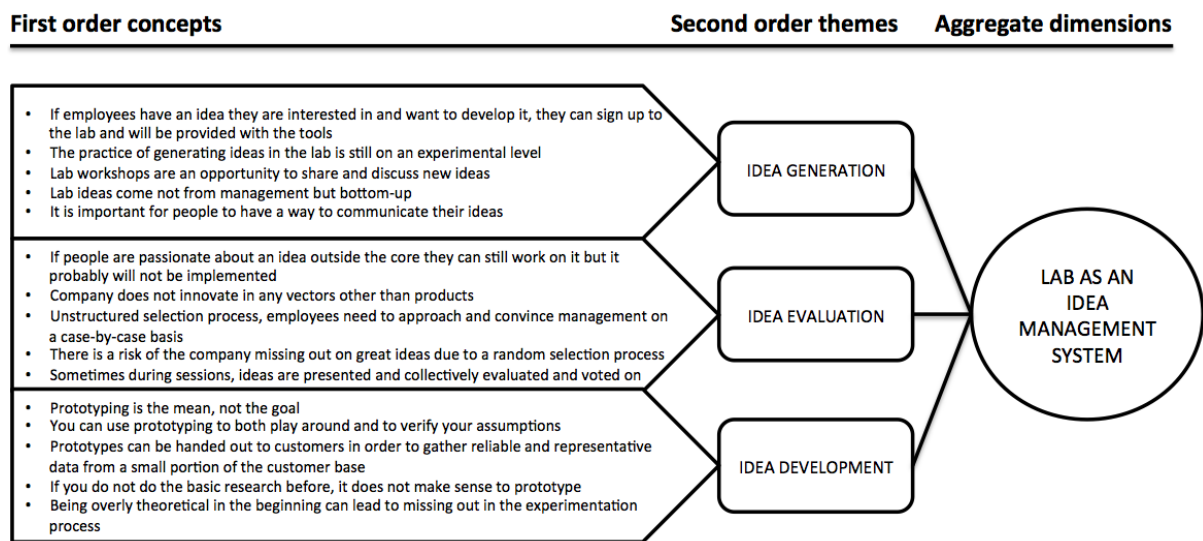
Figure 5. Lab as an IMS

Idea Generation: A key finding is that there exists a clear attempt to sustainably manage the idea generation process although at this stage it is largely experimental and made up of diverse and sometimes contradictory practices. It is very important for employees to have a way to communicate their ideas and the Lab is trying to address that. It is generally recognized that ideas developed in the Lab come not from management but bottom-up, which is in line with the vision that ideation should not be Lab-specific but diversely sourced. Some ideas originate from the team leader, others from employees being selectively brought in, established R&D teams or free-entry workshops. The key point is that if anyone has an idea they are interested in and want to develop they can sign up to the Lab and will be provided with the tools.

Second Order Theme	Representative quotes from data collection
Idea generation	"If you have an idea that you are interested and you want to build and integrate to the [Case Company] system, here is your chance, sign up here and I will provide you with tools" (Interviewee I)
	"The practice of generating ideas in the lab is still on experimental level, we do not really have clear processes to capture and move them forward" (Interviewee V)
	"We have different workshops to get a lot of ideas and discuss them in-group and where you can share your ideas there. So I have to say that ideas come not from management but bottom-up" (Interviewee II)

Table 8: Idea generation

Idea evaluation: The idea evaluation process is similarly unstructured and employees often need to approach and convince management on a case-by-case basis. Higher level employees recognize that there is a risk of the company missing out on great ideas due to a random selection process so clear attempts have been made to organize the process. It is clear that employees would like to work on radical ideas but try to stay away from them due to implementation issues. Far-fetched ideas would never make it into the product roadmap because ideas in line with the core business are prioritized. The findings show that since the previous CEO left, there has been too much focus on core securities and the company does not innovate in any vectors other than products. The Lab team has tried various methods of evaluation and sometimes during open sessions, ideas are presented and collectively evaluated and voted on. A key feature of the Lab is that if people are really passionate about an idea outside the core they can still have the opportunity to work on it even though it probably will not be implemented.

Second Order Theme	Representative quotes from data collection
Idea evaluation	"If someone is very passionate about it then they can initially start working on it by themselves, but the ones I pick have to be in the context of the core business" (Interviewee I)
	"The idea selection process is unprocessed; it is more up to employees that have to approach and convince the senior management" (Interviewee III)
	"We had a session where we have presented a lot of ideas and then we had both a voting and evaluation process. We try to capture ideas and make their descriptions more clear and defined" (Interviewee VI)

Table 9: Idea evaluation

Idea development: Interestingly, in the Lab, development is structured in such a way as to allow ideas to grow in the safe environment of the front-end without the added pressures that go hand-in-hand with the formal process. In the Lab, it is vital to prototype and experiment because prototyping helps the company make better products. It was clearly communicated to us that employees see prototyping as the mean, not the goal and use it to filter and validate ideas. Prototyping is equally appreciated in terms of playing around as well as for verifying assumptions by handing prototypes to customers in order to gather reliable and representative data from a small portion of the customer base. A key finding is that employees recognize that if you do not do the basic research before, it does not make sense to prototype but also that being overly theoretical in the beginning can lead to missing out in the experimentation process.

Second Order Theme	Representative quotes from data collection
Idea development	"We have tons of ideas. The ideas are not the problem, the problem is how to filter them and validate them, and I think that is where the prototyping comes to play" (Interviewee IV)
	"What you could do is hand it out to customers and see how they act upon it, and with that actually you have reliable data from a small portion of the customer base that hopefully can represent the rest and with that you will be much more confident in your business case if you move forward" (Interviewee V)
	"You start with some kind of idea, then you have to figure out what is feasible and then you have to prepare a prototype. So prototyping is very important, but there is a lot to do before you get to that part. Prototyping is fun, but then you forget that if you do not do the basic research it does not make any sense to prototype" (Interviewee VII)

Table 10: Idea development

2) KEY FEATURES OF THE LAB

The second aggregate dimension is Key Features of the Lab. It is made up of five-second order themes each of which has shown to have a distinct impact on ideation or motivation, thus meriting special consideration.
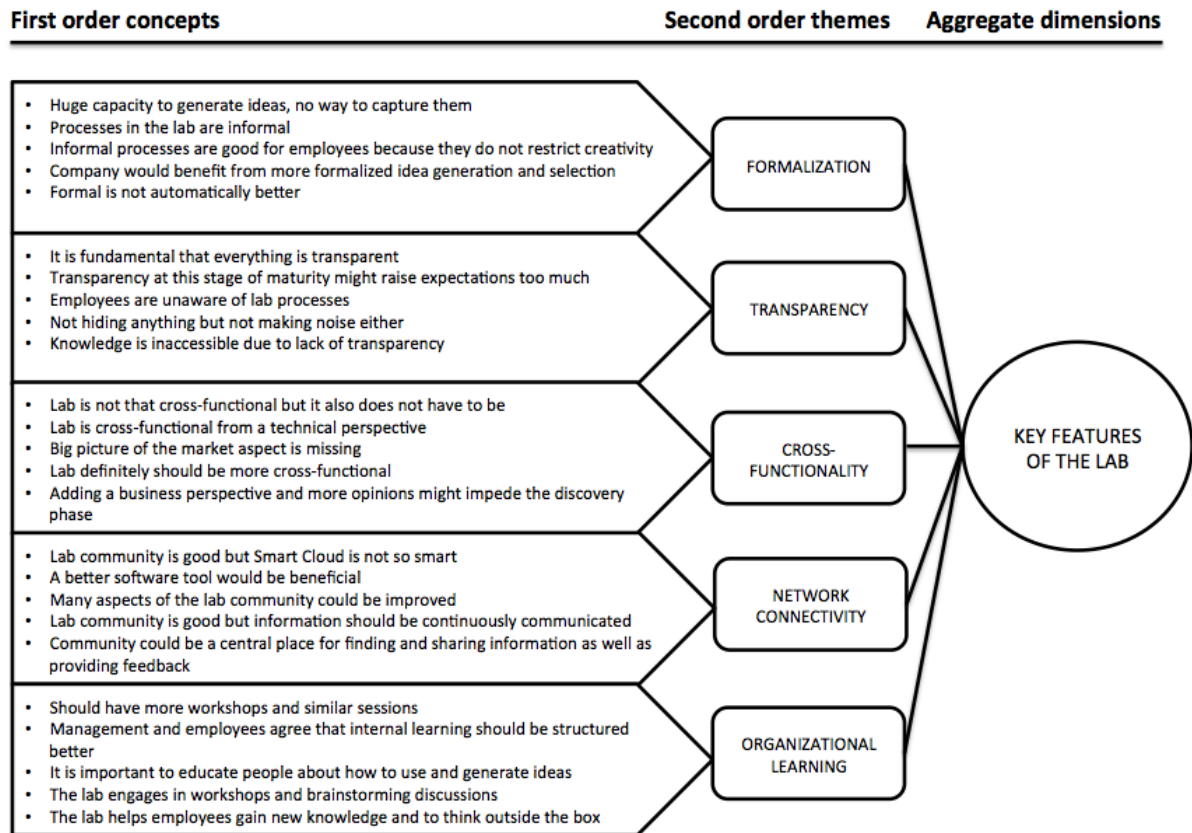
Figure 6. Key features of the Lab

Formalization: As made apparent in the previous section, processes in the Lab are as of now still rather informal so despite the huge capacity to generate ideas, there is no structured way to gather and capture them. Currently, the head often makes the ultimate decision unilaterally and on a case-by-case basis which long term might have an adverse effect. The findings suggest that the company would generally benefit from more formalized idea generation and selection. More specifically, according to the data, it would be good to formalize the execution stage and the communication path. However, as one interviewee pointed out, having formal processes increases expectations in terms of delivery, which at this stage might be counterproductive. Regardless, introducing productive formalization is a challenging task with many inherent risks so perhaps a distinction can be made between introducing a clear structure and formal requirements for participation in the Lab. In fact the data suggests that often-informal processes are positive and beneficial for employees because they do not restrict creativity. In other words, formal is not automatically better.

Second Order Theme	Representative quotes from data collection
Formalization	"You could say that the benefit of having more informal processes would be that the creative minds could run free without limitation" (Interviewee V)
	"Overall the process is quite informal; I think that if the process of generation and selection would be more formalized, the company would benefit from that" (Interviewee IV)
	"Processes are not formal. It was more trying out what could have worked more. I think it is not automatically better when it is formal, not at all" (Interviewee III)

Table 11: Formalization

Transparency: A central finding is that it is fundamental that everything is transparent. Currently, employees are unaware of Lab processes and it is clear to them that a lot of knowledge is inaccessible due to lack of transparency. Also, they believe transparency is key for feedback. It is crucial however to appreciate the fact that employees recognize that the Lab has good intentions despite the need to raise awareness. The Lab team communicated that they are transparent in the sense of not hiding anything but recognize that they are not making noise either. Another key consideration is that transparency at this stage of maturity might raise expectations too much, in a similar fashion to formalization.

Second Order Theme	Representative quotes from data collection
Transparency	"I think on the current level of maturity, if we started communicating we will build expectations that we cannot live up to" (Interviewee V)
	"People are not very aware of what the lab is pursuing. We are transparent in the sense we are not hiding anything but we do not make noise either" (Interviewee I)
	"I think it is fundamental to be transparent in everything we do; not everyone knows what the lab does. Someone does not even know that the lab exists" (Interviewee II)

Table 12: Transparency

Cross-functionality: Employees generally consider it important to have a cross-functional team in the Lab. Findings suggest that the Lab is already cross-functional in terms of knowledge but mostly, it seems, from a technical perspective. The team has worked hard to eliminate any dependency on domain knowledge so as one employee put it, the Lab is not that cross-functional bit it also does not have to be. Others however believe that the Lab definitely should be more cross-functional and indicate that the big picture of the market aspect is missing. It is also important to consider that adding a business perspective and generally too many opinions might ultimately impede the discovery phase.

Second Order Theme	Representative quotes from data collection
Cross-functionality	"I think from a technical perspective the lab is cross-functional, what we are missing out is the big picture of the market aspect" (Interviewee III)
	"I would definitely bring people in the lab from different teams; from the business side it is not as straightforward in my perspective. You want to be aligned with the company's interest, you do not want to have just a playground and do stuff that costs money but you also need to create value there, you would not want to bring in too much opinions from the start of it, because it is the discovery face and you do not really know, you want to try to be fast and innovative" (Interviewee I)
	"I think it is important to integrate many different backgrounds and knowledge in a team" (Interviewee III)

Table 13: Cross-functionality

Network connectivity. It is important to note that the 'Lab community' is a network-facilitated community, part of the 'Smart Cloud', which is the currently employed network connectivity software solution. The general consensus is that the Lab community is good but that many aspects could be improved and that information should be continuously communicated. Part of the problem, apparently, is that the tool itself is not good and it is clear that a better software tool would be beneficial. As one employee remarked:

"The Lab community is good but the Smart Cloud is not so smart". (Interviewee VI)

Another part of the problem is the resources available to the Lab. The Head wanted the Lab community to be more active from the start but ultimately failed to continuously document and send newsletters. In the end, both the participants and the facilitators recognize that the community could be a central place for finding and sharing information as well as providing feedback.

Second Order Theme	Representative quotes from data collection
Network connectivity	"The community I wanted it to be a little bit more alive, we documented what we did and sent weekly newsletters but that never worked out, unfortunately" (Interviewee I)
	"I think it is good to be part of the lab community but I think that Smart Cloud is not so smart. We could have more benefits if we had a better software tool" (Interviewee VI)
	"I think it could be helpful to be part of the lab community. The lab could be a central place both to find and share information about what projects are in the pipeline and similar things. You need the feedback" (Interviewee III)

Table 14: Network connectivity

Organizational learning: Everyone agrees that it is important to educate people about how to use and generate ideas and that a clear understanding of processes would increase involvement. Currently, the Lab engages in workshops, hackathons and brainstorming discussions. Crucially, it is also recognized that the Lab helps employees gain new knowledge and to think outside the box. Hackathons, for example, bring participants from across the organization and can be used both internally and externally. Their key benefit, according to our findings, is that they allow employees to experiment. Employees also clearly state that there is a lot to learn from Lab workshops, even though they are sometimes too short and not employed continuously. Overall, management and employees agree that internal learning should be structured better and that the Lab should have more workshops and similar sessions.

Second Order Theme	Representative quotes from data collection
Organizational Learning	"There is an alignment both from employees side and management side that we need to structure our internal learning is better" (Interviewee II)
	"I think it should be important to educate more people about how to use and generate ideas. If people would understand how easy is to share ideas, they would be much more involved in the lab and they will use it more" (Interviewee I)
	"Here we have had a couple of workshops I have participated in. I think there is a lot to learn. However, one or two hours is too little for innovation workshops and It should be a continuous process where every month for example have meetings with people showing what happen to ideas" (Interviewee II)

Table 15: Organizational Learning

3) EXTERNAL PERCEPTION OF THE LAB

The third aggregate dimension is the External Perception of the Lab. We believe it is crucial to understand how, both, the management and uninvolved employees perceive the Lab, which in turn will indicate the amount of support received.
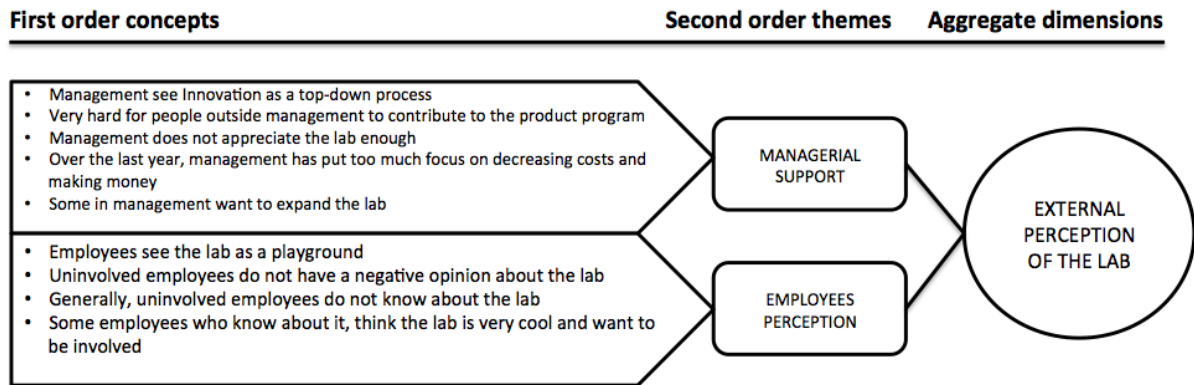
Figure 7. External Perception of the Lab

Managerial support: A key finding in this respect is that management see innovation as a top-down process with the consequence that it is very hard for people outside management to contribute to the product program. It seems like over the last year management has put too much focus on decreasing costs and making money. As one employee put it, the problem is that making money does not ensure good products and value for customers. Findings suggest that there is a certain degree of uncertainty for the Lab's future due to a recent change of management. According to employees the ambition of the new management team, in terms of pursuing innovation, can be questioned. Of course, the situation is slightly more nuanced with indications that some in management believe in and want to expand the Lab. However the overall consensus is that management does not appreciate the Lab enough which certainly has an impact on its purpose and performance.

Second Order Theme	Representative quotes from data collection
Managerial Support	"It is very hard for someone outside management team to put something into the product programme" (Interviewee IV)
	"It is not appreciated enough especially by the management team" (Interviewee III)
	"I know that the non-technical guys, like managers, are interested in getting money but I think the last year it has been too much focus on cost-down and making money. Sugar on top is great but is not making money that makes good products and gives value to the customers" (Interviewee VI)

Table 16: Managerial Support

Employees perception: Generally, uninvolved employees do not know much, if anything at all, about the Lab but it is crucial to note that our findings suggest that no one seems to have a negative opinion. Some employees who know about it think the Lab is 'very cool' and want to be involved while other simply see the Lab as a playground for those involved.

Second Order Theme	Representative quotes from data collection
Employees Perception	"People not engaged in the lab usually do not know anything about the lab but I do not think it is a negative view of the lab" (Interviewee II)
	"People in general here see the lab as a playground, while others really like it, think it is very cool and would like to participate in some projects" (Interviewee III)
	"Most of people do not know about the existence of the lab; the ones who know the lab do not have a clear picture of it" (Interviewee VII)

Table 17: Employee Perception

4) LAB PERFORMANCE

The fourth aggregate dimension is Lab Performance. Here we want to consider the goals set for the Lab in the sense of discovering what degree of managerial control is exercised while also examining the Lab's actual output in terms of projects.
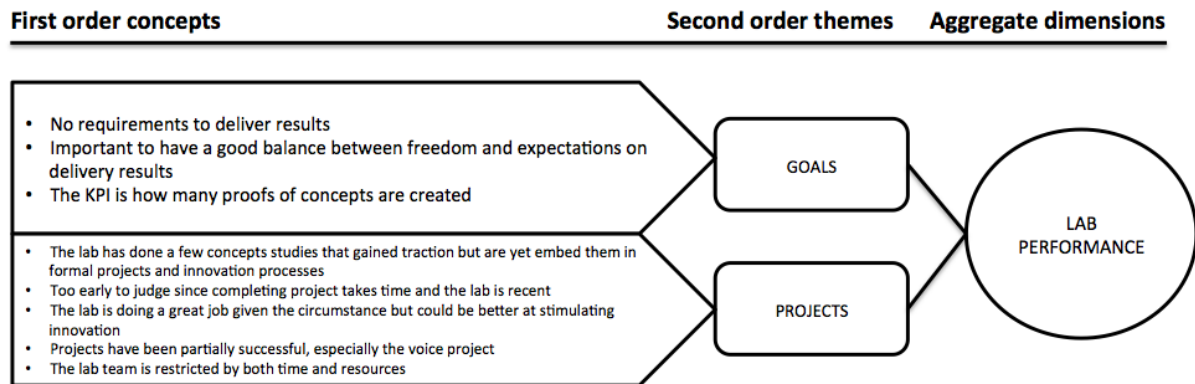
Figure 8. Lab Performance

Goals: According to the head of the Lab, there is no pressure or an explicit requirement to deliver any results. It is however recognized that it is crucial to have a good balance between freedom and clear expectations on delivery results since too much creative freedom could be detrimental. From a management perspective, although not enforced strictly at all, one Key Performance Indicator (KPI) is how many proofs of concept are generated.

Second Order Theme	Representative quotes from data collection
Goals	"I did not have to deliver results" (Interviewee VII)
	"You need to have a good balance of freedom on what to work with and at the same time expectations on delivery results so you do not get too much freedom" (Interviewee I)
	"Given the benefits I would see from the lab, our kpi is how many proofs of concepts we create" (Interviewee V)

Table 18: Goals

Projects: Overwhelmingly, the data has indicated that it is too early to judge since completing projects takes time and the Lab is still quite recent. However, it has to be noted that 'recent' is a relative statement. In any case, the Lab has done a few concept studies that gained traction but they are yet to embed them in formal projects and innovation processes. Otherwise, projects have been 'partially successful', with a voice recognition project being particularly successful. The findings also suggest that the Lab is doing a great job given the circumstances but overall could be better at stimulating innovation. A mitigating factor in this regard is that employees feel that the Lab team is restricted by both time and resources.

Second Order Theme	Representative quotes from data collection
Projects	"We have done a few concept studies that gained attraction but we still need to work on embedding it in our formal projects and innovation processes, so that would be the next step" (Interviewee II)
	"They are not as successful as they can be to stimulate the innovation culture. In the lab they are doing what they formally can and I think they are doing a great job given the circumstances" (Interviewee III)
	"There are a lot of ideas we would like to implement for the company and this requires a lot of time. The projects we have done have been partially successful, especially the voice stuff" (Interviewee VI)

Table 19: Projects

5) IMPACT OF THE LAB ON COMPANY

The fifth aggregate dimension is the Impact of the Lab on the Company. Here we aim to establish the current state of the company first so that we can later shift focus to the Lab and present the contrast between the two. This in turn will let us fully understand the Lab's effect on the company.
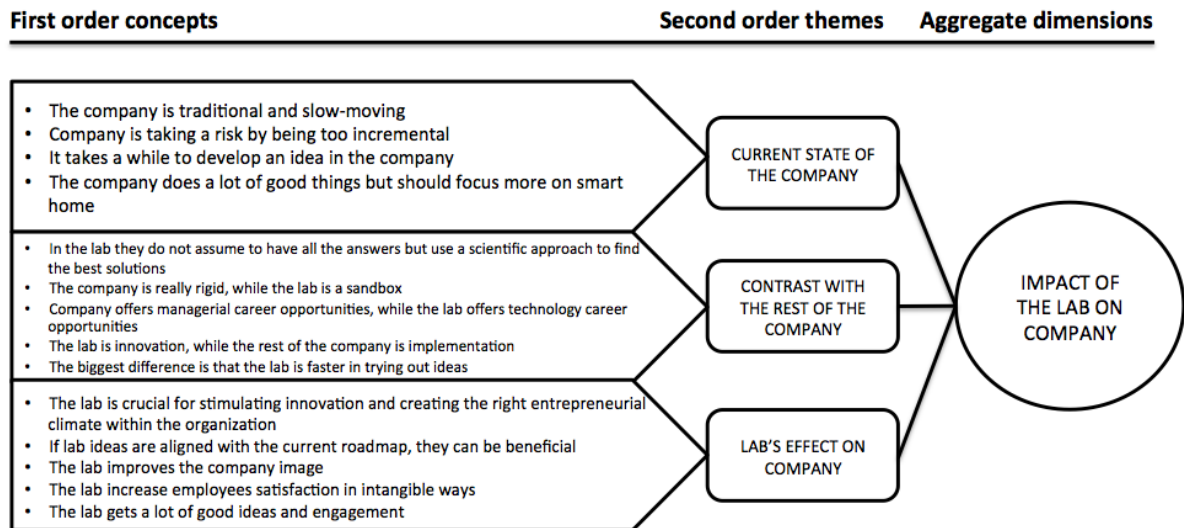
Figure 9. Impact of the Lab on Company

Current state of the company: Employees believe that the company does a lot of good things but should focus more on diversification in other areas such as smart homes. The consensus seems to be that overall, the company is traditional and slow-moving with the result that it takes a while to develop an idea in the company. Findings also indicate that the company

"...run the risk of just doing incremental +1 innovation" (Interviewee IV)

and limit the possibilities of ideas that go beyond the core business perspective.

Second Order Theme	Representative quotes from data collection
Current state of the company	"We are a kind of a traditional company, often they are not fast moving" (Interviewee III)
	"We run the risk of just doing incremental +1 innovation, which is basically what we do to be honest" (Interviewee IV)
	"We want to be more radical but the barrier is quite low here; the company does a lot of good stuff but from a smart home perspective they do not have that much" (Interviewee VI)

Table 20: Current state of the company

Contrast with the rest of the company: Overall, findings indicate that there is a huge contrast between the Lab and the rest of the company. In terms of working processes, the Lab team is more open minded, curious and like to experiment with many options in order to find the best one. So, in the Lab they do not assume to have all the answers but use a scientific approach to find the best solution which is in contrast with the rest. Employees say that you can play around in the Lab while the company is too structured in terms of budgets and deadlines which ultimately means that one of the biggest differences is that the Lab is faster

in trying out ideas. Consequently, the Lab is important because innovation requires trials. There also seems to be little room for 'crazy ideas' in the company because it is seen as really rigid while in the Lab there is space because it seen as more of a sandbox. As one employee put it:

"The Lab is innovation while the rest of the company is implementation". (Interviewee VI)

Crucially, employees also believe that where the company offers managerial career opportunities, the Lab offers technology career opportunities. Of course not everyone agrees that the Lab is radical enough in pursuing innovation but it has been suggested that any lack of radical ideas is the result of tight alignment with the rest of the company, a point that was supported in terms of idea evaluation.

Second Order Theme	Representative quotes from data collection
Contrast with the rest of the company	"We are open minded, curious and we want to see what the best options are and in order to do so we play with many options. We think that you have to have many options to find out which is the best one" (Interviewee VI)
	"In this company there is a really rigid environment, it is good to have a sandbox like the lab. I think the lab is very important since we need more innovation and that requires trials" (Interviewee III)
	"The lab is innovation while the rest of the company is implementation" (Interviewee VI)

Table 21: Contrast with the rest of the company

Lab's effect on the company: Our findings tell us that the Lab gets a lot of good ideas and engagement and is ultimately crucial for stimulating innovation and creating the right entrepreneurial climate within the organization. It has to be noted that some managers, such as the R&D manager, like the Lab but otherwise there seems to be no impact on higher management. In relation to that, it was suggested that if Lab ideas are aligned with the current roadmap they can be very beneficial. Employees engaged in the Lab also recognize that doing radical innovation is fun but it is important to learn and improve the company's own products by applying them in different environments. Overall, by all accounts, the Lab has numerous positive effects such as improving the company image and increasing employee satisfaction in various intangible ways.

Second Order Theme	Representative quotes from data collection
Lab effect on company	"I think the lab is crucial to stimulate innovation and create the right entrepreneurial climate within the organization" (Interviewee II)
	"I think that working for such a company, regardless of where you are, is something that you feel strength and more secure. The benefit does not have to be only tangible but also something that would increase the satisfaction of our employees in a much broader perspective" (Interviewee IV)
	"We got a lot of good ideas and good engagement; we wanted to create something that people would wanted to work with, something that people really like it and are passionate about that" (Interviewee I)

Table 22: Lab effect on company

6) IMPACT OF THE LAB ON EMPLOYEES

The sixth aggregate dimension is the impact of the Lab on Employees. Here we consider the reasons to engage with the Lab in the sense of basic offering, the Lab's role in the war for talent, impact in terms of building up competences, as well as findings explicitly related to motivation and incentives.

First order concepts

- Lab is for the 'makers' of the company who want to prototype
- Lab offers opportunity to work on ideas in a modern way
- Engineers have fun in the lab
- Bigger ideas get more traction in the lab because it is visual
- When employees have an idea they can go, share it, brainstorm with help, research and work on it

REASONS TO ENGAGE WITH THE LAB

- If employees do not have an opportunity to work on their own ideas, they might leave
- A lot of people working in the lab have quit
- Working with the lab is a reason to stay in the company

LAB AND WAR FOR TALENT

- In the lab, you can learn the correct approach to facing and solving problems
- The lab stimulates innovation because it allow testing of different innovative things and the opportunity to discuss with different experts in the teams
- Through the lab, you can get more insights useful for your domain that you maybe have never noticed or realized before
- Sharing or implementing an idea in a group is beneficial because next time an idea comes up, employees will be much more experienced to deal with it and processes become faster

COMPETENCE BUILDING

- Employees are motivated by having the opportunity to improve their skills and discover new things
- Having time to work on innovative projects is motivating
- Employees of the company are mainly intrinsically motivated
- It is hard to find a huge, breakthrough idea but still motivating to try
- There is no point if ideas do not ultimately reach customers

MOTIVATION

- Financial incentives are good for patents
- Freedom to work on personal ideas, appreciation and recognition are good incentives
- There are no incentives to work in the lab
- Working in the lab is incentive enough
- Important to have small incentives such as beer and pizza because they lower the barriers of entry

INCENTIVES

Second order themes **Aggregate dimensions**
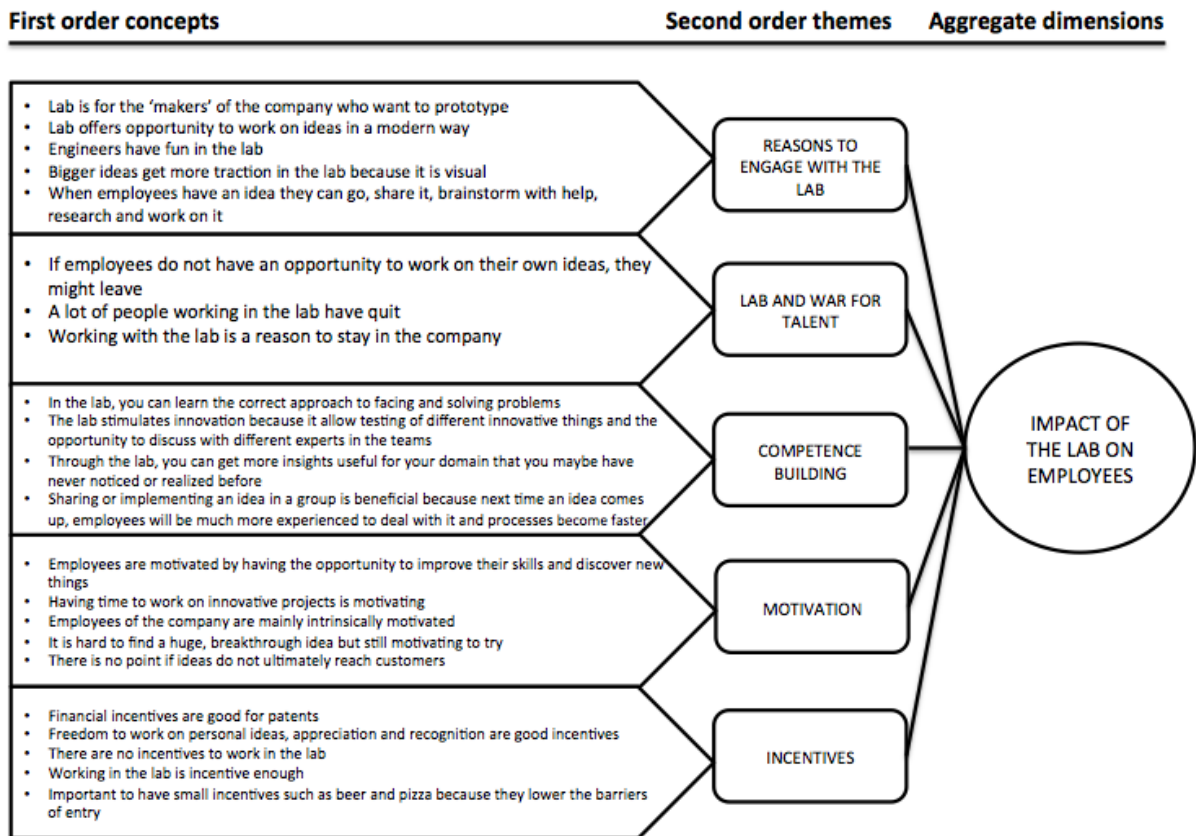
IMPACT OF THE LAB ON EMPLOYEES

Figure 10. Impact of the Lab on Employees

Reasons to Engage with the Lab: The Lab aims to be inclusive and tries to capture all sorts of ideas from diverse sources but overall seems to be most attractive for the 'makers' of the company, those who want to prototype. Employees, it seems, are much more motivated to work in the Lab rather than execute others' orders. The Lab also offers the opportunity to work on ideas in a modern way, with the latest available technology and by all accounts, engineers have fun in the Lab. Additionally, it was suggested that the Lab offers the chance for more attention since bigger ideas get more traction in the Lab as a consequence to the process being so visual. Ultimately, our findings make it clear that when an employee has an idea they can go, share it, brainstorm with help, research and work on it.

Second Order Theme	Representative quotes from data collection
Reasons to engage with the lab	"Many people in the company have a lot of experience and have ideas. As a result, they want to have time to work on it and be able to work in a modern way" (Interviewee II)
	"With the lab engineers have fun and the chances of the bigger ideas gaining attraction is bigger in the lab, because it is so visual" (Interviewee III)
	"What we really want is that whenever an employee has an idea, he comes to us and share it with us so we can brainstorm, do some research and work on it" (Interviewee IV)

Table 23: Reasons to engage with the Lab

Lab's role in the War for Talent: Findings show that if employees do not have an opportunity to work on their own ideas they might leave. In fact, a lot of people working in the Lab have already quit. Most interestingly, as an ex-employee explained, working with the Lab is a reason to stay in the company.

Second Order Theme	Representative quotes from data collection
Lab and war for talent	"If I could not do it here, I would go and do it somewhere else" (Interviewee III)
	"Unfortunately a lot of people working on the lab have quit" (Interviewee I)
	"Maybe I would have stayed a little bit longer if I got more involved in the lab" (Interviewee VII)

Table 24: Lab and war for talent

Competence building: By all accounts, "Engagement with the lab is fantastic". According to our data, the Lab offers easy to use tools accessible by anyone, provides many learning opportunities and stimulates innovation. The Labs is seen as an enabler for employees and as an interviewee remarked:

"Ideally, every team would be a lab". (Interviewee IV)

The lab stimulates innovation because it allows testing of different innovative things and the opportunity to discuss with different experts in the teams so that everyone can learn the correct approach to facing and solving problems. Workshops in particular try to bring competence from across the company. In this sense, sharing or implementing an idea in a group is beneficial because next time an idea comes up, employees will be much more experienced to deal with it and processes become faster. Crucially, the Lab also offers the

opportunity to try different technologies and that environment is mind-opening for employees. Through the lab you can get more insights useful for your domain that you maybe have never noticed or realized before. Many interviewees emphasized that insights from technology can give you insights on how to solve a problem in another context. Of course, for the core team, sometimes working in the lab is stressful and not so creative but ultimately working in Lab is highly enjoyable for participants and as they say: "Having fun with colleagues is very important!".

Second Order Theme	Representative quotes from data collection
Competence Building	"I see the lab as an enabler for them, showing the correct approach to facing and solve problems. Ideally you do not need a lab since every team is a lab, but since they are not I can teach and share how things need to be done" (Interviewee VI)
	"I think the lab stimulates innovation because you can test so many different and innovative things and you have the opportunity to discuss with different experts in the teams" (Interviewee II)
	"I think that engagement with the lab offers a lot of learning opportunities. When an idea is shared or implemented in a group, people certainly learn something; this means that next time an idea comes up, they will be much more experienced to deal with it and processes become faster" (Interviewee IV)

Table 25: Competence Building

Motivation: The key finding in this regard is that even though some people are only motivated by money, majority of employees are intrinsically motivated. In fact many of them believe that monetary rewards can be counterproductive in terms of ideation. Employees like to build new stuff together and work on the new frontier of technology, new user experiences and business. Being creative at work brings satisfaction to employees and many of them need to work on new projects and innovation in order to feel motivated. For others, the biggest motivation is having the opportunity to improve their skills and discover new things. For some employees, the biggest satisfaction is identifying a really great idea but they also recognize that it is hard to find a huge, breakthrough idea yet still motivating to try. Interestingly, employees like working on ideas regardless if they are theirs or someone else's, stressing the importance of the 'journey' while others are more goal oriented and believe that there is no point if ideas do not ultimately reach customers. Finally, from a management perspective, the biggest satisfaction comes when systems are well-functioning and self-governing, a point which the Lab is yet to reach.

Second Order Theme	Representative quotes from data collection
Motivation	"What motivates me is to improve my skills and discover new things" (Interviewee III)
	"I think that being creative is the part that brings me to the most satisfaction at work. The creating part, when you make something out of an idea, regardless if it is my idea or an existing idea, it is the most stimulating and important thing for me" (Interviewee IV)
	"I am very happy when I have the opportunity to develop my ideas. The biggest satisfaction would be identifying a really great idea. I have some ideas, some are better than others but I do not think I found the huge and breakthrough idea because it is hard. Apart from that, I think it is good to create something that is working and with the lab you can do it quite fast. Many people are interested in new innovative projects such as smart home" (Interviewee VII)

Table 26: Motivation

Incentives: Currently, there are no explicit incentives to work in the lab but by all accounts, working in the lab is incentive enough. Freedom to work on personal ideas, appreciation and recognition, from peers or otherwise, were all identified as excellent and sufficient incentives. Financial incentives were deemed to be good for patents but otherwise unnecessary. The findings did however indicate it as important to have small incentives such as beer and pizza because they lower the barriers of entry and increase engagement.

Second Order Theme	Representative quotes from data collection
Incentives	"Financial incentives for patents and new technologies are good, but I believe more on freedom to work on personal ideas, appreciation of the work, for example when you get the credits for having a good idea and recognition" (Interviewee VI)
	"We do not have incentives for working in the lab. I think it is important because incentives lower the barriers for people to join. If people attend a conference where everyone is invited for beer and pizza; the barrier becomes so much lower because even if you go there and you find the talk was not interesting for you, at least you get something out of it. Moreover, people socialize, which is very important. I think that working with the lab would be incentive enough" (Interviewee III)
	"I think it is possible to benefit from some incentives in the lab, however I think that the most important aspect is allowing people that have good ideas to bring them forward and find the most efficient way to make use of those ideas; this is much more important than rewarding" (Interviewee II)

Table 27: Incentives

7) VISION OF THE LAB

The seventh aggregate dimension is Vision of the Lab. Here we aim reconcile the ultimate vision by taking into account the Lab's purpose, employees' advice on how to improve it and lastly its potential in terms of impact and scalability.

First order concepts **Second order themes** **Aggregate dimensions**

- The purpose of the lab is to improve how the entire company works with innovation
- The main purpose is to increase the pace at which the company can prototype and test ideas with real customers
- The purpose is to get everyone in the company, not only management, involved in innovation
- The lab is mostly focused on realizing ideas
- The purpose is to create a place where employees have the opportunity to show their creative talent and at the same time get a better view of the company and be generally happier at the workplace

LAB'S PURPOSE

- The lab should introduce rotation so that more employees can be involved with it
- Sharing knowledge and seeing how other contribute to innovation should be part of the innovation community
- Employees should have more 'Google' time to work on their own ideas
- The lab should not be only a playground for ideas but a tool that should serve to share an innovation culture

ADVICE

VISION OF THE LAB

- The company is in the perfect spot in the market, has all the internal capabilities, data and the opportunity to be disruptive in all areas
- There is potential for integration in the system so that a sandbox environment is created where coders around the world could integrate whatever they like in the system
- If the lab was expanded it would get the most talented workers and the company would be more innovative
- There is huge potential for cross feeding internal ideation and customer insights
- The company would benefit if the lab had more attention and if its purpose was clear to everyone
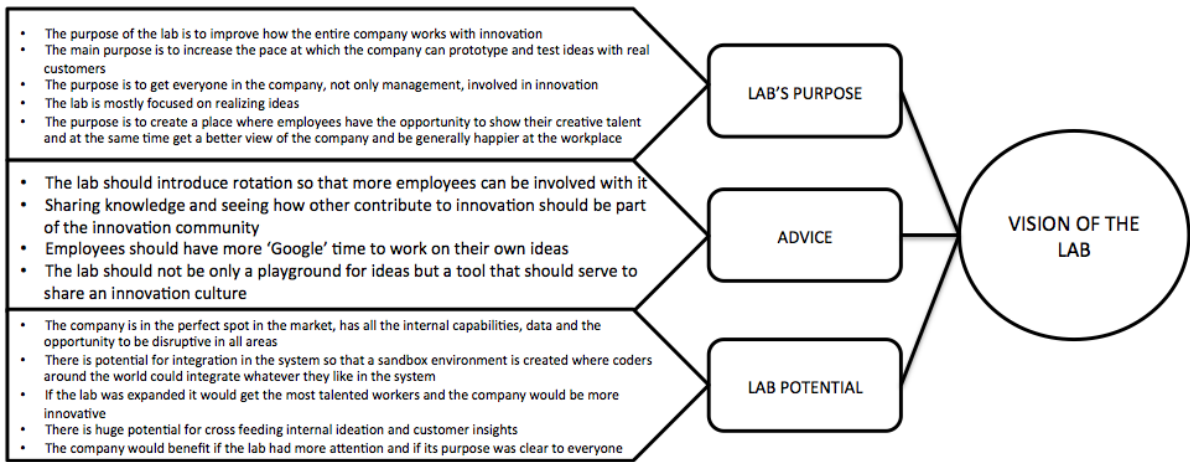
LAB POTENTIAL

Figure 11. Vision of the Lab

Lab's purpose: Overall, the findings suggest that the purpose of the Lab is to improve how the entire company works with innovation but there are various, ultimately complementary, views on how it achieves that. Some say that the main purpose is to increase the pace at which the company can prototype and test ideas with real customers which, according to them, is why the lab is mostly focused on realizing ideas. The other view is that the purpose is to get everyone in the company, not only management, involved with innovation. This

view is more heavily supported so in the end the overriding purpose is to create a place where employees have the opportunity to show their creative talent and at the same time get a better view of the company and be generally happier at the workplace. After all, however, the views are complementary and both can be achieved.

Second Order Theme	Representative quotes from data collection
Lab Purpose	"The main purpose would be to increase the pace at which we can prototype and test our ideas with real customers. There is also the employer branding aspect of it in terms of working with maker spaces universities and experimenting on our platform" (Interviewee V)
	"I think the purpose of the lab is to get innovation and to get people, not only top management but also developers involved in innovation and to get their ideas up" (Interviewee II)
	"We want to create a place where employees have the opportunity to show their creative talent and at the same time they get a better view of the company and they are happier when they come here" (Interviewee II)

Table 28: Lab Purpose

Advice: Here we will look at the advice we received on how to improve the Lab. One finding was that sharing knowledge and seeing how others contribute to innovation should be part of the Innovation community which is in line with advice saying that there is a need for people involved in the lab to share more knowledge and market insights. A prevailing view is that the Lab should not be only a playground for ideas, but a tool that gives people experience and

it should serve to share an innovation culture. As mentioned before the Lab should also be more transparent and try to promote itself more and engage people with videos, demos etc. However it was also mentioned that employees' time to engage with the Lab is limited. Thus another piece of advice was that employees should have more 'Google' time to work on their own ideas. Interestingly, it was also indicated that the lab should introduce rotation so that more employees can be involved with it.

Second Order Theme	Representative quotes from data collection
Advice	"We should have more rotating people so they can work with lab activities" (Interviewee IV)
	"I think we should let people know what we are doing, engage more people with videos, demos, whatever. If they are aware of it they can also be a part of it" (Interviewee VI)
	"I think that people that want to work with the lab should be able to do that, no matter how many days or hours per week" (Interviewee III)

Table 29: Advice

Lab potential: The data suggests that if the Lab was expanded it would get the most talented workers and the company would be more innovative. Some employees believe that in the lab there is a big chance to capture the greatest ideas and gain the attention of senior management. Also, employees consider this a great time to be involved in the Lab since currently, the company is in the perfect spot in the market, has all the internal capabilities,

data and the opportunity to be disruptive in all areas. Additionally, as was mentioned before, in the Labs there is huge potential for cross-feeding internal ideation and customer insights. Interestingly, it was suggested that there is potential for integration in the system so that a sandbox environment is created where coders around the world could integrate whatever they like in the system. Lastly, the most corroborated stance was that the company would benefit if the lab had more attention and if its purpose was clear to every employee because innovating represents a benefit for the company but also a benefit for the staff that would be more stimulated to be innovative and creative at work.

Second Order Theme	Representative quotes from data collection
Lab potential	"I think we have the opportunity to be disruptive in all these areas and this is amazing. We have the opportunity to do so, we are in the perfect spot in the market, we have all the internal skills" (Interviewee VI)
	"I see the potential of integration in our system where we have a sandbox environment where coders around the world could integrate whatever they like in our system" (Interviewee II)
	"I think the company would benefit if the lab had more attention and if its purpose was clear to every employee because innovating represents a benefit for the company but also a benefit for the staff that would be more stimulated to be innovative and creative at work" (Interviewee I)

Table 30: Lab Potential

Overall, our findings comprehensively outline all major problems and difficulties encountered by employees in the case company, setting a broad context for our analysis. Compiling this data and setting this context has allowed us to gain an insight into what an ideal IMS might look like, what purpose it might serve, what issues it might address and how

that process could be facilitated. The findings also cover all aspects of the Innovation Lab, placing it specifically in the aforementioned context. Ultimately, the Innovation Lab is painted as a partial solution, managing to address a lot of the identified problems yet struggling to alleviate others for various reasons. Most importantly, however, it speaks to the intrinsically motivated side of the employees and offers a number of intangible incentives to participate, despite an arguably low output of practicable solutions. In conclusion, the Lab seems to be the perfect starting point for implementing a comprehensive, self-governing IMS.

CHAPTER 5: ANALYSIS AND DISCUSSION

This chapter is going to discuss the findings in relation to the literature and the research question. The theoretical discussion in the literature review unwittingly helped us identify key patterns and solutions exhibited in the ideal IMS as well as problems typically encountered in the facilitation process. The less-structured interviews further solidified these patterns and solutions, letting us examine them in a real-life context. The formal semi-structured interviews and examination of the Innovation Lab offered an even deeper insight into the process. The Lab illustrates a partial solution to a widely encountered problem. Our findings seamlessly fit into the notion of a perfect system, amplifying both solutions and problems. Thus, in order to achieve the purpose of the chapter, we embraced the approach that emerged from our data and envisioned an ideal solution for facilitating idea management in a way that stimulates motivation and will use this solution to present our analysis.

In our findings we discovered that the Innovation Lab could be examined as an IMS because it facilitates the three core stages of idea management:

Idea Management System, Classic Model:
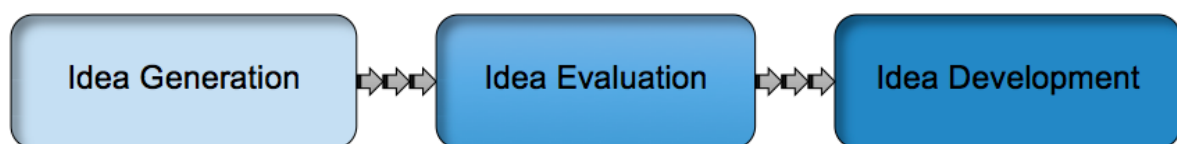
Figure 12. Idea Management System, Classic Model

The most interesting finding in this regard, however, was that a huge emphasis was placed on prototyping and experimentation in the front-end. Employees were given the freedom to experiment, independent of the ideas' potential for implementation, with actual evaluation being the last step of the process. This, as will be examined further, led to numerous positive effects for employees and heavily impacted their motivation. Thus, we believe that the Lab is so successful in improving motivation due to the fact that they effectively switched the order to generation, development and lastly evaluation. Empirical evidence strongly suggests that employees greatly benefit from the freedom to develop both concepts and products without

the excess bureaucracy and pressure to deliver results which are typically associated with this process. We believe that this approach is not only a great contributor to motivation in the case company but also that it is very generalizable. This way the emphasis is on developing concepts in the safe environment of the front-end rather than formally, as shown in the following figure:

Idea Management System, Proposed Model:

Fig. 13. Idea Management System, Proposed Model

Overall, the analytical process of the thesis was very iterative. Due to the practical implications of our analysis we sought a way to present it in a way that showcases all of its aspects. Drawing inspiration from the strong theoretical background and numerous formal and informal interactions with employees across all levels of the organization, we mapped out the employee ideation journey. The data presentation in the previous chapter revealed clear patterns when it comes to idea management. We believe that the best approach is to extrapolate those patterns and input them into a clearly defined process which places at emphasis on the most crucial steps. We relied heavily on empirical evidence when outlining the value and importance of these steps. Using this 'chain of consumption' we are going to show each step of the process, discuss both the practical and theoretical considerations for including it as well as the solutions that will enable employees to progress through each step. It should also be noted that the envisioned solution for facilitating the process is ultimately a sophisticated, software managed, suggestion box. The deliberate handling of employee ideas through the use of suggestion boxes has been a way to coordinate and manage creativity and has been a cornerstone of the continuous-improvement movement, in which the exploitation of every single organizational member's knowledge is one of the basic goals to strive for (Bjoerk and Magnusson, 2009). We consider this to be the ideal solution because of its simplicity and employees' wide familiarity with it.

The proposed model with all the steps is depicted in the following figure:

PROPOSED MOITIVATION-INDUCING IMS MODEL

Figure 14.

 Proposed Moitivation-Inducing IMS Model

The first and perhaps the most important step of the process should be defining the purpose of all ideation efforts. Overall, our findings suggest that the purpose of the Lab is to improve how the entire company works with innovation but there are various, ultimately complementary, views on how it achieves that. Some say that the main purpose is to increase the pace at which the company can prototype and test ideas with real customers, which has great practical implications from a management perspective. The other view is that the purpose is to get everyone in the company, not only management, involved with innovation which in turn is geared towards employees. This view is more heavily supported so arguably the overriding purpose of the IMS is to create a place where employees have the opportunity to show their creative talent and at the same time get a better view of the company and be generally happier at the workplace. Many of the positive effects that will be discussed

subsequently are a direct function of setting this purpose, which is why any organization embarking on a similar journey should first consider what the overriding goal is. If the guiding purpose is to stimulate motivation and competence building, an IMS can undoubtedly serve as a motivational tool. Only then can one move on to the first stage of the IMS.

5.1 IDEA GENERATION

Enabling Factor: Network Connectivity Software

The first area of the entire process is idea generation which in our model includes inspiration and the formation of ideas. The importance of having a social network to enable the process will be discussed further below but it should be noted at this stage that all aspects of the idea management process would ideally be facilitated by a software solution. Regardless, idea management is essentially based on the generation of new concepts, by combining organizations knowledge and collective intelligence, aligned by the organization's contextual factors (Mikelsone and Liela, 2009). It is generally recognized that ideas developed in the Lab come not from management but bottom-up, which is in line with the vision that ideation should not be lab-specific but diversely sourced. Thus, in its ideal form, the idea generation mechanism is to be seen as a device for the advancement and utilization of the creativity of all persons involved in an organization (Ibid.). The key point, as illustrated by the Lab, is that if anyone has an idea and want to develop it, they can sign up and will be provided with the required tools. The openness is absolutely crucial for achieving the overriding purpose. Inevitably the introduction of idea generation mechanisms leads to increased levels of social connectedness, encourages knowledge sharing, aligns employees with the strategic orientation of the organizations, inspires creative thinking and as will be shown leads to numerous other positive effects.

5.1.1 Inspiration

The first step of the ideation process should be inspiration. We have included this step because, through examination of the case company, we recognized inspiration as crucial for

improving general capacity to generate new ideas. Employees indicated the the Lab's positive impact on motivation stems firstly from creative encouragement to think of new ideas. The company needs to **make sure that every single employee** is inspired to think of new ideas. The data clearly shows that the case company is very innovative and internally each department functions very well. This is crucial because employees are more creative when they regard innovation as being important (Ende et al., 2014). The challenge is to ensure equal creative encouragement for every single employee. Creative encouragement is defined as the managerial support and autonomy that is given to employees to allow them to pursue creative tasks (Amabile et al., 2004). Managerial support means encouraging individuals to voice their concerns, providing feedback, and facilitating employee skill development (Ende et al., 2014). A key finding in the examination of the Lab was that management see innovation as a top-down process with the consequence that it is very hard for people outside management to contribute to the product program. This, as we saw, has an adverse effect and should be avoided. Generally, uninvolved employees do not know much, if anything at all, about the Lab so it is crucial for the company to reach out to and engage with all employees. Data also shows that overwhelmingly employees believe that they can and should suggest new ideas. It is clear that the innovative behavior of employees can be stimulated by fostering a social work context in which employees feel motivated to generate, promote, and realize innovative ideas and concepts (Bammens, 2016). Clearly, ensuring some form of management support and motivation in particular is a fundamental first step because if employees lack support and autonomy for creative activity, they might regard the strategic vision and future direction expressed in the ideation strategy as an empty cliché (Ende et al., 2014). If done correctly any IMS will, just like the Lab, get a lot of good ideas and engagement and be ultimately crucial for stimulating innovation and creating the right entrepreneurial climate within any organization.

What should also be done is to channel this inspiration in a way that is beneficial for the organization. Management should make an effort to showcase any identified problems and opportunities so that employees' creativity can be aligned with the company's strategic goals. In confirmation of that, it was suggested by our findings that if Lab ideas are aligned with the current roadmap they can be much more beneficial. Additionally, it is fundamental to

integrate various insights from sales and customers into the mechanism so that employees can offer more insightful ideas. Said simply, at this stage, idea generation captures employees' recognition of an opportunity or problem and the generation of technical ideas to address the identified need (Bammens, 2016).

5.1.2 Formation of a basic idea

The actual formation of ideas represents the first gate in the idea management process. We included this step because employees outlined a clear moment in time when they usually form their new ideas. They shared that the specific boundaries on the nature of new ideas as set by the company has a tremendous impact on the following process. The big dilemma in this regard is the extent to which the process is formalized.

In the particular context of idea management, several disadvantages have been connected with process formalization: decreased innovativeness, negative attitudes among employees; excess bureaucracy and decreased flexibility (Ibid.). Formalization might impede creativity and ideation because it decreases the incentives to proliferate ideas and increases the incentives for convergent thinking (Amabile et al., 1996). Formal processes are often connected with bureaucracy and rigidity, which hamper creativity (Martinsuo and Poskela, 2011). In other words, as one employee had pointed out, formal is not automatically better. Radical ideas, in particular, are more likely to be filtered out (Ende et al., 2014). A clear direction may have a negative impact on the ideation work spontaneously taking place in the informal network of an organization but just like many other questions related to innovation, this one also may in fact be a matter of balancing counteracting forces, where the answer rarely is to be found in one of the extremes (Bjork and Magnusson, 2009).

The data shows that currently 'countries' are the main contributor when it comes to new ideas and the output into the NPD funnel is more than sufficient to sustain the company. This means that efficiency does not need to be a prime consideration and that a more laid back approach is likely to benefit employees more. The organization is already experiencing over-

formalization of processes, which has a negative impact on overall motivation. In fact, data suggests that often informal processes are positive and beneficial for employees because they do not restrict creativity. Regardless, introducing productive formalization is a challenging task with many inherent risks so perhaps a distinction can be made between introducing a clear structure and formal requirements for participation in the Lab. This is why we are more inclined to encourage a process without many formal requirements as to what type of ideas there should be and how they should be formed yet suggest installing a clear structure as to the practical processes of suggesting ideas.

From a management perspective, the data does point out that it is important to include a business case in new idea proposals and that proposals should be generally more developed so as to ease the selection and evaluation process. This is why we suggest the introduction of clearly structured idea proposal forms. Additionally a database with all idea proposals should be maintained so that employees can check the novelty of their ideas as well as draw inspiration as to how the proposals should look. One particular finding was that sharing knowledge and seeing how others contribute to innovation should be part of the Innovation community which is in line with advice saying that there is a need for people involved in the lab to share more knowledge and market insights. The key point at this stage is that employees should be able to suggest **any idea regardless of its nature or scale**.

5.2 IDEA DEVELOPMENT

Enabling Factor: Organizational Learning

The next area is idea development and it encompasses research and refinement, actually submitting an idea and receiving feedback. It was clearly communicated to us that employees see prototyping as the means, not the goal and use it to filter and validate ideas, which has had an excellent overall impact. In fact prototyping is equally appreciated in terms of playing around as well as for verifying assumptions by handing prototypes to customers in order to gather reliable and representative data from a small portion of the customer base. We believe that this approach to idea development is highly beneficial regardless of the type of idea,

whether tangible or not. In terms of working processes, the Lab team is more open minded, curious and like to experiment with many options in order to find the best one. So, in the lab they do not assume to have all the answers but use a scientific approach to find the best solution which arguably should always be the case. It is important to note that in this context development pertains mainly to comprehensive concept building and should be highly informal and mainly explorative, thus unhindered by general company practices.

5.2.1 Research and refinement

This step refers to idea development and aims to outline the optimal ways for facilitating this development for both tangible and intangible innovations. We included this step because invariably employees spend a certain period of time researching and refining their ideas but with varying commitment and success. We believe that placing a 'gate' at this stage would lead to a uniform practice and ultimately better results. Literature suggests that organizing for innovation requires the creation of a dual organization where there is a management structure to steer the innovation process as well as a structure of employees who function as 'free' corporate entrepreneurs (Sundbo, 1999). This way employees can pursue projects of interest at their own pace while also having the security that they are working in the right direction and their time is well spent. Another key consideration is to create a more flexible organization by decentralizing innovation activities in order to free up more initiatives on the part of the employees (Ibid.). This is perfectly in line with the data that clearly indicates that employees need more freedom to develop innovative projects in their own time. We would like to recommend a certain amount of slack time for employees who are developing new ideas so that they can research and refine those ideas. Crucially, one also has to consider that innovation through empowered corporate entrepreneurship demands an increase in the knowledge and learning capability of each individual employee (Ibid.). The data agrees that employees need more entrepreneurial knowledge so as to generate higher quality ideas. In fact 70% of employees are convinced or strongly convinced that Innovation should be taught to employees, while only 30% are indifferent.

A prevailing view in our findings is that the Lab should not only be a playground for ideas,

but a tool that gives people experience and it should serve to share an innovation culture. This can be achieved in a number of ways. For example HRM methods such as education and motivation programs and training for innovation activities contribute to creating a favourable environment for innovation (Ibid.). Luckily we have discovered that the company does often engage in organizational learning. Currently, the lab engages in workshops, hackathons and brainstorming discussions. Crucially, it is also recognized that, through those initiatives, the lab helps employees gain new knowledge and to think outside the box. Employees clearly state that there is a lot to learn from lab workshops, even though they are sometimes too short and not employed continuously. Thus, what we suggest is to maintain the culture of organizational learning but to also continuously apply it to ideation and innovation.

According to our data, the Lab offers easy to use tools accessible by anyone, provides many learning opportunities and stimulates innovation. The Lab is seen as an enabler for employees because it allows testing of different innovative things and the opportunity to discuss with different experts in the teams so that everyone can learn the correct approach to facing and solving problems. In this sense, sharing or implementing an idea in a group is beneficial because next time an idea comes up, employees will be much more experienced to deal with it and processes become faster. Crucially, the Lab also offers the opportunity to try different technologies and that environment is mind-opening for employees. Through the lab you can get more insights useful for your domain that you may have never noticed or realized before. Many interviewees emphasized that insights from technology can give you insights on how to solve a problem in another context. It is clear that such a practical approach is highly beneficial and should be preserved.

Putting an emphasis on development in the front-end is a wonderful opportunity. For example, employees say that you can play around in the Lab while the company on the other hand is too structured in terms of budgets and deadlines. This ultimately means that one of the biggest differences is that the lab is faster in trying out ideas which is a great practical benefit from both an employee and management's perspective. Consequently, the Lab is important because innovation requires trials. There also seems to be little room for radical ideas in the company since it is seen as really rigid while the Lab creates a sandbox

environment where such ideas can be encouraged. This experience is obviously positive and can easily be replicated in any other context.

In order to cater to the more intangible ideas and generally to the business aspect of the process, we would also like to suggest integrating knowledge pools into the IMS so that employees have easy access to information regarding corporate intrapreneurship, trends, how to create a business proposal, brainstorming techniques etc. This can be complemented with physical event-based ideation initiatives which would also satisfy the employees who indicated that they would prefer more physical solutions. Oldham & Cummings (1996) stress the importance of a learning environment that continuously educates employees and align employees with the current strategic needs of the organization. On-going development in a learning culture is imperative in motivating employee innovative thinking by targeting improvement in specific skills that allow them to be more and more prepared for the next innovations. The key objective here is to make sure that employees can suggest an idea **in its most well-informed and refined state possible**.

5.2.2 Submitting an idea

The action of actually submitting an idea is easy to underestimate and numerous approaches can be employed. We observed that employees use different methods, both physical and software facilitated, to suggest their ideas which is why we deemed it important o bring more attention to this particular step. The data told us that 90% of the employees really care about having their voices heard yet the current idea suggestion practice is to go to the closest manager who often does not have time or authority to act upon the idea which is a big problem. Interestingly the results of our questionnaire show that 78% of employees have shared an idea at some point in the past. It is important to consider that even though employees share their ideas there is no evidence to point to the fact, suggesting that ultimately the process achieved close to nothing which in turn points to the need of a comprehensive mechanism. Additionally, employees indicated that only very vocal internal champions are heard when it comes to suggesting new ideas which is also something that

must change.

One way to do that is to adopt a new IMS. It must be noted that an idea suggestion box of sorts was tested yet did not work well at all, mainly due to failure in the selection and implementation phase. At this point we would like to say that successful selection largely depends on the quantity of ideas which is why we suggest setting a limit on how many ideas employees can suggest any given month, at least initially, so as to ease the selection process. The limit should depend on the evaluation capacity of the governing body and should be tested. It is crucial to have a somewhat predictable input of ideas because it only takes a single mistake or lack of feedback to put off idea generators. Our research indicates that the current solution is simply too ambitious and the huge amount of information, lack of transparency albeit for understandable reasons such as patent considerations, coupled with its counter-intuitiveness render the software largely useless for the purposes of ideation. In the end, both the participants and the facilitators in the Lab recognize that the web-based community could be a central place for finding and sharing information as well as providing feedback. In the Lab, some ideas originate from the team leader, others from employees being selectively brought in, established R&D teams or free-entry workshops. While ideas should be able to percolate in various ways, introducing a uniform solution for suggesting ideas will greatly ease the process and alleviate any concerns regarding transparency. Thus, we believe that an idea management software dedicated solely to ideation is the right solution.

At this stage we also have to consider incentives. According to Amabile (1983) the most salient factor for motivating creative and innovative behaviors is intrinsic motivation. It is employees' inner passion in devoting their time, effort and resources into the task at hand that motivates incremental progress towards a meaningful contribution to innovation. Intrinsic factors promote a creative flow for employees in fostering the opportunity for personal and professional development as well as achievement. The Lab achieves that by offering the opportunity to work on ideas in a modern way with the latest available technology. Consequently, by all accounts, employees have fun in the Lab which is a huge benefit and should not be underestimated. In terms of professional development, crucially, employees

also believe that where the company offers managerial career opportunities, the lab offers technology career opportunities. Gupta (2009) for example is convinced that employees who are intrinsically motivated to innovate enjoy their work based on self-fulfillment, personal interest and an innate quest for taking on challenging work. Although suggesting that a certain balance is required, the questionnaire indicated that employees are mainly driven by intrinsic motivation. The qualitative interviews also showed that employees are predominantly intrinsically motivated and very willing to engage in innovation, so arguably no incentives are necessary at this stage. Currently, there are no explicit incentives to work in the lab but by all accounts, working in the lab is incentive enough. Freedom to work on personal ideas, appreciation and recognition, from peers or otherwise, were all identified as excellent and sufficient incentives. Another important data point is that small monetary incentives would be counter-productive in the context of idea generation because it would send the wrong message and would arguably encourage submitting ideas for the sake of financial benefits which in turn would erode the quality. The findings did however indicate it as important to have small incentives such as beer and pizza because they lower the barriers of entry and increase engagement. We believe this to be an excellent suggestion, especially if coupled with the aforementioned event-based ideation initiatives. Otherwise, in order to maximize intrinsic motivation we would suggest gradually introducing more slack time to work on ideas as they progress through the different stages. In any case the key at this stage is to make sure that any employee **has the opportunity to suggest** new ideas.

5.2.3 Receiving feedback

We included this step because all interviewees without exception saw feedback as absolutely crucial for the entire process, both in terms of improving the practical application of thei ideas but also for personal development purposes. In fact feedback seemed so important that we believe it merits its own step in the process. According to our data, collaboration, communication and feedback are crucial to employees (92%). Since we are putting a great emphasis on organizational learning, educating employees and honing their intrapreneurial spirit, this step is absolutely key. As we have seen employees will easily feel disenfranchised with the process if they do not feel like their ideas receive attention. Findings confirm that if

employees do not have an opportunity to work on their own ideas they might leave. In fact, a lot of people working in the Lab have already quit. Most interestingly, as an ex-employee explained to us, working with the lab is a reason to stay in the company. We believe that in the wider context of the currently ongoing war for talent in the industry, offering the opportunity to experiment and pursue radical innovation in their own time is a unique selling point from an employee perspective. In fact, company documents regarding employee turnover and exit interviews show a trend of increasing employee attrition rates, which coincides and is arguably correlated to company-wide formalization efforts. Global trend also show that millennials in particular exhibit short attention spans and a desire to be constantly challenged, a desire that might be satisfied through an increased use of ideation mechanisms.

One of the great advantages of using a software solution to facilitate the project is that it would allow for employees to easily interact with their peers who can also offer invaluable feedback. Each idea should be examined with great care and feedback given regardless of the idea's quality. This is a big reason why this initial stage of the screening process is, in our model, classified as part of idea development. In this context, as the data suggests, transparency of the whole process is absolutely crucial. Currently, employees are unaware of lab processes and it is clear to them that a lot of knowledge is inaccessible due to lack of transparency. A key consideration in this regard is that transparency at certain stages of maturity might raise expectations too much but in a well-designed system this should not be a concern. Additionally, the Lab, just like any other IMS should, has numerous positive effects such as improving the company image and increasing employee satisfaction in various intangible ways so in this sense transparency can only benefit the process. The key point at this stage is that ideas should receive enough attention and be **judged fairly**.

5.3 IDEA EVALUATION

Enabling Factor: Cross-functional Team

Idea evaluation is the third big area and encompasses refining and re-submitting ideas, recycling and leaving ideas as well as implementing them. The Lab team has tried various

methods of evaluation and sometimes during open sessions, ideas are presented and collectively evaluated and voted on while in other instances the Head of the department makes a unilateral decision. It is important to move away from that practice and install a uniform structure for evaluation, which importantly does not necessarily mean formalizing the process because creativity should not be limited. For example, in the Lab, far-fetched ideas would never make it into the product roadmap because ideas in line with the core business are prioritized. In this sense prioritizing ideas is important but entirely limiting the process is likely to have an adverse effect. A key feature of the Lab, which arguably should be adopted widely, is that if people are really passionate about an idea outside the core they can still have the opportunity to work on it even though it probably will not be implemented. As will be seen, the focal point of the evaluation process is, in our opinion, the formation of a cross-functional team.

5.3.1 Refine and Re-submit idea / Recycle and leave

We included this step because employees invariably saw the potential of their ideas but often lacked the competencies to develop them fully. Since they also saw the Lab team as cross-functional and consequently capable of adding value we decided that an opportunity to refine and re-submit ideas will greatly benefit the process. Perhaps the biggest hurdle for ideation mechanisms is the evaluation and selection phase. The lack of a governing body is often where the process falls apart, as clearly illustrated by the failure of the idea suggestion box previously installed in the case company. A big part of the problem is that this stage requires a lot of time and attention which can seldom be achieved without a specialized team. This in turn is often not feasible due to the cost of hiring such a specialized team. However, we believe that we have found a way to solve numerous problems at once by suggesting the formation of a cross-functional team comprised of representatives of the key departments of any given company and of course a dedicated leader playing the role of chief innovation officer or similar.

Cross-functional teams are often seen as key for innovation projects (Blindenbach-Driessen, 2015). Developing appropriate project goals, empowering the team with the needed decision-

making power, assigning the appropriate human resources, and creating a productive climate are all related to fostering team success (McDonough and Edward, 2000). Of these four factors, appropriate project goals is mentioned most often as being associated with success, followed by empowerment (Ibid.). In terms of goals, for the Lab, there is no pressure or an explicit requirement to deliver any particular results that might relate to the arguably limited output, considering that the Lab has done a few concept studies that gained traction but they are yet to embed them in formal projects and innovation processes. It is recognized that it is crucial to have a good balance between freedom and clear expectations on delivery results since too much creative freedom could be detrimental. Empowerment, on the other hand, is strongly in line with the company culture, with the data indicating that once formed, teams are given a large degree of autonomy. Additionally, a number of researchers have suggested that team leaders, senior managers, and champions provide enabling support to cross-functional teams in achieving success (McDonough and Edward, 2000). Team leadership is the most frequently mentioned enabler, according to these findings, followed by senior management support (Ibid.). Employees of the company agree that having an innovation champion, someone to lead and oversee innovation efforts is essential. Overall, cross-functional innovation teams can make novel ties between functional domains, integrate up and downstream knowledge to facilitate the transition to production and break down knowledge barriers between functional departments (Blindenbach-Driessen, 2015). In the innovation literature, the general assumption is, therefore, that cross-functionality contributes positively to the performance of innovation teams (Ibid.). Employees generally consider it important to have a cross-functional team in the Lab. It is our belief that such a team can offer assistance across all stages of the ideation journey and that their diverse experience and knowledge will be of great help in regard to organizational learning and evaluation of ideas. Findings suggest that the lab is already cross-functional in terms of knowledge but mostly, it seems, from a technical perspective which in this particular case is sufficient and has been beneficial for employees. Others however believe that the Lab definitely should be more cross-functional and indicate that the big picture of the market aspect is missing. On the other hand, it is also important to consider that adding a business perspective and generally too many opinions at this initial stage might ultimately impede the discovery phase. Therefore it seems that the correct approach is to advocate a balance, which in turn strongly depends on

the industry and type of company. At this stage we envision the team to be strongly involved with idea generators and help refine their ideas and either re-submit or recycle them and leave them in the database. Our findings indicate that from a management perspective, the biggest job satisfaction comes when systems are well-functioning and self-governing, a point which the Lab is yet to reach. However we believe a well-formed cross-functional team will be a great step towards facilitating that. It is also important to note that no idea should be outright discarded because even if not feasible at the moment, long-term it can have a positive contribution in an array of different ways.

Data shows that it is crucial to focus on the selection criteria so that people are aware of why their ideas were or were not implemented. As was previously discussed however formalization of criteria may have an adverse overall effect. Additionally it is the aim of the IMS to motivate employees by helping them grow, learn and providing opportunities to explore ideas which they would not otherwise be able to do. This is why we do not recommend restricting idea generators with formal selection criteria. Whatever the process is, the only requirement we recommend is that of full transparency. Thus arise two problems. Firstly how to evaluate ideas and secondly the cost of hiring a cross-functional team.

As was suggested in our findings, both problems can be solved by introducing rotation. We would like to propose that a new innovation team is formed, for example every month, by employees of the company. It is important to make the process voluntary because naturally, as the data shows, not all employees are interested in being involved. Nevertheless, 80% seem willing to participate in new initiatives and be involved directly in new projects which is clearly a good indication. Many surveys from different organizations have determined that the more employees are engaged, the more happy and productive they are (Fisher and Montalbano, 2014). Empowerment is an exceptionally strong motivator. Since it is generally accepted that engaged employees are better employees, it is important that managers do whatever is possible to increase the engagement level of their departments. This may be done through empowering employees and making them feel like they are part of management. Introducing rotation will achieve a number of goals. Firstly, it will allow all employees to be more involved in innovation and to gain invaluable experience. Secondly, it will help them

understand the nature of the evaluation process thus making them more proficient in idea generation while also allowing to mitigate the inherently subjective nature of the proposed selection process. Thus, instead of an arbitrary attempt to eradicate subjectivity in the decision making process we propose embracing it and simply ensuring a common practice for all employees. Lastly, barring opportunity cost, there will be no extra expenses.

However, it has to be said that functional diversity also introduces conflict, which may hinder a team's optimal performance (Blindenbach-Driessen, 2015). Additionally a team that is regularly rotated is unlikely to achieve optimal efficiency. Efficiency however is not the main goal of the process and we believe that the positive effects on motivation outweigh any concerns. Furthermore, the envisioned chief innovation officer will mitigate this problem while some codification of the amassed tacit knowledge should help temporary team members achieve ultimate efficiency as fast as possible. Lastly, some degree of creative abrasion is a necessary antecedent of innovation. Overall the key point at this stage is to give every idea a fair chance if it is **deemed to be beneficial** for the organization.

5.3.2 Implement / Recycle and leave

We decided to include this step because all employees mentioned implementation in some form or another. Some were greatly pleased that their ideas were implemented while others greatly disappointed because they weren't. We believe that introducing a clear gate at this point would lead to the development of uniform practice for implementation which we saw as much needed. Also it has to be said that just like in the previous step recycling is included since employees recounted multiple cases in whih they benefited from having access to old unimplemted ideas that were logged in the system as part of the formal product development process. Implementation is the last step of the ideation journey. When asked to differentiate between the importance of having the opportunity to suggest an idea and having an idea implemented, employees, expectedly, gave a 50-50% response. Interestingly, some employees like working on ideas regardless if they are theirs or someone else's, stressing both importance of the 'journey' while others are more goal oriented and believe that there is no point if ideas do not ultimately reach customers.This is reflected in the fact that both

suggestion and development of ideas are crucial and mutually dependent. No one will propose ideas if they know in advance that the ideas will never be implemented and, at the same time, organizations cannot implement something new if they do not have fresh ideas. An important consideration is that some degree of bias can be expected in the sense that employees might have trouble differentiating between producing an implementable solution and actually seeing market adoption. Since many employees lack Lab experience we believe that they underestimate the benefits of the 'journey'.

In this sense, we believe that finding good ideas for innovation is a secondary goal and that the IMS should be used to promote innovation and to stimulate collaboration among employees to produce innovations (Elerud-Tryde and Hooge, 2014). Thus, the introduction of an IMS should be seen as a managerial tool to deepen the commitment of employees to innovation and also to generate new ideas (Ibid.). Many studies foresee low rates of conversion of the generated ideas and suggest that idea generation campaigns support the innovation process in large firms mainly because they involve the relevant stakeholders in the generation and selection of innovation ideas (Ibid.). Consequently it is important to give all relevant stakeholders the opportunity to get involved and to encourage them to do so.

On the other hand we recognize that some implementation is necessary in order to ensure a continuously smooth ideation process. Data indicates that generally the company focuses too much on its core business and refuses to explore exciting new ideas and that as a market leader has no reason to take the risk and engage in more radical innovation. This is why we recommend that the company makes a point to implement as many of the generated ideas as possible, keeping in mind the inevitable long-term benefits this would bring. Additionally, the importance of diversification is easily underestimated when profits are on the rise.

Here, once again, incentives need to be considered. Employees like to build new stuff together and work on the new frontier of technology, new user experiences and business. Being creative at work also brings satisfaction to employees and many of them need to work on new projects and innovation in order to feel motivated. For others, the biggest motivation is having the opportunity to improve their skills and discover new things. The Lab, as any

IMS could, satisfies all of those desires, which is arguably sufficient. Nevertheless, even though employees are indeed largely intrinsically motivated, reaching this final step would require a lot of time and effort. The data indicates that employees believe that some extrinsic incentives would benefit the ideation process. We would propose limited ownership of implemented ideas in order to boost engagement even further but believe that any token of appreciation would be beneficial.

From a practical point of view all ideas that reach this stage should be either implemented or recycled. Small scale ideas regarding mundane aspects should be implemented on the spot while larger scale ideas should be taken on by management and entered into the formal development process. It is important to note that the idea management processes is finished at this point and responsibility is transferred. From a practical point of view the achieved effect is that management will be looking at ideas in their most developed state which would inevitably ease decision-making. The key point at this stage is that each idea that reaches this stage should be **rewarded and implemented** if possible.

5.4 CONCLUDING REMARKS

In terms of the potential of idea managemetn systems, the data suggests that if the Lab was expanded it would get the most talented workers and the company would be more innovative. Some employees believe that in the lab there is a big chance to capture the greatest ideas and gain the attention of senior management which in a well-designed system would undoubtedly be so. Also, employees consider this a great time to be involved in the Lab since currently, the company is in the perfect spot in the market, has all the internal capabilities, data and the opportunity to be disruptive in all areas. This is a very important point because the arguably the best time to engage in ideation is when there is no external pressure to deliver results yet enough flexibility and resources to be explorative and pursue diversification. Additionally, as was mentioned before, in the Lab as in any company, there is huge potential for cross-feeding internal ideation and customer insights. Interestingly, it was also suggested that there is potential for integration in the system so that a sandbox environment is created where coders around the world could integrate whatever they like in the system. We also believe that

engaging in open innovation is a natural next step. The most corroborated stance, which is also one we want to amplify, was that the company would benefit if the lab had more attention and if its purpose was clear to every employee because innovating represents a benefit for the company but also a benefit for the staff that would be more stimulated to be innovative and creative at work.

For internal IMS, research points to the importance of particular characteristics and learning behaviors of the individual idea generator, which is often beyond control (Ende et al., 2014). Ultimately, this is why no idea generation mechanism can ensure successful product innovation and the next big idea. Of course, for some employees, the biggest satisfaction is precisely the identification of a really great idea but employees also recognize that it is hard to find a huge, breakthrough idea yet still motivating to try. The motivating power of the 'journey' lies at the heart of our vision. Thus what can surely be done is to encourage organizational learning through those mechanisms so that individuals gradually hone their intrapreneurial skills and creativity so that no matter what, a positive effect is achieved.

Ultimately all of these stages should together ensure that **every single employee has the opportunity to suggest any idea, regardless of it nature or scale, in its most well-informed and refined state possible and with the full confidence that the idea will be rewarded, judged fairly and implemented if deemed to be beneficial.** We believe that if this is facilitated, it will ensure that the IMS will strongly stimulate motivation and ultimately lead to long-term innovation.

In conclusion, we strongly believe that the idea management system can be successfully used as a motivational tool and following the steps outlined in our model is in our opinion the optimal way of facilitating this process.

CHAPTER 6: CONCLUSIONS AND IMPLICATIONS

In this chapter we will present our conclusion and recommendations coupled with managerial implication as well as limitations, implications of our study and areas for further research.

6.1 CONCLUSIONS

This thesis has the objective to contribute to three major areas of research, namely the Front End of Innovation, Employee Motivation and Idea Management. In order to do so we employed a single case study approach. At the case company, we observed a number of difficulties in the initial phases of the innovation process, mainly in facilitating bottom-up idea generation. Due to problems such as excess process formalization and lack of opportunities for personal development, employees feel neglected and discouraged in terms of idea generation, which in turn leads to low levels of motivation and ultimately innovation. Theoretical research revealed a gap in literature in terms of the purpose of ideation that made us challenge the established perception as to the use of idea management systems. Early on we discovered that a well-designed IMS, geared towards boosting motivation, could be a potential solution to the aforementioned problems. The question emerged was whether an idea management system can be used as a motivational tool and if so what is the best approach to facilitating this process. In our literature review, we established a relationship between idea management and employee motivation in the context of the front-end of innovation. This relationship was shown to have a strong impact on ideation. We employed a triangulation approach, using observation, company documents, less-structured interviews, a questionnaire and formal qualitative semi-structured interviews to gather representative data. We focused our research on the company's Innovation Lab as a partial solution to the widespread ideation problem. Taking all knowledge into account, we followed the patterns emerging from our data, and envisioned an ideal IMS, optimally geared towards stimulating innovation. Our analysis revealed that switching the classic IMS process to idea generation, idea development and lastly idea evaluation has a tremendous positive impact on spurring motivation. If the steps we outlined are followed and key features, such as the introduction of a cross-functional team, heavy reliance on organizational learning and a network connectivity software solution for facilitating the entire process, are integrated then successful long-term

innovation is extremely likely. Indeed we believe that the purpose of ideation has been unjustly limited to output into the formal product development funnel. Referring back to our research question we can say, with a large degree of conviction, that the idea management system can be successfully used as a motivational tool and following the steps outlined in our model is the optimal way of facilitating this process.

6.2 GENERALIZATION

We are aware that qualitative interviewes are not meant to be representative of a population, leading to the impossibility of generalizing a case study. However, qualitative research is to generalize to theory rather than to population (Bryman and Bell, 2015). This is the reason we can say, with a large degree of certainty, that companies operating in different markets could draw various insights from this model leading to easy internal imitation and implementation. As presented in Gioia *et al.* (2012), research can be generalized if the case generates concepts or principles with obvious relevance to some other domain. We argue that due to the transparency of our data-work methodology, the main findings of this research are replicable and at least partially generalizable. However, we keep in mind the inevitable limitations of both the qualitative research and the single case study approach in terms of external validity due to small sample size and locality (Bryman and Bell, 2015).

6.3 MANAGERIAL IMPLICATIONS

The first managerial implication of this thesis is that a well-designed idea management system can lead to high levels of employee motivation and intense competence building. While finding the next big idea through ideation mechanisms is a myth and largely beyond managerial control, the advocated approach means that eventually employees will be much more experienced, motivated and prepared to develop the next big product or service innovation once the opportunity does appear. In order to facilitate this process, managers should ensure equal creative encouragement for all employees, emphasize organizational learning, introduce a smooth idea generation process, create a sandbox environment where employees can research and refine their ideas with the help of cross-functional experts, incetivize the process with slack time for work on projects of personal interest and regularly

show committment through implementation. Managers also need to recognize that motivation is influenced by many different factors and that consequently every employee has unique desires and driving-forces. However, if employees are intrinsically-minded, the introduction of an IMS is likely to be an excellent and sufficient incentive on its own. Managers also need to create a clear, open and transparent idea management process. Our research unwittingly led us to develop an ideal idea management system along with all the steps that practitioners should consider if inclined to implement it within their own companies: 1) inspiration, 2) formation of a basic idea, 3) research and refinement, 4) submitting an idea, 5) receiving feedback, 6) refine and re-submit / recycle and leave and 7) implement / recycle and leave

6.4 LIMITATIONS

As established, there are some inherent limitations as to generalization of both qualitative research and the single case study approach. A further limitation is that the Lab, which was the focal point of our research, is quite recent hence the examined processes are far from well-established. The use of the Lab is also quite limited so, even though exhaustive, the relatively small sample might be seen as a limitation. Furthermore the case company itself exhibits some unique features such as already having a predictable and steady inflow of new ideas, which might also hurt generalization. Additionally, having spent five months in the company there is a risk of 'going native' leading to the over-reliance on informant centric terms and justifications which can influence capacity for critical evaluation and hurt researchers' objectivity. Another limitation is that such focused and extensive research inevitably leads to a degree of confirmation bias. Though extensive in some sense, the time frame prevents longitudinal examination hence it is hard to establish the extent of positive effects on employees, brought through the use of ideation mechanisms. Lastly, implementation is an important part of our model and analysis yet the scope of the thesis as well as the fact that the Lab is recent did not allow us to examine it in greater detail.

6.5 IMPLICATION FOR FURTHER RESEARCH

As established, in the purpose of our thesis in chapter 1, ideation plays only a minor role in the NPD literature. The area of research remains understudied and it is crucial for further research to address this issue. We argue in this thesis that the purpose of ideation has been overly limited and challenge the common perception. Within this stream of research, we believe that we have contributed to an interesting new chapter and started a discussion that deserves more attention and reflection. Since the stance is quite novel, further research should aim to test the validity and implications of our own research. Additionally, a longitudinal examination of the discussed solutions is likely to strongly improve understanding of the area. Further research can also transcend the limited scope of the front-end and examine idea management in the context of later stages of new product development, potentially finding even great application for our model. Lastly, although our analysis is theoretically compatible and applicable to our case, future research may find that other phenomena or tools are better equipped to contribute to higher level of employees' satisfaction and motivation.

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APPENDIX

Appendix I - Interview guide

Ideas for follow-up questions are written in *italic*.

Topic 0: Introduction - Interviewee's role and position at [Case company]

Thank you for providing us your time as well as useful information relevant for our Master's thesis. Since there are no right or wrong answers, please just give your honest opinion. Every time you find a question ambiguous or not clear please do not hesitate to say that. For a more efficient analysis, we would like to record this interview, if you do not mind.

1. Opening question: Tell us a bit about yourself and your role here at [Case company]
2. How long have you worked here? *Have you held any other positions in the company?*

Topic 1: General information about the Innovation Lab

3. How would you define the purpose of the Innovation lab?
4. Do you think it is successful in achieving its purpose?
5. What is the current practice of generating ideas in the lab?
6. What is the idea selection process like in the lab?
7. How formalized is the process and do you think that is positive?
8. How important do you think it is to prototype and experiment?
9. How radical do you think the lab is in pursuing innovation? How important is that and why?

Topic 2: Personal thoughts about the lab

10. Do you think engagement with the lab offers learning opportunities? In what way?
11. Have you experienced any organizational learning initiatives through the lab? Did they benefit you and in what way?
12. Would you say that the lab team is cross-functional and if so in what ways is it

beneficial?

13. Is it beneficial to be a part of the labs community and how?

14. Do you think that the lab culture stimulates innovation? How important is it for you to have time to work on innovative projects?

Topic 3: Comparing the lab with the rest of the company

15. What do you think is the biggest contrast between the lab and the rest of the company? Develop on all differences (positive and negative)

16. How do you think the rest of the company sees the lab?

17. How transparent do you think processes in the lab are and how important do you think transparency is?

18. Do you think the entire company would benefit if the role of the lab was expanded?

Topic 4: Motivation

19. What part of your job brings you the most satisfaction?

20. What motivates you to go to work every day?

21. Are there any incentives for working in the lab? *Should there be any?*

Appendix II – Questionnaire results

Response rate 37% - 112 out of 305 respondents (note that all respondents are anonymous).

Mean, Mode and Standard Deviation:

The *Mean* represents the average and it is computed as the sum of all outcomes divided by the total number of events.

Formula:

$$\overline{X} = \frac{X_1 + X_2 + X_3 \dots X_N}{N}$$

Where
$\overline{X}$ = the mean
X_1 = the first value
X_2 = the second value
X_3 = the third value
X_N = the last value
N = the number of values (112 respondents)

See 'Mean' in 'Question 1' for specific calculation procedure.

The *Mode* is the number with the highest frequency.

The *Standard Deviation* describes how spread out the data is. If the data all lies close to the mean, then the standard deviation will be small, while if the data is spread out over a large range of values, then the standard deviation will be large (see 'Standard Deviation' in 'Question 1' for specific calculation procedure).

Formula:

$$ s = \sqrt{\frac{\sum (x - \bar{x})^2}{n - 1}} $$

Where
$\bar{X}$ = the mean
s = standard deviation
Σ = "sum of"
x = each value in the data set
n = the number of values

Note that all numbers are rounded to the decimal (e.g. $5.65 \rightarrow 5.7$)

Results

Question 1: How much do you think employees should contribute to Innovation? (Scale from 1 to 5, where 1 stands for "Not at all" and 5 "Very much")
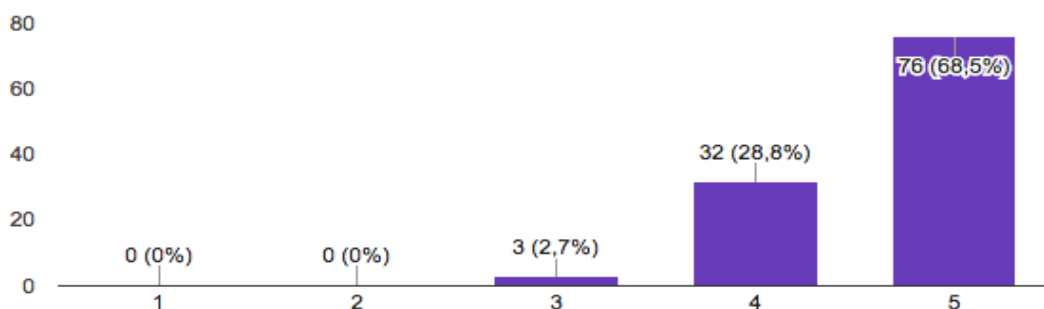
Mean: [(1x0)+(2x0)+(3x3)+(4x32)+(5x76)]/112=4.6

Mode: The number with the highest frequency is 5 since it occurs 76 times.
1 and 2 (0) < 3 (3) < 4 (32) < 5 (76)

```
Standard Deviation: √{[(1−4.6)^2]x0+[(2−4.6)^2]x0+[(3−
4.6)^2]x3+[(4−4.6)^2]x32+[(5−4.6)^2]x76}/(112−1)=0.5
```

The same calculations for *Mean, Mode* and *Standard Deviation* work for all the following results.

Question 2: Would you say you are more intrisically (inner motivation) or extrinsically (tangible rewards) motivated? (Scale from 1 to 5, where 1 stands for "Mainly Intrinsically" and 5 "Mainly Extrinsically")
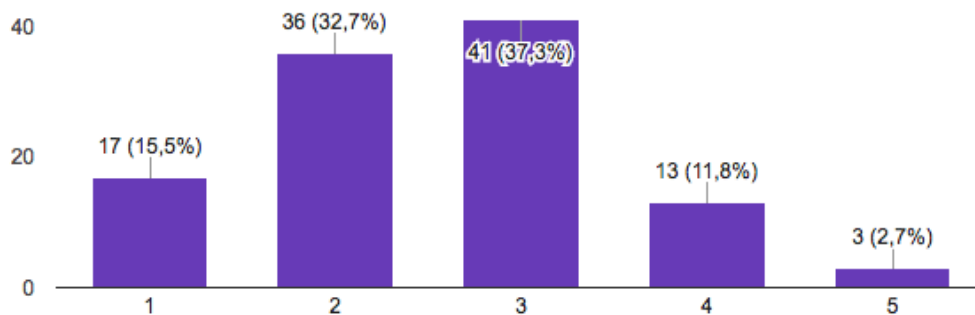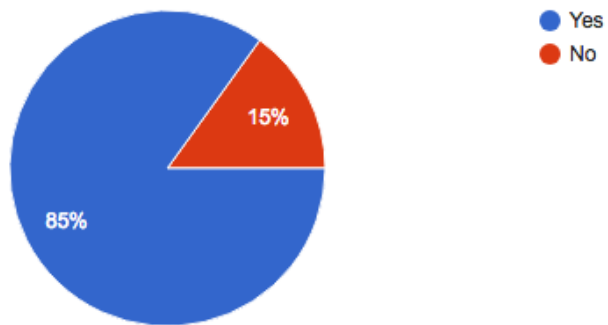

Mean: 2.5   Mode: 3   Standard Deviation: 1

Question 3: Would you like to spend more of your working time on new creative projects? (Scale from 1 to 5, where 1 stands for "Not at all" and 5 "Very much")
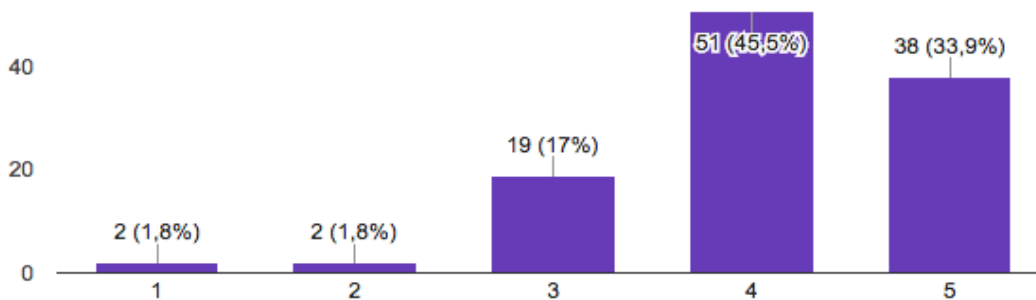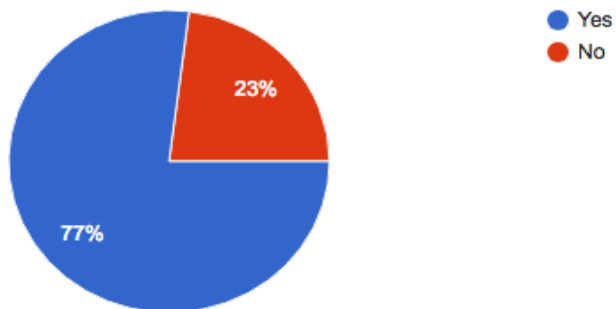

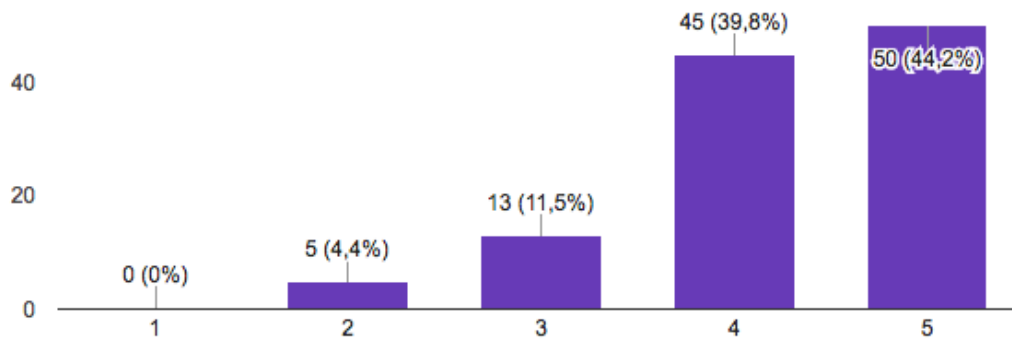Mean: 4.1   Mode: 4   Standard Deviation: 0.9

Question 4: Have you ever had an idea that you think would benefit the company?

Question 5: Have you ever shared an idea?

Question 6: Is it important for you that your ideas are heard? (Scale from 1 to 5, where 1 stands for "Not at all" and 5 "Very much")
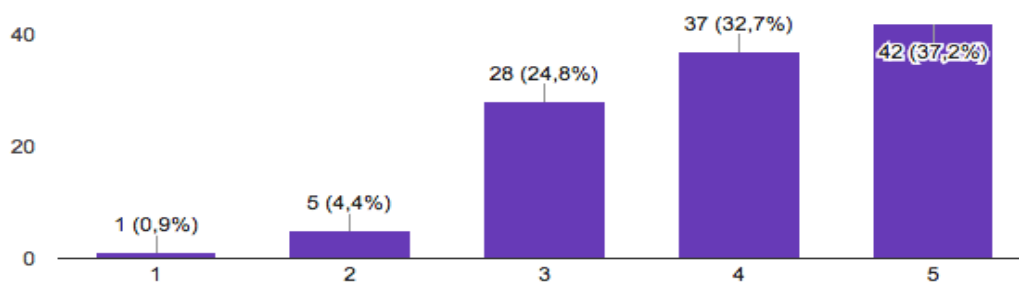

Mean: 4.3   Mode: 5   Standard Deviation:0.8

Question 7: Do you think the company should put more effort in educating employees about innovation and idea generation? (Scale from 1 to 5, where 1 stands for "Not at all" and 5 "Very much")
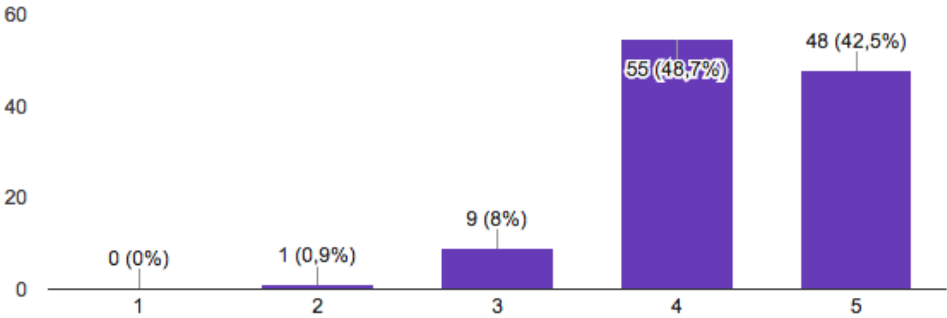

Mean: 4   Mode: 5   Standard Deviation: 0,9

Question 8: How much do you think you would benefit from your colleagues feedback on your ideas? (Scale from 1 to 5, where 1 stands for "Not at all" and 5 "Very much")
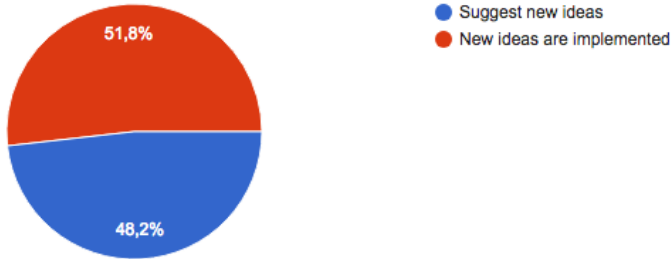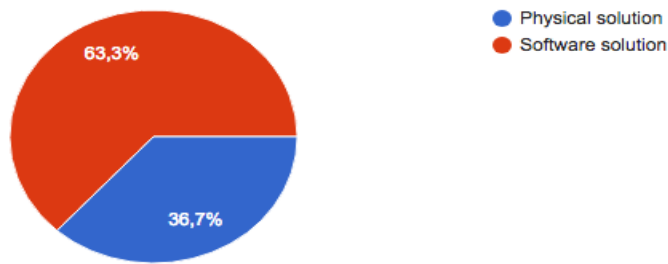

Mean: 4.4   Mode: 4   Standard Deviation: 0,5

Question 9: Do you think it is more important to be able to be able to suggest new ideas or that new ideas are implemented?

Question 10: How would you feel more comfortable sharing your ideas, through a physical or a software solution?

Question 11: Any additional thoughts or comments? Feel free to add any reccommendation on how to improve the actual idea generation system.

17 comments received:

1. At IT Ops we have far more ideas that can be implemented with current staffing. The problem is not generating new ideas, it's to pick them up, prioritize them and to be allowed to work with them.

2. I don´t understand question no 2, I suggest you should rephrase it. Also in question no 9 your combination is very strange. I think both of them are depending of each other. You can´t ask people to generate ideas and then not give the opportunity to implement a few. And you can´t implement new ideas if you are not open for new ideas. Sorry, maybe I didn´t understand the question properly. Good luck with you project. And keep on sending out questionnaires. :-) Oh b.t.w. My suggestion to you is to pilot test your questionnaires before you send them out. Just on a few people in the organisation, just to see if they understand your intentions and questions. :-)

3. - I think that there must be an diversity of possible ways to discuss and send in new ideas.

   - I also think that it might be beneficial to highlight topics and create group workshops on certain topics to collect input and innovative ideas around these topics (focus innovation & not solution!).

   - Even if I think that most people are drive by "inner motivation" I still think that, as a company, we should encourage employees by innovation "effect" bonus systems (as this indicates the importance of innovation and could give the innovators substantial pay-back on innovation). This also indicates that process/impoved system "efficiancy" innovations could be as important (or even more important) as "new product/new service" innovations.

4. I think is should be some kind of open voluntary process. And a iterative process with steps like "brainstorming -> idea -> review -> refinement -> review -> ..."

5. Allocate time for tinkering and prototyping.

6. Needs to be a very simple, easily accessible system for people to share their ideas

7. I think the company once more need to learn to listen to its employees. This has been a long tradition here, but the last 3 years this has changed. I can see a small change back again, but it needs to go longer. If the management is listening and implementing the ideas, this needs to be communicated better because now it is not obvious.

8. Very important from several aspects that employees feels that the company/managers consider employees crucial for the future of the company. Also that their ideas a dealt with in a serious way and that they get feedback.

9. #1 problem is that there is 0 chance of any idea that does not originate from MT to be worked on

10. The main thing missing is the ability to spend time (and report time) on innovation projects. Now, every single hour is allocated to production projects. It should be allowed and encouraged to spend time on innovation projects. We have a lot of ideas in our team (product hw development), but no time to test them, hence, most of them die quietly.

11. Cross team idea generation.

12. We as a company will surely benefit from being seen as a company that takes the employees ideas seriously. Both when it comes to attracting talent as well as retaining existing talent. The second last question to me a very strange question. Creating a tradition of generating and sharing new ideas will only become reality if some of those ideas are actually transformed into real solutions. Hence one is not possible without the other.

13. Both suggest and talk it through so all views are taken in consideration and a good answer why not, otherwise in the end people are gonna say why suggest if never implemented anyway. Some things need to be implemented to really see if success or not. Physical solution like brainstorm or fun event is the best, difficult sometimes to know who actually came up with the idea in the end, so considering that it is good with software solution.

14. Much analysis and improvement solutions have already been proposed around innovation and development (spanning Process, Tools, R&Rs, Deliverables), but prevailing company maturity /culture is a huge factor to whether such transformation ideas are given consideration, understood or supported into implementation. In 2 years of trying to initiate many aspects of innovation and transformation towards better practices, I have found that current innovation culture is driven almost entirely top-down and almost entirely focussed on tech/product innovation. Currently, there seems to be very limited opportunity to capture or

listen to ideas coming from others. Software solutions including Workfront, Aha! and Skipso have been proposed or trialled, but none have gained required level of engagement, understanding or support from decision makers so far.

15. Note that I have only worked here for two weeks.

16. Even though i feel it is more important to be able to suggest new ideas it is essential that at least some of the ideas are implemented. Otherwise people will stop suggesting even if it is possible.

17. Want to suggest new type of products but where to write?

Appendix III - Data from Interviews

We came up with a total of 7 aggregate dimensions, which are: 1) KEY FEATURES OF THE LAB 2) EXTERNAL PERCEPTION OF THE LAB 3) IMPACT OF THE LAB ON COMPANY 4) IMPACT OF THE LAB ON EMPLOYEES 5) THE LAB AS AN IDEA MANAGEMENT SYSTEM 6) LAB PERFORMANCE and 7) VISION OF THE LAB. We want now to show for each dimensions, what are the exemplary quotes that brought to the first and second order themes.

1) Aggregate dimension: KEY FEATURES OF THE LAB

Second order theme: Formalization

EXEMPLARY QUOTES	FIRST ORDER THEMES:
"...there is no structured way of how to gather ideas from employees"	No structured way to gather employee ideas
"There are thousands of good ideas but there is no way to capture them, and if you do not capture them you cannot work on them"	Huge capacity to generate, no way to capture ideas
"...it is not that structured but I know that most people here have many ideas and they are very passionate"	Processes in the lab are informal
"The approach is quite informal"	Head unilaterally makes ultimate decision
"So the process is a little bit unstructured but I am planning to make it more structured"	Good to formalize execution stage
"...It is not formalized, it is me making judgement only"	Would benefit from having a structured way to suggest ideas
"I think that formalization is important, at least a bit of structure"	Informal processes are beneficial for employees because they do not restrict creativity
"...would be good to formalize it a little bit at a very high level, such as execution"	Informal processes are positive
"We would really benefit from having a more structured way where you can share your ideas and someone picks them up"	Important to have a formalized communication path
"You could say that the benefit of having a more informal processes would be that the creative minds could run free without limitation"	Having formal processes increases expectations
"The process was quite informal and I would say that it was a positive experience"	Company would benefit from more formalized idea generation and selection

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EXEMPLARY QUOTES	FIRST ORDER THEMES:
"I think it is not about more resources it is more about formalize and making sure that we communication path but with that there is the additional expectation that we have the processes in place to capture ideas to bring them forward and evaluate them so we have a transparent system that could be viewed from outside" "The process was informal; there was a lot of ideas from people who joined this. We were good in follow up these meetings and we have realized a lot of good things and benefits after these meetings" "Overall the process is quite informal; I think that if the process of generation and selection would be more formalized, the company would benefit from that" "Processes are not formal. It was more trying out what could have worked more. I think it is not automatically better when it is formal, not at all" "I think it is important not being too restricted in the idea phase"	Formal is not automatically better It is important not to be restricted in the idea phase

Second order theme: Transparency

EXEMPLARY QUOTES	FIRST ORDER THEMES:
"Transparency as well is important especially when explaining to people why ideas are rejected" "I think it is fundamental to be transparent in everything we do" "I really like transparency, I am a big fan of open system. I think it is crucial" "I think on the current level of maturity, if we started communicating we will build expectations that we cannot live up to" "People are not very aware of what the lab is pursuing. We are transparent in the sense we are not hiding anything but we do not make noise either" "I think it is fundamental to be transparent in everything we do; not everyone knows what the lab does. Someone does not even know that the lab exists" "There is a lot of documentation but if no one reads it is not useful. I think the lab should be transparent" "I do not think it is clear that you can actually propose your ideas through the lab, what you can do and who to talk with"	Transparency is key for feedback It is fundamental that everything is transparent Transparency at this stage of maturity might raise expectations too much Employees are unaware of lab processes Not hiding anything but not making noise either Knowledge is inaccessible due to lack of transparency Lab has good intentions but needs more awareness

"I am not sure if that process is clear enough, so the visibility of what we have done in research and innovation it is not clear" "It should be very clear what should I do if I have ideas, who should I talk to, where should I go. I have put some stuff in the box but I am not sure what will happen now, where do we go next, what is the feedback, if I should continue or not" "The Innovation lab has good intentions, you are allowed to experiment but your normal day to day work gets in the way and it should be more visible that exists, explaining what they do and what is happening to the things people put in it there" "It is unclear who they are and what they do; transparency is the key"	

Second order theme: Cross-functionality

EXEMPLARY QUOTES	FIRST ORDER THEMES:
"It is not that cross-functional. I do not think it is at this stage required either"	Lab is not that cross-functional bit it also does not have to be
"...what we did from the beginning was actually remove all of the dependencies on the domain knowledge"	No dependency on domain knowledge
"...It should be more cross-functional, similar to Spotify"	Lab is cross-functional from a technical perspective
"I think from a technical perspective the lab is cross-functional, what we are missing out is the big picture of the market aspect"	Big picture of the market aspect is missing
"Within the lab, anyone can work with everything and everyone"	Lab definitely should be more cross-functional
"I would definitely bring people in the lab from different teams; from the business side it is not as straightforward in my perspective. You want to be aligned with the company's interest, you do not want to have just a playground and do stuff that costs money but you also need to create value there, you would not want to bring in too much opinions from the start of it, because it is the discovery face and you do not really know, you want to try to be fast and innovative"	Adding a business perspective and generally more opinions might impede the discovery phase
"I think it is important to integrate many different backgrounds and knowledge in a team"	Important to have a cross-functional team
"...It seems to be a lot of different people and I think it is good in terms of knowledge"	The lab is cross-functional in terms of knowledge

Second order theme: Network Connectivity

EXEMPLARY QUOTES	FIRST ORDER THEMES:
"The community I wanted it to be a little bit more alive, we documented what we did and sent weekly newsletters but that never worked out, unfortunately"	Head wanted lab community to be more active, failed to continuously document and send newsletters
"The tool sucks, is really bad and prevents you to do good stuff"	The tool is not good
"I think it is good to be part of the lab community but I think that Smart Cloud is not so smart. We could have more benefits if we had a better software tool"	Lab community is good but Smart Cloud is not so smart
"I am a member of the lab community but there are many aspects that should be improved"	A better software tool would be beneficial
"It is good to be part of the lab community but information should be communicated on a continuous basis to people, we really struggle on doing it"	Many aspects of the lab community could be improved
"Moreover, there is Smart Cloud which is not a good tool; it is very hard to make something appealing through that"	Lab community is good but information should be continuously communicated
"The company needs better software tools"	Community could be a central place for finding and sharing information as well as providing feedback
"I think it could be helpful to be part of the lab community. The lab could be a central place both to find and share information about what projects are in the pipeline and similar things. You need the feedback"	

Second order theme: Organizational Learning

EXEMPLARY QUOTES	FIRST ORDER THEMES:
"I think we should have more workshops and similar sessions"	Should have more workshops and similar sessions
"On the hackatons we have put people together from different part of the organization"	Hackatons bring participants from across the organization
"...there is an alignment both from employees side and management side that we need to structure our internal learning is better"	Management and employees agree that internal learning should be structured better
"I would like to take that one step further adding some gamification to it, having experience points level both for the tutors and for the students in that sense so that we really emphasise the importance of continuous learning"	Hackatons can be used both internally and externally
"We wanted to do hackatons both internally and externally"	It is important to educate people about how to use and generate

EXEMPLARY QUOTES	FIRST ORDER THEMES:
	ideas
"I think it should be important to educate more people about how to use and generate ideas. If people would understand how easy is to share ideas, they would be much more involved in the lab and they will use it more"	Understanding of processes would increase involvement
"In the lab there were some workshop and discussion, basically brainstorming to sort out which ideas were best for the company"	The lab engages in workshops and brainstorming discussions
"I think that it is very easy to think in your own personal sphere, what you actually do and your existing knowledge, you often stay there and you do not get out of the box, out into the unknown. Only then you can find new stuff to do and for me it is really awesome and fun do these kind of things but a lot of people stay in their box and they do not get out"	The lab helps employees gain new knowledge and to think outside the box
	A lot to learn from lab workshops
"Here we have had a couple of workshops I have participated in. I think there is a lot to learn. However, one or two hours is too little for innovation workshops and It should be a continuous process where every month for example have meetings with people showing what happen to ideas"	Workshops are too short and should be employed continuously
	Hackatons allow employees to experiment
"We also have hackatons internally where interested people experiment during their working hours, usually one or two hours"	

2) Aggregate dimension: EXTERNAL PERCEPTION OF THE LAB

Second order theme: Managerial Support

EXEMPLARY QUOTES	FIRST ORDER THEMES:
"...management team thinks that innovation comes from above"	Management see innovation as a top-down process
"It is very hard for someone outside management team to put something into the product programme"	Very hard for people outside management to contribute to the product program
"I do not know what the next step is because we have new management again, we are recruiting and do not know what will happen with the lab"	Uncertainty for lab due to change of management
"This is the biggest contrast with the other teams that receive order from the top"	Management does not appreciate the lab enough
"It is not appreciated enough especially by the management team"	Ambition of the new management team can be questioned
"I do not know how much ambitious is the new management team"	
"I know that the non-technical guys, like managers, are interested in getting money but I think the last year it has been too much focus on cost-down and making money. Sugar on top is great but is	Over the last year management has put too much focus on decreasing costs and making

	money
not making money that makes good products and gives value to the customers"	
	Making money does not ensure good products and value for customers
"In a management perspective, they want to expand the lab to a greater extent"	
	Some in management want to expand the lab

Second order theme: Employees Perception

EXEMPLARY QUOTES	FIRST ORDER THEMES:
"They think it is my little playground where I can play around and have fun"	Employees see the lab as a playground
"People not engaged in the lab usually do not know anything about the lab but I do not think it is a negative view of the lab"	Uninvolved employees do not have a negative opinion about the lab
"People in general here see the lab as a playground, while others really like it, think it is very cool and would like to participate in some projects"	Generally, uninvolved employees do not know about the lab
"People do not really understand what the lab is, if it is a service or a location"	Some employees who know about it think the lab is very cool and want to be involved
"Most of people do not know about the existence of the lab; the ones who know the lab do not have a clear picture of it"	

3) Aggregate dimension: IMPACT OF THE LAB ON COMPANY

Second order theme: Current state of the company

EXEMPLARY QUOTES	FIRST ORDER THEMES:
"We are a kind of a traditional company, often they are not fast moving"	The company is traditional and slow-moving
"We run the risk of just doing incremental +1 innovation, which is basically what we do to be honest"	Company is taking a risk by being too incremental
"At this company it takes a while for develop an idea"	Takes a while to develop an idea in the company
"We want to be more radical but the barrier is quite low here; the company does a lot of good stuff but from a smart home perspective they do not have that much"	The company does a lot of good things but should focus more on smart home

Second order theme: Contrast with the rest of the company

EXEMPLARY QUOTES	FIRST ORDER THEMES:
"Comparing to the other teams, we do not think we have the answers, we just use a scientific approach to finding out which is the best solution"	In the lab they do not assume to have all the answers but use a scientific approach to find the best solution
"We are open minded, curious and we want to see what the best options are and in order to do so we play with many options. We think that you have to have many options to find out which is the best one"	The lab team is open minded, curious and experiment with many options in order to find the best one
"The lab is built around what we already have; so with that it kind of does not get all that radical, so we would not invent the space rocket in the lab"	The lab is not radical because it is aligned with the company
"In this company there is a really rigid environment, it is good to have a sandbox like the lab. I think the lab is very important since we need more innovation and that requires trials"	The company is really rigid while the lab is a sandbox
	Lab is important because innovation requires trials
"I think it is important just not sit and implement the whole day, also to make people stay in the company and you should have some career opportunities in the company not only managerial but also technology career"	Company offers managerial career opportunities while the lab offers technology career opportunities
"The lab is innovation while the rest of the company is implementation"	The lab is innovation while the rest of the company is implementation
"The contrast between the lab and the company is pretty huge. The biggest thing is that we should be faster in trying out ideas. I work on a software where I can integrate new features very fast, and that is incredibly beneficial, at least we have the tools to integrate whatever we want instantly"	Huge contrast between lab and the rest of the company
	The biggest difference is that the lab is faster in trying out ideas
"In the lab there is room for more "out of the box" ideas. In the company there is small room for crazy ideas"	Little room for crazy ideas in the company while in the lab there is space
"The lab is a place where you can play around, it is a sandbox and the company is more structured, you need to do things budgeted and respect deadlines"	You can play around in the lab while the company is structured in terms of budgets and deadlines
"The company mainly pursue incremental innovation but the innovation lab was different. You could explore other trucks as well but you need time to work on it and few people had time to do so"	Can explore more innovative ideas in the lab but need even more time

Second order theme: Lab effect on company

EXEMPLARY QUOTES	FIRST ORDER THEMES:
"R&D and closest managers like the lab but I do not think it has got any impact on higher management"	Some managers like R&D like the lab but otherwise no impact on higher management
"I think the lab is crucial to stimulate innovation and create the right entrepreneurial climate within the organization"	The lab is crucial for stimulating innovation and creating the right entrepreneurial climate within the organization
"I think we can benefit from it as a company, especially if those ideas can be aligned with the current roadmap"	If lab ideas are aligned with the current roadmap they can be beneficial
"I think that working for such a company, regardless of where you are, is something that you feel strength and more secure. The benefit does not have to be only tangible but also something that would increase the satisfaction of our employees in a much broader perspective"	The lab improves the company image
"We got a lot of good ideas and good engagement; we wanted to create something that people would wanted to work with, something that people really like it and are passionate about that"	The lab increase employee satisfaction in intangible ways
"It is fun to do radical innovation, but it is important from a business perspective to learn and improve your own product with that, applying it in a different environment"	The lab gets a lot of good ideas and engagement
	Doing radical innovation is fun but it is important to learn and improve own products by applying them in different environments

4) Aggregate Dimension: IMPACT OF THE LAB ON EMPLOYEES

Second order theme: Reasons to engage with the lab

EXEMPLARY QUOTES	FIRST ORDER THEMES:
"…those employees were interested in actually prototyping something, they were more like 'makers' within the company"	Lab is for the 'makers' of the company who want to prototype
"Many people in the company have a lot of experience and have ideas. As a result, they want to have time to work on it and be able to work in a modern way"	Lab offers opportunity to work on ideas in a modern way
"With the lab engineers have fun and the chances of the bigger ideas gaining attraction is bigger in the lab, because it is so visual"	Engineers have fun in the lab
"What we really want is that whenever an employee has an idea, he	Bigger ideas get more traction in the lab because it is visual

comes to us and share it with us so we can brainstorm, do some research and work on it"	When an employee has an idea they can go, share it, brainstorm with help, research and work on it

Second order theme: Lab and war for talent

EXEMPLARY QUOTES	FIRST ORDER THEMES:
"If I could not do it here, I would go and do it somewhere else"	If employees do not have an opportunity to work on their own ideas they might leave
"Unfortunately a lot of people working on the lab have quit"	
"Maybe I would have stayed a little bit longer if I got more involved in the lab"	A lot of people working in the lab have quit
	Working with the lab is a reason to stay in the company

Second order theme: Competence Building

EXEMPLARY QUOTES	FIRST ORDER THEMES:
"Absolutely, they think engagement with the lab is fantastic"	Engagement with the lab is fantastic
"...for the workshops we bring in cross competence from all the company"	Workshops bring competence from across the company
"I see the lab as an enabler for them, showing the correct approach to facing and solve problems. Ideally you do not need a lab since every team is a lab, but since they are not I can teach and share how things need to be done"	Employees are much more motivated to work in the lab rather than execute others' orders
"Of course the lab offers many opportunities to learn"	The lab is an enabler for employees
"I think that working in the lab gives you the opportunity to try different technologies and that environment really opens your mind"	In the lab you can learn the correct approach to facing and solving problems
"I think the lab stimulates innovation because you can test so many different and innovative things and you have the opportunity to discuss with different experts in the teams"	Ideally, every team would be a lab
"I think it is great that employees get the opportunity to work for the lab"	The lab offers many learning opportunities
"The lab offers a lot of learning opportunities. When you have such a big company you tend to have a lot of technologies as well so there are huge learning opportunities"	The lab offers the opportunity to try different technologies and that environment is mind-opening
"The lab stimulates innovation since we have a lot of freedom, but sometimes it is also stressful and not very much creative"	The lab stimulates innovation because it allows testing of different innovative things and

	the opportunity to discuss with different experts in the teams
"If you work on the same problems and stuff day and day out you tend to get stuck in your wheel. People need to think outside the box and work with different stuff"	
	Sometimes working in the lab is stressful and not so creative
"Through the lab you can get more insights useful for your domain that you maybe have never noticed or realized before. Insights from a technology can give you insights on how to solve a problem in another context"	Through the lab you can get more insights useful for your domain that you maybe have never noticed or realized before
"Being creative does not have to be technical either but just only having fun with your colleagues is very important so there are multiple benefits"	Insights from technology can give you insights on how to solve a problem in another context
"I really think that the lab stimulates innovation"	Having fun with colleagues is very important
"We have a lot of features that we can easily access thanks to the lab and I think it has been very easy to just do things"	The lab stimulates innovation
"I think that engagement with the lab offers a lot of learning opportunities. When an idea is shared or implemented in a group, people certainly learn something; this means that next time an idea comes up, they will be much more experienced to deal with it and processes become faster"	The lab offers easy to use tools
	Sharing or implementing an idea in a group is beneficial because next time an idea comes up, employees will be much more experienced to deal with it and processes become faster
"I have learned a lot of good and new stuff when I was working in the lab"	

Second order theme: Motivation

EXEMPLARY QUOTES	FIRST ORDER THEMES:
"I like to build new stuff together with others and working on something new"	Employees like to build new stuff together
"I think employees would be much more happy and motivated, instead of executing random stuff that someone else decided which they do not believe in, that is sometimes the case here"	Employees like to work on the new frontier of technology, new user experiences and business
"I really like to work on the new frontier of technology, new user experiences and business"	Employees need to work on new project and innovation to be motivated
"I really need to work on new projects and innovation stuff to be motivated"	Employees are happy when systems are well-functioning and self-governed
"I think is crucial to have time to work on innovative projects"	
"My job is to build an efficient organization, so the most satisfaction I get is actually when I am not needed, which means that the organization is working and I know that problems are	Employees are motivated by having the opportunity to improve their skills and discover

resolved and decisions are made that used to involve me and now they have the foundation to run them selves"	new things
	Having time to work on innovative projects is motivating
I like to do a lot of stuff, a vast array of different stuff and that is huge for me, both for the technical level and at the same time more idea generation, architecting stuff, talking to people, etc"	Being creative at work brings satisfaction to employees
"What motivates me is to improve my skills and discover new things"	Employees like working on ideas regardless if they are theirs or someone else's
"It is very important to have time to work on innovative projects because the innovation part is very important for me and I feel much more motivated"	Employees of the company are intrinsically motivated
"I think that being creative is the part that brings me to the most satisfaction at work. The creating part, when you make something out of an idea, regardless if it is my idea or an existing idea, it is the most stimulating and important thing for me"	The biggest satisfaction is identifying a really great idea
"I think in general intrinsic motivation is the most driving force for employees working here, me included"	It is hard to find a huge, breakthrough idea but still motivating to try
"I am very happy when I have the opportunity to develop my ideas. The biggest satisfaction would be identifying a really great idea. I have some ideas, some are better than others but I do not think I found the huge and breakthrough idea because it is hard. A part from that, I think it is good to create something that is working and with the lab you can do it quite fast. Many people are interested in new innovative projects such as smart home"	There is no point if ideas do not ultimately reach customers
	Some people are only motivated by money
"The best scenario for me would be identify the next big idea, develop it with a team and release it to our customers, if not there is no point. That is what motivates me most"	Some employees are motivated by credits, recognition and honor rewards
"I think it is cool to do new awesome stuff"	Monetary rewards can be counter-productive
"There are some people motivated only by money, you have to pay them to actually to stuff, then we have those who like doing stuff because it is fun and then we have those who are motivated by credits, recognition and honour rewards"	
"I think that employees in general love innovative projects and they really enthusiastic about them"	
"When you have a pride of what you did, when you create something that you can touch and other people have bought it. For me this is the driving force"	
"If I am allowed to experiment something new and to express myself then I feel good about myself"	
"When I have time and I know that I can spend half a day doing something that I really like or improve things, experiment things and share my ideas then I really like my job"	

"By the way I think that some people are motivated by money and bonus percentage, but it is not my case. I have seen people working on this just for extra money and they just wrote random things without a proper research behind it to get the money and they have spent little to no time on the idea" "I like innovation, to find new stuff, the best thing is the learning stuff and the idea of the lab is in line with that"	

Second order theme: Incentives

EXEMPLARY QUOTES	FIRST ORDER THEMES:
"Financial incentives for patents and new technologies are good, but I believe more on freedom to work on personal ideas, appreciation of the work, for example when you get the credits for having a good idea and recognition" "I do not think that financial rewards are effective; I think that non-financial rewards are easier to manage and lead to more motivation" "There are no incentives for working in the lab, actually it is more a benefit being allowed to work there" "We do not have incentives for working in the lab. I think it is important because incentives lower the barriers for people to join. If people attend a conference where everyone is invited for beer and pizza; the barrier becomes so much lower because even if you go there and you find the talk was not interesting for you, at least you get something out of it. Moreover, people socialize, which is very important. I think that working with the lab would be incentive enough" "I do not think you should have some kind of monetary rewards, the lab itself should be the incentive, working on a fun and creative environment" "I think it is possible to benefit from some incentives in the lab, however I think that the most important aspect is allowing people that have good ideas to bring them forward and find the most efficient way to make use of those ideas; this is much more important than rewarding" "I do not think that incentives and rewards are the ways to go. When people develop patents, maybe there should be some financial rewards"	Financial incentives are good for patents Freedom to work on personal ideas, appreciation and recognition are good incentives There are no incentives to work in the lab Working in the lab is incentive enough Important to have small incentives such as beer and pizza because they lower the barriers of entry

5) Aggregate Dimension: THE LAB AS AN IDEA MANAGEMENT SYSTEM

Second order theme: Idea generation

EXEMPLARY QUOTES	FIRST ORDER THEMES:
"If someone has a good idea usually he can have free time to make it more concrete"	If anyone has an idea they are interested in and want to develop they can sign up to the lab and will be provided with the tools
"If you have an idea that you are interested and you want to build and integrate to the [Case Company] system, here is your chance, sign up here and I will provide you with tools"	
"The ideation part has nothing to do with the lab, we should be able to gather ideas from anyone, regardless of the lab"	Ideation is not lab-specific, should be able to gather ideas from anyone
"...first part is to just bringing on the great ideas from the R&D teams"	First step is bringing all great ideas from the R&D teams
"The practice of generating ideas in the lab is still on experimental level, we do not really have clear processes to capture and move them forward"	The practice of generating ideas in the lab is still on an experimental level
"We have different workshops to get a lot of ideas and discuss them in-group and where you can share your ideas there. So I have to say that ideas come not from management but bottom-up"	Lab workshops are an opportunity to share and discuss new ideas
"Most of the ideas from projects we worked on come from our team leader"	Lab ideas come not from management but bottom-up
"We have started bringing people from other teams, the aim was to boost the community of the innovation lab and try to organize everything so that everybody could share ideas not in line with core but something to do with the company system"	Most of the ideas come from the team leader
	Selectively bringing people in to share their ideas
"When I started there was a mail address where you could send your great ideas but I never get any feedback even though someone was reading this mailbox and that was not good and in fact I stopped after having submitted few ideas; so I started to talk face to face with my boss whenever I had ideas but that was not formal at all"	No awareness of processes once an idea is submitted
	It is important for people to have a way to communicate their ideas
"I think that is very important for people working here to have a way to communicate their ideas"	
"If you have an idea to share you do not know what will happen later on"	

Second order theme: Idea evaluation

EXEMPLARY QUOTES	FIRST ORDER THEMES:
"If it is something that is too far-fetched I do not think this will ever make it into our product roadmap"	Far-fetched ideas would never make it into the product roadmap
"If someone is very passionate about it then they can initially start working on it by themselves, but the ones I pick have to be in the context of the core business"	If people are passionate about an idea outside the core they can still work on it but it probably will not be implemented
"Even though I would like to work on radical ideas, I am trying to stay away from them"	Employees would like to work on radical ideas but try to stay away from them due to implementation issues
"If someone comes up with a crazy and really radical, I think it would be hard to execute"	
"We are trying to find something that is within our current strategy, because we are not innovating in any other vectors than products actually"	Company does not innovate in any vectors other that products
"...innovation should only be something specific and related to the product, unfortunately"	Too much focus on core securities now that the previous CEO left
"...we have a lot of innovative people, but they are stuck in executing existing projects and they do not have time to participate in these activities"	Unstructured selection process, employees need to approach and convince management on a case-by-case basis
"When he left we took a turn to core securities and started to ignore what is happening in the world"	There is a risk of the company missing out on great ideas due to a random selection process
"The idea selection process is unprocessed; it is more up to employees that have to approach and convince the senior management"	Sometimes during sessions, ideas are presented and collectively evaluated and voted on
"This is the risk of the company missing out on great ideas that never get captured due to the selection being kind of random in terms of management approach. So, I think there is only downsides to it, you also miss out on the sense of accomplishment and recognition for the employees"	Ideas in line with the core business are prioritized
"We had a session where we have presented a lot of ideas and then we had both a voting and evaluation process. We try to capture ideas and make their descriptions more clear and defined"	
"Depending on what you do, there is a process and I check what is viable and durable and when capture what is feasible then the idea can evolve"	
"If those ideas were in line with the core business they were	

prioritized"	
"...it is a matter of prioritization"	

Second order theme: Idea development

EXEMPLARY QUOTES	FIRST ORDER THEMES:
"That part of prototyping and experimenting I think it is vital, that is why I have been always focusing on"	It is vital to prototype and experiment
"We have tons of ideas. The ideas are not the problem, the problem is how to filter them and validate them, and I think that is where the prototyping comes to play"	Prototyping helps with filtering and validating ideas
"I am convinced that through prototyping the company is able to make better products"	Prototyping is the mean not the goal
"I see prototype as a mean and not as the goal"	Prototyping helps the company make better products
"Prototyping is crucial, you can use it both from an ideation perspective, in terms of playing around and see what you can achieve, but you can also use it to verify your assumptions and business case"	You can use prototyping to both play around and to verify your assumptions
"What you could do is hand it out to customers and see how they act upon it, and with that actually you have reliable data from a small portion of the customer base that hopefully can represent the rest and with that you will be much more confident in your business case if you move forward"	Prototypes can be handed out to customers in order to gather reliable and representative data from a small portion of the customer base
"I think that prototyping is very important; it is good not to define so much the outcomes and the profitability part of the ideas before prototyping, because I guess that through prototyping a lot of things change"	If you do not do the basic research before, it does not make sense to prototype
"I think it is a major importance prototyping, especially when developing ideas. Getting something into your hand gives you an experience"	Being overly theoretical in the beginning can lead to missing out in the experimentation process
"We have to figure out how an idea is going to work before we actually build something; you are more theoretical about it, but since you are not building it you are missing stuff that you figure out when you eventually build it"	
"I think that prototyping can play a very big role in the future; it is crucial, because you can show that an idea is useful and you have a proof. With just an idea you can just guess. If you can actually show someone that an idea works, than that can be the trigger"	
"Prototyping is great and it is what the lab is doing; I think that management thinks that it is great too"	
"You start with some kind of idea, then you have to figure out what	

is feasible and then you have to prepare a prototype. So prototyping is very important, but there is a lot to do before you get to that part. Prototyping is fun, but then you forget that if you do not do the basic research it does not make any sense to prototype" "I think that lab is trying to do experiments that hopefully come out with a product so I think this is what they do"	

6) Aggregate Dimension: LAB PERFORMANCE

Second order theme: Goals

EXEMPLARY QUOTES	FIRST ORDER THEMES:
"I did not have to deliver results"	No requirement to deliver results
"You need to have a good balance of freedom on what to work with and at the same time expectations on delivery results so you do not get too much freedom"	Important to have a good balance between freedom and expectations on delivery results
"Given the benefits I would see from the lab, our kpi is how many proofs of concepts we create"	The KPI is how many proofs of concepts are created

Second order theme: Projects

EXEMPLARY QUOTES	FIRST ORDER THEMES:
"We have done a few concept studies that gained attraction but we still need to work on embedding it in our formal projects and innovation processes, so that would be the next step"	The lab has done a few concepts studies that gained traction but are yet to embed them in formal projects and innovation processes
"I think it is too early to say that projects were successful because it takes a lot of time to complete projects and the lab is quite recent"	Too early to judge since completing project takes time and the lab is recent
"They are not as successful as they can be to stimulate the innovation culture. In the lab they are doing what they formally can and I think they are doing a great job given the circumstances"	The lab is doing a great job given the circumstance but could be better at stimulating innovation
"There are a lot of ideas we would like to implement for the company and this requires a lot of time. The projects we have done have been partially successful, especially the voice stuff"	Projects have been partially successful, especially the voice project
"However, since we are a small group and we do not have much time, we cannot deal with all employees' ideas"	The lab team is restricted by both time and resources

7) Aggregate Dimension: VISION OF THE LAB

Second order theme: Lab Purpose

EXEMPLARY QUOTES	FIRST ORDER THEMES:
"...the purpose of the lab is to improve how we work with Innovation" "The main purpose would be to increase the pace at which we can prototype and test our ideas with real customers. There is also the employer branding aspect of it in terms of working with maker spaces universities and experimenting on our platform" "I think the purpose of the lab is to get innovation and to get people, not only top management but also developers involved in innovation and to get their ideas up" "...what the lab offers is an accelerator to the experimental type of work, creating connection with the great minds" "...the main focus initially was to get some speed in the innovation process" "Right now, I would say, we are focused more on realizing ideas" "We want to create a place where employees have the opportunity to show their creative talent and at the same time they get a better view of the company and they are happier when they come here" "I guess the purpose of the lab is that if we have an idea we could easily make some proof of concepts of that idea without having to build a lot of complex API" "The purpose is to engage employees and not only bring up new great ideas but also that employees feel more involved" "I think the lab is working for the purpose that they can prototype stuff there"	The purpose of the lab is to improve how the entire company works with innovation The main purpose is to increase the pace at which the company can prototype and test ideas with real customers The purpose is to get everyone in the company, not only management, involved with innovation The lab is mostly focused on realizing ideas The purpose is to create a place where employees have the opportunity to show their creative talent and at the same time get a better view of the company and be generally happier at the workplace

Second order theme: Advice

EXEMPLARY QUOTES	FIRST ORDER THEMES:
"We should have more rotating people so they can work with lab activities"	The lab should introduce rotation so that more employees can be involved with it
"Sharing knowledge and seeing how others contribute in innovation should be part of the Innovation community"	Sharing knowledge and seeing how others contribute in innovation should be part of the Innovation community
"I feel like where we are sitting should be more creative and people should be allowed to explore more and to have more Google time. Being creative keeps them awake"	Employees should have more 'Google' time to work on their own ideas
"It should be easier for people to engage in the lab"	The lab should be more transparent and try to promote itself and more engage people with videos, demos etc.
"I think we should let people know what we are doing, engage more people with videos, demos, whatever. If they are aware of it they can also be a part of it"	
"I think that people should more aware of the lab and they should know how easy it is to share their ideas"	The lab should not be only a playground for ideas, but a tool that gives people experience and it should serve to share an innovation culture
"The lab should not be only a playground for ideas, but a tool that give people experience and it should serve to share an innovation culture"	There is a need for people involved in the lab to share more knowledge and market insights
"I think that people that want to work with the lab should be able to do that, no matter how many days or hours per week"	
"We should promote the lab a little bit more in the company to make people understand that they can actually do something"	
"There is a need for people involved in the lab to share knowledge and market insights more"	
"More employees should be engaged in the lab"	
"I think a lot of work can be done there to make it better; dedicated time for some real work on the lab is a good starting point. Maybe gather some kind of team, creating small teams that is important and also the management think it is important"	

Second order theme: Lab Potential

EXEMPLARY QUOTES	FIRST ORDER THEMES:
"I think we have the opportunity to be disruptive in all these areas and this is amazing. We have the opportunity to do so, we are in the perfect spot in the market, we have all the internal skills"	The company is in the perfect spot in the market, has all the internal capabilities, data and the opportunity to be disruptive in all areas
"...we are in a good position, we are the largest network of connected homes in Europe, we have a lot of data from customers"	There is potential for integration in the system so that a sandbox environment is created where coders around the world could integrate whatever they like in the system
"I see the potential of integration in our system where we have a sandbox environment where coders around the world could integrate whatever they like in our system"	
"If the lab was expanded it would get the most talented workers and the company would be more innovative"	If the lab was expanded it would get the most talented workers and the company would be more innovative
"In the lab there is a big chance to capture the greatest ideas and gain the attention from senior management"	In the lab there is a big chance to capture the greatest ideas and gain the attention of senior management
"I think there is a shift happening, although slowly towards understanding how important internal ideation is important to balance the customer insights and if you cross feed them, you can have the engineers validating and finding solutions to the customer insights as well as having the engineers playing with technologies feeding into what do we ask our customers are they interesting in. If we can marry them, that would be great"	There is huge potential for cross feeding internal ideation and customer insights
"The company would absolutely benefit if the lab was expanded and given more attention"	The company would benefit if the lab had more attention and if its purpose was clear to every employee because innovating represents a benefit for the company but also a benefit for the staff that would be more stimulated to be innovative and creative at work
"I think that if the lab was expanded there will be much more opportunities of integrating innovations, that could potentially serve our customers or our employees"	
"If we now focus on integration with our partners, there are huge opportunities with the Innovation lab especially for employment and engagement"	
"I think the company would benefit if the lab had more attention and if its purpose was clear to every employee because innovating represents a benefit for the company but also a benefit for the staff that would be more stimulated to be innovative and creative at work"	
"I think the company would benefit if the lab was expanded"	