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**THE ROLE OF MARKETING COMMUNICATIONS IN AN INNOVATION  
COMMERCIALIZATION PROCESS OF A START-UP COMPANY**

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<p>This study was undertaken as a master's thesis in marketing in the spring of 2016. The aim of the study is to investigate the role of marketing communications in the innovation commercialization process in start-up companies and offer guidelines for start-up companies on utilizing marketing communications tools in the commercialization of innovative products. The reason for choosing this particular topic is that start-ups have a major role in creating innovations, but they may have trouble with commercializing them. We believe that marketing communications have the potential to enhance the possibilities of a company to success in their commercialization process.</p> <p>This research is a qualitative case study of four start-ups that have discovered some form of new technological innovation and utilize it in their product. The primary data is collected using semi-structured interviews and puzzle exercise.</p> <p>The theoretical part of the study is divided for three sections. The first theme contains topics of innovation, innovation strategy, product development and innovation commercialization process. The second theme is going through theory of marketing communications. The third section is theoretical framework which is built to combine theories regarding the innovation commercialization process and marketing communications. The theoretical framework is the basis which our research is built upon. The empirical part of our thesis comprises an analysis of our research data which is presented in a thematic order that follows order of our theoretical framework. In the chapter, we draw comparisons between theory and empirical data.</p> <p>As a conclusion, we have formulated a start-up verified framework that is based on our theoretical framework, but altered to meet the commercialization process of a start-up company. The start-up-verified framework is applied in answering the research questions. As the main result we found out that the role of marketing communications is essential throughout the innovation commercialization process even though its importance and purpose fluctuates between different stages of the process. During the process of commercialization, the role of marketing communications evolves from preparing activities into implementation of actions.</p> <p>This thesis contributes to the previous studies on commercialization process, as there are no studies made on within this specific start-up context combining commercialization and marketing communications. From a theoretical standpoint the results of this study highlight the iterative nature of the phases of commercialization process. As a managerial implication, our start-up verified framework serves outlines for discussion about marketing communications and how it could be connected to their commercialization process. Limitations of this thesis concern relatively small sample size of empirical data, which leads us to believe that our research does not reach a degree of validity that would be suitable for making generalizations. We also knowingly ignore whatever happens after the last stage of commercialization process, so we do not argue how a start-up company would continue to develop if we knew that the commercialization process had been carried out successfully.</p>			
Keywords entrepreneurship, marketing channels, start-up verified framework			
Additional information			

## **1 INTRODUCTION**

This study was undertaken as a master's thesis in marketing in the spring of 2016. The aim of the study is to investigate the role of marketing communications in the innovation commercialization process in start-up companies. The inspiration for research came from an IT start-up company in 2015 which was at the time facing challenges in commercializing their product due to lack of experience in marketing. The goal of the study is to offer guidelines for start-up companies on utilizing marketing communications tools in the commercialization process of innovative products.

The introduction chapter presents the existing background for the topic of research, the study's purpose, arguments for its importance, and the research questions relevant to this study. Following that, we will discuss the chosen research methods, key concepts and the structure of the study.

### **1.1 Research background**

The significance of entrepreneurship and business growth to commercial broadcasting and the process of innovation is clearly reflected in current media coverage and research. This view supports the idea that there is an observable gradually on-going structural change taking place in economic and industrial activity. The trend is that certain patterns of change have begun to transfer from larger to smaller companies. It is strategically important for an economic boom to coincide with suitable conditions for the emergence of start-up companies that manage to obtain leadership positions in the international market. This is especially important for countries such as Finland where the size of the domestic market is certainly limited and possible growth is sought through the international market. (Sipola 2015:17.)

The start-up boom and increase in entrepreneurial focus began to emerge in Finland after the turn of the millennium. The success of Angry Birds and Supercell have worked as role models for start-up companies. The trend has affected universities and polytechnic schools, and various forms of start-up and entrepreneurial activity have



found their place within the start-up community. Idea pitching events, business plan competitions and other start-up business related events and programs have become more common. (Sipola 2015: 135.)

Finland is one of the top countries known for innovation. Finland has several strengths in both existing innovation systems and further research and development. Companies in the private sector have especially expressed themselves in terms of supporting innovative research and development. Even though most innovations come from the industry and public sector, start-up companies today form considerable source for novel innovations. (Tilastokeskus 2012.) However, start-up companies can rarely act entirely independently, as sometimes the success of an innovation may require coordinated actions from several proponents, such as 'business angels' for financing, consultants to advise with regulations and standards, etc. (Herdman et al. 1995: 26). Even though Finland is considered to be one of the most innovative countries in the world, there are not as many high-growth firms and international success stories as one might expect. (Sipola 2015: 21.)

Even if corporations make great innovations, they cannot carry them over into the consumer market without a proper commercialization process. Commercialization is how a company seeks to profit from an innovation that is refined into products, processes, or services used or sold in the market. (Herdman et al. 1999: 22.) Finland and Scandinavia are the top countries in successfully commercializing new innovations because of their highly educated workforce and a wide range of know-how. As the gross amount of commercialized products, processes and services is difficult to calculate, there is no exact number that can be given. The numbers on successful processes of commercialization can be measured for example through patents which give a directional estimate of how many innovations have been commercialized. (Tilastokeskus 2012.)

## **1.2 Importance of research topic**

In the current era that is dominated by information technology, start-up companies are considerable competitors in the field of innovation. Start-ups are often seen as a source for new innovations because they are assumed to be more innovative than

more established firms. (Criscuolo et al. 2012). Criscuolo et al. (2012) have found that start-ups differ from established companies in their innovation activities, as start-ups have a higher probability to generate product innovations than established companies. However, even though start-ups are praised for their success in innovation, the commercialization process has a vital role in testifying to the potential benefits. The process is complex and requires a variety of know-how, which is why start-ups may face challenges in implementing their strengths in a successful way (Kajanus et al. 2011). A good evidence for the existence of such challenges is the fact that only one in three thousand innovations are successfully commercialized (Stevens & Burley 1997). Problems in the commercialization process are often related to the companies' strategic zone of commercialization, market creation and sales creation (Aarikka-Stenroos & Lehtimäki 2014).

Traditionally, marketing is seen as a mix or combination of the 4P's: product, price, place and promotion. In this thesis, we concentrate on the role of marketing communications, which refers to the promotion of the 4P's. According to Vuokko (2003: 11), companies are always communicating, regardless of whether they do it on purpose or not. Product, place and price are all signals sent to the communications receiver, but marketing communications or promotion refers to communication that is done intentionally with predetermined goals, such as to arouse interest or the urge to purchase the product, to build a positive image about the company or to maintain a relationship with stakeholders (Bergström & Leppänen 2015: 302). We chose to concentrate on marketing communications because we want to figure out how start-up companies could better reach out to their potential customers and other stakeholders. As the challenges in the commercialization process of a new innovation often relate to market creation and sales, we believe that marketing communications have a crucial role in the commercialization process itself. We believe that marketing communications have the potential to enhance the possibilities of a company to success in their commercialization process.

Start-ups have a major role in creating innovations, but they may have trouble with commercializing them. This is why we decided to investigate process of innovation commercialization and the more detailed the role of marketing communications within the process. We found no earlier studies on the relationship between the

process of innovation commercialization and marketing communications, which greatly affected our decision to choose this research topic.

### **1.3 Research questions**

For this study, we formulated a single main research question and four sub-questions. The sub-questions are designed to support the main question. The main research question is:

*1. What is the role of marketing communications in an innovation commercialization process of a start-up company?*

The purpose of the main question is to investigate what kind of role marketing communications activities and actions play in a commercialization process in general. Answering the main question requires answering the set of four sub-questions:

*2. What stages does an innovation commercialization process include?*

*3. What activities need to be considered in order to execute marketing communications?*

*4. What marketing channels are included in marketing communications?*

*5. What kind of challenges do start-up companies face during the commercialization process?*

The purpose of the sub-questions is to search for a framework that combines the commercialization process and marketing communications. The first sub-question focuses on mapping out the stages of a commercialization process. The second sub-question examines the activities or tools of marketing communications that are used during the different stages of a commercialization process. The third sub-question is concerned with the channels that are used with different tools of marketing communications. The fourth sub-question investigates the challenges of a commercialization process.

All the research questions are considered on two different levels which are the theoretical level that covers previous research, and the empirical level concerned with the data that we gathered from the conducted interviews. Our aim is to combine theoretical knowledge with empirical experience-based knowledge so that we might highlight culmination points, differences or other emerging issues that arise from comparing theoretical knowledge with empirical data. By doing so we are able to present an empirically tested framework that can act as a guideline for start-up companies in their commercialization processes.

#### **1.4 Research methods**

This thesis follows the principles of qualitative research as our aim is to obtain a holistic, descriptive and clarifying view of our research topic. Our research plan in short is to first examine previous research on the topic, build a theoretical framework, then gather experiential knowledge to compare with the theoretical framework, ultimately followed by the relevant conclusions. The primary data is collected using semi-structured interviews. The empirical research data consists of four interviews. The exact methodology is discussed in further detail in chapter five.

#### **1.5 Definition of key concepts**

*Innovation* is the purposeful result of a company's ability to create new knowledge and apply it in product development, processes, organizational design, and combinations of inputs and markets (Fagerberg et al. 2005: 5). An innovation can be a rather simple addition to existing knowledge or the invention of radically new technology (Hansen et al. 2015).

The purpose of *an innovation commercialization process* is to profit from innovations which are transformed into products, processes or services via a product development process, and later sold to customers. Within a company, the commercialization process implies scaling up from a prototype to volume manufacturing and allocating greater resources to marketing and sales activities. (Herdman 1995:500.) An innovation commercialization process includes several

stages and steps which make the process challenging and complex. (Datta et al. 2014.)

The concept of a *start-up company* has become popular only relatively recently. There is no one precise definition, but there are common features that can be found in many definitions. According to Yankov, Ruskov and Haralempiev (2014), start-up companies create innovative products or services, which require big upfront investments in a situation where future returns are uncertain. Čalopa, Horvat and Lalić (2014) define start-up companies as newly founded companies or entrepreneurial ventures that are in a stage of development and market research. According to them, start-ups are often technology-oriented projects since they have the greatest potential for growth. Moilanen (2013) from the Institute for the Languages of Finland describes start-up companies as young companies that are at most a few years old and whose existence is based on innovative ideas. Moreover, a start-up company is in the process of developing its first product and not yet making profit, but is seeking quick growth. Based on these descriptions, we have formed our own suggested definition: start-up companies are newly founded companies whose business idea is based on some innovation; start-up companies' turnover and personnel size are not in the process of increasing enough to meet the criteria of a high-growth enterprise (Työ- ja elinkeinoministeriö 2013). Nonetheless, we argue that start-up companies are aiming to grow rapidly in the future.

**Marketing communications** comprise all the interaction between a company and its stakeholders, whose aim is to positively affect the productiveness of marketing (Vuokko 2003: 17). Marketing communications are intentional communication which has predefined goals that are pursued to achieve by using diverse communications tools and channels. Traditional classification for marketing communications mix tools includes personal selling, advertising, sales promotions and public relations (Pickton & Broderick 2005: 16).

**Digital marketing communications** refer to communication and interaction between a company or a brand and its customers by the use of digital channels (e.g. the internet, email, or mobile phones) and information technology (Merisavo 2008). We propose a broadened understanding of the term based on Merisavo's definition that

includes all stakeholders of a company as recipients of any communications or interaction, as opposed to only including the customers in this category.

## **1.6 Structure of the thesis**

So far, the introduction chapter has shed light on the background and importance of the research topic. We have established the purpose, the research questions, methods, and key concepts of the study. To conclude the introduction, we move on to building a theoretical framework.

The first theoretical chapter is focused on the innovation commercialization process. Types and elements of innovation, innovation strategies, the creation of innovations and product development are themes that guide the reader towards an understanding of the innovation commercialization process and the related challenges.

The second theoretical chapter is about marketing communications. The impact of marketing communications, the planning and tools involved, integration, and digital channels form the chapter's key issues. The aim is to construct a comprehensive view of marketing communications.

The theoretical framework is more thoroughly presented in the fourth chapter of our thesis. It is built to combine theories regarding the innovation commercialization process and marketing communications. The theoretical framework is the basis which our research is built upon.

The fifth chapter covers our research methodology. The philosophical assumptions that guided our methodological choices are discussed in the beginning. This is followed by an overview of the research methods, analysis process, and reliability and validity issues.

The sixth chapter of our thesis comprises an analysis of our research data which is presented in a thematic order that follows order of our theoretical framework. In the chapter, we draw comparisons between theory and empirical data. Any relevant

quotations from the interviews are presented clearly to enhance the transparency of our analysis.

In the final chapter, we present a new start-up-verified framework, answer to the research questions and discuss the theoretical and managerial implications of our study. The start-up-verified framework is formulated based on our theoretical framework, but altered to meet the commercialization process of a start-up company. In other words, we combine the theoretical and empirical knowledge gathered during the research process. The start-up-verified framework is applied in answering the research questions, as we see it as the main result of our work. As long as the research questions can be answered with the help of the start-up-verified framework, we will have succeeded in fulfilling the purpose of our research. In the last part of conclusion, the limitations of the study, along with further research questions are presented.

## 2 FROM IDEA TO INNOVATION COMMERCIALIZATION

In this chapter we explain what is an innovation, what is included in an innovation strategy, how ideas and innovations can be created and what stages are comprised in new product development process. We also present a theory of innovation commercialization based on Datta's et al. (2014) framework for the innovation commercialization process. We also examine different challenges companies may encounter when commercializing their innovations.

One of the biggest challenges for companies today is to cope with the rapid development of technology and mastering competing innovations. In the past, companies used to direct new innovation development only to their research and development (R&D) department to ensure a continuing process of innovation. Today, innovation creation and innovation consciousness are the responsibilities of all departments. In addition to the research and development department, innovation may be the responsibility of production, marketing and finance departments. That is why companies have been forced to change their operations and strategies. (Tschirsky & Trauffler 2010: 3.)

A good process of innovation and product development alone are not enough to bring innovations to the market. Many studies suggest that effective commercialization of innovation is vital for companies to realize the potential benefits of innovation and to survive in a competitive market environment (Kajanus et al. 2011: 1–2). Commercialization is the process through which companies profit from innovations which are transformed to products, processes or services and later sold in the market to customers. Within a company, the commercialization process carries the implication of scaling up from a prototype to volume manufacturing and allocating greater resources to marketing and sales activities. (Herdman 1995: 500.) Innovation commercialization means finding potential products from innovations and transforming them into products ready for the market. The commercialization process sets multiple complex challenges for companies, especially for those in the field of high technology. Commercialization can be demanding for companies, as different activities, resources and external organizations whose aim is to bring a new product to the market are needed. The market environment can already be highly



competitive, and the ability to commercialize new products is an important factor that provides several benefits to a company. (Kajanus et al. 2011: 1.) Bigger corporations can establish innovation commercialization with internal activities as they have internal resources to do that. For smaller companies, it is common to collaborate with others. Small technology companies especially utilize external knowledge and capability to create or acquire innovation-related networks around themselves with the aim of speeding up their commercialization processes and reducing risk and costs. (Pellikka & Malinen 2014: 12–13.)

## **2.1 Innovation**

Innovation studies began to emerge as a separate field of study in the 1960s. Since then, the development of a definition of innovation has interested people in the field of research (Fagerberg et al. 2005: 2). The definition of innovation has changed in several ways over the years, as researchers have investigated the nature of innovation for decades. The main issue among researchers is the overlap of various definitions of innovation; there is a lack of clarity on the issue as there is no one official definition. A general definition of innovation that included different disciplines and covered different aspects of innovation would be beneficial to have due to the frequent use of the term in current research. (Baregheh et al. 2009.)

Early in the 1990's, Webster stated that innovation can be seen as a basic operational change in a specific process or complex product about to enter a whole new market. Innovation should also be visible and must offer a lasting impact. (Webster 1990: 209) The concept of innovation has been developed considerably over the last four decades. Researchers have considered innovation to be a separate area of development. Today, innovation is seen rather as a problem-solving process than the specific result of individual actions where several departments of a company are commonly involved. (Hidalgo & Albors 2008: 5.)

An innovation is commonly described as a creative idea whose intensity varies depending on its impact on the consumer and any competitors. An innovation can be a rather simple addition to an existing area of knowledge or the invention of a radically new technology. (Hansen et al. 2015: 1.) Fagerberg et al. (2005) see

innovation as the purposeful result of a company's ability to create new knowledge and apply it in product development, processes, organizational design, and combinations of inputs and markets (Fagerberg et al. 2005: 5). From a profitability point of view, innovation is utilizing existing knowledge to create a new product or service that the customer wants. Innovation can also be an adoption of new idea within organization even the idea itself might not be new. (Afuah 2003: 3.) Altogether, innovation can be at its simplest the improvement of an existing product, process, method or system, which is essentially the implementation of an idea into action.

Innovations have a great strategic importance in corporations because innovations are seen as a part of the journey to achieve future success. Within an organization, innovations are the source of creating value and sustaining a competitive advantage (Baregheh et al. 2009). On the other hand, increasingly demanding competitive circumstances force companies to maintain continuous innovation processes in their products, services and production processes. (Hussey 1997: 3.) Zahra and Covin (1994) propose that innovation could be considered to be the life-blood of a company's survival ability and growth. Bessan et al. (2005) evaluate that innovation represents the core renewal process in any organization.

### 2.1.1 Different types of innovation

Definitions for several types of innovation can be found within the field of innovation studies, such as technological innovation, market innovation, social innovation, product innovation, process innovation, radical innovation, incremental innovation, etc. Classifications depend on the researcher's point of view and study theme. Even the term 'innovation' is in itself linked to a multi-dimensional concept comprising various types (Prajogo 2016). In this chapter, we use Afuah's (2003: 14–15) classification of the nature of innovations as a basis, where innovations are sorted into two classes: incremental and radical innovations. Another popular classification for innovations that sees frequent use in both literature and research makes the distinction between process and product innovations. These two dimensions are presented in figure 1 as a matrix (dimension of innovation space) where the horizontal axis shows "what is changed" and the vertical axis displays "perceived

extent to change”. (Bessant et al. 1997: 7.) Practical examples of different innovation types are listed in table 1 and placed into Bessant’s figure of dimensions in figure 1. In these examples, transformation and service innovations are not considered because of focus on the two main types, process and product innovations (Prajogo 2016) in the dimension of incremental and radical innovations. Technological innovations will be discussed later more detailed.

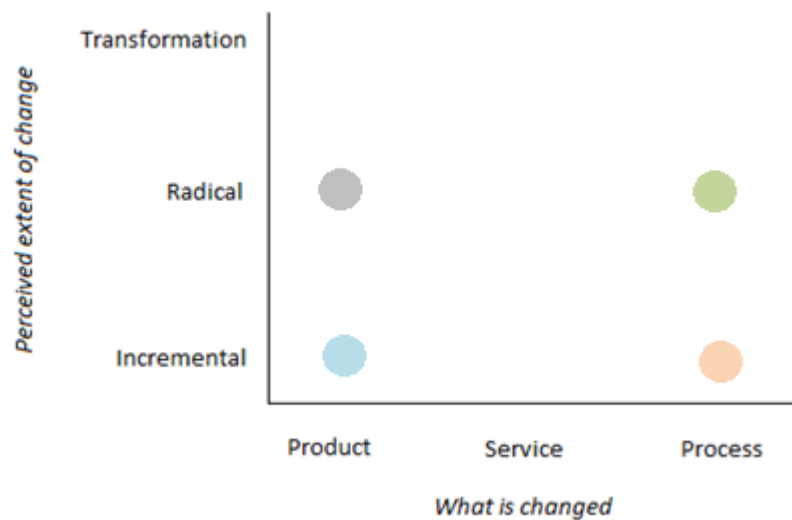


Figure 1. Dimensions of innovation space (Bessant et al. 1997: 7)

Table 1. Examples of different innovations

	Process innovation	Product innovation
Incremental innovation	<ul style="list-style-type: none"> <li>• Longer breaks for operators in manufacturing</li> <li>• Kaizen- tool</li> </ul>	<ul style="list-style-type: none"> <li>• Remote control with extra button</li> <li>• Toilet paper with softer material</li> </ul>
Radical innovation	<ul style="list-style-type: none"> <li>• Automatization in plant</li> <li>• The era of outsourcing manufacturing to sub-manufacturers</li> </ul>	<ul style="list-style-type: none"> <li>• Tablet computer in the beginning of 2010.</li> <li>• New technology like 5G network</li> </ul>

Product innovation refers to adding new components, features and technologies to the product (Prajogo 2016). The purpose of product innovation is to increase the performance characteristics that add to the value of the objectively new or improved version of the product. Product innovation includes activities like design, research, development, and also licensing technologies, patents, and trademarks. (Li & Pan 2015.)

Process innovation is the improvement of production processes or the implementation of a new or remarkable improved delivery method (Prajogo 2016, Li & Pan 2015:136). Process innovation has an essential strategic role as it can increase a firm's capability to produce something better than their competitors (like manufacturing). Making something better or totally different from others gives the company a significant competitive advantage and a powerful tool for corporations to compete with. Through process innovation corporations can increase their performance, be faster and obtain lower production costs with higher quality. (Bessant et al. 1997: 5.) Many corporations use process innovation to reduce production costs, whereas product innovation is used to improve the overall quality of the product (Prajogo 2016).

An innovation can be called radical if it requires new technological knowledge to exploit it. The technological knowledge needs to be very different from existing knowledge and make earlier knowledge obsolete. Radical innovations create totally new market situations, as companies are forced to adapt to new knowledge and technology, and utilize them. (Afuah 2003: 15.) For example, the implementation of 4G networks required tele-operators to make new deals for mobile phone manufacturers to produce mobile phones that could utilize 4G networks. Additionally, tele-operators had to change their product portfolio to offer 4G services to consumers. Radical innovations contain higher levels of uncertainty because radical innovations require exploration activities. This is why radical innovations are a high risk project for companies. Any links to an existing knowledge basis are more tenuous. (Bessant et al. 2013.) Literature has pointed out that radical innovations are necessary once in the while so that changes in knowledge can happen and firms' ability to offer new products will remain (Afuah 2003:14–15).

The major difference in radical and incremental innovations is that the ideology in radical innovation is ‘doing something different’, whereas in incremental innovation it is ‘doing the same thing better’. Incremental innovation is only concerned with minor problem solving like Kaizen-culture in organization. Kaizen is a tool of the Lean philosophy (Toyota), whose aim is the continuous improvement of the organization’s processes. Comparing to incremental innovation, radical innovation requires a higher level of risk. (Bessant et al. 2013.) Even though radical innovations are highlighted in literature to be game changers, the benefits from incremental innovations are also significant. Studies in incremental process development suggest that the cumulative gains in process efficiency are much greater over time than gains from occasional radical changes. For example, the Japanese high standard ‘total quality management’ is the result of many sustained incremental innovations and changes. That is why the idea of ‘continuous improvement’ has received lots of attention in the past years. (Bessant et al. 1997: 8–9.)

Technological innovation is defined as the successful adoption of a technology-based invention for products and processes. Technological innovation can be either product or process innovation, but it must be something entirely new or a significant improvement in the market, the industry or at least for the company. An invention is not a technological innovation until the effect of the innovation is expanded to the market and it produces economic benefit for the company. Technological product innovation can be the adoption of new technology or devising new ways of use for existing technology. In the case of a technological improvement to a product, innovation can emerge, e.g., from applying a higher-performing component or material, or involve a new sub-system of the product. Technological innovation can be described as a new combination of components or a redesign of the relation that was previously established between components. (OECD 2005: 31) A good example of technological innovation is the previously developed 4G mobile network and the mobile phones which include 4G network support.

### 2.1.2 Elements of good innovation

Innovation alone may not always result in business or be successful. However, there is evidence that certain factors are more strongly connected to innovation success

than for others. If the right business circumstances are not met, it is difficult to secure the success of an innovation. To define elements of good innovation, we also need to clarify what factors need to be taken into consideration for an innovation to be successful. The real test for the successfulness of innovation is not a matter of short-term observation, but it can be rather seen through sustained growth that involves a continuous process of invention and adaptation in the long term. The right combination of new ideas and receptive markets at the same time can make an innovation a relatively easy success. It is an entirely different matter to repeat good performance consistently and make the overall innovation process and its contribution to growth successful. (Bessant e al. 1997: 37.)

As innovation types differ from one another quite notably, it is challenging to answer to what the elements of good innovation really are. That is why innovation should be considered more as a process, not a single event, and managing it as such. The most important factor in the creation of successful innovations is routines that are learned over time and through experience. Innovation routine development is strongly connected to successful innovation management and project leadership performance. Successful innovation management covers all the departments of a company, as they are all involved in the innovation process. (Bessant e al. 1997: 39.)

Although Bessant et al. (1997) point out that innovation should be considered to be a process, Cooper (2002: 12–13) lists key drivers for product innovation. The first driver is the increased globalization of markets. Today, the foreign markets are more accessible than ever before, which leads to significant opportunities for innovation. Product innovations have the possibility to spread world-wide by being targeted at the global markets and thus may achieve international success. The second driver is increased competitive pressure. Nowadays, companies are under a great deal of pressure to secure or maintain a competitive advantage because of the highly competitive nature of the markets. In addition to being a sustainable advantage over competitors, new product innovations are seen as an essential factor in gaining a market leadership position. The third driver is the advance of technology. Technological innovations and the amount of available know-how are currently increasing exponentially in number. This has resulted in new ways of solving problems and the creation of products that we could not have even dreamed about a

few decades ago. The development of technology has not been hindered even by the slowing down of economic growth, which has added to the competitive pressure for companies. The fourth driver is the continuous change in customer needs. Customers consistently await new product innovations. These circumstances are the result of the markets' influence on consumer behavior. Companies are required to have a continuous output of new innovations and improved solutions to satisfy consumer needs. Companies that can respond to consumer needs by commercializing new innovations have a great potential to gain a leadership position within the market. The fifth driver is the shortening of product lifecycles. Product development is speeded up by the market. A new product no longer remains in use for five-to-ten years, as the life of a product is these days closer to a few years or even months. Companies are pushing out new and improved products to the market continuously. The reason for changing from one product to another may be that the new one is simply better, but it can also be that the improved product makes the old one obsolete. To make the lifecycle longer and keep competitors behind, a new product must fulfill four requirements: value, rarity, inimitability, and insubstitutability. (Cooper 2004: 13.)

## **2.2 Innovation strategy**

In earlier studies, seeking innovations has been found to be one of the most effective competitive strategies in present day business. The role of strategy is not only to produce a competitive advance, but to also sustain it (Prajogo 2016). Innovation strategies can be defined as successful implementations of creative ideas within companies, which deliver value to customers (Hurley and Hult 1998). An effective and successful innovation strategy gives a great advance to the company when an innovation fulfills four conditions: it gives value to customers, it differs from competitors, it is difficult to imitate and it cannot be substituted. The four elements of value, rarity, inimitability, and insubstitutability form the competitive value of an innovation strategy in terms of business performance (Prajogo 2016). Bessant et al. (1997: 72) list three essential ingredients for success in formulating a company's innovation strategy. They are the company's market position, technological capability, and the organizational processes followed by the company.

Innovations play an important and central role in companies, and act as a competitive resource, yet they also form a major source of uncertainty. This is why corporations should define and implement a detailed innovation strategy. (Bessant et al. 1997: 57) Different kinds of frameworks for innovation strategy implementation have been presented in both literature and research on innovation: innovations can be sorted into “rationalist” and “incrementalist” approaches (Bessant et al. 1997: 57–61). An innovation strategy can be offensive, defensive, imitative, dependent, traditional or opportunistic (Afuah 2003: 126–127). Additionally and usually, strategies can be categorized on process or product innovations. (Cooper 2004: 91.) Examples of these innovation strategy frameworks are presented in table 2. Product strategies are discussed in more detail in next chapter.

**Table 2. Examples of different innovation strategies (Afuah 2003: 30, Afuah 2003: 127, Bessant et al. 1997: 57-61, Prajogo 2016, Garnsey et al. 2011)**

Rationalist approach	A linear model of rational actions for companies where the strategy consists of describing, analyzing and understanding the environment, determining a discipline of actions and carrying out the decided actions. This approach helps firms to be conscious of trends in a competitive environment, to prepare for the changing future and ensure that the firm’s attention is focused on both the short term and the long term.
Incrementalist approach	Incremental strategies doubt that firms can completely understand the complexity and change in a business environment. Therefore companies need to adapt new information and understanding for its strategy and make considered steps towards the set target. The firm evaluates and measures the effects of each step and adjusts the objective if necessary.
Offensive strategy	Involves first-movers in the market, high uncertainty, market pioneers, and the possibility to establish new standards (e.g. technology)



Defensive strategy	A defensive strategy awaits for the pioneer's product to reach the market and corrects the mistakes of the previous product by launching an improved version.
Imitative strategy	An imitative strategy involves waiting for the pioneers to resolve technological and market-related uncertainties. The risk is to miss the first-mover advantage.
Dependent strategy	The company takes a subordinate role to a stronger firm. It commits itself to product changes only when the customer or the superior request it. E.g., external manufacturing sites (EMS).
Traditional strategy	A firm makes few changes to products with the primary aim of offering the lowest cost possible.
Opportunistic strategy	A company looks for a niche market, and a segment where customer needs have not yet been fulfilled.
Process innovation strategy	In a process innovation strategy the source of any competitive advantage is often hidden internally within the organization, which makes imitation difficult. The main focus is to deliver faster, cheaper, more flexible, etc., goods.

Different innovation strategies show that even the incumbent company is not first in the market with its groundbreaking innovation, it may be because of the company's innovation strategy. If the company is succeeded to make right strategic decisions early, it can build the right competences and complementary assets and even form the ideal environment in which is going to operate on. (Afuah 2003: 29.)

### 2.2.1 Product innovation strategy

Li & Atuahene-Gima (2001) define a product innovation strategy as a reflection of a company's commitment to develop and market products that are new to the firm and/or the market. A similar definition comes from Robert Cooper (2004: 53): "*a product innovation strategy is a strategic master plan for new products' entry into the market.*" Product innovation has received more research attention in the past than process innovation because it is more visible to customers and has a greater potential to open new markets. Essentially, new product innovations offer multiple customer value, not only novelty itself. New products mean better performance and features compared to the products offered by competitors. The customer can see better value relatively clearly, which is in part the result of product innovation. Product innovation can be seen as to make it more likely for the consumer to buy the product manufactured by the company. This is one aspect of the competitive advantage that product innovation can provide. (Prajogo 2016.)

Researchers found a strong link between product innovation strategy and corporation performance already in the 1980's. Cooper (1985) was one of the first researchers who investigated the performance impact of product innovation strategies and proved how product strategy is tied to performance results. Nystrom and Edvardsson's studies on company development strategies (1977, 1978, 1980) and Booz-Allen and Hamilton's book of *New Product Management for the 1980s* (1982) also give similar results regarding the connection between new product strategies and performance. These studies have proved that the product innovation strategy is one of the key elements to a corporation's success. (Cooper 2004: 55–57.)

It is not always clear whether a corporation will succeed with its product innovation strategy: e.g., a strategy can emphasize the wrong elements in the current market situation. This can potentially lead to poor decisions being made within the corporation. In *Product leadership: Pathways to Profitable Innovations*, Cooper (2004) evaluates six elements and their impact on product innovation strategy. These six strategy-building blocks are helpful in new product introduction projects in high performing businesses and provide a wider outlook on the product innovation

strategy process on the whole. The elements are named and given short definitions in table 3.

**Table 3. The elements of product innovation strategy (Cooper 2004: 57–62)**

Goals and roles	A product innovation strategy (PIS) should include a clear definition of goals and how they are communicated throughout the company. Here we find the links between the product innovation strategy and the corporation's main business strategies. It is important to understand how product innovations fit into the existing business plan.
Arenas and strategic thrust	The market area to which the new product is targeted at needs to be defined and analyzed. Knowing the market area will increase strategic thrust, which is the result of identifying and assessing product innovation opportunities on a strategic level.
Attack strategy and entry strategy	Stepping into the market must be planned beforehand. An attack strategy can be, e.g., that of a first-mover or early follower into the market. Entry strategies should be outlined and can include licensing, joint venturing, etc.
Deployment – spending commitments, priorities, and strategic buckets	The PIS must include a detailed description of the limits for new product development, e.g., budget, resources, etc. so that resource commitment and allocation can be made. Strategic priorities are indicated in accordance with each arena of strategic focus.

The strategic product roadmap – major initiatives and platform development	The management has a roadmap view on how to achieve the desired goal or how to steer the company into the desired direction. The roadmap includes major new product initiatives and their timing in the new innovation process.
Tactical decisions – individual process selection.	This element is needed to monitor that every product innovation project is headed in the desired direction. Individual projects are monitored to lead them towards a common strategic goal. Some projects may receive ‘kill’ decision.

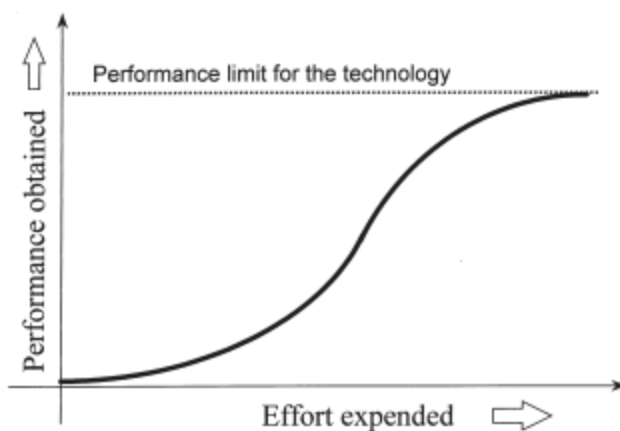
One useful strategic tool for assessing markets of product innovation is Porter’s five forces, which are introduced by Michael Porter in 1980. The forces under consideration are suppliers, customers, competitors, substitutes and new entrants. Porter’s theory has commonly been used in research and literature to describe and assess companies’ competitive environments. The five force theory helps companies to understand their strengths and weaknesses and assess whether the market area of new product innovation is profitable or not. (Afuah 2003: 137–138.)

The first of Porter’s forces, the strength of the supplier, takes into account that a company needs to know its suppliers. The company must be able to consider the opportunities and threats involved with them. For example, some suppliers might be very powerful and controlling which makes cooperating with them possibly unprofitable. The second force is the power of customers, which means the customers’ capacity to create business and cash flows. The third force is the strength and intensity of competitors. Highly competitive markets often involve price competition, which generally leads to a lower profit margin. The fourth force is the ease of entering into a new market. It refers to how industries that can be easily entered are less profitable. Number of companies can easily increase in the same market why competition might be heavier and profits lower. The last force is the threat of substitution. Substitutive companies may step within the same market area

with a new technological product that can capture a part of the market share, or replace the existing products within the shared market field. (Cooper & Edgett 2009: 75–76.)

### 2.2.2 Technology innovation strategy

The technology strategy is an overall plan that includes the company's decisions on the development and use of their technological capability. Technological innovations have an important role in increasing uncertainty and the level of risk. This is why a technologically underlined strategy for innovation is essential. Within the framework of such a strategy elements of uncertainty can be monitored in an organized way. Different types of technology strategies can be categorized similarly to innovation strategies (table 3). E.g., in the case of a defensive strategy the company would decide to wait for a pioneer company (first-mover companies) to step within a market of interest with new technology (a product). (Zahra 1996.)



**Figure 2. Foster's S-curve model (Foster 1986)**

A strategic tool that sees common use in understanding and forecasting the lifecycle of technology is Foster's S-curve model. The technological development process starts off slowly, which means that the beginning stages in the process of developing new technology require significant effort without readily achievable great progress. After a stage characterized by slow progression, technological advancement progresses rapidly, diminishing the distance to the physical limits of the technology under development. When a company finds itself near achieving the physical limits

of a technology, new technologies may already be under development, based on the company's previously developed technology. (Afuah 2003: 117–112.) The S-curve allows companies to understand how technologies evolve and how they displace each other. When a company reaches the limits of utilizing a type of technology, it is quite certain that the company in question, or its competitors, is in a position of dominating the technology's use, and already in the early stages of investment into new technology.

Ortt et al. (2008) list alternative strategies for coping with the uncertainty of technological innovation. The strategies include a niche market strategy, a mass market strategy and wait-and-see strategy. The niche market strategy means that the company invests in small production facilities to manufacture only a specific range of products, only for a niche market. The company uses specific marketing and distribution resources. On the contrary, the mass market strategy pioneers are investing in large-scale production, distribution, and marketing facilities. Being the first in the market with a large volume of production can secure the company a strong market position as a pioneer and leave any competitors behind. A prerequisite for this strategy is the existence of a market situation which enables a relatively fast diffusion. The third strategy is the wait-and-see strategy. In this strategy, the company decides to be a follower. The company develops the technology, prepares for its marketing and distribution, and monitors competitors' actions and market results. The company waits for the optimal moment to step into the market which is when their product's introduction becomes a commercially viable option. This strategy can work with any breakthrough technologies that first-movers may pull from the market before the technology becomes a success. (Ortt et al. 2008: 211.)

### **2.3 Creating innovations**

Innovations are seen as a powerful tool for securing a competitive advantage and preserving a strategic market position (Bessant et al. 1997: 10). All innovation activities are normally derived from an already planned out process for innovation, despite the fact that innovations can also emerge in an uncontrolled manner. There are cases where success is achieved through unintended ways and the costs from several failed innovations can be covered. Understanding and managing the

innovation process helps to manage the elements of risk and uncertainty. (Bessant et al. 1997: 11–13.) We will further discuss how firms can create new innovations later in this chapter.

### 2.3.1 Innovative organization

An important factor that affects organizational innovativeness is the innovation environment. The creation of an innovative organization begins within the top management of the company, and is the result of their attitude towards innovation and innovativeness. The focus on innovation may have an impact on the flexibility of the organizational structure. (Özsomer et al. 1997.) Flexible structures lead to the development and implementation of new ideas, which is why firms that include them tend to be better at innovating. Typical features of a flexible structure are decentralization, informal decision-making, and flexibility in processes and procedures. A flexible structure allows for open channels of communication, which is vital factor for agile innovation sharing and any commenting between the different departments within an organization. A flexible organization structure makes for an innovative environment that typically involves higher rates of innovation than other firms. (Özsomer et al. 1997: 402.)

### 2.3.2 Open and closed innovations

Nowadays a big trend for the companies is to prefer open innovation. An open innovation is an idea developed in cooperation with external sources. An open innovation connects different organizations, groups, and individuals from different social, cultural, and economic backgrounds together so that they can interact, collaborate, and solve problems by generating solutions and creating value. (Russo-Spena & Mele 2012.) Open innovation organizations may cooperate with, e.g., universities, competitors, customers, and users. Open innovation organizations expand their knowledge and technology sourcing externally to achieve hidden knowledge and manage the complexity of innovation. Open innovations may compose a challenge, as many counterparts are involved in the innovation process. This is why there are some underlying mechanisms for managing external knowledge and open innovation, for example alliances and joint ventures, corporate venture

capital, licensing, open source platforms, and participation to open communities. (Felin & Zenger 2013.) There are several examples of open innovations: IT-programs like Mozilla Firefox and the Linux platform where every user can modify the code behind it, innovation forums like Dell Ideastorm, and crowdsourcing projects like “plan your own ice cream” by Magnum.

In a closed innovation process there is no involvement of any external environments meant for sharing knowledge or interaction. Like with open innovation, the decision to prefer closed innovation is one made by an authority within the company. (Chesbrough 2003: 30–31.) A typical reason to why a company may choose closed innovation is that the firm does not believe that ideas can be found and developed in cooperation with external networks. The company assumes that they already have the best creative innovative workforce and choose to protect new ideas and innovations by the use of intellectual property rights and patents. (Sener & Hobikoglu 2013) Closed innovation systems are not very popular in research, as there is a clear trend of preferring open innovation.

#### **2.4 Product development process**

It is not enough that corporations have great innovations: they must develop their ideas into physical products or services in order to profit from them. The aim of product development is to create and commercialize products or services for the future markets. It is characteristics for product development to involve uncertainty and high risk because no one can clearly forecast the future. Companies need to invest a significant amount of resources into product development in the beginning, while any returns may only come years later when the product or service has been commercialized. The product development process in a large corporation is usually established in different projects or in one department. In smaller organizations, the whole firm can be involved in the development process, but usually any product development activities are assigned to a specific department or group. (Jaakkola & Tunkelo 1987: 87.)

There are a great deal of different kinds of descriptions for product development processes. Most of them show great similarity. One description of a product



development process is Crawford's (1996:43) 6 step process: (i) inflow of resources, (ii) strategic planning, (iii) concept generation, (iv) pre-technical evaluation, (v) technical development, (vi) and commercialization. Similar features are found in Ulrich and Eppinger's (2007: 13–16) 6 step description for a new product's development process: (i) planning, (ii) concept development, (iii) system-level design, (iii) detailed design, (iv) testing, (v) refinement, (vi) and production ramp-up. Some details on Ulrich and Eppinger's (2007: 13–16) product development process description can be found in table 4. Even though linear sequencing is a typical way to describe the product development process, different stages of the process are in actuality active at the same time. For example, in Crawford's (1996: 44) description, at the very beginning of the product development process, the focus is on planning at the strategic level in addition to other process levels, such commercialization and pre-technical evaluation.

**Table 4. Product development process**

Planning	In this phase the corporation assesses technology development and market objectives to find opportunities for developing new products or innovations. The output of the planning phase is a project mission statement where the target market for the product, business goals, and key assumptions are specified.
Concept development	In this phase the needs of the target market are evaluated, alternative product concepts are created and one or more potential concepts are selected for further development. A concept could be a form, feature or function of the product.
System-level design	This phase includes the definition of architecture, decomposition of the product into subsystems and components, and preliminary design of key components. The first plans for production and final assembly are usually considered. The outputs of this phase are a layout of the product, functional specifications of sub-systems and a process flow diagram of the production process.

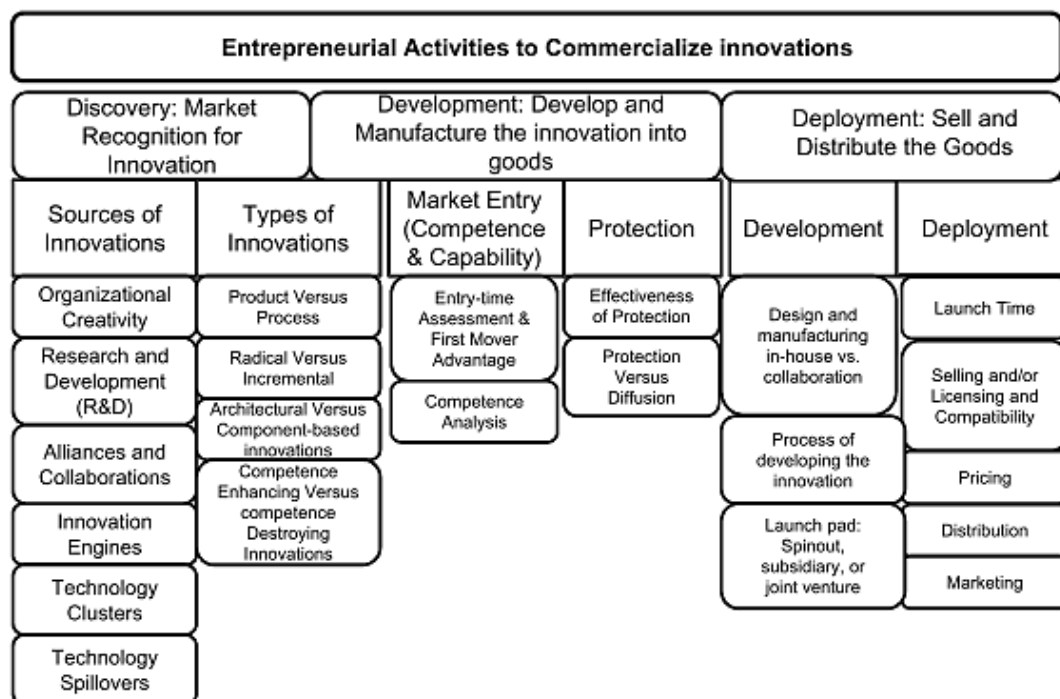
Detailed design	This phase includes a complete specification of features, both standard and unique parts in the product. The production process is established and the tools are designed for production system.
Testing and refinement	The testing and refinement phase includes the evaluation of preproduction versions of the product. Prototypes will be tested for whether the product will work as planned and satisfy customer needs. Further prototypes may also be tested by customers.
Production ramp-up	In this phase production will be ramped up for the designed product. The purpose of the ramp-up is to train the workforce to manufacture the product and to test the production process. The ramp-up is preparation for manufacturing the product in mass.

The current business environment and shorter product lifecycles have forced companies to seek effective and efficient product development processes, as product development occurs more frequently nowadays. One solution available for companies is to integrate new development practices when managers and resources from various departments and units are connected to create product ideas and transform them into design, prototypes, and plans for product commercialization. Integrated product development admits the company to respond quickly to continuously changing customer requirements. (Koufteros et al. 2002.)

## 2.5 Innovation commercialization process

Innovation commercialization is commonly known to be a critical and challenging stage of the innovation process due to the high risks and costs involved (Chiesa & Frattini 2011). Datta et al. (2014) have developed a framework for the innovation commercialization process, which has been collected from existing literature. They used 194 different articles from 62 journals to create their innovation commercialization process model. The framework is a combination of several entrepreneurial activities which are essential when commercializing new innovations.

(Datta et al. 2014.) We utilize the framework in question in this thesis. The framework is presented in figure 3. The framework shows how the six themes are connected to the main activities of discovery, development, and deployment. These main activities are broadly described as the process of innovation commercialization in literature. The framework is not be linear, as the commercialization process can start from the deployment of a prototype, leading to getting customer feedback, and finally resulting in development of an innovation. Still, in several cases, the process is distinctly linear and involves all six sub-themes. (Datta et al. (2014.)



**Figure 3. Entrepreneurial steps to commercialization of innovations: themes from the extant literature (Datta et al. 2014).**

### 2.5.1 Discovery

The first main activity is discovery, which means that the firm needs to occupy itself with market recognition for innovation purposes, and then decide the form of innovation. This includes two sub-themes: the source of innovation and the type of innovation. The origin of an innovation commercialization process lies in the discovery of innovations. The company needs to produce an innovation that can be commercialized. Innovations can be originated internally or externally. Typical

sources of innovation are organizational creativity, R&D, alliances and collaborations, innovation engines, technology clusters, and technology spillovers. (Datta et al. 2014.) These sources are explained shortly in following:

- Organizational creativity is formed from individuals, variety of social processes, contextual factors and organizational routines and structure in that way which maximizes creativity and idea generation processes that later transforms ideas to commercialized products. (Datta et al. 2014.)
- R&D (research and development) has typically a traditional role of creating innovations. The intensity of corporations R&D functions has positive correlations with sales of new product, sales growth rate and profitability. (Datta et al. 2014.)
- Alliances and collaborations can help to create innovations through knowledge sharing and transferring. The network with competitors, suppliers and customers can be a valuable source of new ideas and such networks are especially crucial in high-technology sector where it is improbable that a company can monitor all the necessary capabilities to commercialize the innovation. (Datta et al. 2014.)
- Innovation engines like universities and government are collaborating with firms to develop innovations. Government agencies invest in their own research and offer support for other public or private research departments. Universities are doing cooperation with firms and help to commercialize their innovations. (Datta et al. 2014.)
- Technology cluster is the group of suppliers, buyers, manufacturers and other actors which are working in a geographical proximity and do cooperation and have a good relationship. Cluster of companies who are working with high innovation-productivity can head to new innovations and new firms to start up. One example of technology cluster is Silicon Valley. (Datta et al. 2014.)
- Technology spillover is a positive externality from R&D results which are formed by spread of knowledge across regional and organizational boundaries. Spillovers have a significant influence on innovation activities. (Datta et al. 2014.)

The second sub-theme in discovery activities is the type of innovation. In this framework, innovations are classified as follows: product vs process innovations, radical vs incremental innovations, architectural vs component innovations and competence-enhancing vs competence-destroying innovations. (Datta et al. 2014.) Product, process, radical, and incremental innovations are defined in more detail in chapter 2.1.

- Product innovation is a development of adding new components, features and technologies to the new product (Prajogo 2016) whereas process innovation is the improvement to production processes or implementation of new or remarkable improved delivery method (Prajogo 2016, Li & Pan 2015).
- Radical innovation are innovations which are totally different from prior innovations and do not exist before. Incremental innovations are improvements to existing products, services or delivery systems. (Datta et al. 2014.)
- An architectural innovation is the innovation which changes the overall design of the product or system or the way how components interact with each other. The component-based innovation might not significantly affect the whole system configuration as it is embedded to the system. (Datta et al. 2014.)
- Competence-enhancing innovation is built on the firm's existing knowledge, for example application updates in mobile phone. An innovation can also be competence-destroying which means that innovation does not build on its existing knowledge or competence but instead head to new competencies. (Datta et al. 2014.)

### 2.5.2 Development

The second main activity is development, which means both developing and manufacturing innovations into sellable goods. Datta's et al. (2014) collected literature on market entry assessment is concerned with two main activities: entry-time assessment and first-mover advantage, and competency analysis.

- Entry-time assessment can be an advantageous function when a company is assessing the market entry of a new innovation, the state of enabling technologies, the state of complements, the threat of competitive market entry, etc. Assessing the first-mover advantage is at the core of discussing the time of market entry (chapter 2.2). First-movers are also affected by certain disadvantages, such as a high rate of failure caused by R&D expenses and consumer ambiguity, poorly-developed logistics with suppliers and distribution channels, and the availability of goods. (Datta et al. 2014.)
- Competency analysis is focused on analyzing the company's core competencies and integrated combinations of abilities. These resources differ from one company to another. The combination of resources and embedded skills are a unique mix in each company, which can be difficult for competitors to imitate. This can translate to a competitive edge for the company in question. (Datta et al. 2014.)

Protecting innovations is a crucial sub-theme regarding market entry. Innovations need protection against duplication and replicas (such as patents, trademarks, etc.). The protection theme includes two subjects of interest: effectiveness of protection and protection vs diffusion. (Datta et al. 2014.)

- Effective protection of innovations is crucial for companies. The term 'appropriability' refers to how quickly competitors can imitate an innovation. It is also understood as the degree to which a company can collect rent for the use of an innovation. Some innovations need more protection than others, as they are more valuable to the industry. There are three legal mechanisms for protecting innovations: patenting, trademarks and copyright. Different mechanisms work better in different industries, depending on the field of industry and innovation type (process, product, etc.). (Datta et al. 2014.)
- Protection vs diffusion means that most companies do not exclusively subscribe to a wholly open or (see chapter 2.3.2) proprietary innovation strategy. Successfully protecting any innovations means being able to collect rent for the use of an innovation by other companies, and then being able to re-invest the profit into the company's own operations. On the other hand,

technology diffusion connects multiple companies to promote and distribute technology amongst each other and increase the speedup of technological development. In many cases, diffusion is the opposite of protection, and the standards within the market playground are controlled by a company in managing of crucial technology through licensing or by means of creating the dominant design in the industry. (Datta et al. 2014.)

### 2.5.3 Deployment

The third and final part of the innovation commercialization process is deployment. The purpose of deployment is to make the selling and distribution processes fluent. Deployment is divided into two sub-themes: development and deployment. Development activities include designing and manufacturing the product in-house vs collaboratively, and the process of developing the innovation and a launch pad, which can be a spinout, a subsidiary or a joint venture. (Datta et al. 2014.)

- The firm needs to make a decision if it is going to pursue designing and manufacturing the product in-house or through collaboration. Choosing the path of individual development can be the reasonable choice if the company has the necessary capabilities and resources to create the product, when the company wants to launch the product faster, or when the management has a good reason to worry about product protection issues. An advantage of collaborating with other operators in the field is being able to share the costs and risks by combining available skills and resources. Collaboration can be organized through a strategic alliance, a joint venture, by licensing, or outsourcing. (Datta et al. 2014.)
- The importance of the innovation development process is highlighted in literature. Successful product development requires that the company can fulfill three conditions: maximized fit with customer requirements, a minimized time of market entry, and controlled development costs. These can be achieved by inviting customers and suppliers to participate in the product development process. In this way, extra costs can be minimized and customer requirements can be recognized through process-optimizing methods. The process and manufacturing costs, concurrent development-processes,

marketing coordination, the manufacturing process, and R&D can all be improved this way. (Datta et al. 2014.)

- The launch pad can mean a variety of forms in which the innovation can be brought to the market. Commonly, even new products are launched individually by the firm. Companies can launch innovations as spin-outs, subsidiaries, or joint ventures. A spinout refers to when a company ‘splits off’ a section of itself to be a separate business, the new business taking along assets, intellectual property, technology and existing products from the parent organization. A subsidiary is an entity controlled by a separate entity. A controlled entity is usually formed from a limited-liability firm and controlled by the parent company. The choice of innovation launch style is usually based on the scope of the innovation and the risk related to bringing it to market. (Datta et al. 2014.)

The other sub-theme is the deployment of an innovation to the market. This theme is concerned with launch timing, licensing and compatibility, pricing strategy, distribution and marketing. These actions finalize a successful innovation commercialization process. (Datta et al. 2014.)

- There are several factors which affect the launch time of an innovation. The first is seasonal effects like trends and the business cycle. The second is the situation of production capacity and the availability of complementary goods. The third factor is an assessment of profit creation within the framework of the existing product generations vs the advantages of cannibalizing existing products. (Datta et al. 2014.)
- Selling out an innovation or licensing it can be a feasible strategy for a company not only because of the availability of the assets required for a successful launch, but also because of compatibility and backward compatibility issues. Compatibility means the way products of one technological generation can work jointly with products of another technological generation. (Datta et al. 2014.)
- The pricing strategy affects how the markets react to the emergence of a new innovation. There are two different commonly used pricing



strategies: market skimming and penetration pricing. Market skimming means setting high prices, which signals the significance of the innovation to the customers. Pricing penetration means aiming for the maximum market share by setting prices low. (Datta et al. 2014.)

- Distribution decisions are essential because firms need to begin distribution to customers as soon as possible. Firms can sell products directly to end-users via websites, mail order, online stores, etc., or use intermediaries and middle men. Intermediaries can have an important role in accelerating the distribution of innovations, as they can fulfill several crucial roles in the supply chain, such as breaking the bulk, carrying inventory, logistics, sales, and various services, e.g., customer service. (Datta et al. 2014.)
- Marketing is important to successfully bringing the innovation to the market. There are different methods of marketing and they vary in attributes of cost, reach, information content, and the ability to target particular market segments. (Datta et al. 2014.)

## **2.6 Challenges in the commercialization process**

A commercialization process plays an essential role in realizing the potential benefits of an innovation. Because the process is not simple and requires a variety of know-how, commercialization presents complex challenges for entrepreneurs; especially in the case of small and medium sized companies. (Kajanus et al. 2011.) Nowadays the business environment is filled with technological, customer-related, and marketing discontinuities because needs, market structures, business models, and relationships between factors are unpredictable. This makes the commercialization process more complex and more prone to failure. (Aarikka-Stenroos & Lehtimäki 2014.) One piece of evidence for the challenges of commercialization is that only one innovation in three thousand is successfully commercialized into a product (Stevens & Burley 1997). The major challenge areas that firms face can be divided into three categories: the strategic zone of commercialization, the market creation and preparation zone, and the sales creation and development zone. (Aarikka-Stenroos & Lehtimäki 2014.)

The first major challenges are related to the strategic zone. A marketing strategy is the core of the strategic zone and the commercialization process. Companies encounter challenges in choosing a feasible marketing strategy because of the uncertainty of the business environment (Aarikka-Stenroos & Lehtimäki 2014). Companies may be missing a systematic model for a commercialization process, which is why they may have difficulty with its management and control. Small companies do not necessarily have the variety of knowledge or the ability to understand and establish the commercialization process. This is why firms can sometimes suffer extra costs and unfavorable changes. (Kajanus et al. 2011.) Firms may also face problems with understanding the customers' perspective, which can result in difficulty with formulating a market strategy (Aarikka-Stenroos & Lehtimäki 2014). Companies may fail to access, gather and exploit the market and customer information. The commercialization process would take more time under such circumstances, with additional delays in the time-consuming market launch phase (Kajanus et al. 2011).

The second set of major challenges are related to the market creation and preparation zone. This middle zone is vital because of how the activities contained are aimed at familiarizing the customer base with the product and changing customer mindsets to prefer the company's product over any competitors'. Involving and activating stakeholders is important at this stage. It may pose a challenge for the company to get support from the stakeholders and their network. As small firms depend on their network far more than larger ones, since they may not have the necessary know-how themselves, cooperation with stakeholders is essential. (Kajanus et al. 2011, Aarikka-Stenroos & Lehtimäki 2014.) Stakeholders can support the firm in their commercialization process in many ways: by offering distribution channels, coping with legislation and standards, developing broader solutions, etc. Another challenge is the creation of credibility for the innovation and the firm. As many technological innovations are entirely new to market and there may not be any similar products available, the firm must prove the usefulness and benefits of their innovation, and show that they are a credible actor in the business environment. There is also the core challenge of making consumers adopt the idea of buying the product. If a firm were to successfully present a completely new product category to the market, a large shift in customer and stakeholder attitudes, behavior and processes are necessary to make

the product vendible. (Aarikka-Stenroos & Lehtimäki 2014.) There may also be challenges within the preparation zone related to the resources needed for the commercialization process. Companies may have problems with acquiring and allocating both internal and external resources optimally during the commercialization process, which is when cost overruns and delays can be expected. Additionally, a regional lack of available and sufficient managerial and industrial business experience may cause additional costs because of a slowed-down progression of bringing the new innovation into the market. (Kajanus et al. 2011.)

The third area of challenges is related to sales development and the development zone. At this stage, the firm begins to generate and increase sales and their growth through new initial deals. The deals are acquired through customer referencing and stakeholder mobilization in taking part in the commercialization process. The challenge is to create sales to early majority market, as a new innovation is still not well-commercialized and earlier challenges may not have been thoroughly solved. The company may need to return their focus to earlier challenges, either strategy development or market creation and preparation. Sometimes, there may be special difficulties related to initial sales creation and sales development, which are caused by marketing discontinuities. The one paradoxical dilemma for small firms is that they need the support of early investors and distribution partners to build sales, but investors require evidence of future sales profit. (Aarikka-Stenroos & Lehtimäki 2014.)

### 3 MARKETING COMMUNICATIONS

Companies are always communicating, regardless of whether they do it on purpose or not. Even the company name, range of products, pricing, location, and offered service communicate something to the rest of the world. (Vuokko 2003: 11) Marketing communications, however, are an intentionally conducted enterprise. The promotional mix of the four P's is relatively often referred to when defining marketing communications. However, the current paradigm places more emphasis on interactive communication, resulting in the preference to speak about "communicating with" rather than "promoting to" someone (Hughes & Fill 2007).

Ottosen (2001: 35–36) defines marketing communications to comprise all communication between the buyer and the company about the market offering. More recently, the target audience of marketing communications has been understood to contain all external and internal stakeholders, not being restricted to direct buyers or customers. According to Vuokko (2003: 17), marketing communications include all the elements whose purpose is to generate interaction between a company and its stakeholders, in a way that it will positively affect productiveness of marketing. In other words, marketing communications is intentional communication that has predefined goals that can be achieved by using diverse marketing communications tools, actions and channels. The goals can be, for example, informing about and improving the conspicuousness of the company, their products, prices and availability in an effort to stand out from rivals, to arouse interest and the urge to purchase among potential customers, to build a positive image for the company, or to maintain relationships (Bergström & Leppänen 2015: 302).

#### 3.1 The effects of marketing communications

Marketing communications seek to make a company and its marketing offering visible (Bergström & Leppänen 2015: 300). Marketing offering is defined to cover "*everything relevant to the buyer in connection with preparing to buy, carrying through the purchase of, using and consuming a company's product*". In other words, offering indicates to the buyer's experienced value that can be gained from the offering. (Ottosen 2001: 31–32.) Through marketing communications, companies

seek to diminish or remove any company-related conspicuousness or image issues (Vuokko 2003: 19). By removing these problems, other challenges such as the creation of sales can be influenced positively. Thus, the function of marketing communications is to use communicational means in order to find and assure target groups about the attractiveness of the offering, and about the value that can be gained by the customer or any other stakeholder. (Vuokko 2003: 26). As noted by Schulz, Tannenbaum and Lauterborn (1994: 45), the real value of an offering exists in the minds of customers. The mental network structured by the consumers' collective minds, which is created through communications, is the only true differentiating feature in favour of the company, since all other marketing variables, such as price, product and distribution can be duplicated.

Marketing communications can have an effect on three different levels: the cognitive, affective and conative levels. The impact of the cognitive level relates to conspicuousness, knowledge, and awareness about the company and its products. For example, people will generally learn to recognize the name and the logo of the company, or some of the various technical features of the product. An affective impact can be observed in the opinions, preferences and attitudes held by the recipient. For example, learning to appreciate the features of a product, preferring one product over another, or having the urge to try a new product are affective effects. Effects in the conative level refer to more visible impacts to behaviour, such as purchase habits or product-related inquiries. (Vuokko 2003: 37–38.) According to Vakratsas and Ambler (1999), marketing communications should have an effect on the mental, cognitive, and affective levels before it can affect the behavioural conative level.

The chronological point of origin and the durability of an effect achieved through marketing communications can vary. The impact of marketing communications can be instant or only begin after a varying long period time. The so called 'sleeper effect' theory suggests that the source of the message is also a partial cause in the immediate effects gained through the use of marketing communications. If the source is experienced as being pleasant, the message is an overkill, but if the source is unpleasant, the impact is undesirable compared to a neutral source situation. But as time goes by, the impact of the source diminishes and the impact of marketing

communications is more evidently based on the message itself. For the most part, marketing communications seek to achieve long-term effects such as a constant and proper image, a positive attitude or the building-up of a brand image, but short-term effects can also be sought after. For example, cheap prices can be advertised before running down a business. (Vuokko 2003: 41–45.) Ultimately, all marketing communications seek to eventually affect the target customers' buying process, which includes their awareness, knowledge, liking, preference, conviction, and finally the purchase. In order for marketing communication to be effective and a purchase response to be reached, marketing communications must be designed to fit the stage in the buying process where the target group is standing at the moment with the consideration of the goal position of the group in mind. (Kotler & Armstrong 2016: 454.)

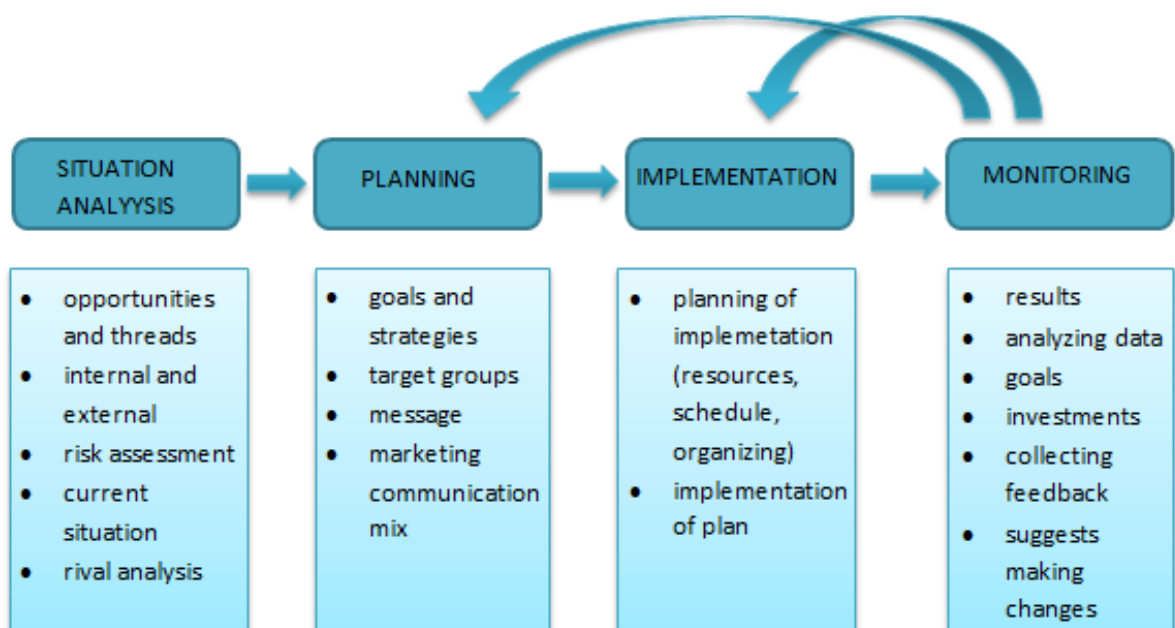
The target audience of a marketing communications message can be different from one type of stakeholder to the next. Some marketing communications might be targeted to nearly all stakeholders, covering a vast target audience, whereas some other communications might be targeted to only a narrow, limited group of people. A company may choose either a push or pull strategy to be their communications strategy. (Bergström & Leppänen 2015: 301–302.) A push strategy means that the message is sent to an intermediary who then passes on the message to the final audience. (Vuokko 2003: 47.) For example, a brewery may contact Alko (a Finnish government-backed alcoholic beverage retail corporation) to get their products to the market, who will then market the products to the end consumers who will finally buy the product for personal consumption. Conversely, a pull strategy means that the message is targeted directly to the final audience, who then contacts the intermediary, who will then answer the growing demand. For example, a brewery may market their products directly to the consumers, who will then visit Alko in order to buy the brewery's products.

### **3.2 Marketing communications planning**

The purpose of marketing communications planning is to produce a predefined impact, so that the message reaches the desired receiver at the end of the process. The aim is for a predetermined goal to be achieved as a response to the

communications. The effectivity of the communications is dependent of three variables: the stimulus, the receiver, and the environment. When planning the stimulus, the target group of the message and nature of the environment must also be familiar to the one communicating in order for the result to be an effective message. (Vuokko 2003: 66, 131.)

Marketing communications planning should carry a strong connection to broader marketing planning and, moreover, to the company's strategic planning. Marketing communications should reflect and support the vision and the values of the company as well as be seen as an inseparable part of overall marketing planning. (Isohookana 2007: 92) It is also important that a mix of different marketing elements and tools are utilized in parallel and in support of each other (Vuokko 2003: 132).



**Figure 4. Marketing communications planning phases**

Like any other marketing planning process, marketing communications planning includes four main stages: (i) analysis of the current situation, (ii) planning, (iii) implementation, (iv) and monitoring. Phases of marketing communications and activities related to those are presented in figure 4. Stages of Situation analysis means describing and analysing the current situation by gathering and modifying data in order to support decision making. According to Winer and Dhar (2011: 61), the major marketing research functions are the scanning of opportunities and threads,

risk assessment of future programs, and the monitoring of current programs. Both internal and external actors, such as the company and the product, and the operating context and rivals, respectively, must be analysed. Market research can help the manager to develop an efficient marketing plan and a competitive marketing strategy. The magnitude of the analysis must be put into perspective with the importance and complexity of the decision to be made. (Vuokko 2003: 135–136.)

As advised by Isohookana (2007: 94), only after reaching consensus about the current situation can one move to the planning stage, where the goals and the strategies to meet those goals are set. As already noted, the goals of marketing communications should follow the goals and strategies of the company and overall marketing strategy. The goals should also be realistic but challenging enough. Another important notion is that no matter whether the goals are qualitative or quantitative, they must be measurable. (Vuokko 2003: 138.) Various hierarchy of effect models can be utilized in setting the goals for marketing communications. Such models describe the process that people go through when exposed to marketing communications. The models concern the kind of conspicuousness and awareness that will finally lead into action. The DAGMAR-model (awareness, comprehension, conviction, and action) and the AIDASS-model (attention, interest, desire, action, satisfaction, and service) are examples of such models. (Isohookana 2007: 99; Bergström & Leppänen 2015: 303.)

One of the most important tasks in the planning stage is to define the target groups, as it is considered to be essential for effective marketing communications (Vuokko 2003: 15). All stakeholders that influence the company's productivity and efficiency must be considered as target audience. In other words, the audience is not only limited to direct customers, but also contains, e.g., the company staff, the media, investors and distribution channels as target groups. It is crucial to define and know well all the target groups, so that the company has a good grasp on what the message recipient is like, what kind of a world the recipient operates in, and what kind of information the recipient needs. Segmentation of the target groups can be done by using several different criteria. For example, when segmenting customer groups, the stage of the customer relationship can be one criterion. Potential customers, new customers, regular customers, and lost customers need different kinds of information



and communications. (Isohookana 2007: 103.) Another way to find target groups is to analyse the product lifecycle. When the company is in the phase of entering the market, their own employees, distribution channels and partners play key roles in boosting the entry process. Early adopters are the best consumer audience to target at this point. When the company reaches a growth phase, the range of target groups also expands and changes. The maturity and decline stages also have their own key target groups. (Isohookana 2007: 105.) During the same campaign, there might be multiple target audiences that are being communicated to by using different channels and tools. (Vuokko 2003: 142.)

The third main task in planning marketing communications is forming the message. At this stage of planning, the main message and supporting messages are decided upon. The message is about what the company wants the target audience to remember about it and what the company wants to guarantee to the recipient. It is important to remember that these messages hold promises that must be delivered. The message should be based on the true strengths of the company that differentiate it from its rivals. (Isohookana 2007: 105–107.) The focus of the message can either be on the content or the form, which can also affect the structure of the message. The content of the message refers to what is being said in the message and how it is structured within the form of the message. This can concern, e.g., which channel is chosen to be used. If the customer is motivated and capable of understanding the message, they form their opinion by evaluating both the content and the form. If the customer is not motivated or incapable of understanding the message, one forms opinion based on the form of the message only. (Vuokko 2003: 58.) The content of the message can make use of either rational appeal or emotional appeal (Kotler & Armstrong 2016: 455). We would argue that rational appeals are suitable for messages that are focused on the content, while emotional appeals are better suited for messages that focus more on the form. When decisions about the message and its structure and format are made, many factors, such as communications objectives, target groups, rivals, and the communications environment must be considered to have influence (Isohookana 2007: 106).

The next big task is to form a marketing communications mix, which refers to the different marketing channels and tools used. When a target group analysis is done

well, it can be utilized when figuring out good contact points for communicating with different target groups. According to Kotler and Armstrong (2016: 457), communications channels can be broadly divided into personal and impersonal channels. A rough estimate is that personal selling is the most important communications tool in B2B-marketing and advertising in B2C marketing. (Isohookana 2007: 108.) Different channels and tools are dealt with more depth under chapters 3.4 and 3.5. The budget of communications is also defined in the planning stage. The budget should include the planning, implementing and monitoring expenses involved in marketing communications. In our thesis, the focus is on start-up companies, so the relevant budgets are in actuality close to zero, which may result in some restrictions regarding the formation of a marketing mix. Effective use of resources is pursued through effective coordination and integration. Integrated marketing communications are dealt with in the next chapter.

After a phase of careful marketing communications planning, the time has come to plan the implementation and to eventually implement the plan. The important issues in this phase concern organizing, allocating resources, and scheduling. Resource allocation means figuring out what monetary, human and technical resources are needed in order to implement the plan. Resources can be acquired outside of the company if needed: for example, if there is a lack of sufficient know-how in the company, it can be acquired through a business associate. Finding any necessary resources from outside of the company is also a part of the plan. Organizing means adjusting the marketing communications plan to fit more concrete actions. This can include, for instance, who does and what, whether marketing communications are combined with either the marketing or sales departments, or if they are operated by an individual department. Last but not least, the implementation plan is scheduled for the master plan. Additionally, a timeline for individual actions and use of communications tools is decided on. It is important to schedule communication tools in the right order to make them support each other as well as possible. (Vuokko 2007: 160–162.)

Monitoring and exploiting results is the last phase in the marketing communications planning process. Although this is the last phase, it does not mean that one should think that the results need to be measured only after implementing the plan.

Monitoring should also take place during the planning and implementation phases because careful evaluation of data can be extremely helpful for the company in managing any problems at any earlier stages before it is too late to make corrections. As already noted, monitoring includes measuring if the goals were reached and tracking any made investments. It also includes the analysis of gathered data and exploiting the results. (Isohookana 2007: 116–117.) Monitoring and collecting feedback on marketing communications might produce results that urge the company to make changes in their communications practices or even in the offered product itself (Kotler & Armstrong 2016: 460).

### **3.3 Integrated marketing communications**

Integrated marketing communications (IMC) is a marketing paradigm that has increased its popularity since early 1990's. IMC means that all the marketing communications tools and channels work in conjunction with each other in order to create a coherent set of images and effects in the recipient. Integrated marketing management reflects a marketing paradigm that highlights a customer-oriented approach to marketing. That is to say, the primary starting point in IMC is to wonder what the desired impression amongst the recipient group is; not which tools are used to achieve it (Vuokko 2003: 325). In the value creating process the most important task of marketing communications is to communicate the chosen and generated value. Despite that, it is still important to notice the connections between the different phases of the value creating process and how those processes bundle together different processes in the organization. (Vuokko 2003: 24.) According to Finne and Grönroos (2009), customers receive messages from five sources, which are planned marketing communication, product messages, service messages, unplanned communication, and absence of communication. Thus, based on traditional IMC, organizations strive to implement communications from various sources so that it would appear seamless from the receiver's viewpoint. (Hartley & Pickton 1999.)

By integrating marketing communications, companies try to seek synergy benefits. Pickton and Broderick (2005: 28–29) describe synergetic benefits of IMC by using 4E and 4C models. The four E's indicate to enhancing, economical, efficient, and

effective benefits. The four C's are coherence, consistency, continuity, and complementary communications. These E's and C's depict the benefits that can be gained by integrating marketing communications. To reach its full potential, integration should consider strategic planning on the company level, all marketing mix elements and tools, messages, target groups, internal and external marketing, design management, and visual design (Isohookana 2007: 293 & Vuokko 2003: 328).

Even though integration of marketing communications is recognized to create many benefits for the company, it is not necessarily carried out because of the challenges and barriers related to achieving integration within the company. Pickton and Broderick (2005: 36) summarize the factors that discourage companies from integration: mind-set, taxonomy and language, structure of organizations, elitism, magnitude of the task, adequacy of budgets, manager ability, agency remuneration systems, and dimensions of integration. Over many years, specialization of practices has been rewarded and the benefits of integration have been overlooked. This mind-set can be result in the companies fearing loss of control or changes that might be believed to be related to integration. Also, the magnitude of the integration task at its widest scope may seem overwhelming. Organizations that have traditionally subdivided their tasks into many departments and under several managers can generate organizational barriers that should be broken down in order to coordinate and manage organizational integration. In addition, organizations should have managers with cross-disciplinary skills who can master integration. Attitudes and perceived elitism within specialist fields should be overcome as well. The taxonomy and language used to discuss marketing communications may cause promotional activities to be seen as being separate. Integration on the whole should include dimensions of integration besides promotional activities, such as creative integration, intra-organisation, information and database systems, and geographical integration (Pickton & Broderick 2005: 533–535). To achieve true integration, marketing communications budgets should be seen as long term investments, so that potential strategic and long-term values of marketing communications can be properly considered. Challenges that are seen as hindrances emerging from integration are organisationally driven. If managers see the whole potential of integration, it becomes clear that these hindrances should be overcome by the management. (Pickton & Broderick 2005: 36–39.)

Even though Vuokko argues that IMC is a customer-oriented approach, Finne and Grönroos (2009) criticize IMC for lacking a truly outside-in focus on the consumer, since in the traditional sense of IMC, the company is seen as a driving force for integration that sends consistent messages to the consumer through various communicative efforts. Consequently, they propose a new outside-in consumer-centric perspective called the Relationship Communication Model. The perspective is built on the idea that, in reality, it is the active consumer that performs the integration of received communications messages. Finne and Grönroos (2009) argue that communication messages can trigger integration and a meaning creation process within the minds of the customers. However, there are other additional factors that have an essential part in the meaning creation process. Such factors are categorized within two dimensions, which are the dimensions of time and situation. The time dimension includes historical and future factors based on the consumers' perceptions about a given relationship with the company. Historical factors may be, for example, experiences, memories, or stories that are part of the consumers' personal history. Future factors can in turn be hopes, visions, expectations, or goals. The situational dimension includes external factors, such as trends, traditions, the situation, family, or alternate choices offered by market competitors. Another situational dimension includes internal factors, such as attitudes, capabilities, identity, or personal interests related to the consumer's individual context. Since this model argues that the consumer also integrates these elements and factors into the meaning creation process, they should be also considered when planning communications and the use of communications activities. Still, the traditional sense of IMC that highlights integration of outgoing messages from various sources is considered to be important.

Communications should take into account that the relationship between the consumer and the company is established, maintained, and enhanced over time, and that this relationship has a considerable impact on the integration of message meaning creation. When a company is successful in forming a mutual knowledge basis and a shared structure of meaning between the company and the consumers, it can be a good platform for future relationship-building communications. In order to predict the meaning outcomes of communication messages and to develop more effective marketing communications, a relationship communication model can be used to identify the factors that influence the consumers' meaning creation process. Finne

and Grönroos (2009) argue that marketers can only facilitate the circumstances needed for the customer to integrate the communication messages, but it is the consumer who decides whether and how to both integrate and create meaning. Long-term and comprehensive communications that are rich in time and situational factors, and also consist of sequences of coherent messages coming from variety of sources, may enhance the integration and the meaning creating process that take place at the consumer level.

### **3.4 Marketing communications tools**

The traditional classification for the marketing communications mix or promotional mix tools includes personal selling, advertising, sales promotions, and public relations (Pickton & Broderick 2005: 16; Kotler & Armstrong 2016: 462). Marketing communications are always useful for the company, but the goals and messages may vary in the different phases of the company or the product lifecycle. These different marketing mix elements engage different target audiences and channels, and the best mix of them must be considered to be the one that fits the goals and contexts of marketing communications. (Bergström & Leppänen 2015: 304.)

Personal selling is a communication activity between a company representative and a customer through the use of personal channels, traditionally being face-to-face or telephone communications. In our opinion, personal selling can nowadays also take place on the internet. E.g., it is possible for a Finnish citizen to ask for help from a tax official with filling one's fiscal declaration by using a chat service online (vero.fi). A customer servant may propose buying a lightbulb when ordering a lamp by communicating through a chat box while a customer is engaged in online shopping. Personal selling is interactive two-way-communication by nature, and the message can be tailored to fit the needs of the situation. Personal selling is regarded to be an effective tool for marketing communications whose goal is to create short-term effects. (Vuokko 2003: 169.)

Advertising is the most visible tool of marketing communications. By its definition, advertising is paid communication to large target groups. Advertising is impersonal by nature. It is one-way communication that does not establish any sort of

interpersonal contact between the message sender and receiver. Advertising can be realized by using several different channels, including traditional media, such as print, magazines, television, radio, and direct advertising, or digital media. By advertising, a company aims to inform, persuade, or remind customers about their products. Advertising can be used to pursue long-term or short-term effects. It can encourage making purchases, but also be used to build up the brand image or enhance recognition of a product. (Vuokko 2003: 193–195.)

Sales promotion is marketing communication whose goal is to trigger an increase in demand or sales. It can be targeted to actors operating in the company's distribution channels, the company's own sales organization or be directed straight to the consumer. Sales promotion is based on the idea that a product has a certain price, and by reducing that price or offering more of the product for the same price, the company is able to affect demand. In practice, sales promotion is done by offering an incentive that agitates purchase. A typical feature to sales promotion is that the incentive offered is temporary, not permanent. Sales promotion uses both push and pulls strategies so that demand is affected by both the seller, e.g., encouraging sales personnel and distribution channels, and the buyer. (Vuokko 2003: 277.) Like advertising, sales promotion is also a form of impersonal communication that pursues a short-term effect. It is typically used as a supporting tool together with advertising and personal selling, since it is not often as effective as advertising or personal selling for building long-term relationships. (Kotler & Armstrong 2016: 463.)

Public relations are a marketing communications tool that aims to build a positive image or attitude, and good will towards the company. Public relations seek long-term effects, such as the building-up and maintaining of the organization's image amongst both internal and external stakeholders, or enhancing interest in the company's products. PR messages are more about content marketing, sending news, and events instead of sales-direct communications (Kotler & Armstrong 2016: 463). This is why target audiences are more receptive to the messages that the company is communicating. Some examples of public relations are organizing company visits for students, giving seminar speeches, generating positive media publicity, or arranging special events for regular customers. (Vuokko 2003: 279–280.)

Sponsorship can also be seen as a way of utilizing public relations as a marketing communications tool (Vuokko 2003: 278), but it can also be considered to be a supportive function to advertising, sales promotion, or even a marketing mix tool of its own (Karjaluoto 2010: 55). Sponsorship is based on making use of the public image of an external media actor. A company seeks to communicate about its values, interests, and products by linking them to an external entity. Publicity gain is the key factor that separates it from charity. When executed effectively, sponsorship may generate loads of positive publicity for the company. (Vuokko 2003: 303–304.)

Kotler and Armstrong (2016: 463) suggest one more tool for the promotion mix: direct and digital marketing. They describe direct marketing to be more targeted, immediate, personalized, and interactive. We argue that developments in technology have broadened the variety of channels that can be utilized in the implementation of different marketing tools. For instance, advertising can be executed virtually on the internet by using banners, advertisements can be sent directly to mobile phones. Some sales platforms are entirely digital systems. In the next chapter we concentrate on discussing digital marketing channels.

### **3.5 Digital marketing channels**

Marketing and marketing communications have undergone a transformation in the twenty-first century. One of the most significant factors are the technological advancements that have rapidly changed the power structures of marketing. Power is shifting from the producers and manufactures to the hands of sophisticated and sceptic consumers and customers, who can access unforeseen amounts of information. (Kitchen & Proctor 2015.) This change has forced marketing to aim for increasingly targeted and relevant communications.

Changes in marketing communications reflect major changes in the marketing paradigm as well, which are reflected in the concentration on relationships, customer-perceived value, maintaining customers and tailoring products (Karjaluoto 2010: 16). Together with the paradigmatic change, technological development, information technology, and new digital channels have changed the way that companies communicate and maintain relationships with their customers. According



to DiVia (2014), digital marketing is increasing its share of the total marketing budgets in Finnish companies. Digital marketing channels are used to replace traditional channels, for example expensive TV-commercials might be replaced with YouTube-videos. On the other hand, traditional media is still used in support of digital marketing campaigns (Karjaluo 2010: 108).

According to Merisavo (2008), digital marketing communications is “*communication and interaction between a company or brand and its customers using digital channels (e.g. the Internet, email, mobile phones, and digital TV) and information technology.*” This definition emphasises important characteristics of digital marketing communications, such as interactivity and two-way-communication. It also highlights that many channels can be used when performing digital marketing, not only the internet. Another important feature is the possibility to personalize marketing more accurately than when using traditional marketing channels which usually concentrate on marketing to the masses.

Digital marketing channels are here to stay. They are not necessarily replacing traditional channels, but the changes in people’s media behaviour forces marketers to re-evaluate and change their marketing actions. Still, according to the DiVia Digital marketing barometer (2014), Finnish companies are in the process of replacing especially print media, brochures, and catalogues with digital channels. There is also an increasing pressure against the use of traditional electric channels, such as TV or radio. Using TV as a marketing communications channel is especially under consideration.

Digital marketing channels have some major advantages compared to traditional channels. One of the most important advantages is in the alignment of the message. Personalisation is possible because new technology allows the monitoring of individual preferences, and content can be tailored to meet those preferences. In other words, in digital marketing, one-to-many communication can be transformed to one-to-one communication, individualized marketing, or mass customization. Another important feature is interactivity, which can facilitate direct feedback and dialogue between communicating parties and even between themselves. Customers have more power than ever before and they are not seen as passive message

recipients anymore. Demand-side thinking has become more important than supply-side thinking. Customers are seen as partners adding value to the brand. (Chaffey, Ellis-Chadwick, Johnston & Mayer 2006: 26.)

According to Karjaluoto (2010: 127–129), digital marketing communications are most efficient when the objectives of marketing are increasing brand awareness, changing brand image or attitudes, stimulating customers to try new products, or increasing customer loyalty. One or more of these objectives should be chosen as the goal for digital marketing communications. The most effective mediums for customer relationship marketing are the mobile and the internet. Next, we will discuss their significance in more detail.

### 3.5.1 Mobile marketing

Mobile marketing is marketing that is carried out by using mobile media. Mobile media include all wireless devices that people carry with them, such as mobile phones or tablets. Mobile marketing utilizes mobile telephone networks, WLAN or other internet networks to reach its audience (Karjaluoto 2010: 151). In other words, mobile marketing can use different technologies like SMS, multimedia messages, mobile websites, or geographic information systems. The message itself might be text, an image, video, or even an application (Karjaluoto 2010:158). According to the DiVia barometer (2014), mobile marketing communications tools such as mobile pages or services and mobile applications have increased their popularity among Finnish companies. In 2014, the popularity of mobile marketing tools was at the same level as the popularity of social media tools in 2010. It is predicted that the popularity will grow in the next years to come.

Mobile marketing has certain unique characteristics that need to be understood when planning mobile marketing communications. First of all, communication can be highly personalized, since the device usually belongs to one specific person, and the person to whom the communication is targeted at is almost always reached. In order to be able to send relevant information to the customer, it is vital to identify both the customers and their preferences. When personalization is completed successfully, the return of the communications is considerably higher than if sending inaccurately

targeted communications. However, because of the intimate nature of mobile devices, companies must be careful as not to irritate the customer by sending out communications. Mobile marketing also enables interactivity and direct dialogue between the message sender and the recipient, but the power to decide whether to engage in interaction or not is in the receiving end. It is argued that personalized dialogue may enhance customer loyalty, which is why it is important to send messages that encourage customers to be interactive in their behaviour. A third distinguishing characteristic is the flexibility and accessibility of mobile marketing communications. Mobile devices are carried around by people wherever and whenever they move about, so the people themselves are accessible by the use of mobile messages at anytime and anywhere. This makes mobile marketing a channel that has access to people beyond the reach of any other media. (Sinisalo, Salo, Karjaluoto & Leppäniemi 2007.) In addition, accessibility can be both an advantage and a potential challenge. E.g., sending text messages urging people to access information about a new product in the middle of the night can be irritating for the message recipient. On the other hand, mobile marketing communications have the potential to be context or place specific. If a person is at a nightclub, having a good time, and the company knows this because the person is carrying a mobile device, a mobile discount drink coupon can be a pleasant surprise. The effect can be further enhanced by extending the benefit to the recipient's immediate group of people. Mobile marketing messages have the potential to become even viral.

Responsive design has become more important than ever because people use so many different devices. The inevitable collection of a customer database for use in digital marketing is a challenge that companies currently face. Mobile marketers must have a permission from the receiver to send them any marketing communications messages. Usually, a database is collected by using external mediums, such as company websites or sales locations. It is recommended that permission be asked right at the beginning of the customer relationship; usually customers expect to be able to choose the channels they use to communicate with the company. When a company is planning to initiate mobile marketing communications, yet another challenge is to combine it with traditional and other media, so that the message remains consistent. (Sinisalo et al. 2007.) This is where integration of marketing communications steps in. Mobile marketing

communications are not to be approached as a separate project, but as a media that acts with the support of other marketing communications channels.

### 3.5.2 Internet

The internet has become wildly more readily accessible globally in the past ten years. As people spend a great deal of time on internet, it has consequentially become an essential place for marketing as well. According to Chaffey et al. (2006), internet marketing refers to the use of internet technologies to achieve marketing objectives. Karjaluoto (2010) regards targeting, interactivity, impressiveness, versatility, and measurability as distinct advantages of internet marketing. On the other hand, information that becomes quickly out-dated, the potential to annoy, and the difficulty of standing out are considered to be the challenges of internet marketing. Like in mobile marketing, different terminal devices with different resolutions set challenges for internet marketing. Again, responsive design is important. According to Karjaluoto (2010: 129), the most important internet marketing communications tools are corporate web pages, branded web pages, search engine marketing (including search engine optimization and paid search results), internet advertising (such as banners, pop-ups), viral marketing, advergames, online seminars, online competitions and lotteries, and e-mail marketing. According to DiVia (2014), company administrated websites, e-mail newsletters, and social media are the most frequently used tools for digital marketing communications among Finnish companies. We are going to take a closer look at company administrated websites, search engine marketing, social media marketing, viral marketing, advergames, email marketing, and marketing in online communities or forums.

Company administrated websites can be categorised into corporate websites and branded websites. Corporate websites are built around companies. Corporate websites focus on informing the users of the website about the company, including its values, mission, products, staff or other relevant information. Usually the aim of a corporate website is not to be a platform for business transactions or providing services. Corporate websites can work as a conjunctive actor between the company and its brands or subsidiaries. Branded websites refer to sites that are built around a specific brand. They are more focused on building the brand of a specific product

that the company has on offer. Branded websites offer information about the offering, but may also provide more interactive elements such as games, message boards, newsletters or blogs. Branded websites that are built just for one campaign are called microsites. They function separately from the main page and are short-lived. (Karjaluo 2010: 130.)

People find information from the internet mainly by using search engines such as Google. As people search information about products, companies and services by using search engines, search engine marketing is a splendid way of advertising. Search engine marketing is based on the idea that the company and its products are made easy to be found on the internet. According to Jansen and Spink (2006), 73 percent of search engine users will not even look beyond the first page of research results, so it is vitally important to get your company to the first search result page to lure visitors to your site. Search engine marketing can be divided into search engine optimization and paid search engine results. The target of optimization is to get the wanted web site among the first search results. Optimizing means adjusting search results organically, for example, by editing the content of the web site, keywords or backlinks. Search engine optimization is basically free and it is considered more trustworthy than paid results by internet users. Paid search engine results mean that the organizations behind the search engine sell advertising services to corporations. In a practical sense, search engines are selling keywords, and the highest bidders with a sufficient amount of clicks receive the best advertising spaces whenever the paid keyword is typed into the search engine. Using Google, paid ads can be seen above the organically produced results or on the right side of the results. Paid search engine advertising has major advantages. It is a cheap way to reach internet users worldwide, it is not perceived as being as irritating as traditional internet advertising such as banners, and it is well-measurable. Search engine marketing is a common form of advertising besides other marketing communications activities. Usually other activities function by arousing needs, while the function of search engine marketing is to fulfill the need by offering the user a solution. Besides paid search engine advertising, the internet can be utilized as a platform for other channels of advertising, such as AdSense, banners, pop-ups or direct email marketing. (Karjaluo 2010: 133–142.)

Email marketing can be used to seek both long-term and short-term effects. Email marketing campaigns can boost sales effectively, but they should be seen as a part of the whole communications strategy that aims to build a long-term relationship with the communications recipient (Perry 2015). On the other hand, if email marketing is mishandled in a company, it has the potential to damage the company's business image and alienate customers. For example, a company might commit itself to spamming, which means sending irritating and unsolicited commercial messages to customers. (Watjatrakul & Drennan 2005.) In order to avoid the negative impressions that might incur from spamming, marketers can use a permission-based marketing communications strategy when sending email messages. This means that the consumer is asked to agree to receive communications. This makes the consumer feel more control over the communications process. Permission marketing highlights the importance of personalized ongoing communications and dialogue that lead to greater profitability. (Godin 1999: 44.) According to Kent and Brandal (2003), seeking permission in advance for sending marketing communications is a worthwhile strategy for any company since permission-based emails are more effective, more frequently read, found to have more interesting content, are more likely to lead to a purchase than spam-based mails, and have higher click-through rate. Sutton (2015) argues that in order to succeed at effective email marketing, communications should be tailored to the individual. He emphasizes the importance of creating interesting content that is delivered to the receiver of the communications exactly when they need it. Advances technology and the growing amount of data about customers enables marketers to make more effective and personalized automated trigger communications that meet the customers' real world needs.

According to DiViA (2014), social media marketing is the third most popular digital marketing channel in Finnish companies. Facebook, YouTube and Twitter are the most frequently used channels, but also the more constrained LinkedIn, Foursquare and Pinterest arouse interest among companies who see them as suitable platforms. Barwise and Meehan (2010) encourage companies to see social media as a tool for engagement and collaboration. They argue that social media can increase brand awareness, competition and sales, but the most important possibility lies in the customers' expertise and creativity in product development, which can be harnessed through social media. They see social media as a channel to get unmediated customer

insights immediately. In order to succeed in social media and to take full advantage of it, a company should communicate a clear customer promise, build trust by delivering on any communicated promises, continually improve the promise, and innovate even beyond the familiar. The opportunity within social media lies in its interactivity. The scale and speed of social media development can be a great challenge to companies, but if companies succeed in delivering their promises, social media may well amplify their reputation. This, in turn, translates to great benefits. Social media is a productive platform for facilitating e-word-of-mouth, which has a significant influence on purchasing behaviour (Chen, Fay & Wang: 2011). Social media can also act as a good platform for viral marketing. Viral marketing refers to marketing messages that move from one person to another by exploiting peoples' existing social networks. Viral marketing is differentiated from word-of-mouth (WOM), as it means sharing or spreading an original message forward, whereas WOM refers to sharing experiences and opinions. According to Karjaluoto (2010: 144–146), viral marketing is considered to be an effective and successful way of marketing communications because marketing through friend-to-friend channels is often the most powerful way to influence brand preference and purchasing decisions. On the other hand, viral marketing is difficult to manage since it is difficult to explain how and when it really works. Nonetheless, it is known that viral messages spread most effectively in social networks that share common interests. This makes knowing the target audience important in order for a company to succeed in viral communications. Viral marketing has a great potential on social media platforms where sharing content and recommendations are made easy and rapid.

Advergaming is a digital marketing channel that seeks to draw attention to the product or to build the brand image by using an interactive user experience. They can also be used to train people or to introduce new products. People play advergaming because of the amusement or relaxation they offer. Advergaming is not seen as advertisements and companies should keep advertising elements to low level so as not to disturb the game experience. If advergaming meets the needs of the players, they have a chance to go viral if players recommend the game within their social network. (Karjaluoto 2010: 147–150). Games can also offer a platform for marketing and advertising inside the game. For example, a real-life brand may have established a virtual presence in a certain virtual world called Second Life, which can be used to

strengthen their real-world brand. Virtual worlds can also be utilized when doing marketing research or educating personnel who are geographically far away. (Messinger, Stroulia, Lyons, Bone, Niu, Smirnov & Peregut 2009.) Virtual games might also be the offering itself with its own revenue model that turns usage of the game into purchasing and profits (Mäntymäki & Salo 2011).

We argue that online communities such as online forums or blogs can also be considered to be noteworthy marketing channels for start-up companies. According to Yang, Mai and Ben-Ur (2012), marketers have begun to use online communities in order to reach online opinion leaders, who can have a great deal of influence within their social circle where information is searched for and shared. In other words, the idea behind marketing inside online communities is to encourage eWOM to spread through the community. This can be achieved through discussion about the market offering and by making the product better-known. According to Homburg, Ehm and Artz, (2015), a company's role in online communities can be either active or passive. A passive role means offering a platform for online conversations without engaging in the conversations among consumers. When following the passive role, a company's goal can be, e.g., to gather information about consumer needs. An active role means that a company is in active and direct interaction with the members of an online community. Kozinets, De Valck, Wojnicki and Wilner (2009) highlight the importance of transparency for those who market in online communities, as community members want to know about marketers who approach them. They also warn about engaging in ethically questionable WOM behaviours, such as posting fake blogs or hiring people to post positive comments. Unethical behaviour can lead to attitudinal resistance and hostility towards the company. Yang, Mai and Ben-Ur (2012) argue that seeding strategies targeted at opinion leaders may turn out to be more effective than a general buzz strategy targeted at the general audience. Companies can try to attract the support of opinion leaders within an online community for the company's products, and to encourage key individuals to generate positive feedback about their products in a blog or forum environment. Kozinets, De Valck, Wojnicki and Wilner (2009) suggest that marketing in online communities should be seen as a long-term interactive proposition that follows the principles of relationship marketing. Different campaigns and actions can be chosen when aiming for relationship building or immediate sales.



Summary of the most used digital marketing channels are presented in table 5. Purpose of the marketing communications is also represented. Table aims to present which digital marketing channels can be utilized to meet certain goals of communications, such as making sales or arousing awareness. As we can see, one channel can serve multiple purposes and channels work best together in conjunction to each other.

**Table 5. Which marketing communications purposes are suitable for different channels**

PURPOSE CHANNEL → ↓	MAKING SALES	AROUSING AWARENESS	SHARING INFORMATION	BUINDING RELATION-SHIP	ENCOURA-GING WOM	GOING VIRAL
MOBILE	X	X	X	X	X	X
WEB PAGES		X	X	X		
SEARCH ENGINES		X				
EMAIL	X	X	X	X		X
SOCIAL MEDIA	X	X	X	X	X	X
GAMES		X		X		
ONLINE COMMUNITIES		X	X	X	X	X

#### **4 THEORETICAL FRAMEWORK**

From the theory of innovation commercialization and marketing communication we have created a theoretical framework which is presented in figure 5. The framework combines the process of innovation commercialization (see chapter 2.5) and themes from market communication (chapter 3). As discussed before, the innovation commercialization process includes three main stages discovery, development, and deployment. The stages and their themes may not be linearly organized, as in some cases a company may enter straight into the deployment phase and finish in the development phase, depending on the context of innovation. The main stages include six different themes: (i) the source and (ii) type of innovation, (iii) market entry, (iv) protection, (v) development, and (vi) deployment. We see that integrated marketing communications have an essential role in the whole process of innovation commercialization. This is why integrated marketing communications are situated between the innovation commercialization process and marketing communications activities. Marketing communication activities are divided into three different roles: the plan, the target and full action. The roles relate to the role of marketing communications in each step in the innovation commercialization process. Below the marketing communications roles are communication activities, which are needed to implement market communications actions in practice.

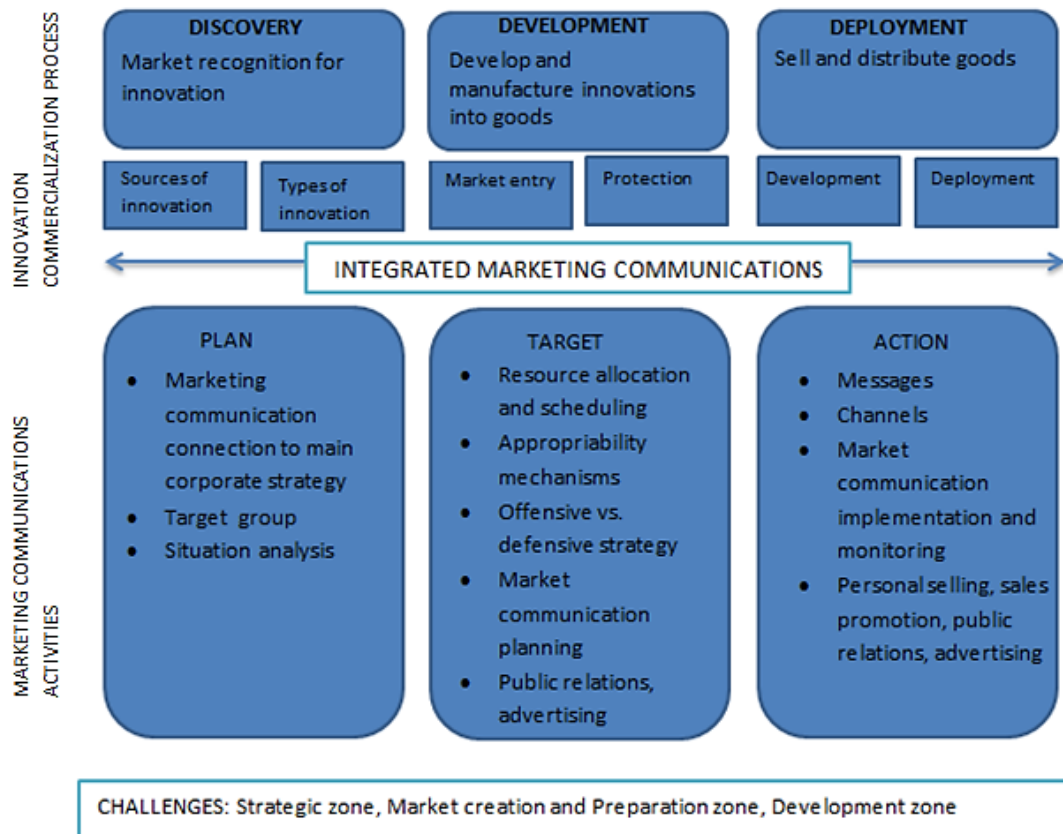


Figure 5. Theoretical framework of innovation commercialization process and marketing communications

#### 4.1 The Framework explained

In this chapter we are going to explain our theoretical framework in more detail as well as argue the reasons why each marketing communications activities are places under each phase of commercialization process as those placements are based on our own logic, because there is no existing studies combining theories of marketing communications and commercialization process. However, as mentioned in the previous chapter, the structure of the framework in the figure 5 is based on theory concerning the innovation commercialization process. Detailed explanations of the main actions of discovery, development, and deployment and their themes are found in the chapter 2.5. The theory of marketing communications from chapter 3 is combined with the theory of the commercialization process. The aforementioned marketing communications roles (the plan, the target and full action) are meant to be adapted for the different stages of the innovation commercialization process: the plan role at the discovery stage, the target role at the development stage, and the action role at the deployment stage. Different communications activities help to confirm

that the desired actions can be implemented in practice at every stage of innovation commercialization. Activities help companies to execute their marketing communications strategy. Companies also face some challenges related to strategy, market creation, and development at different stages of commercialization.

At first, it is important for a company to utilize integrated marketing communications (see chapter 3.3). This means that the principles of marketing communications are similar in both internal and external communications, as well as for the different marketing channels. Marketing communications are not only marketing department's responsibility, but a task for carried by the entire company without departmental limits. It is essential that all operators in the company deliver the same message to external parties, such as customers or co-operators. For example, the worker in the material execution department reflects the company's values, principles and trust to suppliers the same way the seller reflects them to customers. In order to assure that all operators can deliver the same message externally, the message and common marketing communications practices (like value communication) must first be successfully internally adapted throughout the company. Integrated marketing communications should always have a presence within the company. This is why it has been marked into the framework, so that all the stages of commercialization are covered.

#### 4.1.1 Plan at the stage of discovery

The role of marketing communications at the discovery stage is to participate in the planning process. This means that planning of the base of marketing communications should take place in the beginning of the innovation commercialization process. Data gathering from customers, competitors and suppliers, and other background work including competition and situation analyses are done at this stage. Customer-oriented thinking and the promise made to the customer are essentially connected to innovation discovery because a company needs to consider these already when they are still in the process of creating the commercialized innovation. Later, the customer promise forms the basis for the marketing communications plan and acts as the main message in communications activities. The plan creates a part of the basis for marketing communications which is to be established later. In some cases, values

and principles that are communicated internally within the company can trigger innovation activities, although the direction is typically vice versa. As an example, a company may have internalized marketing communication principles, and R&D can follow up on the same principles when creating new innovations. Another example could be that the customer promise exists before the innovation itself takes place, e.g., the company has promised to have the fastest delivery time in the market, but one day a competitor beats theirs. This would force company to innovation development of an even faster service in order to being able to keep their promise to the customers.

The marketing communications strategy and innovation strategy should be aligned to fit the company's main strategy. This means that elements of the main strategy, like the company vision and mission, need to be considered during the innovation process and when planning marketing communications. Internal marketing communications inside the company and the network should already have been described in the main corporate strategy to guarantee that all the operators can act under the same principles, and later expand the uniform communications practices to external customers. The company also needs to consider the target group of a new innovation at this point, as the innovation commercialization process should be customer-oriented. Based on data gathering and situation analysis, it is important to recognize not only the possible market niches and potential customers, but also competitors and possible threats, so that the innovation commercialization will have a better chance of success.

Companies may struggle with their strategy at the discovery stage, as they do not yet know which kind of marketing strategy or innovation strategy they should follow in order to maximize the chance of success in the commercialization process. Companies may also face challenges because of a lack of a systematic model for the commercialization process. This may lead to difficulties on managing the process and connecting it with marketing activities. At this stage of the commercialization process, small companies or start-ups may lack the relevant knowledge to understand the commercialization process. This is how they might fail to make the right decisions to exploit the markets and customers, and at the same time making the right marketing communications choices.

#### 4.1.2 Target at the development stage

At the development stage, the role of marketing communications is targeting. At this stage, the purpose of marketing communications is to stir up interest among potential customers towards the innovation, and to create positive attitudes towards the innovation among customers and other stakeholders within the company's communicative network. This makes public relations and advertising important tools to use at this stage, since they produce long-term effects, such as product awareness, stir up interest in the product and promote the formation of more positive attitudes. The finishing touches to the marketing communications plan should be made by the time when product is ready to be sold and distributed to customers. At this point, marketing communications are typically performed on a small scale towards the customers and on a larger scale within the company and its network. There may yet be a small number of exceptions where marketing communications are more effective when performed to full capacity towards the customers. For example, if the company is using a first-mover strategy (offensive strategy) to launch a new product (see chapter 2.2) the role of marketing communications is much more significant at this rather early stage. First-movers need to create and communicate visions and even secure pre-orders from customers before the product is launched, and confirm their successful entry into the market. A good example of such a case is the iPhone: Apple uses marketing communications activities to advertise a new version about year before launching.

The marketing communications plan is finished at the development stage along with a description of its details. Major concerns in the marketing communications plan are resource allocation and scheduling. The company needs to target the resources reserved for marketing communications. For example, whether the marketing communications plan is established and implemented with company's own reserve of resources, or if the resources are acquired through the company's network, or perhaps bought from an advertising agency. The budget, the first draft of the outline of marketing tools and channels, and the marketing communications schedule are also included. Companies acting through networks may utilize marketing communications targeted to other actors within the same network when seeking to build beneficial relationships. For example, appropriability issues such as legal

workforce, lead time and human resources can be a prerequisite of marketing communications inside the network. Communications can be used to signal the trustworthiness, honesty and respectfulness of the company. By using the appropriability issues as a basis for marketing communications, the company can strengthen its positive image among cooperators and even further within the reach of their communicative network.

The level of significance that the role of marketing communications plays at development stage depends on the marketing strategy of the company (see chapter 2.2). If the company chooses to use an offensive first-mover strategy, the big picture of the marketing communications strategy is supposed to be planned out in a way that allows for the company to implement concordant marketing communications as early on as possible. In such a case marketing communications take the role of ‘full action’ even if the actual deployment of the innovation (distribution, manufacturing, pricing, etc.) has not been implemented yet. If the company uses a defensive innovation strategy, the employment of the marketing communications plan can be postponed until the innovation deployment stage. The company will wait for the market pioneers to launch their product, and may prefer to do some late design changes to their own product, and therefore base their marketing communications plan to exploit the pioneer products’ weaknesses, e.g., by offering a better solutions to any possible design flaws.

Companies may face certain challenges related to market creation and the market preparation zone at this stage. Companies may, however, have formed a strategy to make their innovation well-known within the market and among customers. Usually, the stakeholders and the company’s communicative network have an important role doing innovations well-known, which makes small companies often highly dependent on their support. The network can offer the company direct aid or their knowledge at the different stages of the commercialization process, e.g., helping with appropriability and legal issues. The absence of a supporting network in the commercialization process is a common challenge for companies, which can leave especially smaller companies struggling with a lack of information and know-how. This can lead to a situation where the company cannot create credibility for the innovation, and as a result, potential customers may not want to buy the product.

Insufficient resources during the commercialization process are also a common challenge, as companies may sometimes fail to allocate internal and external resources in a way that could save them from cost overruns and delays.

#### 4.1.3 Action at the deployment stage

The last marketing communications role is the full action at the deployment stage. This refers to how the marketing communications plan is implemented to its full extent. Marketing communications have an important role to play in innovation commercialization, acquiring new customers and making sales. A uniform marketing communications message must be delivered to the target audience through the use of different marketing communication tools meant to ensure that all potential stakeholders receive the intended message. All marketing communications tools (whether they are advertising, public relations, sales promotion, or personal selling) are used in combination with variable channels at this stage in order to reach as many target groups as possible. Advertising and public relations are utilized to seek long-term effects, such as building a positive brand or corporate image and controlling attitudes, and also used to share information, to arouse interest and gain positive publicity. Sales promotion and personal selling are especially typical tools at the deployment stage, since they specialize in causing short-time effects, such as increased sales. The role of marketing communications is usually at its most significant point at this stage. During earlier stages, the role of marketing communications is more focused on planning and preparatory work aimed towards a deployment stage.

The customer promise acts as a basis for formulating the marketing message, which supposedly follows the company's market entry strategy. As explained before, the message in a first-mover strategy may not necessarily need any changes, as it is typically delivered already to customers during the previous stage. The message of a defensive strategy may require several changes for it to maximize its market potential in comparison to the pioneer product. Marketing communications can be used effectively by contrasting the two products and highlighting the improvements made by the company that chose a defensive strategy. For example, if a first-mover smart phone developer uses a low durability battery, another company launching a



new smart phone, can form a message that highlights the product's longer battery life. However, the message, which is reaching the customers, must be uniform in every channel used. Some channels may already have been used at the development stage, but there needs to be a remarkable change in the intensity of the message. The purpose of marketing communications channels is to deliver both the main message and supporting messages to the chosen target groups. Marketing communications actions, goals, results, and general successfulness are carefully monitored at this stage so that the company can ensure the functionality of its marketing communications actions. If the chosen marketing communications actions fail to generate the desired results, the company must re-examine the various factors that affect the result. It is even possible that faulty analysis at the discovery stage has led to incorrect results, which may have resulted in misunderstanding that there ever was any demand for the innovation.

At this stage, most challenges are related to earlier challenges not having been solved properly. The problem of creating sales in the early majority market cannot be solved before the company can understand their past mistakes. For the deployment stage to go fluently, earlier stages and their problems must have been thoroughly dealt with, or the company might risk going backwards the commercialization process. Sometimes the company may still be in the process of solving special difficulties at this stage even though previous stages have been successfully worked through. E.g., marketing discontinuities may play a role in the problem of sales creation and sales development, which the company can do hardly about anything.

## **5 METHODOLOGY**

In this chapter we discuss our research methodology and methods. Firstly, we will consider the philosophical assumptions that underlie the study. Then we move on to a discussion of the more practical and empirical implications of our research methods, and the interpretation of the collected data. At the end of the chapter we evaluate the validity and reliability of our thesis.

### **5.1 Philosophical assumptions**

The foundations for any study are laid by its philosophical considerations, assumptions and an exploration of the understanding of relevant methodology. These areas of interest are what allow the reader to identify and ascertain the writer's most basic assumptions, which hold a special significance within the structure of the study and the organization of research. In this chapter we take a closer look at the ontological and epistemological foundations of our thesis. Ontology refers to philosophical questions that deal with the nature and existence of reality. Epistemology is concerned with questions about knowledge, such as its origin, nature and formation. (Hirsjärvi, Remes & Sajavaara 2007: 126.)

Our thesis aims to clarify and describe how the process of commercialization could work in the context of and to the optimal benefit of start-up companies. Our thesis is a study of a process that is essentially a human creation, not a natural process. Ontologically speaking, we see human beings as the agents within in the process of interest. We assume that there is no one universal truth to the process, but rather consider there to be a collection of perspectives, which are essentially about different agents confronting different realities based on their experiences and circumstances. In other words, we see reality as being socially constructed. We claim further that reality is a changing phenomenon, not a stationary one. On the other hand, we seek the creation of singular framework that could benefit the majority of start-up companies, but at the same time believe that the framework should be applicable to actions with consideration of specific situational elements. Consequently, we believe in the existence of multiple contextual truths or realities rather than on one single truth.

Epistemologically we believe that knowledge is based on experiences and perceptions. We also realize that in some cases rational deduction may be the only possible way of gaining further knowledge, but prefer experience and observation as a more accurate source of knowledge. We believe that knowledge can be shared by person to person, but that knowledge is not consistent. Each person interprets knowledge based on their individual values and earlier experience. As constructivists argue, we believe that human beings' minds play an active role in construction or creation of knowledge. Knowledge that is based on impressions received and modified into, e.g., abstractions or concepts (Schwandt 1998: 221). We see interviewees as subjective informants who share their subjective knowledge, and that knowledge to be open for our further interpretation. Our goal is to understand the process from the point of view of those who have experienced it. As researchers, we interact with the informants within the interview event. We are not independent observers of the situation, but personally take part in the research. In conclusion, we categorize our philosophical assumptions to follow principles of empirical constructivism.

## **5.2 A Qualitative case study**

In our thesis, we aim to accomplish a holistic, detailed and comprehensive understanding of the commercialization process in start-up companies in real-life situations. The start-up companies we chose form our group of research subjects. Our goal is to understand and describe a process that takes place in one point of time during the lifecycle of a company. (Hirsjärvi et al. 2007: 130–131.) We are not interested in changes that happen during any extended time period. (Cooper & Schindler 2008: 144) Based on these parameters, our thesis is a case study, regardless of the fact that our analysis is theory-driven and not as strongly empirical data - driven. (Saarela-Kinnunen & Eskola 2007: 185)

The instruments of our research are people who have experience of the process that we are interested in, which is why we see them as a valuable source of information. We argue that deep interviews are the best way to transfer that experience-based knowledge from one person to another. This is why we have chosen to use theme interviews to collect the research data from our informants. We believe that theme

interview as a research method allows informants to reveal their perspectives and stories well. The informants for this study were selected adequately, not randomly. According to Hirsjärvi et al. (2007: 160), these are all typical features of qualitative research.

On the other hand, Hirsjärvi et al. (2007:160) argue that qualitative research uses inductive reasoning instead of deductive reasoning. In our thesis, we take a more theoretical point of view. Our aim is to build a framework based on earlier theories and then test how well it fits to a real world environment, and finally learn how to improve the framework. In other words, the aim is to test the theory that we have built for use in a new environment or context. Based on all this, we believe our reasoning follows deductive reasoning. On the other hand, we are per se questioning the framework and searching for alternatives. We see the topic as a complex issue that has no right or wrong answers. According to Saaranen-Kauppinen and Puusniekka (2006), the division of deductive and inductive reasoning is too simplistic. According to them, it cannot be said that all qualitative research is purely inductive or that quantitative research is purely deductive. Despite of these contradictions with the reasoning, we have chosen to follow a qualitative research strategy.

### **5.3 Semistructured interviews**

For our experience-based data gathering method, we have chosen semi-structured interviews conducted with individual informants. Semi-structured interviews suit our research best, as they allow us more freedom than structured interviews. This way we have a better chance to discover new theme related issues that may come up during the interviews. On the other hand, unstructured interviews are not an option, since we have a certain process that is built into a framework that we are concentrating on. In order to be able to make some conclusions based on the comparison made between the theoretical framework and the empirical data, we must gather some specific data from all the informants. The interview frame is built to follow the different phases of the commercialization process of our theoretical framework, so that we are able to compare theoretical and empirical knowledge. Under each theme we have planned questions that are meant to shed some light on

the questions and issues that we are interested in within each phase suggested by the theoretical framework. Semi-structured interviews allow us as interviewers to vary the order of the questions to be asked to suit the situation the best. This way, we are also able to make clarifying questions if needed.

At a more practical level, we had planned to hold three to five interviews with individuals who worked in different start-up companies that have discovered some form of new technological innovation and utilize it in their product. In the end, we interviewed a total of four company personnel. Interviews were held in Finnish language. All the start-up companies operate in the Oulu region, and all interviews were held face-to-face. Three of the interviews were held at the offices of the interviewees and one was held at one of the two researcher's homes. The interviews lasted between an hour and seven minutes to one hour and thirty seven minutes. The informants were selected to meet our specifications, such as technical innovation utilization experience and the possibility of participation in a face-to-face-interview. This means that we used judgement sampling. The informants were acquired by inquiring from acquaintances whether they knew any suitable companies and through research into local start-up companies conducted on the internet. On one occasion, our informant suggested another potential interviewee, led to the creation of a snowball effect in our sampling. In other words, our informants were selected by using nonprobability sampling procedures (Cooper & Schindler 2008: 379). After finding some interesting suitable candidates for the interviews, we reached out to them by calling them or sending an e-mail informing them about our thesis and our interest in interviewing them. After receiving a preliminary acquiescence from some of the companies, the exact interviewing times and places were scheduled.

During the interviews we had predetermined roles: one of us acted as the interviewer while the other took notes. We believed it to be most practical that only one of actively interviewed the subjects, while the other one took notes. This way, we could avoid speech overlap during the interview. We did not switch roles for any of the interviews, but instead followed through with the same roles each time.

#### **5.4 The Puzzle exercise**

As a part of the interview we used a projective technique of component sorting (Cooper & Schindler 2008: 174), where the informant is presented with flash cards containing the different components of our framework and asked to create combinations of those component based on their experience about the commercialization process. The idea is that the interviewees were given pre-determined parts of commercialization process and marketing communications activities, but informants decided the order and linkages between them for themselves. The informants were also encouraged to explain the combinations they made and walk us through the process piece by piece. By doing that, we tried to uncover information that might have remained hidden if we had only relied on asking questions. We also believe that by using this visual technique, our informants could better perceive the commercialization process that they had gone through. We especially believe that the process and the bonds between different phases of that process could be better examined by using this exercise. The interview questions were designed to help us in our search to understand these phases in more detail and to make sure that we had a set of common themes that were discussed in all the interviews, no matter what the informants told us during the puzzle exercise. We see this exercise and the interviewing questions to complement each other. Both deal with the same issues, but in different forms and concentrating on different aspects.

In our opinion, the interviews went well. The informants seemed enthusiastic to tell us their stories. We were especially positively surprised with the amount of information that we were able to gather by doing the puzzle exercise. Informants told us surprisingly much during the exercise and seemed to enjoy doing it. Many times we felt that most of the interview questions were answered during the puzzle exercise and that going through the interview questions was repetitive. On the other hand, even though we believed that we already had an answer to a specific question based on the puzzle exercise, when asking the interview question, some new viewpoints or information typically came up. All in all, we feel that we were able to gain rather a deep understanding of the topic based on the informants' shared perceptions.

## **5.5 Analysis and interpretation of Data**

The analysis of our research data began with transcribing the interviews into a written form. Half of the interviews were transcribed by us and half were gone through by a transcribing service. Transcriptions were made in Finnish as the interview tapes were in Finnish as well. The transcriptions were not made with the sort of exactness that would be needed for conversation analysis in mind, and some irrelevant expletives were ignored. When the data had been transcribed, the second stage was to become familiar with the data by reading it many times. Once we were familiar with the data, we began codifying it. The way of codifying our analysis data is based on our theoretical framework, which means that our analysis is theory-driven. (Tuomi & Sarajärvi 2013: 113.) As our interview frame was based on the theoretical framework, the themes of the interviews were also preliminary classes of codifying. The classes were modified and combined based on the data that was gathered.

As analysing tactics we have utilized thematising and counting. When thematising, we examined issues that were common between several interviewees. On the other hand, we counted how many of our interviewees argued for specific items of interest. (Hirsjärvi & Hurme 2009: 172-173.) When interpreting the data we reflected our data against the theoretical framework with the aim of finding similarities and divergences in-between. We also looked for similarities in the answers provided by our interviewees. The results of our analysis are presented in multiple ways, such as descriptive text, graphs, figures and tables. Graphs and figures are used especially to represent processes or relations, tables to represent amounts or summarizations.

## **5.6 Validity and reliability**

The validity of a study concerns how well the chosen research methods fit the parameters set by the research questions, or in other words, whether the research methods measure the qualities of the chosen research topic. Our thesis is a qualitative study, which means that its aim is not to make any statistical generalizations (Tuomi & Sarajärvi 2013: 85), rather the results of our research are dependent on historical and cultural context. We wish to form a comprehensive view regarding the

perceptions, knowledge and experiences of the informants that took part in the study, but are aware that as researchers, we inevitably have an inherent influence on the formulation of knowledge, which affects everything all the way from gathering the data to the analysis and interpretation of the data. The attempt was made to make the research process transparent in order to enhance the study's validity. Transparency is accomplished, for example, by showing the reader our interview frame (appendix 2) and any quotations from the interviews to show how the interpretations have been made. Quotations are translated to English but the original Finnish quotations can be found from appendix 1. The research strategies and methods were chosen so that they could offer us answers to the research questions. (Hirsjärvi & Hurme 2009: 188–189). The interviewees were chosen so that they would have as much experience and knowledge about our research interests as possible, as Tuomi and Sarajärvi (2013: 85) advise researchers to do.

Reliability refers to the accuracy of the chosen research method. In other words, it means evaluating whether the results are reliable. We encountered some challenges concerning reliability issues during the research process. When analysing of the data, we confronted challenges, such as how we could be convinced that the interviewees had understood our question correctly. For example, when we asked whether they had any thoughts on customer promises, we assumed that both parties understood that the subject of discussion was concerned with the stage of innovation discovery, but there was no way to ascertain this at the time. We should have reached greater precision in the planning of the interview frame and have understood to ask more specific questions during the interviews. Utilizing method triangulation in our data gathering proved useful in the context of the previously described circumstances. As we collected our data through both the interview questions and the puzzle exercise, we were able to combine data from both to make more precise interpretations. Another reliability enhancing aspect of our work is that there were two people conducting the interviews, performing the analysis and discussing the interpretations.



## 6 THE ANALYSIS OF THE ROLE OF MARKETING COMMUNICATIONS IN THE INNOVATION COMMERCIALIZATION PROCESS

In this chapter, we analyze the data from the interviews and the puzzle exercise we had each interviewee go through. Our analysis begins by forming a comprehensive understanding of the innovation commercialization process. This part includes the puzzle exercise and two extensive interview questions. Three themes from the theoretical framework (see chapter 4) are examined in more detail using the interview questions. Each theme represents one stage in the commercialization process (innovation discovery, development, and deployment) which are further divided into eighteen subtopics based on the structure of the interviews. The three main themes are: innovation creation, innovation development, and market entry. The purpose of the chapter 6.1 concerning the innovation commercialization process is to shed light on the timing of marketing activities as themes one, two and three (chapter 6.2) are focusing to describe the elements included in these activities.

Table 6 is presents basic information about the companies that our research subjects represent. All companies are start-ups and they are all only couple of years old. The amount of turnover varies from one company to another. Each company either works within a field of technological innovation, or with innovations that include new technology.

**Table 6. Basic information of interviewed companies**

	Company A	Company B	Company C	Company D
Established	2012	2014	2014	2012
Turnover (€)	7500	xxx	250 000	50 000
Employers	5	8	2	6
Field	IT	Wireless hardware	Electronic development	Health and wellness technology
Interview date	17.12.2015	18.12.2015	5.1.2016	28.1.2016

As the last question of interviews we asked the companies what they thought about the role of marketing communications on the whole and within their innovation commercialization processes. All companies responded that the role is absolutely

necessary. The interviews speak for the importance of marketing communications, but we are interested in how companies implement in practice. It is essential to know the activities they favor to be the most successful ones in marketing communications. It is entirely possible, however, that while companies may see the benefit of implementing marketing communications practices, they do not necessarily know how to put this knowledge into practice.

## **6.1 Innovation commercialization and the channels used during the process**

In this chapter we discuss innovation commercialization on the whole before moving on to examine each stage with precision. We discuss and analyse the following topics in this chapter:

- The innovation commercialization process
- The challenges concerning the innovation commercialization process
- Analysis of the commercialization process based on the puzzle exercise
- Marketing communications channels

### **The innovation commercialization process**

Interviewees were asked to describe the commercialization of their innovations in their own words. There was a great deal of variation in the answers, but a common feature was that three out of the four companies concentrated on describing a marketing channel that they have felt to play an important role in the commercialization process. Two companies mentioned crowdsourcing as an important tool in their commercialization process. Two of the companies mentioned telemarketing. This is how the companies described their respective innovation commercialization processes:

*“About a year ago, we were quite ready with the physical gadget, but software was not fully defined yet, that is when we decided to test the market potential by doing a crowdsourcing campaign. [--] And for thirty days we sold it through Kickstarter and achieved our goal--.” (Company B)*

*“Telemarketing. That’s about all that we have done. When we got the product ready, we started calling to get some pilot customers and to tell what is our product like. It was completely new product on markets and it still is. It was challenging to get those first pilot customers, but when we got them, it made things easier, also others joined in.” (Company A)*

*“I did this commercialization a bit different, as I used a crowdsourcing campaign already a year ago. I have had two crowdsourcing campaigns. [--] I used it to get pre-orders, when I just had the idea. [--] It was a market research, if there is any demand. [--] I got such a positive feedback from there that it helped me to get company’s finances in order. [--] I engaged half a dozen companies and about twenty employees last year. I act as a project manager, I am being reported to every week.” (Company C)*

*“Slowly. Maybe where we started it was different. Whole service process --, but then we realized that our [product] was actually so good, that we hold up on that. On the other hand, when we started to seek some capital investors, we got a message that this business should be scalable. [--] We started cold calls on customers. [--] And sales should start even before the product is ready. So that you are a bit ashamed. [--] You can sell a product as soon as you can describe it. Try if anyone responds to your ideas. If nobody understands and gets enthusiastic, then you know that something is wrong. Then it’s not worth doing anything.” (Company D)*

### **The challenges concerning the innovation commercialization process**

Companies were asked to describe the challenges they had confronted during the commercialization process. The small Finnish markets and gaining credibility were mentioned as challenges by two of the companies. Also patent issues, lack of money, delays from the schedule, and understanding customer needs were mentioned as challenges in the process. This is how the companies told us about the challenges:

*“Bad situation [for potential customers] in Finland. The fact that we are in Finland, Finland is a lousy business country. [--] It has been a true challenge that the product that we are offering has ever been seen in [Finland] before. So to gain the credibility that it actually works and we have gained results.” (Company A)*

*“A basic problem of Finnish product development is that we are good at inventing new technologies before checking if anyone is interested in that kind of a technology. That is the... fundamental problem. (Company B)*

*“A lot. Challenges, big and small. [--] Tardiness. Things don’t happen as quickly as you want or have planned. One of the biggest problems is patents. I*

*have has two patent applications running for two years, nothing has been granted yet. Complaints are made regularly [by big competing companies], and whenever a complaint is made, the patent is delayed for three months. That is the biggest problem. [--] Investments can't be gained from investors or banks as the patent has not been granted yet. It causes a risk for them--.*  
(Company C)

### **Analysis of the commercialization process based on the puzzle exercise**

Here we will analyse some of the key issues that were found using the puzzle exercise during the interviews. The goal of this exercise was to gather a wide perspective on the commercialization process that the companies had gone through. Using this exercise we aimed to find out the order of the different stages of the process, whether the process was linear or not, which marketing activities were used at each stage of the process, and what the target audiences were.

First we take a look at the stages of the commercialization process. Our theoretical framework suggests one specific order for the stages of the process, but highlights that the process is not necessarily linear. According to our framework, the order would be as follows: innovation discovery, innovation development, and finally innovation deployment. All of the interviewed companies thought that innovation discovery was the first stage of the commercialization process, but only one of them continued the process as our framework suggests by arguing that development followed the discovery, and that the last stage was to bring the innovation to the market. Two of the companies placed developing the innovation and deployment of the innovation as taking place at the same time. One of the companies placed innovation deployment before innovation development since a company can sell based on made promises, even though the product itself does not yet exist and the development process is still on-going. The following figure 6 shows how companies placed the phases of commercialization process:

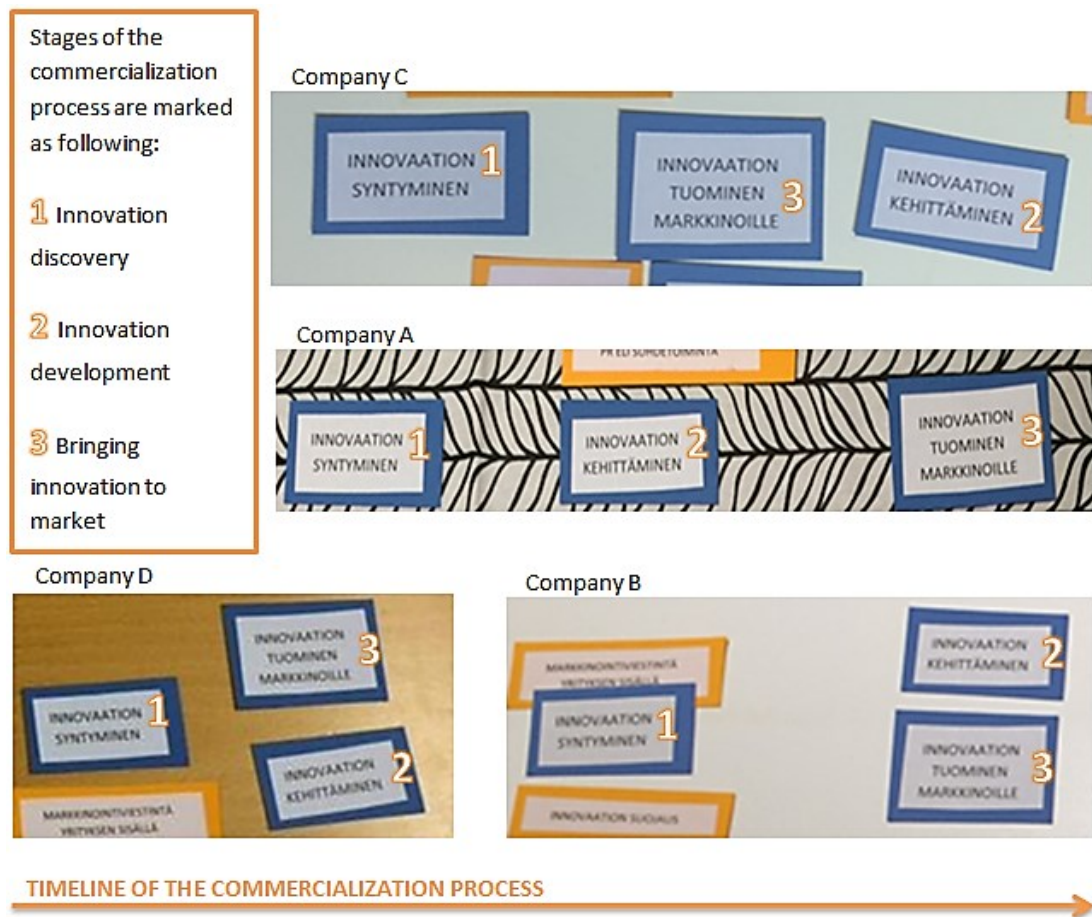


Figure 6. Stages of commercialization innovation process based on the puzzle exercise

The companies provided some commentary as they placed the stages in order as follows:

*“It is iterative, really rapid. It’s not a stiff process. [--] It’s hard to say which one of these two [innovation development or bringing innovation to market]... It was done iteratively. Started to market the idea for example to investors in a really early stage, when we had no employees, and on the other hand to prototype.” (Company D)*

*“Well, these we made side by side. Those two were made side by side.” (Company B)*

*“Well, well, what remains hidden is that developing an innovation is secularly a long phase. Bringing the innovation to market is phased. I mean, I could place bringing innovation to market over here and another version of that same over there.” (Company B)*

*“It’s already on the market, even though it’s not on the shelves of stores. Loads of contracts and sales. I am selling promises at the moment.” (Company C)*

Interviewees were also asked to place cards under the stages of the commercialization process that represented the target audiences of marketing communications. Target audiences of marketing communications in different stages of innovation commercialization process according to the interviews are presented in table 7 where A represents company A, B represents company B, C represents company C and D represents company D. Companies highlighted that even though they placed one target audience under one stage of the process, marketing to that target audience is a continuous process, and that the card only marks the stage where the communication was first started. The most frequently brought up target audience among the companies were the customers. All of the companies had been involved in marketing communications targeted to customers, and two of the companies began their outreach at the innovation discovery stage. Two of the companies began theirs at the innovation development stage, while one company placed it on level with the development and deployment stages which had been placed side-by-side. Three of the companies targeted marketing communications at other stakeholders. For example, investors were mentioned as a target audience. Two of the companies started marketing to other stakeholders at the innovation discovery stage, one began at the development stage, and one company only after all three phases. Internal marketing was the least popular activity among the companies. Only two of them admitted they had done some internal marketing communications that took place at the innovation discovery stage. Building a good team and marketing the idea to one self were mentioned as motivators for internal marketing communication. At the same time, it was judged to be irrelevant, as the companies were so small. One company placed internal marketing as a possibility for the future when the company would be bigger.

**Table 7. Target audiences of marketing communications in different stages of innovation commercialization process.**

	Internal marketing communications	Marketing communications to customers	Marketing communications to other stakeholders
Innovation discovery	D, B	B, C	D, C
Developing the innovation		D, A	A
Innovation deployment		D	
After the innovation process, future plans	C		B

Interviewees were asked to place different marketing activities under the different stages of the commercialization process. Placements of marketing activities are presented in table 8 where A represents company A, B represents company B, C represents company C and D represents company D. The placements show us that the innovation discovery stage is the most popular stage among the companies to engage in rival analysis, protect their innovations, and to examine customer needs. This is in line with our theoretical framework which suggests that the main focus of marketing communications at the innovation discovery stage is situation analysis which acts as a basis for marketing communications planning. On the other hand, our framework places appropriability issues, which are innovation protection mechanisms, at the stage of innovation development, but three of the companies placed it at the innovation discovery stage. This means that they began thinking about innovation protection immediately after discovering the innovation. Additionally, half of the companies began outlining marketing resources at the discovery stage. For example, employees were hired based on their know-how in order to assure that the company would have the human resources that it would come to need.

Marketing communications planning, formulating the marketing message and the creation of a marketing strategy are activities that were most commonly performed at the development stage. Half of the companies began thinking about marketing resources during this phase. The activities undertaken by the companies are in line with our framework. Within the framework, the marketing strategy and communications should be planned out in more detail at this stage, while some actual communications might already take place.

The innovation deployment stage was not a popular stage during which to engage in marketing communications activities. Only one company placed three activities under the innovation deployment stage, but this was because the company viewed the development and deployment stages to exist side-by-side. This is in line with our framework in that no marketing activities were placed under the innovation deployment stage, since in our framework that particular stage is intended for marketing communication activity implementation and monitoring, while all our

activity cards were concentrated on different tasks of marketing communication planning.

**Table 8. Placements of marketing activities on different phases of innovation commercialization process**

	Marketing resources	Marketing strategy	Rival analysis	Marketing communications planning	Innovation protection	Marketing message	Mapping customer needs
Innovation discovery	B, D	B	B, C, D	B	B, C, D	B	B, C
Developing the innovation	A, C	C, D	A	A, C, D	A	A, C, D	A
Innovation deployment		D		D		D	

### Marketing communications channels

In this study we also take a closer look at the marketing communication channels that the companies have used in the past during the different stages of their commercialization processes. Channels presented here are collected from puzzle exercise and, most of them mentioned during the puzzle exercise. The channels used at different points in commercialization process are presented in table 9. The channels highlighted in a dark green color were mentioned by two or more companies. The highlighted channels are later analyzed in more detail.

**Table 9. Channels in the commercialization process**

DISCOVERY STAGE	DEVELOPMENT STAGE	DEPLOYMENT STAGE
Crowdsourcing (Kickstarter)	Social media	Third party
Pitching	Crowdsourcing (Kickstarter)	Social media
Networks	Pitching	Telemarketing
Online communities	Online communities	Online communities
Internet	Internet	Pitching
Social media	Third party	E-mail
Networks	Networks	Traditional advertising
	Telemarketing	Webpages
	Google advertising	Google advertising
	WOM	WOM
	Magazines	
	Start-up events	
	E-mail	



Two or more companies admitted to using crowdsourcing, pitching, and networks as channels to stir up interest among potential investors during the innovation discovery stage. Such means were taken also in order to do market research related to their innovation process. At the early stage of the innovation commercialization process it is essential to acquire financial support and know-how from investors so that the companies themselves can continue their commercialization process towards the development stage. As the different stages in the innovation commercialization process might not be linearly organized, crowdsourcing and pitching were also mentioned at the development stage. Companies do not necessarily possess the necessary resources during the discovery stage, which is why they have to continue finding investors and clarifying their market potential even though they have already begun developing their innovation with the already existing resources. The companies mentioned these channels in the following contexts:

*“—kick-starter campaign came in the same time, because it was market research at the same time.” (Company C)*

*“--we have had these pitching events etc. and we have been asked to present [product].” (Company A)*

*“Probably in pitching events in the very beginning. From there it [information of product] spread to wider network.” (Company D)*

In the development and deployment stages, social media was highlighted to be a very important channel. Digitalization has made it possible to perform marketing communications and use a range of channels with a zero budget. This is why digital channels are essential for start-up companies. Social media also has the tendency to strengthen the phenomenon of viral marketing. All companies told that a great channel for marketing communications targeted at the customers during deployment stage are third party channels. Third parties may have wider networks and better customer portfolios than the companies themselves, which is why start-up companies may find it so beneficial to collaborate with third parties. Companies also mentioned that telemarketing works as an important channel for reaching customers and creating sales. Companies commented on the use of channels during the development and deployment stages in the following way:

*“And then there are all social media channels like Twitter, Facebook, Instagram, LinkedIn. Facebook and Twitter are the most important ones --“ (Company D)*

*“So yes, we want to create partnerships with those who are really good at doing sales and marketing.” (Company B)*

*”And marketing communication is also happening through third party.” (Company A)*

*” And selling is going to be more like doing telemarketing --“ (Company C)*

## **6.2 Theme 1: Innovation discovery**

In this theme, we focus on the first stage of the innovation commercialization process, which is discovering the innovation. The main focus is on the source and the type of innovation, and any possible marketing communications activities that take place during this stage. The following concepts are discussed within the first theme:

- Source of innovation
- Customer promise
- Relationship between the company’s main strategy and innovation
- The plan of commercializing the innovation, market situation and rival analysis
- Challenges in the stage of innovation discovery
- The role of marketing communications at the innovation discovery stage

### **Source of innovation**

The source of the innovation varied between the four companies. Two began to innovate when a need emerged from outside of the company. One company discovered the innovation with the encouragement from a lecturer when a student was doing their bachelor’s degree in university. Another company discovered the need for a new innovation by directly looking at the market and doing market research. Two of the companies expressed that their original idea for the innovation had changed along the way. Two of the companies were founded after having an idea about the innovation and based on that innovation. One innovation project stimulated

a company to develop a new individual product brand and the establishment of a new company. The different sources of innovation were described as follows:

*“After the course, the lecturer asked us if we were interested to further develop our technology, in his opinion the technology has some business potential. That’s it, we didn’t think it any further. Just started to do it.” (Company A)*

*“[Company] told us about their need, that they will need this kind of a gadget -. So, we developed that gadget for them here in this company--. That is how we developed the first version of the product, but at the same time we realized that the market potential is not too big--. [--] So, the further development idea came from inside our company.” (Company B)*

*“First market needs, that is from the faraway outside world. There was a lack of solutions. Our idea was to develop services. I mean complete service system offered by us, that was the first thought. [--] Then we realized that we can’t offer the service, but we must concentrate on the product to make it so good that we can sell it.” (Company D)*

*“-- my mother-in-law asked if I could develop this [gadget]--. I didn’t think it actively, but sometimes it crossed my mind. Then, one night when I was going to bed to get some sleep, I realized how to do it.” (Company C)*

### **Customer promise**

We were interested in knowing whether the companies had a customer promise, or in other words, a guaranteed solution to the specific customer need, what the value that the company offers to the customer through the product is, and what the customer promise contains. All companies were able to describe their customer promise. All companies mentioned possible savings, but one of the interviewees said that he is no longer marketing the product based on saving money, but instead concentrates on other ways to provide value. Otherwise the customer promises were different from one another. Nonetheless, the content of the customer promises was never our main concern, but rather to know if it existed at all.

*“-- we promise them like time and monetary savings in customer services. We can already prove that to a certain point. Plus our product makes additional sales possible.” (Company A)*

*“-- we enable individual people to make things that were possible only for large companies before.” (Company B)*

### **Relationship between the company’s main strategy and innovation**

We were interested in learning about the companies’ main strategies in order to understand what the relationship between the main strategy and innovation is. We were especially interested in finding out whether the main strategy and innovation support each other harmoniously, as is recommended in our theoretical framework. Three of the companies argued that their main strategy, including their values and visions, supported innovation. One of the companies said that they are acting to fulfill their values within their main strategy, but because of the nature of their market offering, some people might see a contradiction there. We argue that the characteristics of innovation have played a major role in formulating the companies’ strategies, or at least in three of the cases among the companies we interviewed. For example this is how interviewees told us about their companies’ main strategies:

*“To be a good place to work, and quality, to do thing in high quality, both internally and to the customers. To show the world that these are the things, and with this team we can take things further, all the way to international business. But it can’t be taken there unless we use these strong visions and values to guide our actions.” (Company D)*

*“-- we have to have values for customers. We want to be a reliable business partner. [--] -- there might be a contradiction since our innovation might give up a view of downsizing the need for employees.[--] On the other hand, as we want to be a reliable company in many levels, we react to customers’ needs and requests.” (Company A)*

One theme that arose as the interviewees discussed their companies’ main strategies, was their goal to reach for foreign markets. This is in line with our definition of a start-up company, which argues that start-up companies aim for rapid growth in the future. Two of the companies expressed that they were aware of large international companies having the tendency to buy out smaller companies from the market. Here is what the interviewees said on the matter:

*“Let’s say we go to India and there we will bump into [our product]. Then we know that we have accomplished something. Intention to take our innovation to foreign markets.” (Company D)*

*“To harry the market so that [large companies] are irritated enough to licence or buy the whole company with a big amount of money.” (Company C)*

*“Our vision is to be a flagship in the future. [--] For us Finland is only a test laboratory for our product and technology--.” (Company A)*

### **The plan of commercializing the innovation, market situation and rival analysis**

Within this theme we wanted to know if the companies had planned how they would commercialize an innovation already at the stage of innovation discovery. All four companies said that they have planned through the commercialization process already at this stage, which is in line with our framework. We were also curious to find out if the companies had analysed the market situation, the possibilities of commercializing their innovation and if they had done any rival analysis. These questions about market situation analysis and commercializing possibilities seemed to be somewhat challenging for the companies, as their answers varied significantly. Still, the companies managed to tell us something about their commercialization plans. However, the question about rival analysis seemed to be clearer, as the answers were more precise. Three of the four companies explained that they had done rival analysis, while two performed rival analysis on a regular basis. One company said that they did not engage in the analysis since they lacked any real rivals.

*“Yes, we have planned. And as I told you, we have two business models--. [--] From the very beginning when we started to develop this technology and had the vision about how to utilize our technology, we have thought about the commercialization since then--.” (Company A)*

*“Yes, we have thought about that [the plan of commercialization] and taken out the market offering to customers. To test and ask, we trust that customers tell us what they need and for what they are willing to pay.” (Company D)*

*“-- the lack of a rival analysis is due to that there are no equivalent products. Usually everyone claims that, it is the biggest bull shit ever that they say that*

*they don't have rivals. But technically speaking, there is a long way to our product from the closest product from the same sector.” (Company B)*

*“We have done our rival analysis, all the time in different stages. There is loads of competition in this market. [--] In my opinion basic principle is that it is not worth to concentrate on rival, but on own issues and customers. If the customer buys from someone else, then you know that there is the rival. (Company D)*

### **Challenges at the stage of innovation discovery**

Three of companies had confronted some challenges during innovation discovery stage. One company had not confronted any challenges at that particular stage. There were many disparities in the answers between the companies that had confronted challenges, but lack of money was a common challenge for two of them.

*“No, there were no challenges. It just bobbed to head. [--] We just were at the right place at the right time.” (Company A)*

*“Especially that when we had the general idea, how to make it fit the real needs of the user. [--] First challenge is that how to make the information flow through this organization. I mean, how developer of the product makes what the definer of the product wants. [--] How to make this feedback loop work? [--] And of course in hardware it is especially tricky that the product is so far from the end user in the development phase. To gain real customer feedback, to know whether the product really meets the customer needs. Let's say, there is half a year to nine months of time when work is done in a vacuum without contact to customers. It is a challenge.” (Company B)*

*“The only challenge was that I didn't have experience with patents databases, if someone else has patented this. It was hard work, it was a challenge that I immediately needed someone else to do it for me. [--] Money was of course it, the more money, the faster everything. [--] Everything would be a lot easier if I had money. Only few have the money in the beginning.” (Company C)*

### **The role of marketing communications at the innovation discovery stage**

Half of the companies that we interviewed had not engaged in marketing communications during the stage of innovation discovery. Even though the companies had not done any marketing communications during the discovery stage,

they had engaged in activities that prepared them for marketing communications, such as rival or market potential analyses. Still, we argue that for those two companies the main role of marketing communications has been preparative. Nonetheless, the other two companies started marketing communications actions already at the discovery stage and in their opinion it had played a major role. It seems that the role of marketing communications was mostly in making the market offering known and visible among different stakeholders in their emerging networks. This is how companies commented the role of marketing communications in innovation discovery stage:

*“Well, yes, it could have been important, but it is a complex problem. [--] When we started to develop our technology, it was like from a sci-fi movie, we have worked really hard with it. [--] I find it more important, as we were in a situation where we were able to develop it without any salaries for several years, that when the product is nearly ready, then to start the communication.”*  
(Company A)

*“We have been building networks, speaking like parrots whenever we have had a chance to join some events. [--] Conspicuousness we have been building right from the beginning. [--] Communications must be done everywhere, at home to your wife in order to get the detached house as a guarantee for a loan. All the time, everywhere, to family members and friends. [--] All that you do is communication. How you dress and treat people, it’s communication.”*  
(Company D)

### **6.3 Theme 2: Developing the innovation**

The second theme is innovation development. As explained before, each company found the commercialization process to be nonlinear. They thought that the development of the innovation could take place side-by-side with or even before bringing the innovation to the market. Despite this, the companies had no significant difficulty in answering the relevant questions. Within this theme we asked eight different questions related to the following concepts:

- Innovation strategy
- The plan of bringing innovation to market
- Protecting innovation
- Allocating resources to marketing communication operations

- Marketing communication plan
- Challenges in the stage of innovation development
- The role of marketing in the stage of innovation development

### **Innovation strategy**

Companies could not give a straight answer to the question “Do you have an innovation strategy?”, as they did not know what we meant with the term. We needed to present different examples of innovation strategies (chapter 2.2), but after this all four companies answered that they followed a first-mover strategy. However, three companies explained that even though they followed a first-mover type strategy, they had not planned on it consciously. According to our theoretical framework, only within a first-mover type strategy must the marketing communications strategy be planned early enough for the company to be able to perform concordant marketing communications as soon as possible.

*“We did not have defined, conscious strategy that we would have been written to paper and have a discussion because the nature of our operations is self-evident to all of us that we are first-movers” (Company B)*

*“Yes we are first movers --. We did not plan it consciously that we need to be first in market.” (Company D)*

### **The plan of bringing innovation to market**

We asked the companies to answer the question: “Describe what kind of plan you have/had for bringing innovation to market?” The answers varied, as each company had a different plan for introducing their innovation to the market. One common feature for all four companies was forming a partnership with a third party which acted as a channel to the end-customers. Three companies also describe that they first needed to test the market potential with pilot programs or Kickstarter campaigns. All companies mentioned marketing tools (such as PR, a marketing plan, marketing campaigns, and personal selling) as a part of the commercialization plan. In our theoretical framework PR and advertising are presented as especially important tools to use at this stage.



*“Basically short simplification is that first need to get pilot customers and major amount of feedback from them --. [Then] we need as much as possible customers from Finland that we can test the technology in proper way and the product. When the customers start to give good feedback, we need to start to do English version of the product as fast as possible --. (Company A)*

*“In the future the bringing the product in the market is that we are doing partnerships with and via operators. Then we try to get them to engage marketing activities, as we are doing products and operators are marketing them as their own.” (Company B)*

*“We are going to be as visible as possible. Marketing campaigns from which the newspapers and magazines are going to report.” (Company C)*

*“-- our product is good already that we can partner with bigger operators who have existing customer portfolios. -- this is the channel to reach end customers.” (Company D)*

### **Protecting innovation**

We asked how the companies are protected their innovations. In our theory the appropriability issues could communicate message about the company which is trustful, honest and respectful. All the companies admitted to protecting their innovations. The most common protective action was getting the innovation patented. Three of the companies had already patented their innovations, while one company expressed that it would like to possess a patent. Otherwise, the answers had contained significant variation, and the companies mentioned several ways in which they protect their innovations:

*“Patent would be nice to have but it is too expensive in this point of business. [--] However, perhaps bringing the innovation first to the market is also protecting innovation?” (Company A)*

*“One protecting way was to publish my product [and technology behind it]. It can be classified to be protecting actions as this is how no-one else can stop me to do my own product.” (Company C)*

*“Patent. [--] -- we have a good service provider network [which is protecting us from competitors]. -- we have trustful relationship with this network.” (Company D)*

### **Allocating resources to marketing communication operations**

We asked the companies if they allocated or planned resources for marketing communications at the development stage. We also asked them to define the participants of their marketing communications planning process. All companies explained that they had resources planned for use in marketing communications operations, but three of them continued that they had to make it work with a zero budget. This means that while the companies may not have monetary resources, they can still make use of human resources. Three companies told that their entire team participated in planning marketing communications. Only one company mentioned that half of their team participated in marketing communications, while the other half concentrated on product development. In theory, resources should be allocated to marketing communications at this stage. Human resources can, however, be acquired internally or externally, for example through the company's network.

*“Yes, but I said, we have had a ridiculously small budget, zero budget.”  
(Company A)*

*“All the time we have so few people, one or two, who can make. We have strengthened little by little. Monetary resources we have had all the time only a very little.” (Company D)*

*“The whole team is participating to plan marketing communications. I mean all, product developers etc.” (Company B)*

### **Marketing communication plan**

We investigated whether the companies had a proper marketing communications plan. We asked the companies whether they had thought about how, to whom and when to implement marketing communications, to which the answer was that they all had considered these aspects of marketing communications planning. Despite of that, there was significant variation among the different answers regarding marketing communications planning, as each company had their own target group and a specialized plan for implementing marketing communications. The companies also mentioned if they already had established marketing communications practices. In theory, the companies that have adopted first-mover strategy should already carry out

marketing communications and not simply have a plan for it. In a typical situation a plan already exists at the development stage and the company already has functioning marketing communications, which have already been implemented internally and are gradually expanded to cover external agents as well.

*“Yes we have thought this a lot. -- we have a quite clear image how we are going to bring this product [to market and how, to whom and when]. [--] In this stage [of developing innovation] it was testing that what is profitable to do -- we did not have actual plan that now we are doing that. (Company A)*

*“Yes, [we are thinking it] all the time as continuous process. And we can make fast changes of it.” (Company B)*

*“Doing it. I have implemented more than planned.” (Company C)*

*“First we focused to sell and market to B2B service provider. And now we are consciously focusing to do market communications to end customers. Our service providers are a bit poor to sell, especially to companies.” (Company D)*

### **Challenges in the stage of innovation development**

The companies had already had to overcome types of difficulty in their innovation development process. Three companies mentioned the lack of money (and other resources) and time estimations as being having been challenging aspects within their processes. Two companies also claimed that feedback from the customers is essential; it is difficult for companies to understand their customers' needs and to respond to them within their inherently limited capability. Other challenges that were brought up were, e.g., the location of the company and planning for the future direction that the company would take. The theoretical framework takes into account the possibility of a limited pool of resources. In small companies, the meaning of this is expanded to include a more general lack of information and capability. Companies commented their challenges for example as following:

*“One clear [challenge] has been that we have worked all the time without salary.” (Company A)*

*“It needs to be understood that ideas, which sounds fancy, might not be what customers want --. So not satisfying customer needs but employees’ and product developers’ needs.” (Company B)*

*“[The challenge is to] get money, not loaning it.” (Company C)*

*“Common challenge which is typical for start-ups is that processing things onwards might take more time that has been planned. [--] Costs are still ongoing even incomes come slower.” (Company D)*

### **The role of marketing in the stage of innovation development**

To conclude our inquiry into the theme of innovation development, we asked companies to describe the role of marketing at this stage. Three companies explained that the role of marketing communications is very significant at this point. One company told us that marketing communications had a central role in deciding whether to invest in new innovation within their own company. Whether the role of marketing communications is important or not in their business in terms of innovation development was not entirely clear to the last company. Companies commented the role of marketing communication as following:

*“It depends. If the time of innovation development is really short, the role of marketing communication is really important.” (Company A)*

*“The most important role of Kickstarter-campaign and its marketing communications was to do the decision to invest in innovation. On the other words, because we made a successful campaign, we decided to set remarkable product development resources to finish the innovation.” (Company B)*

*“The role of marketing communication is big, but it is underestimated by many start-ups. The big part of product is that company can communicate what it is. It is almost bigger than the product. The product can be really fancy but if people do not know it, it never comes to market.” (Company D)*

### **6.4 Theme 3: Innovation comes to market**

The last stage explored in our interview was the point in time where the innovation enters the market. In our theoretical framework, this is referred to as the ‘deployment stage’, but during the interview and on the form deployment was referred to as

‘taking the innovation to the market’. This part consisted of six questions relating to the time of the innovation’s market entry. All interviewees were able to answer all questions widely by using many words and expressions. One company (C) has not yet released its product physically to the market, but the product is already creating sales. The interview questions are sorted and analyzed through the following topics:

- Time when innovation came to market
- Marketing activities
- The role of marketing communication
- Message and target groups
- Measuring effectiveness of marketing communication

### **Time when innovation came to market**

We asked the interviewees to describe the time when they published their innovation in the consumer market, and place special focus on the successes and challenges they had during that time. Answers we received varied in content, and not all companies managed to give a precise description of what done successfully or what was challenging during the time of the innovation’s publication. However, we cannot expect for such commonalities to necessarily emerge because of the circumstantial variance between all four individual companies, their innovations and the wider context the commercialization process involved. The answers do, however, reflect a shared experience of uncertainty connected to the innovation’s deployment stage. According to our framework, the challenges at this stage are expected to be resultant from any shortcomings in the way that challenges within the previous commercialization process stages were managed. For example, if a situation analysis or rival analysis was not properly carried through in a previous stage, it may negatively affect future outcomes. At the deployment stage, this can cause marketing discontinuities, which can have the potential effect of creating trouble in sales creation and sales development. It is important to follow through any plan of action properly, which should also diminish any insecurities that may take place within company personnel close to the deployment stage. Companies had several successes and challenges and they described them for example as following:

*“We are still very invisible. So we should get more visibility by using more social media, get followers in twitter, blaa blaa blaa. All the time. We are very bad of doing that.” (Company A)*

*“And what we managed well, we understood early the fact that we are achieving something like stream which is spreading with baby steps. That at first we are happy for small attention but we are trying to build something which will stay in life and will spread.” (Company B)*

*“And what have been challenging is.... all. The lack of time and that we would like to do so much more.” (Company B)*

*“[This time is] black hole and one reason why I hired new CEO. -- now I do not have understanding anymore or experience what to do next.” (Company C)*

*“It was important that we got a few customers. [--] We got confirmation that we have a product that we can now get excited about. (Company D)*

### **Marketing tools and channels**

The next subject of interest was how companies implement marketing activities and actions in practice. The companies described the different tools and channels that they used in their own marketing communications. The answers were extensive and detailed. Marketing channels that came up twice or more were social media, Reddit, blogs, crowdfunding campaigns, the internet, corporate or pitching events, and content marketing. Other marketing actions and channels that were mentioned to be helpful at the deployment stage were search engine advertising (Google), webpages, the telephone, e-mail, and traditional marketing activities (such as TV, magazines, and the radio). One company had implemented marketing activities actively during the entire commercialization process and stated their support for utilizing various marketing channels and activities throughout the process. Within our theoretical framework, marketing channels play an important role in the successful deployment phase of the commercialization process. The companies' descriptions about their use of various marketing activities during the deployment phase align well with our theory.

*“This Reddit is like – it can be accepted as a blog, but I think it is a forum.” (Company A)*

*"-- find content, something valuable. We call it core content. So it is something valuable some other has done, and which has value for promoting and which somehow is related to [company product]. " (Company B)*

*"Maybe in someday we are heading more to traditional advertising." (Company C)*

*"Maybe the webpages are the most important. And all social media channels like Twitter, Facebook, Instagram, LinkedIn and Twitter is the most important as we get most traffic to our webpages via that. It is hard to say but perhaps the most important channels at the end are B2B customers." (Company D)*

### **The role of marketing communication**

The next subject of inquiry was the role that marketing communications played at this stage, which turned out to be very important. Three companies pointed that the role of market communication is essential for spreading information about the company and their products to consumers. One company told that it could not identify the role yet, as their product had not yet been physically released. In our theoretical framework, the role of marketing communications is essential in acquiring new customers and making sales. It also now has a greater role than previous stages.

*"The relationship is totally linear that if we can drive 1000 people to our shop, the sales are 10 – times bigger than if we get 100 people to our shop in the same time frame." (Company B)*

*"Similar chaos [than before], it cannot be known yet." (Company C)*

*"[Role] might be to increase the awareness about company and product. (Company D)*

*"Important, very important." (Company A)*

### **Message and target groups**

Two interview questions were related to the marketing message and target groups. All companies were able to tell us what message they wanted to communicate to their customers via marketing communications tools. In theory, the marketing

message should be based on the customer promise. Each company had the aim of communicating their customer promise via marketing communications. As such, the answers can be seen as to support our theory. At the deployment stage, it is important that the company has clear definitions of their marketing message and target groups, so that they can address their marketing communications to the right audience. All companies were also able to identify their target groups and to whom they are targeting their marketing communications.

*“-- we have two target groups. -- individual consumers, developers, not only web developers. [--] And other group -- is big companies --.” (Company B)*

*“To all stakeholders. Cannot be classified.” (Company D)*

### **Measuring effectiveness of marketing communication**

We asked the companies if they monitored the effectiveness of their marketing communications. We also asked them to explain how and why they measured it. Three companies told that they were to some extent measuring their marketing communications activities. Three companies pointed out that they already used or planned to use Google Analytics in the future. Other examples of measuring the effectiveness of marketing communications were, for example, tracking the number of e-mails and phone calls, and the number of viewers there were (for example for a video or a blog post). This is how the companies commented on this topic:

*“Yes, we have followed. The basics, how many calls we have done and how much we have sold.” (Company A)*

*“Yes, and we are quite good of [measuring effectiveness of marketing communication].” (Company B)*

*“We are not [following] --. We are not following, but now when we get that third guy, we have given this role to him/her.” (Company C)*

*“Via [Google] analytics.” (Company D)*



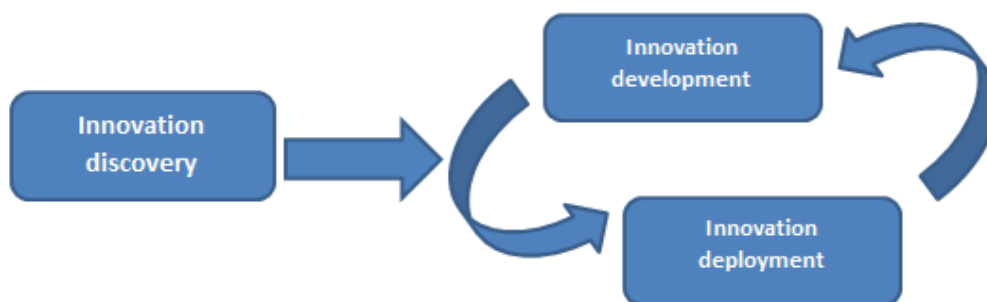
## 6.5 Summary

Shortly summaries are presented in this chapter offering a quick overview for results of interviews.

### **Puzzle exercise**

Doing the puzzle exercise as a part of the interview process allowed us to uncover information especially about timing of different marketing-related actions within the commercialization process. First of all, what became clear is that in a start-up context, the order of commercialization stages is not linear, nor does it necessarily follow the order of our framework. While we would advise that an innovation commercialization process begin with innovation discovery, it is noteworthy that the innovation development and deployment stages function as an iterative process where innovation is developed based on the feedback from stakeholders. Our interviewees found especially pilot customers and crowdsourcing campaigns on Kickstarter worth mentioning as sources of feedback.

Pilot customers and especially crowdsourcing campaigns were also used to conduct market research, test the product and to create actual sales. Even though the market offering was not yet finished, it was already sold to a limited audience during the development process. Deployment was seen as a process with many phases and audiences. For example, at the first phase the audience might consist of investors, afterwards of pilot customers, ultimately followed by the general public or another final customer. At the innovation discovery stage, potential investors and customers form the most important target groups. The importance of end customers as a target group increases as the process progresses, while the importance of investors gradually diminishes as resources within the company itself increase. Internal marketing communications do not play a huge role in start-up companies, since it is considered irrelevant for small companies. The following figure 7 illustrates the innovation commercialization process for start-up companies.



**Figure 7. Innovation commercialization process for start-up companies**

After doing the puzzle exercise, we were able to examine the timing of the actions that were made by companies in order to prepare for marketing communications, such as acquiring and allocationg marketing resources, formulating a marketing strategy, doing rival analysis, marketing communications planning, innovation protection, formulating a uniform marketing message and mapping out customer needs. The timing of these actions was compared to both our theoretical framework and the results from the interviews. The following table 10 presents our findings. In that table A represents answers of company A, B represents answers of company B, C represents answers of company C, D represents answers of company D. Marketing actions timing according to theoretical framework are marked in blue background. Red coloured letters indicates divergence between theoretical framework and data from the interviews, green letters indicate to congruence.

**Table 10. Placements of preparing marketing communications actions on different phases of innovation commercialization process**

	Marketing resources	Marketing strategy	Rival analysis	Marketing communications planning	Innovation protection	Marketing message	Mapping customer needs
Innovation discovery	B, D	B	B, C, D	B	B, C, D	B	B, C
Developing the innovation	A, C	C, D	A	A, C, D	A	A, C, D	A
Innovation deployment		D		D		D	

As already noted in previous analysis of the data, some of the actions were timed by start-up companies as our theoretical suggested, but there is also divergence between the two. Especially rival analysis, marketing communications planning and mapping out customer needs are conducted within the same phase as our framework suggests. Differences are found primarily in the cases of marketing strategy, innovation protection, the marketing message and resource allocation. We argue that many of these divergences can be explained by the fact that our theoretical framework was directed at companies in general, and for that reason it does not take into account certain special features of start-up companies.

Start-up companies are often founded based on and only after the discovery of an innovation. This was the case with three out of the four companies that we interviewed. Features of the innovation act as an important guideline when planning the innovation strategy, marketing strategy and finally the company's overall strategy. We believe that this is the possible reason to why strategies are formed later in commercialization process compared to bigger companies in general. As there is no overall strategy what would form a basis for the marketing strategy, the planning of the marketing strategy takes more time and can be done at the innovation development stage, after carrying out situation and rival analyses, which typically take place during the innovation discovery stage.

Based on our theoretical framework we argue that innovation protection is an important issue when developing the innovation. According to our theory, appropriability mechanisms plays a role in building relationships through the company's network, as they can strengthen company's positive image among cooperators and even further in the network. However, the interviewees highlighted the protection aspect of appropriability issues. According to the interviewees, innovation protection, especially patents, are a requirement for acting within a network. Innovation protection enables companies to safely contact potential cooperation partners or even to advertise publically. For this reason, innovation protection becomes crucial even right after the innovation has been discovered, as it can enable a safer development phase with more potential financial and know-how resources that can be brought in from outside the company.

Our theoretical framework places the formulation of the marketing message at the stage of innovation deployment. Still, we must recognize that if the company has chosen an offensive innovation strategy, a message is essentially delivered to the customers at the stage of innovation development already. On the other hand, if a defensive strategy is chosen, the message and innovation can be adapted according to features of pioneer's first-launched product. All of our interviewees agreed that their companies followed a first-mover strategy that encourages marketing communications planning and actual communications as soon as possible. The start-up companies that we interviewed were marketing the product to at least a limited audience at the stage of innovation development, which made the marketing message important at an earlier time.

We have been especially interested in the role of marketing communications in the innovation commercialization process in start-up contexts. Our empirical data suggests that changes must be made to our theoretical framework to make it suit start-up companies better.

### **Interview questions**

The second part of interview was to ask questions regarding the innovation commercialization process, what is included in the different stages of it, and what is the role of marketing communications in all of this. As the puzzle provided us answers to the question of when to do different activities, the interview questions were meant to find out what is included within these activities. Table 11 presents a summary constructed from the interviews and certain theoretical key issues. As we can see from the table, there are many similarities between the results of interviews and the theoretical framework. The detailed explanation of the summary is presented after the table.

**Table 11. Summary from interviews compared to theory. Differences between theory and practice are highlighted**

	Companies	Theory
<b>Theme 1: Innovation discovery</b>		
Source of innovation	<ul style="list-style-type: none"> <li>- From outside the company</li> <li>- Original idea about the innovation has changed along the way</li> </ul>	<ul style="list-style-type: none"> <li>- R&amp;D</li> <li>- Open organizations</li> <li>- Collaboration</li> <li>- Technology clusters and spillover</li> </ul>
Customer promise	<ul style="list-style-type: none"> <li>- All companies have defined their customer promise</li> </ul>	<ul style="list-style-type: none"> <li>- Customer promise is created based on data gathering (consumers, competitors, suppliers)</li> </ul>
Relationship between company's main strategy and innovation	<ul style="list-style-type: none"> <li>- Main strategy is supporting companies' innovations</li> <li>- Innovation has played a major role of company's strategy formulation</li> </ul>	<ul style="list-style-type: none"> <li>- The innovation strategy is aligned to company's main strategy</li> </ul>
The plan of commercializing the innovation	<ul style="list-style-type: none"> <li>- Plan exists</li> <li>- Companies have done rival analysis</li> </ul>	<ul style="list-style-type: none"> <li>- Data is gathered from consumers</li> <li>- Situation analysis</li> <li>- Potential market niches and customers are explored</li> </ul>
Challenges	<ul style="list-style-type: none"> <li>- Lack of money</li> </ul>	<ul style="list-style-type: none"> <li>- To form strategy</li> <li>- Lack of systematic model of commercialization process</li> <li>- Lack of knowledge to understand commercialization process</li> </ul>
The role of marketing communications in discovery stage	<ul style="list-style-type: none"> <li>- Marketing communications has a visible role</li> <li>- Marketing communications actions or preparing activities are started</li> </ul>	<ul style="list-style-type: none"> <li>- Discovery stage is preparing marketing communications operations</li> <li>- Planning</li> </ul>
<b>Theme 2: Innovation development</b>		
Innovation strategy	<ul style="list-style-type: none"> <li>- First-mover strategy</li> </ul>	<ul style="list-style-type: none"> <li>- If first-mover strategy, company should do marketing communication in full capacity already in this stage</li> </ul>
Plan to bring innovation to market	<ul style="list-style-type: none"> <li>- Creating partnership with third party</li> <li>- Testing market potential</li> <li>- Marketing tools essential (PR, personal selling, marketing plan, marketing campaigns)</li> </ul>	<ul style="list-style-type: none"> <li>- Marketing tools</li> <li>- Entry time assessment</li> </ul>
Protecting innovation	<ul style="list-style-type: none"> <li>- Patent</li> </ul>	<ul style="list-style-type: none"> <li>- Protection (closed system)</li> <li>- Diffusion (open system)</li> </ul>
Resource allocation to marketing communication operations	<ul style="list-style-type: none"> <li>- All companies have allocated resources to marketing communication operations</li> <li>- Zero budget</li> <li>- All team is participating</li> </ul>	<ul style="list-style-type: none"> <li>- Resources is targeted to marketing communications</li> </ul>
Marketing communication plan	<ul style="list-style-type: none"> <li>- Companies have thought about how, to whom and when they are implementing marketing communication</li> <li>- Not have official plan in paper</li> </ul>	<ul style="list-style-type: none"> <li>- Marketing communication plan is done</li> <li>- If first-mover strategy, marketing communications in full action</li> </ul>
Challenges	<ul style="list-style-type: none"> <li>- Lack of money and other resources</li> <li>- Doing what customers want</li> </ul>	<ul style="list-style-type: none"> <li>- Market creation and preparation</li> <li>- Lack of support from network</li> <li>- Lack of resources</li> </ul>

The role of marketing communications in development stage	- Major role	- Role is to stir up the interests of potential customers - PR, advertising - Minor role externally - Major role internally - Marketing communication preparation
Theme 3: Innovation comes to market		
Time when innovation came to market	- Feelings of uncertainty	- Challenges connected to previous unsolved problems
Marketing tools and channels	- Social media, online communities, internet, corporate or pitching events, content marketing, google-advertising, webpages, telephone, e-mail, traditional marketing activities	- All marketing communication tools (PR, advertising, personal sales, sales promotion) utilized
The role of marketing communications	- Very important - Role to spread information about company and product	- Important role to get new customers and make sales - Marketing communications in action
Message and target group	- Companies have defined their target group and marketing message	- Defined, message based on customer promise
Measuring effectiveness of marketing communications	- Marketing communications is measured - Google Analytics	- Marketing communications activities are measured and monitored

The first theme, innovation discovery, has major differences between the interview results and theory. While the theory suggests that the source of innovation is often the result of cooperation or exploration conducted by a R&D department, the interviews shows that in start-ups the idea often comes from outside of the company, and that the original innovation might undergo change along the way. This is why in many cases the innovation has been first discovered and the company has been founded only after. This means that start-ups may typically base their main strategy on their core innovation. Challenges in innovation discovery are usually connected to strategy formation, the lack of a systematic model of commercialization, and a lack of knowledge, but start-ups often feel that their major challenge is the lack of money. This shows that start-ups may not consider the commercialization process or strategy to be crucial at this point. The role of marketing communications seems to be controversial among start-up companies. Half of the case start-ups in this thesis were already implementing preparing activities, as our theory suggests. However, the other half was already executing marketing communications actions, and according to them marketing communications played an important and visible role.

There are also similarities in practice and theory within the first theme. The theory suggests that the customer promise should be formulated early on in the innovation discovery stage. The customer promise is based on data gathered from consumers, suppliers, and competitors, so that company can be certain of the need for the innovation and of how to develop it into a product. The start-up companies from the interviews claim having thought about and formed their customer promises for their product at this stage. The interviewees also commented that their innovation follows their main strategy even when the innovation was established before the strategy. Innovation functioned as the trigger for the creation of a corporate main strategy. In the discovery stage companies have considered what the commercialization plan for their innovation might be like, for example, by doing rival analysis, but the plan might not have been written down, nor been as detailed as our theoretical framework would suggest.

Within the second theme, the connection between the theory and the interviews is obvious. Almost all answers under the subtopics support our theoretical framework. In accordance with our theoretical innovation strategy, the companies admitted to having had a first-mover strategy, which is common in start-up companies. However, companies expressed that they may not have thought about the strategy but rather self-identified as first-movers. In reference to our theoretical framework, companies should make the effort to define their innovation strategy, as it has an effect on the time frame of the activities and actions involved in the innovation commercialization process. For example, if a company were to use a first-mover strategy, this should have been planned out and implemented into their marketing communications operations starting from the innovation development stage. In support of our theory, the interviewees told they had thought about how, to whom and when they would implement marketing communications, and had a plan for implement them. However, companies also noted that they might not have an official plan on paper, but that they had had informal discussion concerning the matter. The companies had also targeted resources for use in marketing communications. The primary resource was the company's own personnel, as start-ups need to plan and implement marketing communications with zero budgets. It would appear that the companies had not made an official marketing communications plan, even though they were already in the process of implementing marketing communication actions during the

innovation discovery stage. This supports the notion of a connection between the first-mover strategy and marketing communications actions.

The companies were able to properly defined their plan for bringing their innovation to the market. According our theory, an entry time assessment and a clear definition of utilized marketing tools should be made at this stage. Companies described a great variety of different marketing tools to bring their innovations to market, which is in line with the theory. Nevertheless, companies did not mention making an entry time assessment, which could be explained by the nature of start-up companies: they may lack the resources to wait for the right time or to simply push the innovation out into the market within specific time frame. The challenges that the companies faced during innovation development were related to a lack of resources. The companies especially complained about their lack of money and other resources such as knowledge. Some companies also suggested that it can simply be too difficult to do what the customers want instead of what the company can do. The role of marketing communications is important during the development stage according to interviews. Referring to theoretical framework, the role of marketing communications should be internally significant and to less extent externally. As start-up companies are usually formed by small teams, they may not consider it necessary to engage in internal marketing communications, as all the members of the team are already involved in the implementation of external marketing communications.

The last theme of innovation market entry aligns quite well within our theoretical framework. We first asked about any experienced challenges or successes that the companies faced during the time in question. The answers did not directly show any similarities. However, we realized answers to reflect experiences of uncertainty. We argue that this may be the result of unsuccessfully solved challenges and badly implemented marketing communications activities in previous stages, which might result in marketing attitudes marked by uncertainty. On a different note, we were able to map the various marketing communications channels, actions and tools utilized by the companies, as interviewees were able to provide us detailed descriptions of them. Thus, the data works in support of our theory, which advises the use of all marketing communications tools at this stage (PR, personal selling, sales promotion, and advertising). Companies formulate their marketing message and



define their target groups. Our informants explained that the role of marketing communications is vital because of their natural purpose to contribute to the spreading of information about the company and product to the target groups. The theoretical framework provides a definition for the ultimate aim of marketing communications, which is to acquire new customers and create sales. Companies measure and monitor their marketing communications, for example, with Google Analytics, which shows that there is an interest to follow both the impact and efficiency of marketing communications. This, too, is in line with our theory.

The answers we received within the pre-determined themes and subtopics through the interviews were highly supportive of our theoretical framework. However, we argue that the theoretical framework better addresses to a large corporation with more resources and time. The disparities between the interviews and our theory can be explained by the fact that our informants were employed in small start-up companies.

## 7 CONCLUSIONS

We will present the conclusions of our thesis in this final chapter. We will discuss the start-up-verified framework which we have created based on the theoretical framework and the collected empirical data. We will also answer research questions and discuss the limitations and possible implications of the study, and explore possible further research on the topic of our thesis.

### 7.1 Start-up verified framework and answers to research questions

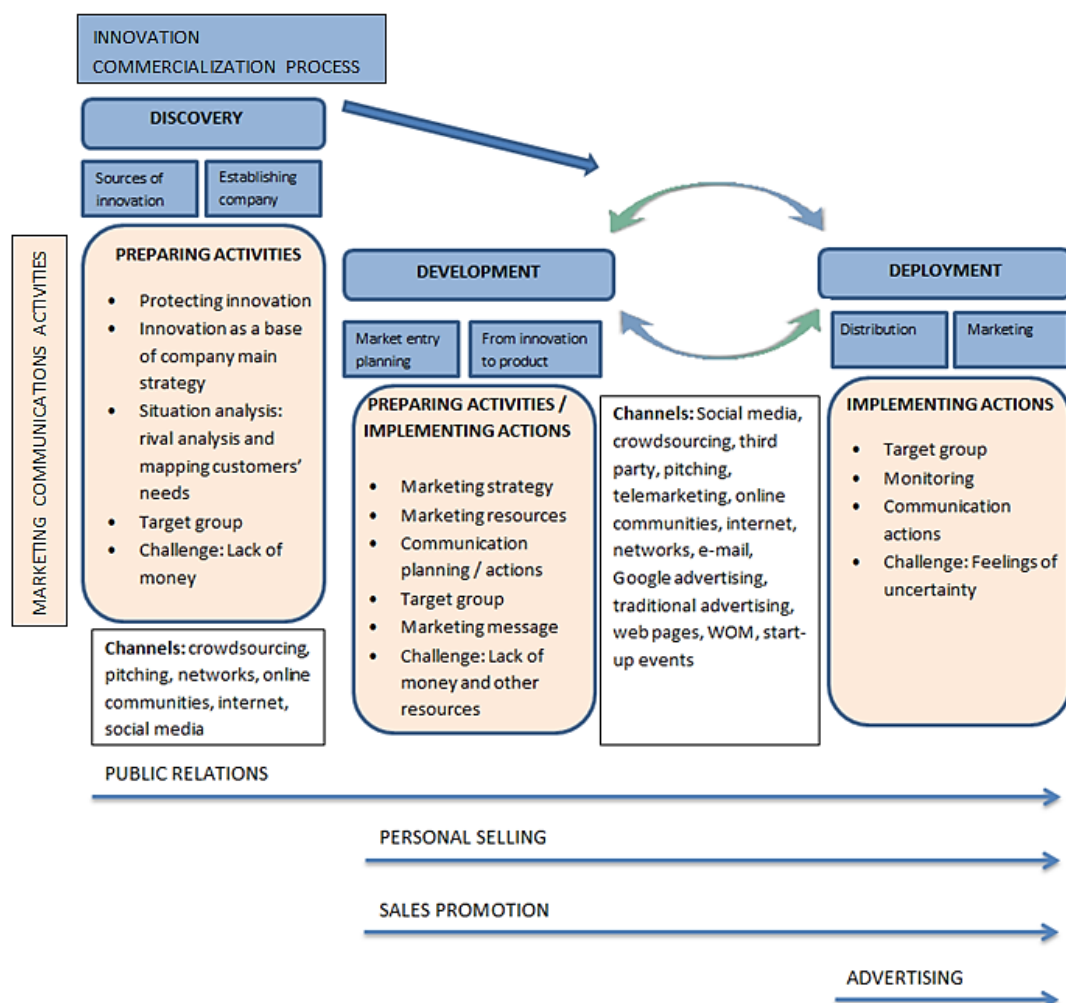


Figure 8. Start-up verified framework

Our analysis of the research data showed that empirical data supported our theoretical framework to a degree, but certain adjustments need to be made to the framework for it to better fit the needs of and the nature of the commercialization process in start-up companies. We have defined start-up companies as newly

founded companies that aim to create rapid growth in the near future, but do not meet the turnover and personnel growth criteria of high-growth companies yet. We also highlighted that the foundations of start-up companies lie in new innovations. During our research process we have also discovered additional issue typical to start-up companies, such as the difficult process of establishing the company only after discovering idea of the innovation. Issues such as this affect the formation of our new start-up-verified framework which is presented in figure 8.

Like in our theoretical framework, the three main phases of the innovation commercialization process remain in our start-up-verified framework. However, we have altered some of the sub-themes of the stages. The sub-theme of ‘sources of innovation’ within the innovation discovery stage has remained the same in our start-up-verified network, but ‘types of innovation’ has been replaced with ‘establishing company’. We discovered with the help of the empirical data that the innovations of start-up companies are typically radical product innovations, which lead to the establishment of a new company. ‘Market entry’ has been transformed into ‘market entry planning’, which highlights the importance of a thoroughly planned marketing strategy. ‘Protection’ has been removed as a subtheme as we prefer that protection of the innovation should be considered already at the stage of innovation discovery and we have relocated it into marketing communications activities. ‘Processing innovation to product’ has replaced ‘protection’ as a subtheme. We argue that the most important purpose of innovation development in the commercialization process is to figure out how the innovation can be commercialized and transformed into a sellable product. We have chosen ‘distribution’ and ‘marketing’ to replace ‘development’ and ‘deployment’ as the new deployment sub-themes. Products are brought to the market through the use of different distribution channels. The distribution channels are planned in advance, but may be altered, for example, to meet newly defined target groups or changes in the market situation. Moreover, distribution channels can be developed according to the monitoring results gained through marketing communications. Marketing actions hold great importance in a successful commercialization process, which is the reason to why their role has been highlighted within the innovation deployment stage.

Although the stages of the innovation commercialization process have remained the same between the two frameworks, we have added arrows to represent direction and the relationships between the stages. Innovation discovery is the first step, which lays foundation for to the entire process, but innovation development and deployment do not necessarily follow in a linear order, but rather as an iterative process where an innovation is developed based on feedback received from different stakeholders. This information comes from the deployment stage. However, a company remain at the deployment and development stages simultaneously. Activities belonging to from both stages may take place coincidentally.

### 7.1.1 Preparing activities

The first marketing communications theme in our start-up-verified framework is ‘preparing activities’. This refers to any marketing communications related activities that need to be carried out in order to plan and implement effective marketing communications in future stages of the process. Still, start-up companies may necessarily not consider preparing tasks such as doing rival analysis or scanning for business opportunities to be preparing activities within marketing communications.

‘Protecting innovation’ has been moved from the development stage to the discovery stage. Start-up companies are usually based on new innovation, which forms the core competence within the company. Innovation needs to be protected as soon as possible in order for companies to begin networking safely. In the theoretical framework we argued that marketing communications should be in line with the corporate main strategy. This is still taken into account in the start-up-verified framework. However, the collected empirical data exposes how innovation lays the foundation for the corporate main strategy. In start-up-companies, the innovative idea is often discovered first, and the company established only afterwards. Marketing strategy and communications are developed to meet the need and goals of the innovation-based product.

At the innovation discovery stage, the main target group of marketing communications are investors whose involvement is meant to secure resources such as money and know-how for the company. Arousing customer awareness can also be

begun at this stage. A good example of a marketing channel at this stage is crowdsourcing campaigns that aim to collect funds from potential consumers for developing the innovation. This can also be employed as a situation analysis tool for measuring the interest among potential consumers and to get new ideas for the development phase of the commercialization process. Doing proper situation analysis is important, as it can offer valuable insight into how the innovation could be developed to meet customer needs better and while also standing out from any rival products.

Channels that may be considered to be used in this stage are crowdsourcing, pitching, networks, online communities, internet, and social media. These channels are suited for reaching out to investors or increasing awareness about the innovation and the newly established company among variety of stakeholders. These channels can be very helpful in managing public relations. Public relations are focused on building a positive company image, enhancing interest in the innovation and the company, and acquiring supporters and publicity. As can be deduced from our empirical data, a public relations campaign would be at its most effective when begun immediately after discovering the innovation, as this is shown to improve the company's likelihood of managing to acquire any external resources. Still, public relations are a tool that ought to be in effect throughout the commercialization process.

Lack of money is the biggest challenge that start-up companies confront at this stage of commercialization process. Insufficient funds can easily translate to a lack of know-how, since resources cannot typically be drawn from outside of the company without money. According to our theoretical framework, start-up companies do not necessarily have a wide enough variety of knowledge, which in turn may show as a critical lack of systematic mode of commercialization process. This is supported by our findings in the empirical data, as start-up companies displayed a lack of resources to consider market strategy and product lifecycles thoroughly.

#### 7.1.2 Preparing activities / implementing actions

The second marketing communications theme in our start-up verified framework is the preparing of marketing communication activities, or implementing marketing

communication actions. This theme replaces the theoretical framework theme of 'target'. The theme is further divided into the sub-themes of 'preparing' and 'implementing' as both can be done during the development stage depending on the marketing strategy. Because a first-mover strategy is most often exploited in the case of product innovations coming from start-up companies, it is necessary to begin marketing communication actions as early as possible. Nevertheless, companies rarely have their marketing communication plan done in print version, although they typically have somehow informally defined their marketing communications outlines. In the development stage of the commercialization process, the relevant marketing communications activities are 'marketing strategy' and 'marketing resource' planning, 'communication planning /actions', 'target group' assessment, and forming the 'marketing message'. At this stage, the major problem tends to be a lack of resources, typically funding.

The first activities mentioned were marketing strategy and resources. The 'offensive vs. defensive strategy' component of the theoretical framework has been replaced by marketing strategy and resource planning in the start-up-verified framework, as start-up companies tend to be natural first-movers. Start-up companies should make sure to define the outlines of their marketing strategy because of the necessity of careful allocation of resources at this stage, which is due to the typically challenging resource situation. This means that without having taken any action yet, companies should make the effort to devise how minimal of resources can be allocated to marketing actions with the optimum result. The first-mover strategy also pressures companies to engage in marketing activities, especially marketing communications targeted at stakeholders, as early as possible. The company must stir up the interest of investors and customers before any prospective competitors do. Despite the version of an oral, informally defined version of the marketing communication plan, companies should prepare an official plan in print that contains the basic principles of how marketing communications happen in the future. Because start-up companies do not have the scale of larger companies and are based on innovation, they put greater emphasis on external marketing communications. They may not have defined their internal marketing communications because it functions naturally within company: the same people are involved in both product development and marketing.

The target group and marketing message are a new addition to the start-up-verified framework at the discovery stage. At discovery stage, 'target group' means that start-ups must direct attention to investors, but focus is not static, as in this stage the focus shifts gradually to the customers. The target group can include both investors and customers as a start-up company may still not possess the necessary funding to execute its operations. To define target groups within the consumer base is essential, so that the company can later sell its product and direct their marketing communication actions properly to the right audience. The marketing message has a major role in marketing communications and must be defined before putting any marketing communications into action. The pre-established marketing message takes care that the content of marketing communications is customized appropriately for different target groups, as several target groups may only be reachable through different channels.

We re-emphasize that the primary challenge in the development stage is typically a lack of funding and other resources. Even if the company has some resources and know-how available through their networks, this may not be enough. Start-up companies may feel that they need a regular workforce or specialists to carry out certain operations that they do not feel confident about implementing themselves. One example is that a group of engineering might not know anything about marketing, which is why they would rather like to hire a specialist for the job. The difficulty is that they might not have the funds to do so, which would mean that they would run risk of certain problems emerging along the implementation of the commercialization process due to a lack of success with any marketing actions.

The marketing communication tools used from the beginning of development stage are personal selling and sales promotion. The innovation and the product itself should already create sales while still in the development phase. Start-up companies can sell the promised of product (through a Kickstarter campaign) or even an unfinished product to pilot customers. The first-mover strategy supports the tendency to sell the product even when it is not yet ready for the open consumer market. The market entry process can include several steps: first, companies may sell and market the promised product, secondly they might sell prototypes, and at the third phase sell the completed product, or new versions of it. In development stage, selling is

concentrated on the end-customer, while selling the image of start-up company and the idea to investors has a minor role. Sales promotion can be important when, e.g., persuading pilot customers to become paying customers.

The channels used to carry out marketing communications vary significantly. The most popular channels are digital, as their use requires less funding. Another essential channel for start-up companies are pitching events. Crowdsourcing (e.g., Kickstarter campaign) is an effective way to facilitate marketing research and draw the interest of potential customers when the product is a physical object.

### 7.1.3 Implementing actions

The last theme of our start-up-verified framework is the implementation of actions. This is not redefined in any way compared to the previous, theoretical framework. In the deployment part, it is important that the innovation is already known in the market and marketing communications actions have been implemented. This theme includes activities such as redefining the target group, advancing communication actions to their full potential, and market communication monitoring. Any challenges are related to earlier stages at this point, which means that not all earlier problems have not been properly solved. One specific challenge that may emerge when the innovation is brought to market is the feeling of uncertainty. The company cannot yet be sure that its commercialization process and marketing communications preparations have been executed correctly, and that the commercialization will be ultimately a success.

The first activity is target group, which was added into our start-up-verified framework. Target group shifts continuously during the commercialization process because at this stage start-up companies have usually already acquired capital from their investors and can thus focus on marketing communications directed at the end-customer. However, start-up companies do not necessarily possess the funds to possible post-development, which is why a return to the development stage and shifting their attention back to the investors once in a while may be necessary. The target group of marketing communications is continuously changing why it needs to be realigned to suit the every context of each product development process. This



means that the previously defined end-customer base can be changed if the decision is made to develop the product to better fulfill the needs of another consumers group. In addition, if the start-up company fails to secure desirable sales results within one target group, they may consider redefining their target group to create more sales.

The second activity is the advancement of marketing actions to their full potential and monitoring the results. This has not changed from our theoretical framework. At this stage, the company should have accomplished any preparing activities and engaged considerably in marketing communication activities to make sure that their intended target group and other potential customers are aware of the product's availability. The marketing communication activities that start-up companies should carry out are public relations, personal selling, sales promotion, and advertising. The start-up companies whose representatives were interviewed did not find traditional advertising very important: they expressed that content marketing is more essential than more plain advertising in, e.g., magazines. Some activities such as personal selling and sales promotion are highlighted to ensure sales and the money flow back to the start-up company in the future. If the company has been successful in their preparation for marketing communication actions during earlier stages, they should have a functional network and potential customers already connected for creating sales. The right channels are vital for properly organized marketing communication actions, and the company must choose them very carefully. The process of digitalization has resulted in several new useful channels for marketing communications; start-up companies may face challenges in connecting the right channels with the right target group. Nevertheless, the majority of channels are fairly easy to make use of without large financial investments, as companies can use basically them with a zero budget. The initial plan for the use of marketing communications activities and channels has already been made in the development stage, but the plan can be altered throughout the product's lifetime in the market. The most important thing is to conserve resources and implement actions in real life, so that the marketing message can be delivered to customers without fail.

In contrast to the theoretical framework, the place of the 'marketing message' activity is within the development part in the start-up verified framework. In a first-mover strategy all marketing communication activities and possible actions need to

be committed to earlier than in a defensive innovation strategy. This ensures that the consumers can receive enough information about the new innovation before any competitors begin to enter the same market. Some start-up companies have underlined that a new innovative product must reach the market during the development stage, before the product is even completely finished. Some product types like software are in a constant process of development, thus leaving the start-up company with their feet in both the development and deployment stage at the same time, sometimes even for a long period.

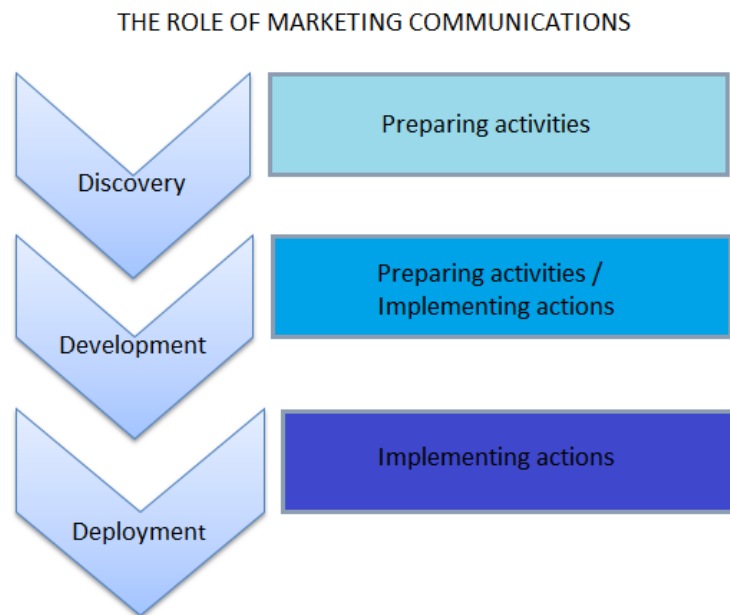
#### 7.1.4 Answers to research questions

In this chapter we give brief answers to our research questions, which we already presented in the introduction chapter. The answers are based on our start-up-verified framework which is presented in chapter 7.1.

### **1 What is the role of marketing communications in innovation commercialization process of a start-up company?**

The role of marketing communications is essential throughout the innovation commercialization process even though its importance fluctuates between different stages of the process. In the beginning of the commercialization process (discovery), the role of marketing communications is to arouse the interest of different stakeholders with a special focus on investors. Marketing communications actions are not implemented to their full capacity, as activities that prepare the company for future marketing communications are principally what is carried out at this stage, excluding communications towards investors. At the development stage, the role of marketing communications is more important, since their purpose is to gain the customers' attention and make a product known to the public. Start-up companies that use a first-mover strategy should already be implementing some marketing communications towards customers at this stage, and formulate a detailed plan for the upcoming stages of the commercialization process. In the last stage of the commercialization process (deployment), the role of marketing communications is essential. Without effective marketing communications, customers cannot be guaranteed to be aware of the new innovations and its features. Marketing

communications have the role of increasing sales and spreading information about the product to the customers. Marketing communications should be implemented properly and in full capacity at this stage because even if the product, price and location are optimal, without sufficient recognizability and product promotion the company will not be able to create sales. Figure 9 shows the importance of the role of marketing communications. The darker the color, the more important the role is.



**Figure 9. The role of marketing communications**

## ***2 What stages does the innovation commercialization process include?***

The innovation commercialization process includes three stages: discovery, development and deployment. The innovation commercialization process is presented in figure 10. In the discovery stage, a new innovation has already been found and the start-up company has been established with innovation at the core of its existence. The discovery stage is the starting point of the commercialization process, and usually happens before anything else in the case of a start-up company. The next part of the innovation process is either the development or the deployment stage. These two stages do not necessarily follow the discovery stage in a linear way, but they can happen simultaneously or in alteration. In the development stage, the start-up company plans how the innovation can be transformed into a sellable

product. The start-up company also plans its market entry, which is an important part of the marketing strategy. As the discovery and development stages involve more planning, the deployment stage is conversely all about action. The deployment stage usually means that the start-up company implements its marketing plan with full action and begins selling and carrying out customer distribution of the product.

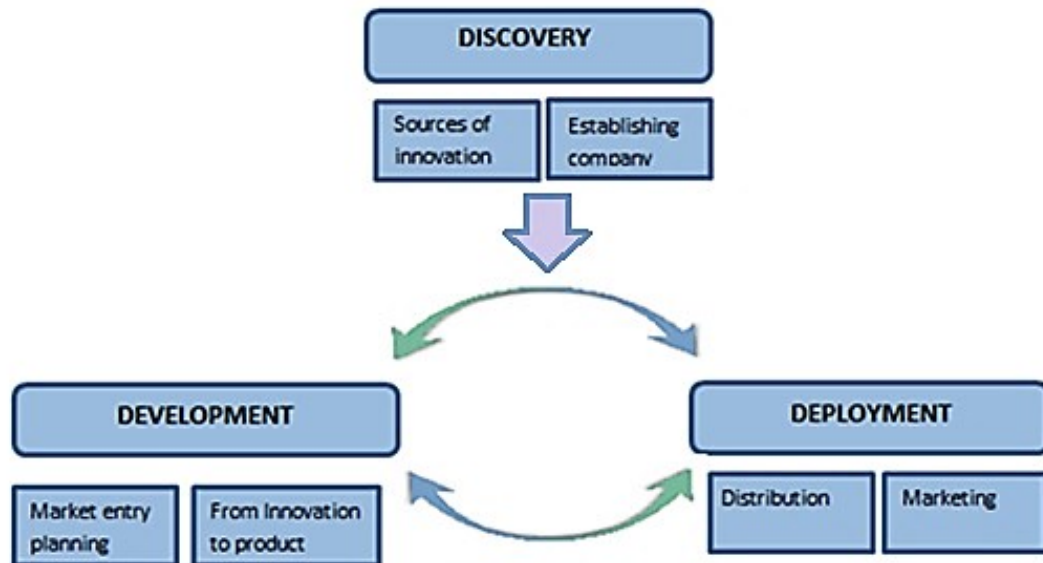
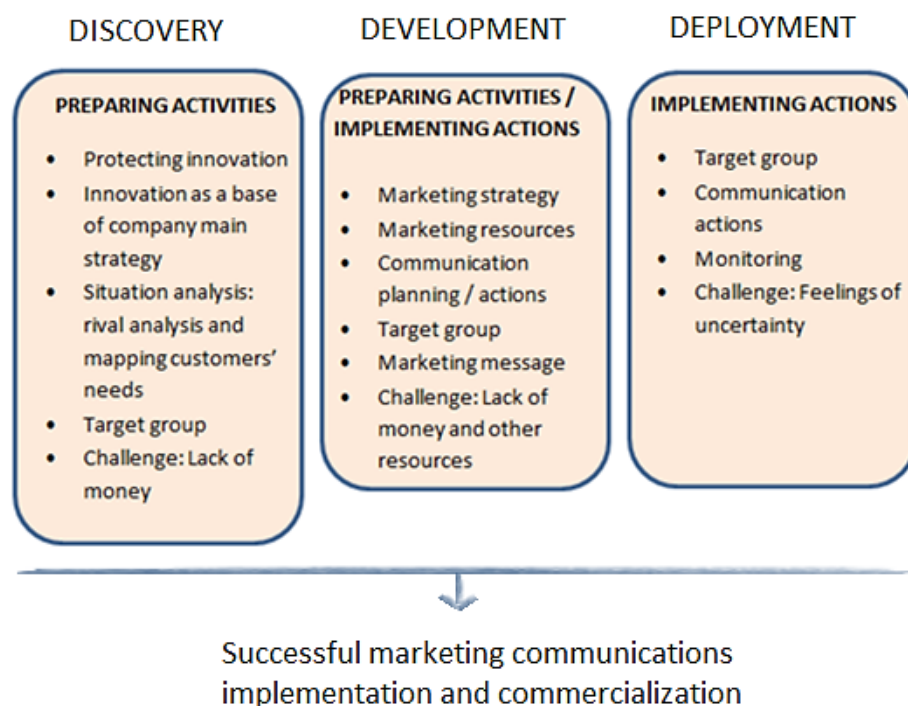


Figure 10. The innovation commercialization process

### *3 What activities need to be considered in order to execute marketing communications?*

Figure 11 shows the activities which need to be considered in the proper implementation of marketing communications during the innovation commercialization process. As the marketing communications have a greater part to play in the development and deployment stages than in the discovery stage, the activities in the discovery stage are essentially preparation work for the implementation of future marketing communications. These activities include innovation protection, company strategy creation, situation analysis and defining the current target group. Marketing communications can already be implemented at the development stage, even though the company may still lack an official marketing communications plans. This is why the company may still be carrying out

preparation activities, but also begins the implementation of marketing communications actions. The activities in the development stage are marketing strategy planning, marketing resource allocation, marketing communications planning and actions, updating the target group, and defining the marketing message. In the deployment stage, the implementation of marketing communications is in full action, and that is why marketing communications activities include few planning activities. Relevant activities include definition of a new target group, marketing communication actions, and monitoring. The target group is updated here again because of the shift of focus from the investors to other stakeholders, such as customers. Marketing communication actions mean using the four tools used to transmit the message to customers: public relations, personal selling, sales promotion and advertising. By making sure that all these activities are carried out properly in every stage of commercialization process, the probability of successful implementation of marketing communications increase. This, in turn, enhanced the final result of the innovation commercialization process.



**Figure 11. Marketing communication actions**

#### ***4 What marketing channels are included in marketing communications?***

Start-up companies use multiple channels in marketing communications. The channels are presented in table 12 where the channels with a darker background are more commonly utilized than the ones with a lighter background. Today, the most popular channels among start-up companies are digital because they can be used even with a low or a zero budget. The channels used in the different innovation commercialization stages vary only a little, even though the number of channels in the development and the deployment stages is greater in cases where marketing communication actions are implemented to a greater extent. At the beginning of the innovation commercialization process channels like crowdsourcing and pitching are used more frequently, while social media and third parties are more popular later in the process.

**Table 12. Channels**

DISCOVERY STAGE	DEVELOPMENT STAGE	DEPLOYMENT STAGE
Crowdsourcing (Kickstarter)	Social media	Third party
Pitching	Crowdsourcing (Kickstarter)	Social media
Networks	Pitching	Telemarketing
Online communities	Online communities	Online communities
Internet	Internet	Pitching
Social media	Third party	E-mail
Networks	Networks	Traditional advertising
	Telemarketing	Webpages
	Google advertising	Google advertising
	WOM	WOM
	Magazines	
	Start-up events	
	E-mail	

#### ***5 What kind of challenges start-up companies face during commercialization process?***

The most common problem for start-up companies in every stage of commercialization process is lack of resources. Lack of money is the biggest challenge at the discovery stage, as start-up companies do not have the funds to carry their innovation over to the development stage. Start-up companies need funding, e.g., to protect their innovation and acquire external know-how to make the commercialization process smoother. In later stages of the commercialization process

the challenges are generally related to paucity of resources. Limited financial resources can lead to a situation where company cannot hire specialists to solve problems which they cannot solve for themselves. Furthermore, any help from their network may be incomplete, which can mean that the company has not received the know-how they require to accomplish a fluent process of commercialization and marketing communications. This can all lead to serious delays in the innovation commercialization process, which can cause extra pressure to build up on first-mover start-up companies. When the innovation enters the market, a significant challenge can be created by any feelings of uncertainty. Companies cannot be sure that their commercialization process has been successfully executed until they begin receiving results in the form of sales. If the market response is unexpectedly negative, the company may be forced to re-enter earlier stages of the process, and follow through some of the same procedures all over again, such as any planning or the implementation of certain other activities.

On the whole, start-up companies have to cope with limited resources during the entirety of the commercialization process. This has an influence on how smooth the commercialization process is, or to be more precise, it has an effect on the proper preparation and implementation of marketing communications. Insufficient resources set different limitations: e.g., the time frame of the commercialization process, marketing communications planning and implementation should be adjusted to be accomplishable within the boundaries of available resources.

## **7.2 Theoretical implications**

This thesis contributes to the previous studies on commercialization process and marketing communications, as there are no studies made on within this specific start-up context combining commercialization and marketing communications. So to speak, our findings can be interpreted to extend the theoretical literature and associate different fields of study. Moreover, our study may trigger dialogue among different research fields and generate more multidisciplinary studies encouraged by our thesis.

From a theoretical standpoint the results of this study highlight the iterative nature of the phases of commercialization process. Emergence of this theme suggests that

commercialization is not a simple and steady process. Instead, commercialization process of start-up companies is influenced by prevailing trends of agile development and lean thinking that seeks to maximize customer value with few resources. These trends are ways of thinking that emphasize efficiency and effectiveness, fluent value stream, simplicity and minimum amount of waste.

Likewise, we contribute to theoretical discussion about the definition of a start-up company. There are various definitions in that field of study but not one precise description. Thus, we have formed our own definition for a start-up company that is a combination of multiple features of previous definitions.

### **7.3 Managerial implications**

The start-up-verified framework can provide start-up companies with guidelines and hint towards an informed model for an innovation commercialization process, making their work easier and better understood. Likewise, start-up verified framework serves outlines for discussion about marketing communications and how it could be connected to commercialization process. Ultimate goal of this thesis is that start-up companies would find our framework as a useful tool helping them to plan and utilize marketing communications activities and actions during process of taking innovation to market.

The framework considers well special features of start-up companies, such as lack of resources and limited quality of know-how. Thus, the framework can be modified to suit the needs of any start-up company, depending on the context and the depth of understanding on the process available. The framework is simple, but still explicit enough, so that the utilizer of the framework can easily interpret the content of it. Even further, one is able to plan marketing communication activities and implementation of actions, as well as organize execution of them later. Although a start-up company or other reader of the start-up verified framework is not interested in investing on utilizing the framework to the full, one can still exploit it to get a quick insight at potential marketing communications tools, channels, activities and actions.



The results highlight the nature of commercialization process that is more iterative than linear. Start-up companies can utilize this feature of commercialization process and take customers as a part of it. In deployment stage the company collects information from customers and moves back to development stage to improve its product based on feedback. This is how the start-up company can ensure that the development of its product is going in to the right direction, as well as to avoid time consuming and unnecessary operations which do not dispense value to customers. Thus, the company executes only development and implementation of features that customers are ready to pay for.

#### **7.4 Limitations and further studies**

In this chapter we consider about the limitations of our study. First of all, our empirical data has relatively small sample size, which leads us to believe that our research does not reach a degree of validity that would be suitable for making generalizations. This is a common feature of qualitative case studies, such as our thesis. At the same time, making generalizations was never the aim of this study. Instead, our aim was to offer start-up companies a framework that they could utilize in their individual commercialization processes.

Our study was limited to cover the commercialization process, which inherently has no clear end point. The last phase is to bring the innovation to market, but we knowingly ignore whatever happens after that point. For example, whether the company grows into a high-growth enterprise or not, that is intentionally left out. It would be interesting to investigate how a start-up company would continue to develop if we knew that the commercialization process had been carried out successfully.

Another limitation of our research is that we were not able to present the phases of a commercialization process using a linear representation or a specific order of marketing communications activities. As the business-related circumstances among companies vary a lot, we have no way of arguing for a model that includes phase duration or what ultimately be a ‘correct’ order of activities. What we can present are

the stages of the process and argue what are the phases and the activities included within that stage.

An interesting problem that calls for further research is investigating if there are distinct differences between the commercialization processes of start-up companies that develop hardware or tangible products, and software development firms. Our analysis provides some clues that might suggest such distinctions could be drawn between the different company types. E.g., we found out that companies that had a tangible product, utilized crowdsourcing campaigns at the discovery stage, while companies developing software products preferred pilot customers.

We have also been left to ponder the definition of a start-up company, and how it is used today. One could investigate the definition and how it may develop over time, as there start-up companies are an increasingly popular business model. The pursuit of rapid growth and products whose production can be scaled up are necessary criteria for a start-up company.

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## APPENDIX 1: INTERVIEW CITATIONS IN FINNISH

### Innovation commercialization process

*Noin vuos sitten, vähän reilu vuos sitten, oltiin aika pitkällä sen ite fyysisen laitteen kanssa, mutta softa ei ollu täysin määritelty ja siinä vaiheessa päätettiin, että testataan tää niin kun markkinamahollisuus tekemällä joukkorahotuskampanja [--] Ja kolmenkymmenen päivän ajan myytiin sitä sitte Kickstarterin kautta ja saatiin kasaan se meidän tavote --.(Yritys B)*

*Puhelinmyynnillä. Että ei juuri mitään muuta olla tehty. Se että kun saatiin tuote valmiiksi, niin puhelin kätteen ja soitteleen pilottiasiakkaita ja kerton minkälainen se meidän tuote on ja minkälainen se meidän tuote on ja. Se oli täysin uus tuote markkinoilla sillon, ja on vieläki. Ja tota, se oli haastavaa saada ne pilottiasiakkaat, mutta ne kun sai, niin se toimi sitte semmosena pienenä ponnahduslautana, että sieltä niinku muitakin, muitakin sitte [asiakkaita] lähti mukaan. (Yritys A)*

*Tein vähän eri tavalla tämän kaupallistamisen, koska käytettiin joukkorahoituskampanjaa jo yli vuos sitten. Mulla on ollut kaksi joukkorahoituskampanjaa. [--] Siellä hommasin ennakkotilaisuuksia [tuottelle], kun oli vasta idea. [--] Se oli markkinatutkimus, onko kysyntää. [--] Koska sieltä tuli niin positiivista palautetta, niin sen avulla onnistui firman rahoituksen kuntoon saaminen. [--]Työllistin Oulun seudulta puolenkymmentä firmaa ja noin 20 henkee viimisen vuoden aikana. Itse toimin projektipäällikkönä, mulle aina raportoidaan viikon välein. (Yritys C)*

*Hiljalleen. Ehkä se mistä me lähettiin, se oli jopa erilainen. Koko palveluprosessia -- , mutta sit huomattiin että mejän [tuote] on itse asiassa niin hyvä, että meidän kannattaa keskittyä tähän. Toisaalta siinä vaiheessa kun alettiin hakea pääomasijoitusta niin sieltä tuli viestiä että pitää olla skaalautuva tää bisnes. [--]Ja myymään pitää lähteä ja ennen kuin se tuote on valmis. Sillai et pikkasen hävettää. [-] Tuotetta voi myydä kun sä pystyt kuvailee sen. Kokeile, tuleeko siihen vastetta siihen sun ajatukseen. Jos kukaan ei ymmärrä ja kukaan ei innostu. Tietää et jotain on pieles. Silloin on turha tehdä yhtään mitään. (Yritys D)*

### Challenges concerning innovation commercialization process

*Kurja tilanne [potentiaalisilla asiakkailla] Suomessa. Se, että me ollaan Suomessa, Suomi on huono bisnesmaa. [--]se on ollu todella kova haaste, että tämmöstä tuotetta joka meillä on, ei ole ennen [Suomessa] nähty tämmöstä. Niin se uskottavuuden saaminen, että se toimii, ja siitä, että me saadaan tuloksia. (Yritys A)*

*Suomalaisen tuotekehityksen perusongelma, että ollaan hyviä keksimään hyvää teknologiaa ennen ku tarkastetaan, että kiinnostaako ketään sellanen teknologia. Sehän on se... perusongelma. (Yritys B)*

*Paljon. Haasteita, isoja ja pieniä. [--] Hitaus. Se on kaikista, asiat ei tapahdu niin nopeesti kun haluaa ja on suunnitellut. Yks suurimpia ongelmia on patentit. Kaksi patenttia ollut haussa vajaan kaksi vuotta, vieläkään ei oo myönnetty. Niistä tehään valituksia tasaisesti, aina kun tehään valitus, viivästytetään kolme kuukautta patenttia. Se on suurin probleema. [--] Sit sitä [rahoitusta] ei saa sijoittajilta tai pankista, koska ei oo viimistä patenttia myönnetty. Heille se on riski--.* (Yritys C)

### **Analysing the commercialization process based on the puzzle exercise**

*Se on iteratiivista, hyvin nopeeta. Ettei ne mene jäykässä prosessissa. [--] Sit on vaikea sanoa kumpi näistä. Näitä tehtiin iteratiivisesti. Koko ideaa markkinoimaan esim. rahoittajille hyvin aikasessa vaiheessa. Kun ei ollu yhtään työntekijää ja toisaalta protoamaan. (Yritys D)*

*No, me tehtiin tätä rinnakkain. Noita kahta tehtiin rinnakkain. (Yritys B)*

*Tota, tota tota, se mitä tää niin kun, ehkä jättää, piilottaa sen, että innovaation kehittäminen on ajallisesti pitkä vaihe. Innovaation tuominen markkinoille siis on vaiheistettu. Elikkä mä voisin laittaa tuonne innovaation tuominen markkinoille, ja tuonne toisen version samasta. (Yritys B)*

*Kyllä se markkinoilla jo on, vaikka sitä kauppohen hyllyllä ei. Paljon sopimuksia ja paljon myydä. Mä myyn lupauksia tällä hetkellä. (Yritys C)*

### **Marketing communications channels**

*”-- tuli samaan aikaan joukkorahoituskampanja, kun se oli markkinatutkimus samalla.” (Yritys C)*

*”--on ollut näitä pitching-tapahtumia ym ja on pyydetty käymään esittelemässä.” (Yritys A)*

*”Varmaan niissä pitchaustilaisuuksissa tosi alussa. Sieltä [informaation tuotteesta] levis laajalle verkostolle.” (Yritys D)*

*”[--] Sitä varten [markkinapotentiaalin selvittämistä] me tehtiin oikeestaan kickstarter-kampanja,” (Yritys B)*

*”[--] Sitten on kaikki somekanavat, Twitter, Face, Insta, LinkedIn. Face ja Twitter on tärkein, sitä kautta trafficia nettisivuille.” (Yritys D)*

*”[--] Niin kyllä me halutaan niin kun partneroitua sellasten kanssa, jotka on hirvittävän hyviä myynnissä ja markkinoinnissa.” (Yritys B)*

*”[--] Ja meillähän niinku myös sitä markkinointiviestintää tapahtuu myös kolmannen osapuolen taholta.” (Yritys A)*

*”[--] Ja myynti tulee olemaan enemmän puhelinmyyjien tapaisia luukuttajia –” (Yritys C)*

## **Theme 1: Innovation discovery**

### **Source of innovation**

*Sen kurssin päätteeksi kurssin vetäjä kysy että jos kiinnostaa jatkokehittää, niin hänen mielestään tässä vois olla niinku potentiaalia joskus niinku kääntää bisnekseen tätä teknologiaa. Siinä oli, sen enempää ei ajateltu mittään. Lähettiin tekemään. (Yritys A)*

*[Yritys] kerto omasta tarpeestaan, he tarvi tämmösen laitteen --. Ja heitä varten sitte täällä [yrityksessä] kehitettiin sellainen (laite) --. Mm, sitä kautta kehitettiin ensimmäinen versio tuotteesta, mutta samalla tavallaan niinku huomattiin se, että sen markkina-alue kokonaisuutena ei oo hirvittävän suuri --. [--] Elikkä talon sisältä tuli se kehittäjälaiteidea. (Yritys B)*

*Ensin markkinatarpeet, eli tuolta kaukee et maailmalla. Sieltä puuttuu ratkaisuja. Ajatus oli lähteä siihen kehittämään palvelua. Et kokonaispalveluna itse tarjottais, ensimmäinen ajatus. [--] Sit hoksattiin ettei voida ite alkaa tehdä palvelua, vaan tehään tästä tuotteesta niin hyvä et myydään sitä. (Yritys D)*

*-- anoppi muutama vuosi sitten sanoi et [haastateltavan nimi] voisi keksiä [laitteen]. Siihen se jäi. Välillä tuli mieleen, mut ei aktiivista ajattelutyötä. Sit yksi ilta kun oli nukkumaanmenossa, tajusin että miten se tehdään. (Yritys C)*

### **Customer promise**

*-- no me luvataan heille niinku asiakaspalvelutehtävistä ajansäästöä, rahansäästöjä. Me pystytään se jo todistaan tiettyyn pisteeseen asti. Plus se että lisää myyntiä tekee meidän tuote. Mahdollista lisämyyntiä. (Yritys A)*

*-- että mahdollistetaan [yksilöille] sellasia asioita, mitkä oli ennen mahollisia vaan suuryrityksille. (Yritys B)*

### **Relationship between company main strategy and innovation**

*Ollaan hyvä työpaikka ja laatu, tehdään laadukkaasti, sekä sisällä että asiakkaiden suuntaan. [--] Näyttää itselle ja maailmalle että näillä asioilla, tiimillä me voidaan viedään asia pitkälle, kansainväliseen bisnekseen. Mutta sitä ei viedä, muuta kuin vahvoilla, just tää vision ja arvojen mukaisilla toiminnoilla. (Company D)*

*-- asiakkaille pitää olla arvot olemassa. Me halutaan olla luotettava yhteistyökumppani. [--} ehkä siinä voi olla semmonen ristiriita niinku, että jos tuosta meidän tuotteesta voi saada semmosen kuvan, että se vähentää ihmistyövoimaa. [--] Toisaalta sitte myös se, että halutaan olla luotettava yritys, mää luulen että noin niinku monella ulottuvuudella tai tasolla luotettava, että me reagoidaan asiakkaan niinku tarpeisiin ja pyyntöihin. (Yritys A)*

*Et mennään vaikka Intiaan ja siellä törmätään. Sit tiedetään et ollaan saavutettu jotain. Tarkoitus viedä maailmalle. (Yritys D)*

*Toimitaan markkinahäirikkönä et [Yritys] ja {yritys} ärsyyntyy tarpeeksi. Jotta ne sitten lisensois tai ostaisi tarpeeksi isolla säkillä sitten koko firman pois. (Yritys C)*

*Visiohan meillä on se, että me halutaan olla niinku lippulaiva -- tulevaisuudessa. Meille Suomi on pelkkä testilaboratorio ollu tuolle tuotteelle ja teknologialle--.* (Yritys A)

### ***The plan of commercializing the innovation, market situation and rival analysis***

*Joo, ollaan suunniteltu. Ja niinku mää sanoin, että meillä on kaks bisnesmallia--.* [--] Alusta asti kun lähettiin teknologiaa kehittämään ja saatiin niinku suurin piirtein se visio, että mihin sitä mejän teknologiaa voitais hyödyntää, niin sitä kaupallistettavuutta niin tota, on mietitty siitä asti--. (Yritys A)

*-- semmosen kilpailija-analyysin puutteellisuus tietyllä tavalla johtuu siitä, että ihan vastaavan kaltaisia tuotteita ei oikeestaan ole. Kaikki väittää näin yleensä, se on niinku suurinta bull shittiä ku kaikki sanoo, että meillä ei oikeestaan ole kilpailijoita siihen, se on paskapuhetta. Mutta että niin ku noin teknisesti kattoen, niin mejän tuotteeseen on aika hirvittävän pitkä matka semmoselta lähimmältä saman sektorin tuotteelta. (Yritys B)*

*Kyllä sitä on mietitty ja menty, viety asiakkaille. Testaamaan ja kysymään ja luotettu siihen et asiakkaat kertoo, mitä ne tarvii ja mistä maksaa. (Yritys D)*

*Kilpailija-analyysi on tehty, koko ajan eri vaiheissa. Markkinassa on hirveästi kilpailua. [--] Peruseriaate minun mielestä on et ei kannata keskittyä kilpailuun, vaan omaan asiaan ja asiakkaisiin. Jos asiakkaat ostaa joltain muulta, niin tiedät että on kilpailu siinä. (Yritys D)*

### ***Challenges in the stage of innovation discovery***

*Ei, ei siinä ollu mitään haasteita. Se vaan pulpahti päähän. [--] Me vaan oltiin oikeassa paikassa oikeaan aikaan. (Yritys A)*

*Varmasti erityisesti se, että kun yleisellä tasolla on saatu se idea, korkean tason idea, niin miten se niinku saadaan sopimaan yhteen sen käyttäjän oikeitten tarpeitten kanssa. [--] Ensimmäinen haaste on se, että miten saadaan se niinku viesti selkeesti kulkemaan tän organisaation läpi. Elikkä se, että mitä se tuotekehittäjä tekee, on sitä, mitä se tuotteen määrittelijä haluaa. [--] Miten tää niinku feedback looppi saahaan toimimaan? [--]. Ja sitten tietysti hardiksessa on erityisen hankala tämä kohta, että se kehitysvaiheessa elää niin kaukana loppukäyttäjästä. Siitä, että se niin kun, että saatas oikeaa asiakaspalautetta, että vastaako tää oikeesti asiakkaat tarpeita. Että sanotaan näin, että siinä on semmonen noin puolen vuojen viiva yheksän kuukauden mittanen jakso, jossa se tehdään tyhjiössä ilman asiakaskontaktia. Se on haaste. (Yritys B)*

*Ainut oli ettei itellä ollut kokemusta patenttitietokantojen tutkimisesta et onko joku tehnyt tätä, onko joku patentoinut. Se on työlästä, se oli yks haaste et tarvittiin heti joku muu siihen tekemään, kun ei itse osannut. [--] Raha oli tietysti se, kaikki nopeutuu mitä enemmän rahaa. [--]Kaikki ois aina helpompaa kun ois rahaa. Hyvin harvoilla sitä rahaa on alussa. (Yritys C)*

### ***Role of marketing communications in innovation discovery stage***

*No siis kyllähän se, kyllähän se tärkeetäki ois ollut, mutta se on vähän semmonen monipiippunen ongelma. [--]Mutta meidän tää teknologiahan on ollu siis suoraan sillon ku me lähettiin tätä kehittään, niin täähän oli niinku scifi-elokuvasta, että ihan niinku älytön työ mikä sinne on niinku tehty. [--]Että ennemmin ehkä piän sitä ehkä tärkeimpänä, että kun meillä oli semmonen tilanne, että me pystyttiin kehittään monta vuotta ilman mitään palkkoja, kenellekään mittään palkkoja siitä, että kun se tuote lähenee niinku valmista, niin sitte alottaa se niinku viestintä. (Yritys A)*

*On verkostoiduttu, puhuttu kuin papukaija. Aina kun päästy erilaisiin tilaisuuksiin. [--] Tunnettuutta lähtee, kyllähän se on lähtenyt rakentumaan heti. [--]Viestintää pitää tehdä kaikkialla, kotona vaimolle, jotta se uskoo asiaan ja saa lainan takeeksi panna omakotitalon. Koko ajan joka paikassa, perheenjäsenille, ystäville. [--]Miten se pukeudut ja kohtelet ihmisiä, se on viestintää. (Yritys D)*

## **Theme 2: Developing the innovation**

### ***Innovation strategy***

*”Määriteltyä, tietosta strategiaa ei oo, sellasta että oltas kirjoitettu tää paperille ja keskusteltu, mutta se johtuu siitä, että meidän toiminnan luonteen vuoksi se on ihan ittestään selvää, että me ollaan first-movereita.” (Yritys B)*

*”Kyllä meillä first mover tässä mielessä on, että [tuote]. Ei tietoisesti suunniteltu, et meidän täytyy olla markkinalla ensin.” (Yritys D)*

### ***The plan of bringing innovation to market***

*”-- periaatteessa lyhyt yksinkertaisuus näin, että pilottiasiakkaat, pilottiasiakkaat, heiltä mahdollisimman paljo palautetta miten se toimii, mahdollisimman paljo Suomesta saaha asiakkaita, että saahan kunnolla testattua se teknologia sekä se tuote. Ja sitte ku asiakkailta rupee tulee hyvää palautetta, niin mahdollisimman nopeaa tehdä se englanninkielinen versio, sitten aloittaa kääntämään sitä.” (Yritys A)*

*”Niin se markkinoille tuonnin tapa tulevaisuudessa tulee olla se, että me partneroidutaan niitten operaattoreiden kanssa ja kautta. Ja yritetään saada sitoututtua heidät markkinointiin. Elikkä tehdään heille tuotteita joita he markkinoi ominaan.” (Yritys B)*

*”-- meil on tuotekin jalostunut, et nyt me voidaan partneroitua isojen tekijöiden kanssa. Joilla on paljon yritysasiakkaita jo olemassa. Niitten kanssa, se on se kanava edetä sitten suoraan loppuasiakkaiden.” (Yritys D)*

### ***Protecting innovation***

*”Mutta pantentti ois ihan jees, mutta se tulee todella kalliiksi tässä vaiheessa, ei oo mahdollisuutta.” (Yritys A)*

*”Niin ja voihan senki periaatteessa sen innovaation suojelemiseksi, että on ensimmäinen joka sen kaupallistaa ja tuo markkinoille?” (Yritys A)*

*”Se oli yksi suojauskeino se (NIMI)-kampanja, sen julkaiseminen. Lasketaan suojauskeinoksi, sillä tavalla kukaan muu ei voi estää tekemästä omaa tuotettani.” (Yritys C)*

*”Patentti. [--] – meil on kohtuu hyvä tää palveluntuottajaverkosto – luottosuhde verkostoon.” (Yritys D)*

### ***Allocating resources to marketing communication operations***

*”On, mutta niinku mää sanoin, että meillä on ollu älyttömän pieni budjetti. Siis nollabudjetti.” (Yritys A)*

*” ThingseeOnen osalta ihan koko tiimi, siis aivan, kokoonnutaan koko, ihan kaikki tuotekehittäjät, kaikki. ” (Yritys B)*

*”Että koko ajan henkilöitä on hyvin vähän, yhtä, kahta joka pystyy tekemään. Pikkuhiljaa vahvistettu. Rahallista resurssia ollut koko ajan tosi vähän käytössä.” (Yritys D)*

### **Marketing communications plan**

*”Ollaan me mietitty, paljoki ollaan mietitty. [--]Niin meillä on niinku aika pitkälle tosiaan selvänä nämä, miten tämä nykyinen tuote viiään. [--] Mut sitte tossa innovaation kehittämisvaiheessa, niin kyllähän se, se oli semmosta kokeilua kans, että mikä alkaa kannattaa ja tultiin siihen tulokseen sitte, että, meillä ei siis ollu semmosta varsinaista, että nyt tehään näin.” (Yritys A)*

*”Joo, koko ajan jatkuvana prosessina. Ja saatamme muuttaa sitä lennosta.” (Yritys B)*

*” Tekemässä. Mä oon enemmän toteuttanut kun suunnitellut. ” (Yritys C)*

*”Että alussa asiakkaista keskityttiin hyvin paljon markkinoimaan ja myymään niille b to b, palveluntuottajille. Ja nyt tietoisesti on parilla askeleella menty siihen, miten enemmän kommunikoidaan loppuasiakkaille --. Meidän palveluntuottajat on vähän huonoja myymään erityisesti yrityksille.” (Yritys D)*

### **Challenges in the stage of innovation development**

*”No tietenki ihan selevästi se, että koko ajan on menty ilman palkkaa.” (Yritys A)*

*“Ymmärtää se, että hienolta kuulostavat ideat ei välttämättä oo sitä mitä asiakkaat haluaa ja tavallaan niinku semmonen teknologinen onanointi on juurikin sitä. Elikkä ei tyydytä asiakkaan tarpeita vaan työntekijän, tuotekehittäjän.” (Yritys B)*

*”Raha, sen saaminen. Ei lainaaminen.” (Yritys C)*

*”Yleisesti semmoinen, mikä on tyypillistä varmasti kaikille startup, et asioiden eteenpäin saamisen vie enemmän aikaa kun suunnittelee. Niin kaksinkertaistuu aika. Kulut monesti pyörii vaikka tulot tulee hitaammin.” (Yritys D)*

### **The role of marketing in the stage of innovation development**



*”Se riippuu. Jos tuo innovaation kehitysaika on lyhyt, niin todella tärkeäksi.” (Yritys A)*

*”-- Kickstarter- kampanja -- ja sen ehkä tärkein rooli oli se, -- me päätettiin tehdä se investointipäätös. Elikkä koska saatiin tehtyä onnistunu kampanja, niin päätettiin laittaa merkittävät tuotekehitysresurssit vielä siihen tuotteen loppuunsaattamiseen.” (Yritys B)*

*” Markkinointiviestinnän rooli on iso, monessa startup-yrityksessä aliarvostettu. Iso osa tuotetta on se et osataan viestiä mikä se on. Monesti isompi osa kuin se tuote. Vaikka kuinka hieno tuote, jos ihmiset ei tiedä, niin sielläkös se sitten kaapin perällä on.” (Yritys D)*

### **Theme 3: Innovation comes to market**

#### ***Time when innovation came to market***

*”No kyllähän me edelleenki ollaan tosi näkymättömiä. Elikkä, sitä näkyvyyttä pitäis saaha. Ja ihan puhtaasti vaan sillä, että sää käytät sosiaalista mediaa, saat twitteriin seuraajia, blaa blaa blaa. Koko ajan. Me on tosi huonoja siinä.” (Yritys A)*

*”Ja missä onnistuttiin hyvin, niin hyvin aikasessa vaiheessa ymmärrettiin se, että... tuo fakta, että me tavallaan tavoitellaan semmosta niin kun pikkuhiljaa laajenevaa puroa. Että ollaan aluksi tyytyväisiä siihen niin kun pieneenkin huomioon, mutta yritetään rakentaa semmosia, jotka niinku jää elämään ja vaan laajenee ja laajenee.” (Yritys B)*

*”Se, mikä on ollu haastavaa, on tota, hmm... kaikki on haastavaa. Ajanpuute on haastavaa, se, että haluais tehdä niin paljon enemmän ku pystyy.” (Yritys B)*

*” Musta aukko, tämä on yksi syy miksi mä palkkasin toimitusjohtajan. [--] -- nyt itellä ei oo enää ymmärrystä, kokemusta mitä seuraavaksi pitäisi tehdä.” (Yritys C)*

*”Se oli tärkeä, et pari asiakasta saatiin. [--] Saatiin vahvistus et meil on tuote et voi innostua.” (Yritys D)*

#### ***Marketing activities***

*”Tää reddit on siis, se voi olla myös niinku, sen voi hyväksyä myös blogina, mutta mun mielestä se on foorumi.” (Yritys A)*

*"-- elikkä etsi joku sisältö, jotaki arvokasta. Me sanotaan sitä niinku core content. Elikkä jotakin arvokasta joku muu on tehty, joka on promotoimisen arvoista, joka jollakin tavalla liittyy [tuote]." (Yritys B)*

*"Varmaan nettisivut on tärkein. Sitten on kaikki somekanavat, Twitter, Face, Insta, LinkedIn. Face ja Twitter on tärkein, sitä kautta trafficia nettisivuille. Vaikea sanoa, mutta kyllä varmaan b to b -asiakkaat on tärkeimpiä viestinviejiä loppujen lopuksi." (Yritys D)*

### ***The role of marketing communication***

*"Siinä on täysin lineaarinen suhe siinä, että jos me saahaan ajettua 1000 ihmistä sinne kauppaan, niin myynti on 10-kertasta siihen nähden että jos me saahaan sinne kauppaan 100 ihmistä samassa ajassa." (Yritys B)*

*"Samanlaista kaaosta, en vieläkään tiedä." (Yritys C)*

*"Se on varmaan se tietoisuuden lisääminen. Yrityksestä ja tuotteesta." (Yritys D)*

### ***Message and target groups***

*"Thingseen osalta meillä on kaks kohderyhmä. -- osalta kuluttaja-asiakkaat, kehittäjät, ei pelkästään webbikehittäjät. [--] Ja toinen ryhmä [tuote] osalta on siis isot suuryritykset --" (Yritys B)*

*"Kaikille sidosryhmille. Ei voi eritellä." (Yritys D)*

### ***Measuring effectiveness of marketing communication***

*"Joo, on seurattu. Ihan perus, montako puhelua soitettu, montako kauppaa tullu. [--]." (Yritys A)*

*"Kyllä. Tota, siinä me ollaan oikeestaan aika hyviä." (Yritys B)*

*" Ei millään tavalla --. Ei seurata, nyt kun saadaan se kolmas kaveri, niin sillä on sitten tämä rooli annettu. [Yritys C]*

*"Analyticsin kautta." (Yritys D)*

## APPENDIX 2: INTERVIEW FRAME

### Yleiskatsaus/tausta

1. Liikevaihto?
2. Työntekijöiden määrä?
3. Toimiala
4. Kuvaile teidän innovaatiota? Innovaation tyyppi?
5. Kerro omin sanoin, miten olette saaneet innovaation kaupallistettua? Mitä elementtejä/vaiheita kuuluu?
6. Mitä haasteita liittyy innovaation kaupallistamisprosessiin (ideasta innovaatioksi ja kaupan hyllylle)?

**Puzzle:** innovaation kaupallistamisprosessin vaiheet, missä olette nyt, kenelle viestitään, muita markkinointiviestintään liittyviä toimintoja, markkinoinnin työkalut (mainonta, pr, myynnin edistäminen, henkilökohtainen myyntityö), markkinointikanavia (mitä?). Valokuvataan tuotos.

### Teema 1: Innovaation syntyminen

1. Mistä saitte idean innovaatioon? Asiakaslähtöisyys? Tarvelähtöisyys?
2. Mihin asiakastarpeisiin innovaatio vastaa teidän mielestänne? Mikä tekee tuotteenne arvokkaaksi asiakkaalle? Mitä haluatte luvata asiakkaallenne tuotteenne avulla?
3. Miten olette muotoilleet yrityksenne strategian? (esim. ydinosaminen, visio, arvot) Mukailleeko innovaatio yrityksenne yleistä strategiaa?
4. Oletteko suunnitelleet, miten aiotte kaupallistaa innovaation?
5. Oletteko analysoineet kilpailutilannetta ja innovaation kaupallistettavuutta? Miten? Onko markkinoilla vastaavia/vastaaviin tarpeisiin vastaavia tuotteita?
6. Teitkö markkinointiviestintää innovaation syntymisen aikoihin? Mihin liittyen? Minkälaista? Kenelle?

7. Mitä haasteita innovaation syntymisen vaiheeseen liittyi?
8. Kuvaile, mikä on markkinointiviestinnän rooli yrityksessänne tässä vaiheessa.

### **Teema 2: Innovaation kehittäminen**

1. Onko teillä innovaatiostrategiaa? Jos on, niin millainen? Esim. hyökkäävä (first-mover, ekana markkinoille), puolustava (odotetaan, että toinen astuu ensin markkinoille tullaan itse perässä paremmalla versiolla), jäljittelevä ym.
2. Kuvailkaa, millainen suunnitelma teillä oli/on innovaation tuomiseksi markkinoille?
3. Miten suojelette innovaatiotanne?
4. Oletteko varanneet, hankkineet tai suunnitelleet resursseja markkinointiviestintään tässä vaiheessa?
5. Oletteko miettineet, miten, kenelle ja milloin toteutate markkinointiviestintää? Toteutateko jo? Markkinointiviestintäsuunnitelmä?
6. Ketkä osallistuvat markkinointiviestinnän suunnitteluun?
7. Mitä haasteita koitte innovaation kehittämisen vaiheessa?
8. Kuvaile, mikä on markkinointiviestinnän rooli yrityksessänne tässä vaiheessa.

### **Teema 3: Innovaation tuominen markkinoille**

1. Kuvailkaa aikaa, jolloin toitte innovaation markkinoille. Missä onnistuitte hyvin? Mikä oli haastavaa? / Millaisia odotuksia ja ajatuksia herättää se aika, kun aiotte tuoda innovaation markkinoille?
2. Miten toteutate markkinointia käytännössä tässä vaiheessa? Kuvailkaa, millaisia työkaluja ja kanavia käytätte? Miksi?
3. Kuvaile, mikä on markkinointiviestinnän rooli yrityksessänne tässä vaiheessa.
4. Mitä haluatte markkinointiviestinnän kautta kertoa asiakkaallenne?
5. Kenelle suuntaatte markkinointiviestintää?

6. Seuraatteko markkinointiviestinnän tehokkuutta? Miten? Miksi?

7. JOS TUOTE ON TUOTU JO MARKKINOILLE: Onko alussa suunniteltu markkinointiviestintäsuunnitelma toteutunut? Entä innovaation kaupallistamissuunnitelma?

8. Millaiseksi koet markkinointiviestinnän roolin innovaation kaupallistamisen kannalta? Onko rooli ollut oleellinen esim. asiakkaiden saamiseksi?