

Master Thesis

Promoting corporate entrepreneurship through innovation units and innovation networks

Copenhagen Business School

Cand. Merc. Strategic Market Creation

Authors:

Christian Pihl Nielsen (251188-XXXX)

Jeppe Birk Marquard Pedersen (110391-XXXX)

STU Count/Pages: 269.579 characters / 109 pages

Date: 15-15-2017

Advisor: Henrik Johannsen Duus

Abstract

The last decade has led to an increasing focus on entrepreneurial start-ups that challenge rigid incumbents. As organizational size and structures can raise significant barriers to induce entrepreneurial behavior, this presents an obstacle for companies seeking to innovate and renew themselves. As a response, the notion of corporate entrepreneurship has seen increasing prominence in literature as well as in practice for companies to achieve higher levels of profitability and competitive advantage. This has also led to the increasing formation of corporate innovation units and innovation networks that are prescribed as ways for companies to become more innovative.

Considering the relevance of corporate entrepreneurship in today's environment, the purpose of this thesis is to gain an in-depth understanding of how companies are promoting corporate entrepreneurship through innovation units and innovation networks. In this, an interesting aspect is also how and to what extent the companies are measuring the outcomes. For this, a range of interviews were conducted with Danish industry professionals, who are leading innovation units in four different companies. Combined with secondary data, these interviews provided the foundation for a cross-case analysis that shed light on different promoters for corporate entrepreneurship. As 3 out of 4 cases also engage in innovation networks, interviews with two innovation network professionals were conducted to examine how innovation networks, often together with innovation units, seek to promote corporate entrepreneurship.

The main findings demonstrate that companies can indeed use innovation units and innovation networks to promote corporate entrepreneurship, as the innovation unit can act as a catalyst for the promoters of corporate entrepreneurship, and subsequently lead and facilitate entrepreneurial thinking throughout an organization. It was further found that integrating the innovation unit and organization into an innovation network can further promote corporate entrepreneurship, as innovation networks provide a secondary source of inspiration and resources.

Through a synthesis of relevant literature and collected data, this thesis puts forward a normative framework accentuating the important factors for companies, who seek to promote and measure corporate entrepreneurship. By paying attention to these factors and the holistic nature of corporate entrepreneurship, it is believed that companies can become more successful in promoting corporate entrepreneurship and subsequently survive in the dynamic marketplace.

Acknowledgements

First, we would like to express our sincere gratitude to everyone who, despite their busy schedules, took time to participate in the interviews. Their insights and experiences provide valuable data for the findings, which the thesis could not be without.

Secondly, we would also like to thank our friends and families for their proofreading and support during the process. In this, we would like to extend our heart filled gratitude to our girlfriends, who have been patient and supportive throughout the entire process. In this, we would also like to thank each other for being inspiring and hardworking thesis partners and friends.

Finally, we send a special thanks to our advisor, Henrik Johannsen Duus, whose support and constructive feedback has been a great help throughout the entire process.

Table of Contents

<u>1</u>	<u>INTRODUCTION</u>	<u>6</u>
1.1	SITUATION	6
1.2	RESEARCH AIM AND MOTIVATION	7
1.3	PROBLEM FORMULATIO	8
1.4	DELIMITATIONS	9
1.5	STRUCTURE	11
<u>2</u>	<u>METHODOLOGY</u>	<u>12</u>
2.1	RESEARCH PHILOSOPHY	12
2.1.1	THE SYSTEMS VIEW	12
2.2	PURPOSE	13
2.3	APPROACH	14
2.4	METHODOLOGICAL STRATEGY	14
2.4.1	MULTIPLE CASE STUDY	14
2.5	METHODOLOGICAL CHOICE	16
2.6	TIME HORIZON	16
2.7	DATA COLLECTION AND ANALYSIS	17
2.7.1	SOURCES OF DATA	17
2.7.2	LITERATURE REVIEW	17
2.7.3	EMPIRICAL DATA COLLECTION THROUGH QUALITATIVE INTERVIEWS	18
2.8	RELIABILITY AND VALIDITY	21
2.9	SUMMARY OF METHODOLOGY	22
<u>3</u>	<u>LITERATURE REVIEW</u>	<u>23</u>
3.1	HISTORICAL BACKGROUND OF ENTREPRENEURSHIP:	23
3.1.1	JOSEPH ALOIS SCHUMPETER	23
3.1.2	ISRAEL KIRZNER	24
3.1.3	THE ENTREPRENEUR WITHIN ORGANIZATIONS	25

3.2 CORPORATE ENTREPRENEURSHIP	26
3.2.1 INNOVATION	29
3.3 ANTECEDENTS OF CORPORATE ENTREPRENEURSHIP	35
3.3.1 INTERNAL ANTECEDENTS	35
3.3.2 EXTERNAL ANTECEDENTS	41
3.4 MEASURING CORPORATE ENTREPRENEURSHIP	45
3.4.1 MEASUREMENT TOOLS	46
3.5 SUMMARY OF LITERATURE REVIEW	47
 <u>4 ANALYSIS OF EMPIRICAL DATA</u>	 <u>49</u>
 4.1 CASE COMPANIES.....	50
4.1.1 HEDEDANMARK (HD GREENLAB)	50
4.1.2 ISS (ISS CORPORATE GARAGE).....	55
4.1.3 ROCHE (ROCHE INNOVATION CENTER COPENHAGEN)	61
4.1.4 TRYG (THE CAMP).....	66
4.2 CROSS-CASE ANALYSIS.....	73
4.2.1 INTERNAL ANTECEDENTS	73
4.2.2 EXTERNAL ANTECEDENTS.....	77
4.2.3 MEASURING OUTCOMES	80
4.2.4 SUMMARY OF CROSS-CASE ANALYSIS	81
4.3 INNOVATION NETWORKS	83
4.3.1 DANISH FOOD CLUSTER	83
4.3.2 SCION DTU.....	86
4.3.3 MEASURING THE NETWORK EFFECTS	88
 <u>5 DISCUSSION</u>	 <u>90</u>
 5.1 DEFINING CORPORATE ENTREPRENEURSHIP	90
5.2 THE PROMOTERS OF CORPORATE ENTREPRENEURSHIP	92
5.3 THE USE OF INNOVATION UNITS AND NETWORKS	95
5.4 MEASURING CORPORATE ENTREPRENEURSHIP	99
 <u>6 NORMATIVE FRAMEWORK</u>	 <u>102</u>

6.1	STAKEHOLDERS OF CORPORATE ENTREPRENEURSHIP	102
6.2	THE CORPORATE ENTREPRENEURSHIP PYRAMID	103
6.3	SUM-UP OF RECOMMENDATIONS FOR PROMOTING CORPORATE ENTREPRENEURSHIP	105
<u>7</u>	<u>CONCLUSION</u>	<u>107</u>
<u>8</u>	<u>POSTSCRIPT.....</u>	<u>108</u>
8.1	LIMITATIONS	108
8.2	FUTURE RESEARCH	108
<u>9</u>	<u>REFERENCES</u>	<u>110</u>
<u>10</u>	<u>APPENDICES</u>	<u>119</u>
10.1	APPENDIX 1 - PROFILE OF INTERVIEWEES	119
10.2	APPENDIX 2 – INTERVIEW GUIDES.....	120
10.3	APPENDIX 3 – OUTLINE OF LINKS BETWEEN INTERVIEW GUIDES AND RESEARCH QUESTIONS	123
10.4	APPENDIX 4 – NOTES FROM TRYG THE CAMP INTERVIEW	124
10.5	APPENDIX 5 – ISS CORPORATE GARAGE (‘GUIDED TOUR).....	126
10.6	APPENDIX 6 – THE CAMP (‘GUIDED TOUR)	126
10.7	APPENDIX 7 – EXAMPLE OF THEMATIC NETWORK ANALYSIS	127
10.8	APPENDIX 8 – MEMBERS OF DANISH FOOD CLUSTER	132
10.9	APPENDIX 9 – LIST OF COMPANIES IN SCION DTU	135
10.10	APPENDIX 10 – LIST OF COMPANIES IN THE CAMP.....	141
10.11	APPENDIX 11- COMPANIES IN CORTEX PARK	143

1 Introduction

1.1 Situation

In the midst of a global shift, entrepreneurs are challenging the status quo in every nation, industry and market by creating value in innovative ways, as new forms of businesses, products and service appear almost daily. As such, established companies are faced with a fundamental choice. Either become a victim of the 'start-up revolution' that challenge incumbents, or join the revolution. Over the last decade there has been several examples of well-established companies that have failed to survive in the new competitive landscape. Amongst the most famous are Nokia, Blackberry and Kodak, who have been disrupted or significantly reduced, despite their massive resource pools as industry leaders. Reactions to the challenges of today's marketplace has often included downsizing, divesting, decentralizing, outsourcing, strategic alliances, 'going lean' etc. Alternatively, other companies proclaim to 'adopt' innovation strategies, albeit results are often falling short, due to constraining organizational models, risk-averse cultures and generally a rigid approach to change (Solis et al. 2015). Mature companies are simply designed to deliver and exploit, and not engage too much in discovery and exploration. Thus, many companies continue to struggle, as no 'true formula' has prevailed for companies to sustain competitive advantage (Morris et al. 2011).

However, a prescribed way for companies to survive in the dynamic market can be by engaging in corporate entrepreneurship (henceforth CE), which is an overarching term consisting of companies' efforts to innovate, venture and strategically renew themselves. This builds on the notion of entrepreneurship, which is mostly linked to individuals and start-ups that come with a different mentality allowing them to exploit opportunities and challenge incumbents. The notion of entrepreneurship was first introduced by Richard Cantillon in 1755 (Elkjær 1992), and was brought to fame by Joseph Schumpeter and his view on entrepreneurs' effect on the economy (Schumpeter 1934). Today, the term has received extensive amount of focus and definitions as something that can bolster a company's performance, motivate entrepreneurial employees and lead towards sustained competitive advantage (Antoncic & Hisrich 2004). By introducing entrepreneurial thinking, companies more specifically challenge the current way of doing business, as a mean of discovering new business opportunities or shaping current ideas to meet new market standards. This touches upon the creative thinking of employees, a company culture supporting creative thinking, internal restructuring of capabilities and resources, all-in-all encompassing the whole organization. Research has sought to uncover the factors that promote CE and its subsequent success, which in academia is discussed as the antecedents of a company's internal and external environment, such as the top management support,

culture, market dynamism etc. (Sakhdari 2016)(Zahra 1991; Guth & Ginsberg 1990; Covin & Slevin 1991).

In this, companies are looking for new ways to promote CE, for example by setting up autonomous innovation units, sometimes even as part of innovation networks. These kinds of setups have many different names, such as innovation hubs, innovation centers, innovation labs, skunk works or corporate garages (Solis et al. 2015)(Sloane & Ed 2017), all with the same goal of creating the optimal entrepreneurial environment. As a matter of fact, *“Corporate innovation labs have sprung up like weeds across industries around the world. Any self-respecting CEO now has a corporate innovation lab!”*(Kaplan 2016). However, internally promoting entrepreneurial thinking often only brings companies so far on its own, and companies thus seek the outside environment to find inspiration, motivation and help. In this, the notion of open innovation is seeing increasing promise on how companies can tap into external sources in the pursuit of innovation (Chesbrough & Appleyard 2007). As a result, an increased number of innovation units have a major responsibility of developing partnerships and establish connections to companies for inspiration and access to external resources (Ministry of Higher Education and Science 2017; Solis et al. 2015).

Finally, while several CE measurements exist, there is still limited agreeability on how companies should measure their CE efforts (Dyduch 2008). The focus on long-term innovations often clashes with the traditional ways of measuring in companies, where creating short-term shareholder value is more important. Adding to this, the uncertainty related to innovation make it complicated to apply traditional measurements (Erasmus & Scheepers 2005). This also relates to the purpose and objectives that companies put forward in relation to their entrepreneurial initiatives, which seldom are aligned between all parties (Kaplan 2016).

1.2 Research Aim and Motivation

Based on the above, it is evident that companies need to act in order to deal with the opportunities and threats of the environment. For this, CE and innovation have become increasingly used notions, albeit some may see them as just empty “buzzwords” (O’Byrne 2013)(Gartner 1990). Additionally, more and more companies establish innovation units as a mean to promote and facilitate these notions throughout the organization. To some companies, it seems to feed tremendous success, while other companies still reside in a rigid state where they might slowly be losing competitive advantages (Solis et al. 2015). Thus, it is interesting if a company can rejuvenate itself and increase profits by fostering entrepreneurial behavior, and to what extent this is possible. Furthermore, innovation networks are claiming to provide tools and networks that can help start-ups or established companies become more entrepreneurial and

innovative (Ministry of Higher Education and Science 2017). Most studies regarding these innovation networks has only been done on a macro-economic scale, thus we believe there is an interesting aspect in considering these networks' part in promoting CE within companies on a micro-level. Especially interesting is the engagement between innovation units and innovation networks, and its effect on CE.

CE is not a widely-researched area in Denmark, as much of this research revolves around individual entrepreneurship and general innovation. The studies specifically conducted on CE in Danish companies are often more holistic, and is often based on larger quantitative surveys across companies and industries (Bager et al. 2006). Thus, it could be interesting to gain a more in-depth understanding of the underlying assumptions about CE and its implementation in Denmark.

Moreover, several quantitative studies links CE to increased growth and profitability (Zahra 1991)(Dess et al. 2003), as well as intangible outcomes such as increase in knowledge and skills (Ireland et al. 2003). Albeit this has been scrutinized by research and consultants, no universally accepted tools have emerged. Therefore, this thesis seek to get an in-depth understanding of how our case companies measure CE initiatives, and to what extent it can be improved.

Based on above managerial and academic dilemmas, this thesis seeks to contribute to the CE literature by integrating it and testing its applicability in a real-life context. By doing so, it can generate a deeper understanding of the conceptualization, promoters, as well as outputs of CE. This will be supported by the increasingly popular notions of innovation units and innovation networks in order to assess their impact on CE. These theoretical notions are applied in four case studies based on qualitative data, which are furthermore supported by qualitative data from two innovation networks. In this, it is the aim of the thesis to subsequently develop a normative framework as a guiding tool for how to successfully promote CE.

1.3 Problem formulation

Using the previous sections as points of departure, this research thesis attempts to examine how companies can use innovation units and innovation networks to promote to CE. Accordingly, the main objective is to uncover:

- **How can companies promote corporate entrepreneurship through innovation units and innovation networks?**

In doing so, an assessment will be given for the term corporate entrepreneurship, the main factors that traditionally help companies to promote CE, and to what extent these are present and essential in the respective case companies. This will be followed by an uncovering of the impact innovation units and

innovation networks can have on CE. Lastly, it will be investigated how companies can improve their ways of measuring and evaluating the outcomes of CE. This leads to the following sub-questions:

1. *How can we define corporate entrepreneurship?*
2. *What are the main factors prescribed by literature that help companies promote corporate entrepreneurship?*
3. *Which factors are perceived to have the most positive effect on corporate entrepreneurship in practice?*
4. *What impact does innovation units and innovations networks have on corporate entrepreneurship?*
5. *How can companies improve their ways of measuring and evaluating outcomes of corporate entrepreneurship?*

1.4 Delimitations

Delimitations are the boundaries and limits of the research that have been actively constructed by the researcher to ensure focus throughout the research. Thus, the following section will provide an overview of the main areas delimited from this research, as well as the reasons for doing so.

Firstly, it is important to clarify that this research focuses on CE and the structures and processes within larger companies that promote or inhibit this. Thus, this thesis will not focus on companies with less than 50 employees (European-Commission 2017).

Moreover, the thesis will mainly focus on the CE aspects of innovation and strategic renewal. Thus, the analysis will not go into depth with the venturing aspect of CE, as the innovation units in the cases are not seen as such. Furthermore, venturing relates to more separate entities and processes without the same amount of feedback and knowledge sharing going to and from the central organization (Morris et al. 2011). Related to innovation, this thesis has chosen to focus on the generation, selection and measuring phases of the innovation process (Tidd & Bessant 2014). Throughout the thesis, the terminology CE will be covering both the delimited take on innovation and strategic renewal, unless a unique part of CE is specifically stated to be the spoken of. Furthermore, it should be accentuated that the notion of measuring CE in this thesis relates to the different types of measurements and outcomes of the CE initiatives (the innovation units) in the cases.

The research will also focus on examining the antecedents of CE by qualitatively gaining an understanding of the structures and processes applied top-down that seeks to promote CE. In this, the antecedents discussed in the literature are also discussed as promoters of CE. Although we recognize the

relevance of independent intrapreneurs, analyzing the organizational structures that allow intrapreneurship is more relevant for this thesis than analyzing the specific characteristics and behavior of individual employees.

The focus will primarily be on CE on a micro-economic level, as the aim of the thesis is to examine CE within the specific companies. Moreover, the main focus will be on the processes related to the innovation units as the primary unit of analysis, as the size of the case companies make an exhaustive cross-case study of the organizations close to impossible. In this, the term innovation unit is used throughout the thesis as an overall term for the various types of CE initiatives that links to creating a separate innovation promoting unit, such as hubs, units, centers, garages, skunk works etc. While the innovation units are the primary units of analysis, the research will also show traces of a meso-level research when discussing the impact of innovation networks, which is included to support the case studies and theoretical notions. In this thesis innovation networks serves as an overall term in regards to the many different types of networks and clusters working to promote innovation.

Furthermore, the research is not delimited to specific industries, as we believe the findings are relevant across industrial borders. It has also been a deliberate choice to focus on companies already engaged in some sort of CE initiative, in order to examine whether different notions from the literature have indeed been applicable in the cases. In this, it should also be noted that the case companies are all seeing growth and possessing substantial resources which can affect the probable success of entrepreneurial initiatives. Moreover, this study is also of cross sectional character and analyze the cases in the given point in time, not examining the development of CE in the companies over a longer time period. In this, we acknowledge how some initiatives are newly introduced, making it difficult to examine the long-term effects of these.

Nonetheless, this research can be used to support and extend literature into a framework, which can consequently be integrated into companies. An alternative could have been to enter a rigid-company with an in-depth and normative case study approach, and seek to integrate notions from the literature to promote CE and subsequently test these. However, due to the limited time and resources available this was not deemed possible.

1.5 Structure

The thesis consists of 8 chapters placed in a logical progression that aim to solve the problem formulation. The findings of chapter 3 and 4 are synthesized in chapter 5 to provide answers to the sub-questions, which will lead to an answer of the main research question in Chapter 7. The overall structure of the thesis and the interplay of sections is visualized below.

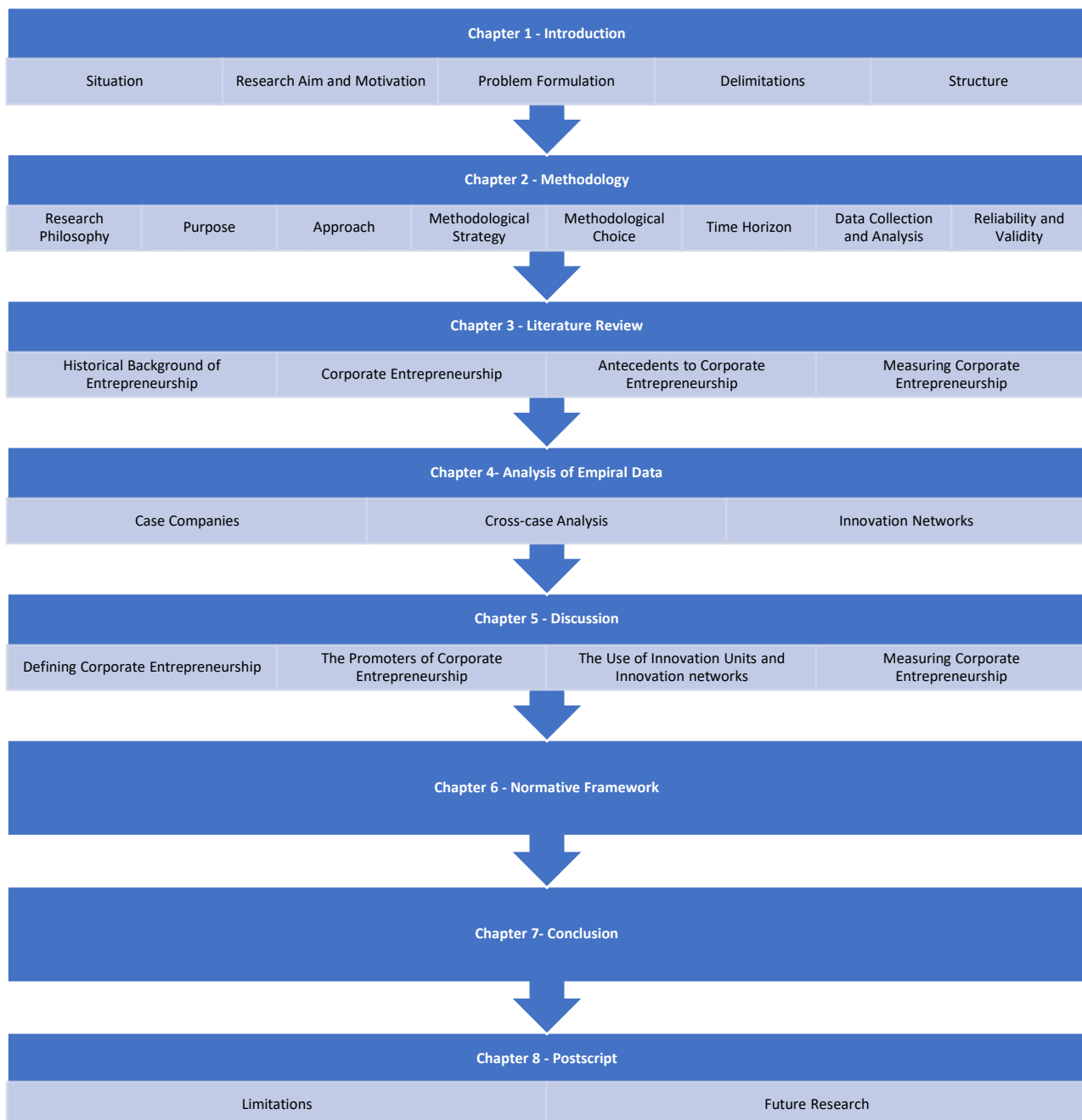


Figure 1 - Structure of thesis. Own Production

2 Methodology

This chapter will describe how the research has been designed and explain the methods applied in order to conduct the research. The structure of the research design is dependent on, and will in turn determine the road to answering the research question. Therefore, the research design must be prudently constructed to *“ensure that the evidence obtained enables us to answer the initial question as unambiguously as possible”* (Vaus 2001, p.9). Thus, the thesis is built upon a research structure that will enable us to come the closest to a gratifying answer to our research questions.

2.1 Research Philosophy

The research philosophy relates to the researchers view of the world (Saunders et al. 2012). As such, there is a need of awareness related to philosophical commitments shaping the research design, as it has a significant impact on how data is collected, analyzed and understood (Saunders et al. 2012). This thesis is based on a pragmatic philosophy, and follows the notions of (Arbnor & Bjerke 2009) that *“the value of knowledge is equal to its practical use”* (Arbnor & Bjerke 2009, p.24). Thus, the choice of research method should be based on the practical consequences of its results (Muijs 2005; Keleman & Rumens 2008).

Related to research philosophy is the considerations of ontology and epistemology, reflecting the nature of the questions 'What is there?', 'What do you know?' and 'How do you know it?' (respectively) (Saunders et al. 2012). As an approach to the research questions asked, the ontological position taken in this thesis is pragmatic, i.e. between positivism and interpretivism. As such, it is recognized that there are many different ways of interpreting the world and undertaking research, as *“no single point of view can ever give the entire picture and that there may be multiple realities”* (Saunders et al. 2012, p.130). Following the ontological position, the epistemological approach follows that the value of knowledge is equal to its practical use. As such, both observable phenomena and subjective meanings can provide acceptable knowledge (Saunders et al. 2012).

2.1.1 The Systems View

The overall research approach for this thesis follows the systems view, which is an approach for an interdisciplinary study that allows an analysis and description of how objects work together in organizations. The systems view takes a pragmatic stance and is based on two fundamental ideas: 1) that all phenomena can be seen as a relationship between its components, as a system, while 2) all systems have common patterns and properties that can be explained and understood to develop greater insight into the complex phenomena. Thus, the systems view allows one to explain and understand a reality consisting of objective and subjective facts that are interconnected in systems (Arbnor & Bjerke 2009).

A well-known example is that of complex organizations, which includes numerous functional areas such as marketing, finance, human resource management etc. These are all areas that affects the overall organization, and has a part in the endeavors of an organizations CE pursuit. Thus, the systems view provides a useful framework for case studies in this thesis. In regard to this, the openness of the system and its adaptability to the changing environment, as well as the fit between the system and its components are of particular interest. The systems view specifically claims that in order to survive and grow, organizations must adapt with new structures to create a continuous fit with the environment. However, as a result of the organizations history, it often displays some kind of inertia or 'rigidity' preventing structural change, as members might simply ignore the need for change and merely pursue stability. In today's business environment, the aspects of the systems view can be seen in various types of organizational systems, including temporary project organizations, entrepreneurial organizations, innovation organizations, as well as in the network perspective that acknowledges the importance of what goes on outside and between organizations (Arbnor & Bjerke 2009).

(Arbnor & Bjerke 2009) also states the importance of a totality of the world, where parts are more or less dependent on each other. However, it is important to recognize that it is only possible to analyze one given picture of a system, as there is a limit to how much detail can be considered. In this, every picture of a system is dependent on the knowledge creator, i.e. researcher, and the frame of reference and chosen magnifying level. In this, the systems view is critical of an objective-only reality, and pragmatically finds the results of a study more important than the objectivity. Additionally, the system view is rarely associated with representability, and case studies are as such not able to represent all other systems, but merely a certain type of system (Arbnor & Bjerke 2009).

2.2 Purpose

In order to answer the research questions, this research will first shows traces of a descriptive study, allowing us to obtain a clear picture of the phenomenon through a comprehensive literature review and description of the companies' respective activities in regard to CE. Subsequently, an explanatory research is conducted through a synthesizing of the primary and secondary data in order to explain and analyze the causal relationships between organizational factors and an organization's ability to be entrepreneurial. Thus, our research purpose can be termed as decripto-explanatory (Saunders et al. 2012).

2.3 Approach

In order to answer our research questions, and test and modify the theories on CE, this thesis will take an abductive approach to reasoning. This follows the pragmatic stance of the systems view, as working abductively is considered appropriate for its efforts of methodological integration (Arbnor & Bjerke 2009)(Saunders et al. 2012). Instead of merely moving from theory to data (deduction) or data to theory (induction), the abductive approach moves back and forth within the same piece of research by combining the notions from deduction and induction. By adhering to this approach, data is collected to explore a phenomenon, identify themes and explain patterns in order to generate a new or modify an existing theory, which is subsequently tested through additional data collection (Saunders et al. 2012).

In this thesis, a theoretical framework on CE and its promoters has firstly been developed based on a comprehensive literature review. This is subsequently related to the real-life cases, which then leads to adjusting our framework based on the newly discovered facts test. This is an going process that will continue until a final framework and validation has emerged. As such, we also follow the approach that is most often used in everyday business research (Saunders et al. 2012).

2.4 Methodological strategy

2.4.1 Multiple Case study

The thesis applies the framework proposed by Robert K. Yin for using case studies for research purposes. This is due to the nature of our research question, as case studies are *"preferred when": (a) "how" or "why" questions are being posed, (b) the investigator has little control over events, and (c) the focus is on a contemporary phenomenon within a real-life context*" (Yin 2009, p.25), all fitting the complexity of this research.

This thesis applies a multiple case studies approach, as a mean to implement and integrate the findings from the respective cases. The cases will provide two different types of data: the unique results from each case that on its own provide knowledge on the real-life situation in the examined companies, and the results coming from the comparison of findings between the multiple studies (Yin 2009).

Despite the fact that single- and multiple case studies can be viewed as being variants of the same methodological framework, it is important to note that there are distinctions between the two. The evidence from multiple case studies is generally viewed as being more compelling and more robust than a single case study. Each case study within the multiple case studies consists of a "whole" study, in which convergent evidence is sought regarding the facts and conclusion for the overall case (Yin 2009). Thus, we have carefully selected and applied each case, so that they can either predict similar results

(literal replication) or predict contrasting results, albeit for anticipatable reasons (a theoretical replication) (Saunders et al. 2012).

In this, we follow the linear, yet iterative process moving through 6 phases of the case study research as illustrated below. This is to ensure that the case studies will help providing a holistic understanding and meaningful characterization of real-life situations (Yin 2009).

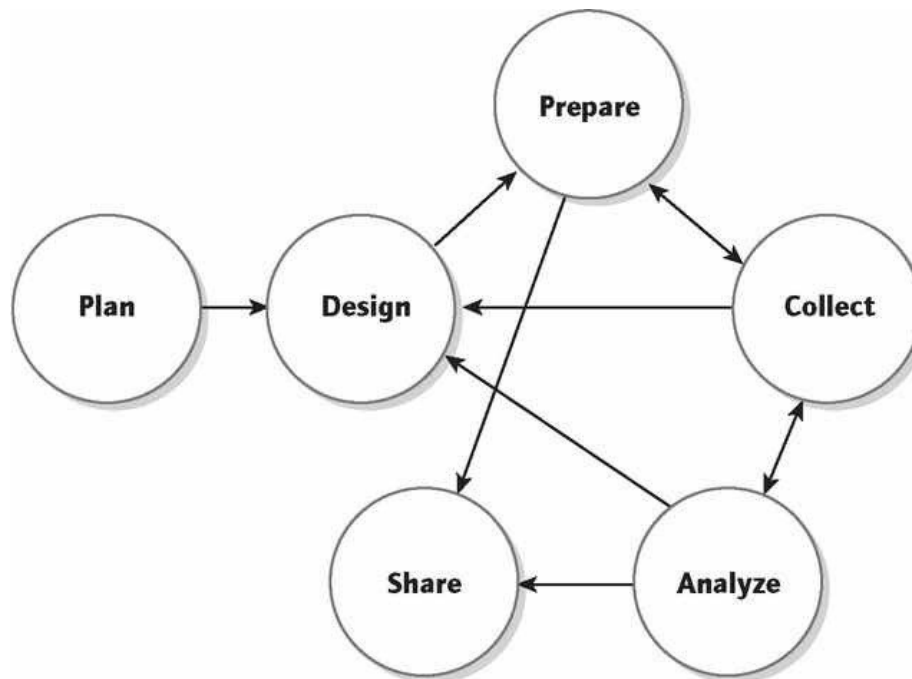


Figure 2 Six Steps of Case Study Yin 2009

Plan: The planning phase has laid the foundation for the case study, in which one of the most critical steps is defining the research questions. As case studies are investigations of a contemporary phenomenon within a real life context, they are eminent for explanatory research and theory testing in single events. In this, it is important to note that the case studies can be used to draw generalizable theoretical propositions, but not scientific generalizations (Yin 2009).

Design: The case study design has been chosen to best link the research questions in mind with what data is relevant, what data to collect and how to analyze the results. More in detail, the case study design is build on 5 components: 1) its questions; 2) its propositions; 3) its unit(s) of analysis; 4) the logic that links the data to the proposition; and 5) the criteria for interpretation of the findings.

Prepare: The case study has been prepared thoroughly in order to obtain the best potential results. This for example involved screenings of case candidates bases on their size and perceived likeliness to be involved in CE was conducted, as well as development of protocols for investigation (Yin 2009).

Collect: The case studies uses as broad a range of data as possible, including both quantitative and qualitative, various documents and articles, archival records and interviews. By using multiple sources of evidence, we are able to triangulate the data and develop converging lines of inquiry (Yin 2009). Albeit observations are often seen as a major part of case studies, the nature of CE and its longitudinal nature made observations less relevant.

Analyze: Every case study follows a generic analytic strategy, defining priorities for what to analyze and why. The way of analysis will be elaborated in section 2.7.3.4.

Share: Despite the different potential formats of a rapport, there are similar underlying steps for sharing the case study: identifying the audience for the report, developing its compositional structure, and having drafts reviewed by others (Yin 2009). After completion of the study, findings will be made available for all case companies and interested academics.

2.5 Methodological choice

This research is a mixed method research, as it includes both quantitative and qualitative research aspects. However, it should be noted that the research is predominantly qualitative research, as the primary data collection consist of qualitative interviews that provides ground for interpretation of participants' meanings and environments. Nonetheless, this study shows traces of quantitative data, as numbers from network surveys as well as general statistical figures have a supporting place in the analysis. As such, there is no quantitative data collection per se, merely limited quantitative data analysis supporting the qualitative data in an embedded mixed methods research. By applying a mixed method research design, we also acknowledge that many business and management research designs are likely to combine quantitative and qualitative elements in order to overcome weaknesses associated with using only one method (Saunders et al. 2012).

2.6 Time horizon

Due to the limited time and resource, the primary research has been conducted over only a couple of months, and seeks to study and compare the CE promoters and initiatives within companies at a given point in time. Thus, the time horizon of the research is cross-sectional, as the research focuses on a given phenomenon at a given point in time. Alternatively, a longitudinal research would study changes and developments over a longer time period (Saunders et al. 2012).

2.7 Data collection and analysis

2.7.1 Sources of data

This thesis draws on both secondary data and primary data. The primary data has been collected through 5 semi-structured interviews as well as one group interview with a total number of 8 interviewees representing companies and innovation networks. The following section will provide an overview of the method and structure of the literature review and empirical data collection, respectively.

2.7.2 Literature review

The literature review summarizes already existing literature and notions relating to CE, and will follow the delimitations given in section 1.4.

The literature review of this thesis was mainly divided into two phases. A preliminary literature review was conducted on CE based on our interest and assumptions (Saunders et al. 2012). This was focused on peer-reviewed articles as well as respective textbooks on the topics of CE, and helped shape the first draft of our problem formulation. This subsequently acted as the guideline for the final literature review that is part of the final thesis.

All data gathering of secondary data has been conducted in physical libraries and through online research. In order to carefully select the literature for this thesis, keywords were used as indicated by (Saunders et al. 2012) to find peer-reviewed articles and reports. Furthermore, several books about CE were used, as these served to provide a useful and comprehensive overview. The literature search process has been structured by adapting notions of (Saunders et al. 2012) and (Bryman 2012):

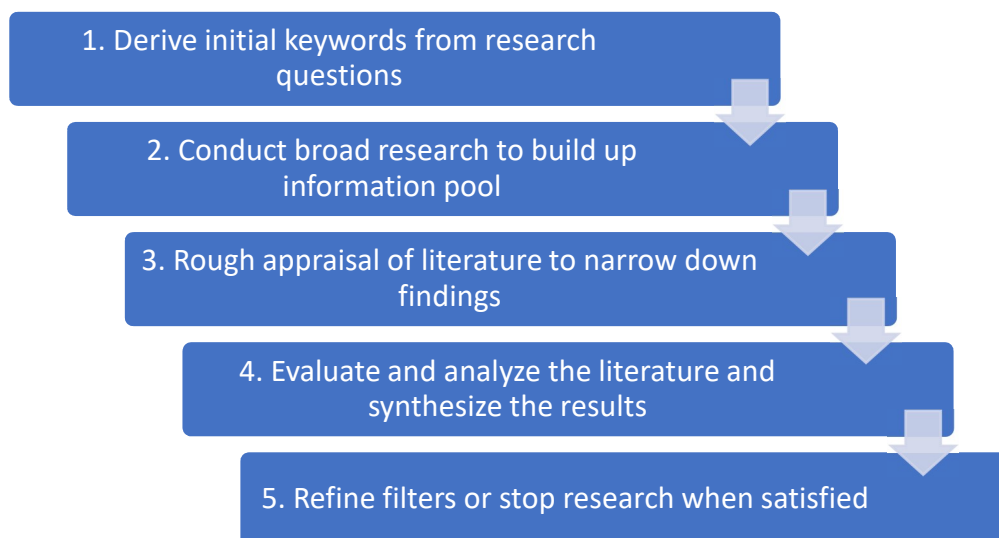


Figure 3 – Literature search process. Own production adapted from Saunders and Bryman

Although the main part of the literature review was an early activity, the literature has been continuously reviewed throughout the whole process whenever new questions and areas of interest have emerged. Thus, the literature review process is a continuous process that follows an upwards spiral as noted by (Saunders et al. 2012).

Albeit secondary data is easy accessible and vast, it also has several drawbacks. Main drawbacks are the fact that the data has usually been collected for different purposes, while possible biases of the researcher are unknown. Furthermore, the data can simply be outdated (Saunders et al. 2012)(Arbnor & Bjerke 2009). Thus, the secondary data has been supplemented by interviews in order to support, challenge and triangulate the data.

2.7.3 Empirical data collection through qualitative interviews

The primary data collection for this thesis has been based on qualitative methods in order to get a more in-depth understanding of the processes and promoters of CE in respective companies and networks. More specifically, the primary data has been collected through semi-structured interviews following the notions of (Kvale 2007), highlighting how the structure of a research interview closely relates to everyday conversations, albeit it still requires a specific approach and technique of questioning.

The semi-structured interviews are also non-standardized, and can as such vary from interview to interview (Saunders et al. 2012). This nature is highly relevant in this research, as it deals with different types of companies and networks that have different organizational contexts, which will ultimately raise different questions. The semi-structured interview also opens up for deeper exploration and explanation of the variables and their effect on CE performance. In this, the semi-structured interview often encourages one to go off tangents, as it allows greater insight into what the interviewees sees relevant and important (Bryman 2012).

2.7.3.1 Interviewees

The respective interviewees have been found by reviewing Danish-based companies and innovation networks that are seeking to promote CE.

The research follows the recommendations of (Kvale 2007) of having an amount of 15 ± 10 interviews, while still acknowledging that more interviews are not necessarily better. This study consists of 6 interviews, consisting of 2 network interviews and 4 company interviews (including one group interview) with a total of 8 interviewees. This number of interviews allowed us to get in-depth insight into the phenomenon from different perspectives, while still allowing time and resources for thorough preparation and analyzing of the interviews. The diversity of the interviewees and companies also serves

as a mean to triangulate the data, as this research seeks to minimize inadequacies and bias found in one-source data (Saunders et al. 2012). A profile of interviewees can be found in appendix 1.

2.7.3.2 Invitation and location

Each potential company or person received an invitational email, which provided initial information regarding the thesis, and an explanation to why the contacted company or individual was of particular interest. The email correspondences also invited the recipient to choose the date, time and setting of the interview. This follows the notions of (Kvale 2007) on the importance that an interview is conducted in a comfortable atmosphere where mutual trust can be established. To encourage participations, the interviewees were also informed that the interview would take around 1 hour, and that the meeting would not require any further resources. The duration of one hour was deemed and proven sufficient to cover all relevant questions.

Finally, the interviewees received the interview guide approximately one week in advance in order to provide the interviewees opportunity to prepare for the interview. Sending the interview guide beforehand not only improves the reliability and credibility of the interview, but also helps prevent situations where the interviewee would be caught off-guard (Saunders et al. 2012).

2.7.3.3 Interview guide and situation

The structure of the interview guide followed our research questions and theoretical foundation in order to ensure that only relevant and useful questions were asked. A separate interview guide was made for the network and company interviews respectively, which saw minor modifications to fit the circumstances of each interview. The interview guides and their linkages to the research questions can be found in appendix 2 and 3.

It was made sure to frame the interviews by including a brief and debrief as per (Kvale 2007). In order to set the scene, every interviewee was presented with a short introduction to the thesis, its objectives, the methodology and the relevance of the specific interviewee's knowledge. The interviewee was also asked permission for recording, and informed about their rights to confidentiality and opportunity to refrain from answering. The debriefing was kept fairly simple to ensure that the interviewee did not have any questions or unexpressed thoughts. The interviewee was thanked for his/hers participation, and offered to receive the final product for future reference.

The questions presented were kept simple, brief and relatively open-ended as a mean to prevent biased questions. Probing follow-up questions were asked in order to delve further into specific areas and clarify statements by the interviewee. To ensure the interviewee felt comfortable during the interview, one main interviewer was chosen. All the interviews were conducted in Danish, as using the mother

tongue of interviewees and interviewers would help prevent misunderstandings, while also enabling a more informal interview situation (Kvale 2007).

In addition, the interview at Tryg The Camp was conducted as a group interview with three participants: Nynne Christiansen, Steen Kjærsgaard and Michael Juhler-Nøttrup, and as such had different dynamics than the other interviews. This also demand more from the interviewer, who is to ensure that the interview is kept on track and that all participants will have the chance to contribute, while also allowing them to range more freely in discussion to maybe reveal unexpected data with important insights (Saunders et al. 2012). This was seen in how the participants supplemented each other with their own view on the different aspects. Despite it did not seem to occur, it should be noted that the interview type could potentially have led to interviewees refraining from commenting negatively on processes related to the other participants. Ideally, the interview would have been conducted as individual single-interviewee interviews; however, this was not possible due to the availability of the interviewees.

The interviews have all been recorded electronically, and can be found on the USB disk accompanying the thesis. However, it should be noted that technical difficulties during the group interview with Tryg resulted in the recording stopping after 27:21. The remainder of the interview was subsequently summarized through notes made briefly after the interview (Appendix 4). At our visits to ISS Corporate Garage and The Camp, we were also provided a brief tour to get an understanding of the facilities, which is shortly elaborated in appendix 5 & 6.

2.7.3.4 Interpretation of data

If qualitative data is to produce meaningful and valuable results, it is necessary that the data is being analyzed in a methodical manner in order to extract themes and concepts to enhance the understanding of the given data (Attride-Stirling 2001)(Bauer & Gesskall 2000). As such, the way of analysis was considered before the creation of the interview guides in order to secure the collected data would be useful in the analysis (Kvale 2007).

The qualitative data analysis was conducted through coding the data for cross analysis (Saunders et al. 2012). The preliminary analysis consisted of noting quotes and patterns for each interview that were particular interesting to the research. With this in mind, a more thorough breakdown of the findings was conducted and the interviews were analyzed and rearranged in categories derived from theory and the interview data in order to look for repeated patterns (an example of the thematic network analysis can be found in appendix 7). After the finalization of all the interviews, a cross-case synthesis was conducted, where the findings from the different interviews and secondary data were triangulated in order to

provide a more comprehensive picture. In general, the case studies followed the replication logic to allow for comparison between of findings.

2.8 Reliability and validity

The concept of reliability is rarely used in the systems approach, as the nature and precision of the measurement is less important than the use of the given measurement (Arbnor & Bjerke 2009). However, to guarantee the trustworthiness of sources and data collected, research reliability in both data collection and analytical procedures will be pursued to ensure that the findings are consistent and available, should they be replicated by a different researcher. As the research utilizes secondary data, it is dependent on other researchers' findings, thus researcher bias is a prevalent threat. This has led to a triangulation of different sources of data, in which multiple findings will complement and support one another (Guion 2002; Saunders et al. 2012). Following, is an outline of how this thesis deals with content-, criterion-related- and construct validity.

Content validity refers to the extent to which the measurements provide adequate coverage of the investigation questions. The approach of combining the collection of secondary data with generation of primary data in this thesis has been explicitly chosen to adequately cover all facets involved in answering the research questions. This will provide not only a broad understanding of the theoretical field of CE, but also deep knowledge of the real-time situation in multiple cases, and use these findings to move towards broader conclusions.

Criterion-related validity is concerned with the ability of the measures to make adequate predictions (Saunders et al. 2012). A case study is deemed one of the hardest, but most precise approaches to cover contemporary events in a real-time context. By explaining the multiple and intertwined structures of a company, the case studies should be able to provide precise information on the various promoters of CE in the case companies, and comparisons between the cases as well as academic literature. The interviews should in similar fashion, bring precise findings of the perceived nature of CE promoters in respective case situations, leading to unique explanations of processes in the organization.

Construct validity is the degree to which the measurements actually measures the presence of those constructs that was intended for them to measure (Saunders et al. 2012). The data collection was arranged as to provide solid understanding of the various aspects of CE covered in academic literature. Furthermore, it provided foundation for the structuring of the in-depth research of the case companies working actively with CE.

2.9 Summary of methodology

This chapter has outlined the world-view of the researchers as well as the research methodology and approach deemed most useful for answering the research questions. The notions from the systems view will be integrated throughout the whole research in terms of data collection and analysis. Here we see the organization as a system, where different components and sub-systems such as innovation units and networks are all affecting the organizations entrepreneurial abilities.

The cross-sectional research is built on 6 interviews with a total of 8 industry professionals all working in relation to CE. The collected data will be applied in 4 case studies, which will firstly be threatred independently, followed by a cross-case analysis based on the theoretical grounds introduced in the following chapter. This will be supported by the findings from the network analysis. An overview of the research methodology has also been summarized in below figure.

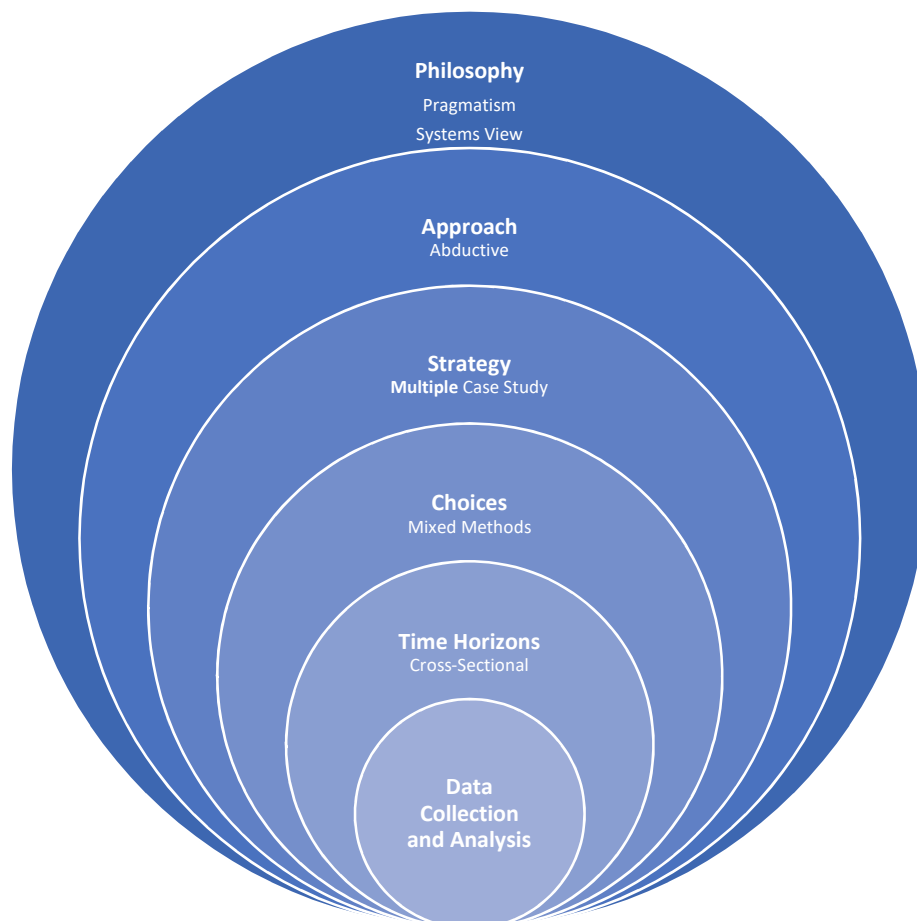


Figure 4 Research Onion. Own production based on Saunders 2012

3 Literature review

The following section will provide a review of the theoretical concepts relevant for answering the research questions. First, it will bring the historical background of the term entrepreneurship, and in this introduce two of its most influential writers, namely Joseph Alois Schumpeter and Israel Kirzner. This will be followed by an introduction of different notions and definitions of corporate entrepreneurship and its related concepts such as innovation. Following will be an outline of the most important internal and external factors that promote CE in companies. Finally, a section will bring forward a discussion of different tools available to measure CE.

3.1 Historical background of entrepreneurship:

3.1.1 Joseph Alois Schumpeter

While entrepreneurship was introduced in 1755 by Cantillon (Elkjær 1992), it was brought to fame in the beginning of the 20th century by economist Joseph Alois Schumpeter, who discussed the term in his book *The Theory of Economic Development* (Becker et al. 2012, p.918). Here, Schumpeter presents the idea of entrepreneurship as the process by which the economy goes forward, driven by the economic agent, the entrepreneur.

The entrepreneur is characterized as an energetic and enterprising leader, who breaks with the 'circular flow', and seeks to push the economy in new directions and open up for new and different opportunities (Brouwer 2002). The term circular flow relates to the static economy (an economy in the state of equilibrium), where economic processes are repeated time after time without any change. Here, neither prices nor quantities vary, the interest rate equals zero while net investments are absent in this flow (Brouwer 2002).

In order to create economic opportunities, entrepreneurs will break with the circular flow by establishing new firms and introducing new combinations of resources or information, thereby challenging the position of the incumbents. This occurs as established businesses tends to postpone innovation until their old assets have become obsolete. As new firms are not impeded by former investments, they will speed up economic progress and temporarily undermine the position of incumbents by introducing new innovations (Schumpeter 1934).

A critical point to the notion of the entrepreneur is that he is not necessarily an inventor, as innovations “*need by no means be founded upon a discovery scientifically new*”, and can simply be “*the carrying out of new combinations*” (Schumpeter 1934, pp.66, 68). In this, Schumpeter made a clear distinction between 5 types of innovations and their effects on the economy: (1) a new source of raw material; (2)

a new method of production; (3) a new product; (4) a new market; and (5) a new organization (Schumpeter 1934). He noted that some innovation were incremental, when “*new combinations may in time grow out of the old but continuous adjustment in small steps*” while others were radical innovations, when “*new combinations appear discontinuously*” (Schumpeter 1934, pp.65–66). Schumpeter observed that incremental innovations can generate small-scale economic growth, yet the power to create actual economic development resides solely in radical innovations (De Jong & Marsili 2011). These radical innovations, realized only by the entrepreneur with the motivation to overcome the challenges of the economy, will result in losses to those incumbents unable to adapt to the new economic situation. These losses will change the balance in the market between incumbents and newcomers, creating room for new at the cost of the old; a situation Schumpeter named *creative destruction* (Schumpeter 1942).

Schumpeter later came to revise his earlier work on entrepreneurship, where he reduced the role of the entrepreneur to mainly being involved in business. Schumpeter also came to believe that innovation could be handed to experts, without affecting performance, and he foresaw that innovation would become a matter of routine, executed by employees in R&D laboratories (Brouwer 2002).

3.1.2 Israel Kirzner

This exogenous entrepreneurial force of change presented by Schumpeter was however later challenged by the economist Israel Kirzner, who perceives the central feature of entrepreneurship as capabilities to notice pure price differentials in the economy and moving towards their elimination. As such entrepreneurship is not about the level of creativity an entrepreneur possessed, but about his alertness to already existing (widely unnoticed) changes in the economy (Kirzner 1973). As such, the entrepreneur is not seeking to disturb any existing state or potential state of economic equilibrium, but rather seen as driving the process towards equilibrium.

Opportunities are generated from inside the economic system, as a result of misallocation of resources. This can create a disequilibrium, and in turn opportunities for economic profit for the entrepreneur-arbitrager (who buys at lower prices and sell at higher)(De Jong & Marsili 2011). When action takes places, and market prices adjust accordingly, the imbalances in the economic system will disappear, and the system will move back towards a state of equilibrium (Kirzner 1973). This relates to the entrepreneur both in terms of direct changes in market movements (by introduction of innovations) and in the absence of dramatic changes in product specifications or in production methods. By being engaged in arbitrage, they act entrepreneurially even without being qualified as a direct creator of innovations.

For Kirzner, arbitrage is one of the key characteristics of entrepreneurship. While more radical innovation can be present or introduced, it is not a necessary element of how the entrepreneurial process develops the economy. Innovations are often of incremental nature, as the opportunities provided by radical innovations are dependent on the creativity and drive of the disruptive entrepreneur (the Schumpeterian entrepreneur). Minor entrepreneurial actions are more prone to provide the entrepreneur success, as they are independent of the nature of innovation, and can even be limited to replicating or adapting existing solutions across different contexts. As such, they rely less on creation of new information, and more on exploiting existing information (Kirzner 1973).

From this we can draw a picture from some of the earlier developments in regards to the entrepreneurs and their proclaimed effect on the economy. The Schumpeterian entrepreneur is a creator and introducer of something new, disturbing and pushing an economy out of equilibrium. Conversely, Kirzner sees the entrepreneur as an alert actor, who takes advantage of the imbalances between price, supply, and demand, until market forces has put the economy back into a state of almost equilibrium (Kirzner 2008). It can however be argued, that the conflict between the Schumpeterian destabilizer's and the Kirznerian stabilizer's approach to entrepreneurship can be solved, by assuming that entrepreneurs are both acting "Schumpeterian" by discovering and thus creating new opportunities that pushes the economic system out of equilibrium, and "Kirznerian" by exploiting the demand gaps in the market, thus pushing the economic system towards equilibrium (Duus 1997).

The notions by Schumpeter and Kirzner have since been adapted by many academics and has laid the foundation for the literature on entrepreneurship and CE. This includes the academic notions upon which this thesis is build, which will be introduced in the following section.

3.1.3 The entrepreneur within organizations

An interesting development of the notion of entrepreneurship was the transition from often relating it an individual to also relating it to the function of the entrepreneur(s) and entrepreneurship within an organization (Elkjær 1992). Penrose tied the entrepreneurs to governing "*the 'productive opportunity', which comprises all of the productive possibilities that its' entrepreneurs' see and take advantage of*" (Penrose 1959, p.29). These where further specified to be covering "*the operations of a firm which relate to the introduction and acceptance on behalf of the firm of new ideas, particularly with respect to products, location, and significant changes in technology, to the acquisition of new managerial personnel, to fundamental changes in the administrative organization of the firm.*" (Penrose 1959, p.30). The entrepreneurial capabilities of a company thereby becomes a combination of the entrepreneurs (and their individual qualities) and the previous investments and experience of the organization.

As such, an entrepreneurial mindset can be used inside or outside an organization, as well as in business or nonbusiness activities as a way to bring forward creative ideas in pursuit of growth (Kuratko 2009b). The point is that entrepreneurs and entrepreneurship are defined by actions, not the size of organization and context that it exist within (Burns 2013). Thus, depending on point of view, an entrepreneur can be a) the founder of an organization, b) the manager of a self-owned business, or c) the innovative leader of an organization (Mintzberg et al. 1998) or d) an employee with entrepreneurial attitude (Pinchot 1985).

The tendencies of focusing on entrepreneurship and entrepreneurs as part of organizations has subsequently given rise to the notion of corporate entrepreneurship, which will be further discussed in the following section.

3.2 Corporate entrepreneurship

The need for CE has arisen due to a variety of pressing problems, including the required changes and innovations needed to sustain growth (Kuratko et al. 1990). Several different concepts, constructs and definitions such as corporate entrepreneurship, corporate venturing, intrapreneurship and organizational entrepreneurship have all emerged to describe these growth-enhancing activities with somehow unspecified differences (Sharma & Chrisman 1999)(Morris et al. 2011). The idea of CE was first coined by (Pinchot 1985), who introduced the term intrapreneurs, as entrepreneurs working inside large organizations that could bring great ideas and innovation to the company if supported. Subsequently, the literature has discussed how CE can be achieved through various different notions, such as internal innovation, joint ventures or acquisitions; strategic renewal; product and process innovations, as wells as diversification (Guth & Ginsberg 1990; Kuratko et al. 1990; Sharma & Chrisman 1999; Zahra 1991).

Although no widely accepted definition of CE exists (Ginsberg et al. 1990; Kuratko 2009a; Zahra 2005; Sharma & Chrisman 1999), “*corporate entrepreneurship is a term used to describe entrepreneurial behavior inside established mid-sized and large organization*”, and as such it is not the fundamentals that change from traditional entrepreneurship, merely the context (Morris et al. 2011). CE does not only include traditional product and service innovations, but also changes in processes, value chains and business models (Kuratko 2009a).

One of the most accepted conceptualizations of CE, comes from (Ginsberg et al. 1990) who attempted to integrate aspects of CE under two categories: 1) “*The birth of new business within existing organizations (i.e. internal innovation or venturing)*”, and 2) “*the transformation of organizations through [strategic] renewal of the key ideas on which they are built*” (Ginsberg et al. 1990, p.1). Contrary to many other authors, (Ginsberg et al. 1990) also accepted a broader view of innovation, including more incremental innovation. They also distinguished between internal and external

venturing, as organizational motivations and the results of these vary significantly. In contrast, (Covin & Miles 1999) identifies three types of CE, namely 1) an established organization that enters a new business; 2) an individual or individuals who introduces new product ideas within an organization; 3) an entrepreneurial philosophy that infuses an entire organizations stance and processes.

Differently, (Morris et al. 2011) divides the domain of CE into two aspects, namely corporate venturing and strategic entrepreneurship. Corporate venturing focuses on adding new businesses through equity investments. On the contrary, strategic entrepreneurship relates to how innovations are adopted in the firm's pursuit of competitive advantage in terms of strategic renewal, sustained regeneration, domain redefinition, organizational rejuvenation as well as business model reconstruction. As such, strategic entrepreneurship relates to the domain of strategic renewal as put forward by (Ginsberg et al. 1990).

A company supportive of CE activities builds a context that enables employees and the organization to recognize opportunities to initiative businesses, while tolerating the accompanying risks in the pursuit of growth and sustainable competitive advantage (Zahra 2005). While many companies seem to experience difficulties in integrating an entrepreneurial spirit, some have successfully recreated themselves, challenged and entered new markets and created untraditional alliances (Christensen 2004). In this, CE is an important factor for creating, combining and transforming knowledge in organizations. Besides organizational and process-oriented innovation set-ups, CE initiatives can emerge from the 'good ideas' that emerges through knowledge networks or amongst creative employees. This links to the notion of intrapreneurship, which is often used interchangeable as a synonym for CE (Christensen 2004)(Erasmus & Scheepers 2005). However, some argue that intrapreneurship focuses more on individuals and informal processes, and rest on the premise that every individual has the capacity for entrepreneurial behavior without the need of setting up separate units or processes (Kuratko et al. 1990). Thus, intrapreneurship is by some regarded as a bottom-up process and democratization of innovation, where it is the individual employees and managers that initiate activities to explore business opportunities. These initiatives can either be captured randomly, or through dedicated fora's such as competitions, innovation events, technological platforms etc. However, a major challenge is to ensure proper combination of resources, and subsequently grasp the ideas and nourish them into a profitable business (Bager et al. 2006)

In this, the entrepreneurial behavior can lead to new combinations of resources in Schumpeter's terms – transform the firm into something significantly different, something new (Ginsberg et al. 1990). As such, CE is also related to the resource based view, as it can be seen as a way of accruing, combining and leveraging resources for competitive advantages, through developing and using products and

processes to both rejuvenate and redefine the firm and its environments (Dess et al. 2003; Zahra 2005). Thus, CE is also a tool for companies to challenge the so-called ‘core rigidities’ that can otherwise become so dominant, that new competencies and capabilities will be neglected or underestimated (Tidd & Bessant 2014).

Summing up the literature on CE, common pattern emerges. A definition that encapsulates most of the literature is presented by (Sharma & Chrisman 1999), who defines CE as *“the process whereby an individual or a group of individuals, in association with an existing organization, create a new organization, or instigate renewal or innovation within that organization”*. Generally, the literature focuses on the birth of new businesses with existing businesses; the transformation or rebirth of an organization through strategic renewal and finally innovation and creation within an existing organization. As such, (Ginsberg et al. 1990) and (Sharma & Chrisman 1999) encompasses most of the literature by defining CE as an activity comprising (internal and external) corporate venturing, innovation and strategic renewal.

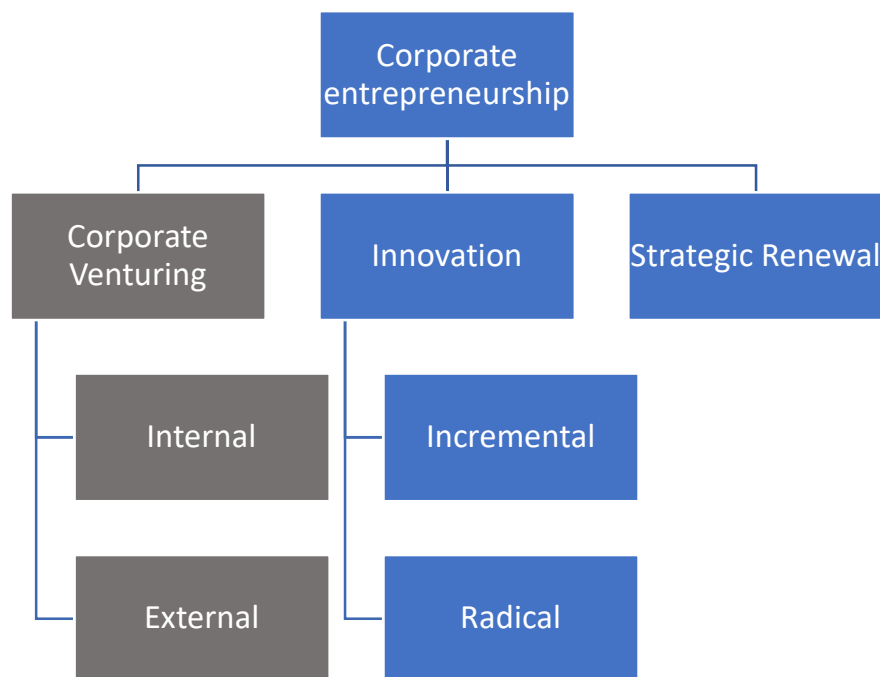


Figure 5 Aspects of CE. Own production based on Sharma & Chrisman, 1999

Here **corporate venturing** refers to CE efforts that lead to creation of new business organizations within the corporation. It is important to acknowledge that this involves a distinction between external corporate venturing (such as joint ventures, spin-offs and venture capital initiatives) and internal corporate venture that involves creation of entities within the existing domain (Tidd & Bessant 2014).

Strategic renewal refers to CE efforts that result in significant changes to an organization, business or corporate level strategy or structure that alter pre-existing relationships within the organization and with the external environment. Renewal activities reside inside the existing organization and is often involving some sort of innovation (Sharma & Chrisman 1999).

Both strategic renewal and corporate venturing suggest change in strategy or structure of the existing organization that might involve **innovation**, with the main sole difference being how venturing involves the creation of new businesses, whereas strategic renewal lead to changes within the existing businesses (Sharma & Chrisman 1999).

Although the above-mentioned concepts have often been used as individual components, they are mostly used as “single-meta constructs” because they are complementary and mutually supportive. For example, strategic renewal might lead to more beneficial innovation- or venturing activities. As such, these components of CE should be threaded together, so one does not ignore their potential complementarity (Sakhdari 2016).

3.2.1 Innovation

As aforementioned, innovation is one of three dimension of CE, and perhaps the most important as it can be seen to be integral in all other aspects. As such, it is especially important to encourage innovation as a specific tool for corporate entrepreneurs (Kuratko 2009a).

Innovation is a term that has gained increased prominence in academia and the business world as companies strive to stay competitive in the changing business environment (Matthews & Brueggemann 2015). However, some believe that the term innovation has become nothing but a shallow “buzzword” used by academics, politicians and companies to describe a key to a better future. It can also be seen as a way to “con investors”, as every small change often is defined as innovation (Kwoh 2012)(O’Bryan 2013; Gartner 1990). The term innovation varies greatly depending on authors and academic area, and as such, no universally accepted theory of innovation has emerged (Matthews & Brueggemann 2015).

The term originally derives from the Latin word *innovates* dating back to the 15th century, which can be translated to renewal and change (Kwoh 2012). (Freeman 1982) discussed innovation within industries, and saw industrial innovation as technical, design, manufacturing, management and commercial activities involved in marketing, or the first commercial use of a new (or improved) product, process or equipment. Later, (Drucker 1985, p.19) relates it specifically to entrepreneurs, as “*innovation is the specific tool of entrepreneurs, the means by which they exploit change as an opportunity for a different business or service*”, while (Tidd & Bessant 2014, pp.3, 5) defines innovation as “*the process of creating value from ideas*”, with value relating to “*creating a (novel) product or service which others*

find useful and which they value". (Matthews & Brueggemann 2015, p.57) defines *"innovation as people applying a purposeful process to transform ideas and opportunities that create new or added value into results that provide for economic growth"*. A contemporary definition widely used on a socioeconomic level is presented by the European Commission and OECD as *"the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organizational method in business practices, workplace organization or external relations"* (OECD 2005, p.46). This definition proposes that innovation can take many different forms.

In this it is important to make a clear distinction between innovation and invention, with the later simply relating to the creation of something novel, which as such does not include the notion of value or commercialization. If an invention is technical feasible, business viable and desired by consumers, you have the possibility to turn it into an innovation (Matthews & Brueggemann 2015). The bridge between invention and successful innovation often consists in the entrepreneurial capabilities of the organization or the individual, as entrepreneurship constitutes the financial and managerial force within the framework innovation will take place (Hougaard 2005). Generally, for all these definitions, is how they describe innovation as something that is either new to the firm, new to the market or new to the world. Thus, although an innovation has been introduced in another company, it can still be defined as an innovation to the specific firm in which it is new (OECD 2005)

Interesting, most definitions define innovation as something that creates value, although this value is only vaguely defined. However more specifically this value can be defined as *"surplus, economic growth and increased employment"* or in a broad sense the production of novelties that add economic value (Duus 2004).

3.2.1.1 Innovation Typologies

Despite the different definitions, innovation is often accepted to come in many different kinds and degrees. Most commonly, innovation is divided into two categories, namely incremental and radical innovation. Whereas Incremental innovation relates to doing what we do better, radical innovation includes something groundbreaking, which is often entirely new to the world (Tidd & Bessant 2014; Matthews & Brueggemann 2015).

Although not explicitly stated, one can draw parallels to Schumpeter and their notions of innovation. Kirzner's notions of innovation is of more incremental character, while Schumpeter's creative destruction relates to innovations of more radical character (De Jong & Marsili 2011) (Cromer et al. 2011). While radical innovations are most visible, incremental innovations are often needed to retain competitiveness over a continuous period. Here it is also important to take into account the needed time

and risks for testing and implementing more radical innovations (Tidd & Bessant 2014; Matthews & Brueggemann 2015). (Christensen 2006) adds the notion of disruptive innovation as a complement to incremental and radical innovation, which he defines as two forms of sustaining innovation. The innovators dilemma discusses how a disruptive innovation transform a product or service that was earlier expensive and complicated, into a simple, convenient, affordable and more accessible product or service.

All of these degrees of innovations can then be applied to different types of innovation, such as product, services, systems, processes, business and managerial innovation (Matthews & Brueggemann 2015). Generally, companies are encouraged to pursue different types and degrees of innovation simultaneously in order to sustain competitiveness in the long-term (Benner & Tushman 2003; Tidd & Bessant 2014), which links to the notion of ambidexterity that will be discussed in section 3.3.1.2.4.1.

3.2.1.2 The innovation Process

In relation to CE and innovation it is important to acknowledge the process leading to a given innovation or entrepreneurial initiative. A popular model of the innovation process, is presented by (Tidd & Bessant 2014). Due to the nature of the innovation units as primary units of analysis, the implementation and capturing value phase is less relevant, and has not discussed to the same level.

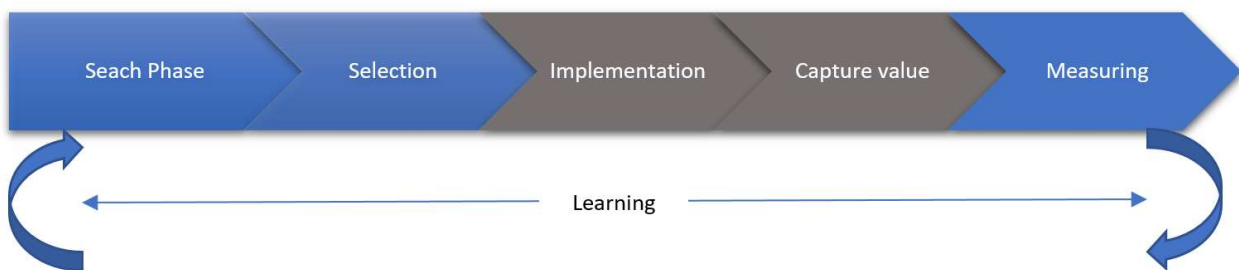


Figure 6 Innovation Process, based on Tidd & Bessant 2014

The first phase is the search phase, where a large number of ideas and opportunities are generated. These can originate from different sources, and this is where CE becomes important for companies as a main way to improve idea generating by stimulating and nurturing the entrepreneurial talent inside the organization. For example, by providing support for opportunity recognition and idea generation, both as an organizational function as well as of more informal character. This all relates to the promoters of CE that will be discussed in section 3.3. In this phase, it is also important to have a clear signal and agreement of the type and degree of innovations, so the ideas generated fit the strategy of the company. Ideally, there should be support for both incremental and radical ideas (Tidd & Bessant 2014).

A well-developed idea generation phase will result many interesting ideas that will have to fight over the resources available. This leads to the selection phase, where the generated ideas will be judged and selected for further investment. The selection techniques can vary depending on company and industry, and can differ between qualitative approaches, such as gut feeling, strategic fit or checklists, or more concrete financial measures, or combinations of both. Here, there can often arise issues regarding more radical and risky projects, as relevant information and potential is more difficult to attain in comparison to ideas that are more incremental in nature (Tidd & Bessant 2014).

The final stages of the ‘original’ innovation process is the implementation and capturing phases that focuses on setting up processes for making the innovation happen and building a profitable business model around this. More specifically, an organization can for example choose to go forward with the implementation through more traditional internal product development, through co-creation with users, innovation networks, corporate venturing etc. (Tidd & Bessant 2014). The measuring stage, which is not originally part of the model will be discussed further in section 3.4.

Finally, in regard to the innovation process it should be noted that it is a continuous and iterative process, where an important aspect is learning from past successes and failures. As such, an organization need not only capture value from the innovation, but also capture the organizational learning from the innovation processes for further improvements (Tidd & Bessant 2014).

3.2.1.3 Innovation Units

As a specific approach to promoting innovation and a more entrepreneurial culture, an increasing amount of companies are setting up innovation units, albeit in different forms and with somewhat different terminologies (Solis et al. 2015)(Owyang 2016). Most prominent to this thesis are the following notions (Solis et al. 2015; Owyang 2016):

- **Inhouse or external innovation teams/units** like skunk works or corporate garages, where a larger teams are dedicated to managing and activating innovation projects. These can often be created as an autonomous entrepreneurial unit with full executive support that is solely focused on growth through innovation (Anthony 2012). Generally, these units work to generate ideas with internal and external stakeholders, while providing fast-track tools to quickly determine the probability of these. Furthermore, the units should provide training and tools for employees to develop their entrepreneurial mindset, and ability to share and combine ideas (Vaupel 2016).
- **Innovation outposts**, where a small team is placed within a network of companies, in order to sense market opportunities and connect with start-ups. The idea is for larger organizations to tap into entrepreneurial communities without committing significant investment.

- **Community anchors**, where large companies invite start-ups to embed at their physical locations in order to bring a more entrepreneurial culture into the company and search for integration opportunities. In these, companies often provide opportunities for start-ups to test their products, while the start-ups are provided access to certain company resources.
- **Intrapreneur programs**, where internal employees are given a platform to innovate. These programs invest in employees' ideas and passion, and can be of both physical or virtual nature.

The main benefits of these kinds of innovation units are apparent, at least if executed correctly. According to a survey by (Solis et al. 2015) 90% of companies believe that they are too slow to market and over budget in regards to innovation, which is something many believe can be helped by establishing some kind of innovation unit or CE initiatives. As such, innovation units will often launch with heavy rhetoric from top management about transformation the business and introduce radical innovation, albeit many innovation units end up producing only minor tweaks, as they are often set up with structures and resources to produce incremental innovations for today's business model. As said by an industry professional, *"About 80 to 90 percent of innovation centers fail, and end up being a massive waste of resources"* (Solis et al. 2015, p.10).

In this, it is also important that the innovation units have a clear focus on creation of new products and services that deliver value to customers while being supported by a sustainable business model. If the last is not the case, calling it an innovation lab is a "misnomer", as it would just then be a creative or invention space of some sorts (Viki 2017). Nonetheless, the units can provide a fresh source of ideas and enable more risk-taking, while generally accelerating innovation. Furthermore, they can also have more intangible benefits, such as driving employee engagement and a more entrepreneurial culture, which ultimately can help attract more talent. However, to what extent the innovation units can provide the above, all depends on type, location and the level of investment behind the unit (Solis et al. 2015).

Before setting up an innovation unit, there are several points that need to be considered. Most notably are the questions regarding level of autonomy and governance as well as location and funding, which links to the promoters of CE in section 3.3. For example, setting up a external autonomous innovation unit versus setting up an internal innovation unit enables sharper focus, greater autonomy and a higher chance for network collaboration, while on the other hand making coordination with the core organization more difficult. The location of the innovation unit also relates to the ease or difficulty of coordination and direct spillover to the core organization, while it on the other hand provides a new and often more creative environment if placed away from headquarters. Moreover, it is important to clarify

how the funding of the innovation unit is structured, and to what extent the unit will continue to receive support in lack of short-term results (Solis et al. 2015).

Internally based innovation units can often fail as they will most likely be integrated into the same 'rigid' processes as the rest of the organization, leading it to keep working on the same things as the organization has always worked on. At the same time, externally based innovation units might be able to work on whatever they want, yet it can ultimately be too distant from the core organization, making integration of innovations and combining resources and capabilities difficult. In this, it is important to build a bridge between the external innovation units and the core organization to ensure transfer of ideas and knowledge. As such, it is clear that this is somewhat paradoxical, as both internal and external innovation units have clear pros and cons (Viki 2017).

Finally, the innovation units must have a clear mandate of what types of innovations to purpose, while it should also be agreed upon that some potential innovation projects might cannibalize current businesses to some extent. Also, the typical requirement of a financial forecast for an innovation projects only works for minor incremental innovation, while radical innovations are more difficult to predict (Kaplan 2016)(Solis et al. 2015).

Summarizing, the key tasks for these different kinds of units is usually to:



Figure 7 Key tasks for innovation units. Own Production

3.3 Antecedents of corporate entrepreneurship

The most widely researched area in regards to CE is the factors, commonly referred to as antecedents, that promotes CE within a given organization (Zahra 2005). Generally, three overall groups of antecedents have been considered: namely environmental (Zahra 1991; Antoncic & Hisrich 2004; Sakhdari 2016; Erasmus & Scheepers 2005); strategic (Zahra 1991) and organizational (Antoncic & Hisrich 2004; Sakhdari 2016). Since the proposal of these, many different CE antecedents have been proposed and analyzed in the literature. As a result of the growing complexity and to identify missing links in the literature, (Sakhdari 2016) reviewed and reorganized the many different antecedents into four overarching groups, namely "Top Management Team", "Firm", "Environment", and "Network/Dyad".

These groups lays the foundation for the following literature review on CE antecedents. Guided by the problem formulation and in order to ease incorporation of relevant literature, these groups will be renamed: Top Management, Organization, Environment and Networks. Here, the main difference from (Sakhdari 2016) review is how the group of antecedents related to top management will have less focus on the individual characteristics of the top management team, as otherwise discussed by (Sakhdari 2016). This relates to the nature of the research, and this group will instead be renamed Top Management, and have more focus on the effect that top management have on CE.

3.3.1 Internal antecedents

When examining antecedents for CE, the effect of the internal factors cannot be undermined. The resources, capabilities, knowledge, and personal etc. all play an undeniable role in either supporting or reducing a company's involvement in, and subsequent success of, CE. As these different properties are numerous, they can be separated into two sole yet intertwined categories, namely "Top Management" and "Organization" antecedents (Sakhdari 2016). However, it can be argued, that while the top management and organization antecedents are intertwined, it can still be valuable to distinguish between the two in order to deepen the understanding of the relationship.

3.3.1.1 Top management

A focal point in the literature on CE antecedents focuses on the top management's ability to create a supportive environment for CE (Kuratko et al. 2014; Villiers-scheepers 2012). (Kuratko et al. 2014) defines top management support as the extent top managers support, facilitate, and promote entrepreneurial behavior, which have been found to have a direct positive relationship with an organization's CE outcomes. This includes the championing of innovative ideas and providing the resources employees require to take entrepreneurial actions (Kuratko et al. 2014).

3.3.1.1.1 Trust and support for autonomy

This also includes the top management's ability to provide autonomy to make workers feel freedom and decision-making authority in projects, while feeling it is accepted to fail in risky projects (Kuratko et al. 2014). (Sathe 1985) argues that a fundamental dilemma of an organization is seeking to enhance CE while simultaneously maintaining corporate control. This can be solved if reporting systems are balanced with a strong entrepreneurial culture based on both mutual trust and open communication. This is supported by (Matthews & Brueggemann 2015), who argues that the empowerment of workers, by adopting "managed freedom", can increase creativity for workers, leading to improved CE performance. Conversely, excessive formal controlling procedures will constrain entrepreneurial activities and the pursuit of CE (MacMillan et al. 1986) because it may frustrate creative employees having to follow too many procedures in order to receive support for their ideas (Zahra 1991). Furthermore, (Chung & Gibbons 1997) argue that high levels of trust among organizational members have a positive influence on innovation through information exchange, while trust flourishes when information channels are open and strong norms of information sharing are prevalent (Adonisi 2003).

Moreover, (Behrens & Patzelt 2016) found past project failure experience, the firm's growth rate, and hierarchical level as an impacting factor for top managements decisions on terminating corporate entrepreneurial initiatives or supporting autonomous initiatives. As such, top management can be argued to be path dependent, in turn leading to their assessment of risk not truly reflecting the actual situation of the initiatives. This often leads to scenarios of falling into a familiarity trap, I.e. companies tend to favor and continue developing already known technology instead of pursuing new and unfamiliar technology, as these are perceived to contain greater risk and insecurity related to profit, thereby becoming less attractive (Ahuja & Lampert 2001; Penrose 1959; Elkjær 1992).

3.3.1.1.2 Reward systems

Another factor of top management support is the nature of rewarding in relation to CE. Research points to organizational systems that provide rewards and recognition for creative work and accomplishments as having a positive affect on CE (Amabile et al. 1996). As such, reward systems can have a significant impact on entrepreneurial activity in a company and be used as a tool to increase such activity, while also having a discouraging effect on innovative activity by rewarding performance not related to CE. Companies should therefore look to specific motivational factors for employees working with CE and innovations.

In relation to this, both extrinsic and intrinsic rewards are well-known tools for top management to motivate workers (Gammelgaard 2007; West & Sacramento 2006; Matthews & Brueggemann 2015).

An employee can be extrinsically motivated, i.e. obtain goals apart from the work itself, (increased salaries, bonuses and promotions) or intrinsically motivated, i.e. gain personal satisfaction from doing the job (acknowledgements and personal development)(Gammelgaard 2007). In line with Gammelgaard, (Matthews & Brueggemann 2015) finds extrinsic incentives useful as motivation for employees, if goals can be seen and are easy to reach, although they block creativity if the goal is farfetched. They find intrinsic motivation good for work life, which similarly spur motivation and creativity. (Burroughs et al. 2011) finds that combining extrinsic rewards with intrinsic rewards such as personal development will enhance the capabilities of workers.

However, the use of rewards for entrepreneurial behavior should be implemented with care. Experiments have shown complex interactions between risk (expected success, pay risk and employment risk), profit sharing and the extra effort employees are willing to exert when participating in new initiatives (Villiers-scheepers 2012). In this, (West & Sacramento 2006) finds that that what should be rewarded is not the success of an innovation, but the genuine attempts at innovation.

3.3.1.1.3 Time availability

Extra time to pursue innovations is also found to be a strong factor of promoting CE. Fostering new and innovative ideas require that employees are afforded time to incubate these ideas. The workload of people must be moderated to allow people to work with others on long-term problem solving. Managers should schedule extra time for individuals and groups to pursue innovations, and structure jobs in ways to support such efforts and achieve short- and long-term organizational goals (Kuratko et al. 2014; Tasavori 2011). Furthermore, (Lerner et al. 2007) found that when employees have defined time structures, which includes a certain amount of time to pursue personal projects, they generated more entrepreneurial proposals.

3.3.1.2 Organization

3.3.1.2.1 Organizational structure and strategy

(Zahra 1991) further identified two key antecedents of successful corporate entrepreneurship in a company, namely *Grand Strategy* and *Organization*. The *grand strategy* encompasses the overall strategy of the company and is seen as a prerequisite for CE in companies, as it relates organizational missions and goals, and subsequently guides the deployment of a company's resources. Thus, if a project is congruent with the strategy, the probability of its adoption increases, while a project not congruent with strategy will be deemed as risky and falling out of the company's area of expertise (and grand strategy) (Zahra 1991).

Organization contains those organizational factors from the specific context in which employees perceive opportunities, and falls into two broad categories: tangible and intangible variables. Tangible variables relate to the formal organizational structure, whereas the intangible includes dominant organizational values, primarily consisting of the persistent belief system of a company (Zahra 1991). Organizational structures can often be divided into two main poles, namely the organic and mechanistic structure. Organic structures are characterized by higher decentralization, flexibility and a lower degree of control and formality, whereas mechanistic structures on the other hand is characterized by more formalized and centralized structures that exhibit higher degree of hierarchies and control. Mechanistic structures are often seen as the most efficient way to operate in stable environments, as it allows full control and optimization of existing processes. Organic Structures on the other hand are more suitable for companies seeking to promote CE, as it allows organizations and employees to react more quickly to changes in the environment (Jones & George 2012). The informality of the organic structure also invites employees to create diverse interpersonal networks with other members of the inside and outside of the organization, which can benefit entrepreneurial behavior. However, some authors also argue that companies need to balance the two poles, as a pure organic structure might lead to chaos (Wit & Meyer 2014).

3.3.1.2.2 *Culture and values*

Organizational culture can be defined as the shared set of values, beliefs, attitudes, expectations, and assumptions, which determine the norms for appropriate behavior within an organization (Wheelen & Hunger 1988) in (Covin & Slevin 1991). As such, an organization's ability to develop and maintain an entrepreneurial posture becomes dependent upon the specific culture and values. (Zahra 1991) analyzed and distinguished between two unique aspects of company values relating to CE, namely *individual-centered* and *competitive-focused* values. The prior relates to the overall nature of motivating individuals' creativity and risk-taking by having an internal climate that integrates both employee and company goals in the daily routines. The latter represents a company's assumptions about the correct response to environmental moves, leading to industry monitoring, more experimentation with new ideas, and possibly initiating new businesses to capitalize on emerging opportunities (Zahra 1991). As such, both are seen as being supportive for CE if they are strongly present in a company, and thus it is important for companies to combine the top management support for an entrepreneurial culture with pre-existing values to foster a supportive environment for CE.

3.3.1.2.3 *Knowledge management*

An organizations capability to effectively pursue CE is also affected by its ability to manage knowledge. Knowledge management is concerned with identifying, translating, sharing and exploiting knowledge

within an organization. One key issue is the relationship between individual and organizational learning, and how individual learning can be translated into organizational learning, and ultimately into new processes, products and businesses (Tidd & Bessant 2014). Five steps of knowledge management can be identified, namely generating and acquiring new knowledge, identifying and codifying existing knowledge, storing and retrieving knowledge, sharing and distributing knowledge across the organization, and exploiting and embedding knowledge in processes, products and services (Tidd & Bessant 2014). This can also be argued to relate to the absorptive capabilities of a firm, which are defined as the capability of a firm to recognize the value of new, external information, assimilate it, and apply it (Zahra & George 2002), in (Tidd & Bessant 2014)". These are further discussed in section 3.3.2.1.2

3.3.1.2.4 Resources and capabilities

Resources and their availability constitute an important element in the facilitation of CE initiatives, which is also linked to the top management support. These are broadly defined to include human capital, financial capital, physical capital, and organizational capital (Barney 1991). Organizational capital is covered in regards to culture and values as well as knowledge management discussed above, while physical capital is deemed less relevant in our case.

It is important to examine company resources available for CE, as entrepreneurial initiatives are resource-consuming activities and constrained by available resources (Adonisi 2003; Covin & Slevin 1991). Several researchers have also found it important that employees perceive an availability of resources, which motivates them to engage in innovative initiatives (Tasavori 2011) (Kuratko et al. 2014)(Covin & Slevin 1991).

More specifically, the human capital in a firm is perceived as an important antecedent for CE. Human capital are seen as the source of "inspiration" and the ability to "change things" in an organization (Schumpeter 1934). The drive, skill, and ambition of employees are all individual traits that should be fostered and integrated into the organization through socialization, network development, and information sharing so that the individuals entrepreneurial spirit can be leveraged through being a part of the organization (Stevenson & Jarillo, 1990)(Starr & MacMillan 1990; Stevenson & Jarillo 1990). This is in particular the case of large companies, where large pools of employees are likely to be preoccupied in daily routines.

Moreover, financial resources can be a strong promoter or barrier to CE, as they often have a direct determinant of initiating a CE initiative. This can become a paradox, as struggling companies will often tend to be cost-saving and reduce R&D, thus not having the financial resources for initiating larger

initiative. This potentially makes it more difficult for them to find new growth opportunities (Financial Times 2009) (Cantner et al. 2010).

Financial resources often links to firm size, as some smaller companies might lack the funds to conduct larger CE initiatives (OECD 2005). Adding to this, (Nason et al. 2015) examines the relationship between the size of the firm and CE, and found organizational size an important factor that contributes to the heterogeneous nature of CE. The authors identified how size promote CE via slack resources and resource structuring processes, while hindering it via large bureaucratic structures and resource bundling. A study of (Burgelman & Sayles 1986) also indicate that the availability of slack resources persuades employees to take more risks.

3.3.1.2.4.1 *Dynamic Capabilities*

Two specific types of firm resources and capabilities that is often mentioned when looking at CE and innovation, is ambidextrous- and dynamic capabilities (Teece & Pisano 1994; Teece 2012; Cantarello et al. 2012; Corbett & Neck 2010). Ironically, consistency in entrepreneurship and innovations involves a paradox, as companies must deal with both continuous improvement and radical innovation simultaneously in order to enforce sustainable growth. Here the tension is where to put the main focus and whether to push employees towards exploration activities for novel ideas or exploitative activities to improve existing processes and products. Thus, companies must be able to operate in two paths: one short-term path adapting to the needs of current markets, and a long-term patch finding ways to create entirely new markets and products through radical leaps (Wit & Meyer 2014).

This has resulted in the term ambidextrous organization (Benner & Tushman 2003), which relates to companies that are able to simultaneously deploy both exploration and exploitation strategies throughout processes and actions (Cantarello et al. 2012). Many companies often have difficulties leading more radical innovation, as there is a tendency to only innovate incrementally. In order to solve this and promote a true entrepreneurial spirit, companies should firstly acknowledge the paradox, and then promote duality and scenario planning to introduce a collective future (Lassen & Sørensen 2006) (Wit & Meyer 2014).

Many also refer to ambidexterity as a kind of Dynamic Capability (Benner & Tushman 2003; O'Reilly III & Tushman 2007; Cantarello et al. 2012), which is a term coined by (Teece & Pisano 1994) as a notion of how companies can become better to “*to integrate, build, and reconfigure internal and external resources/competences to address, and possibly shape, rapidly changing business environments*” (Teece 2012, p.1). More specifically, Dynamic Capabilities also include the capabilities to improve, adapt and innovate and change old routines if necessary (Tidd & Bessant 2014). These can

be divided into three clusters of abilities: Identify new opportunities (sensing), mobilize resources to address an opportunity to capture value from it (seizing), and finally continuing renewal (transforming) (Teece 2012), all areas highly relevant to CE. There are mainly two ways of building dynamic capabilities: one is internal through utilization of the creativity and knowledge from employees, while the other is external through the search of external competencies that complement the company's existing capabilities (Teece 2012)(Teng 2007).

3.3.2 External antecedents

Some internal antecedents are directly related to external antecedents. According to (Kuratko et al. 2014) organizational boundaries are useful in promoting entrepreneurial activity due to their enhancement of information flow between the external environment and the organization, as well as between departments within the organization.

3.3.2.1 Network

The following section will firstly discuss the literature on networks directly relating to CE, while subsequently discussing the notions of innovation networks in more general terms.

There is a consensus amongst the literature that networks play an important role for growth and innovation (Christensen 2004). Nonetheless, most of the literature on networks in regards to CE lacks specific insights into how the external knowledge can be integrated in CE activities. Thus, network antecedents can be seen as somewhat in between the external and internal environment, as it includes both internal and external factors and actors (Sakhdari 2016; Thorgren et al. 2012).

Internal development of knowledge that can lead to CE is often accompanied by high expenses, timing issues and high levels of risk. As such, suggestions have arisen to look to other actors in the market such as suppliers, customers, research centers etc. as a complementary approach to obtain the resources needed to pursue CE (Sakhdari 2016). This approach has gained more prominence in research and in management, as entrepreneurial activities are shown as benefactors of companies' ability to effectively combine internal and external resources through networks and open innovation. Networks help fill the firms knowledge- and resource gaps relating to (Teng 2007; Chesbrough & Appleyard 2007), such as company's lack of specific knowledge, financial resources, managerial capacity, execution capabilities etc. (Teng 2007; Xie et al. 2013). Another purpose might also be flexibility, as entering a network provides flexibility for large organizations, as they can partner up with smaller companies to test a given innovation before integrating it into the large organization. Thus, the large organization gets benefits from the flexibility and adaptability of a small entrepreneurial firm while maintaining stability

(Christensen 2004). (Antoncic & Hisrich 2004) also finds a clear correlation between number of alliances and CE.

(Sakhdari 2016) introduces the “the ability, motivation and opportunity for knowledge sharing; as well as learning” as network antecedents for CE. Herein motivation refers to the willingness to act; opportunity represents an environmental situation favorable of enabling value-creating action; and ability refers to the talent, skill or proficiency in areas that can result in knowledge sharing and CE. This acknowledges that organizations are no longer single independent entities, but rather integrated into relational networks that are largely knowledge-based in nature (Turner & Pennington 2015), which relates to the notions of the systems view (Arbnor & Bjerke 2009). The greater the motivation, opportunity, and abilities within networks, the greater the knowledge sharing, which ultimately leads to CE (Turner & Pennington 2015).

3.3.2.1.1 Innovation networks

A specific way for companies to promote their network is by engaging in innovation networks that can improve their innovation, renewal and venturing efforts, all related to CE (Thorgren et al. 2012). According to (Danish Agency for Science 2011), companies in innovation networks have 366 percent higher probability to be innovative than similar companies. These networks can be beneficial as companies can share and combine information, skills, risks and resources to innovate and reduce costs, ultimately strengthening their competitiveness. Thus, these can act as formal and informal sources of knowledge, ideas and technology (Powell & Grodal 2006; Thorgren et al. 2012; OECD 2005). Networks also allow organizational units to stay relatively small, which ultimately can make them more entrepreneurial (Burns 2013).

Literature suggests that complementarity (different capabilities) and high compatibility (similar culture, management styles etc.) can help to explain why firms are generally motivated to engage in these networks. In this, it is important to consider the given partner fit in these networks, as this is correlated with value-adding synergy opportunities (Tidd & Bessant 2014)(Thorgren et al. 2012). This also links research from (Street et al. 2007) on how networks with high clustering (high number of companies), high reach (wide range of firms) and general diversity lead to more diverse knowledge and ultimately innovation. (Thorgren et al. 2012) showed that participating in networks with partner fit and relational capital is directly related to the extent of knowledge transfer and CE.

Innovation networks can also help with matchmaking and creating collaboration between companies and/researchers, while arranging seminars, workshops and reports on different topics and trends. Furthermore, the innovation networks also facilitate general networking activities and more informal

socialization between different companies to allow knowledge dissemination and sourcing of ideas (Uddannelses- og Forskningsministeriet 2017). Networks may vary by source (who is involved), cost as well as level of interaction (formality and direction of informational flow), which influences the characteristics of information that can be obtained. The benefits of this knowledge will depend on how and to what degree the knowledge is diffused, which relates to companies absorptive capacity as discussed in section 3.3.2.1.2

It is noteworthy that research shows that linkages facilitate innovation, while innovation at the same time facilitate networking. As such, networks and innovation constitute a virtuous reinforcing circle. Companies with many prior patents have for example been seen more likely to enter alliances and networks. Thus, it might be difficult to measure whether networks indeed make a company innovative, or if it was already innovative and as a result entered a network. Furthermore, there has been a tendency that some companies simply just enter networks out of fear to be left behind. As there are also challenges and costs associated with being in networks partnerships, it is important to note that the costs can outweigh the benefits (Powell & Grodal 2006). Furthermore, conflicts might also arise in networks due to goal divergence between partners, hidden agendas, insufficient trust or commitment, personal clashes, unrealistic expectations etc. The conflicts often revolve around issues of intellectual property, costs and strategic decisions (Duysters et al. 1999) (Chengjiang & Chunyan 2008). Thus, partner fit is essential for obtaining the otherwise apparent benefits of innovation networks. The notions of the above review literature on innovation networks, can be summarized in the following model:

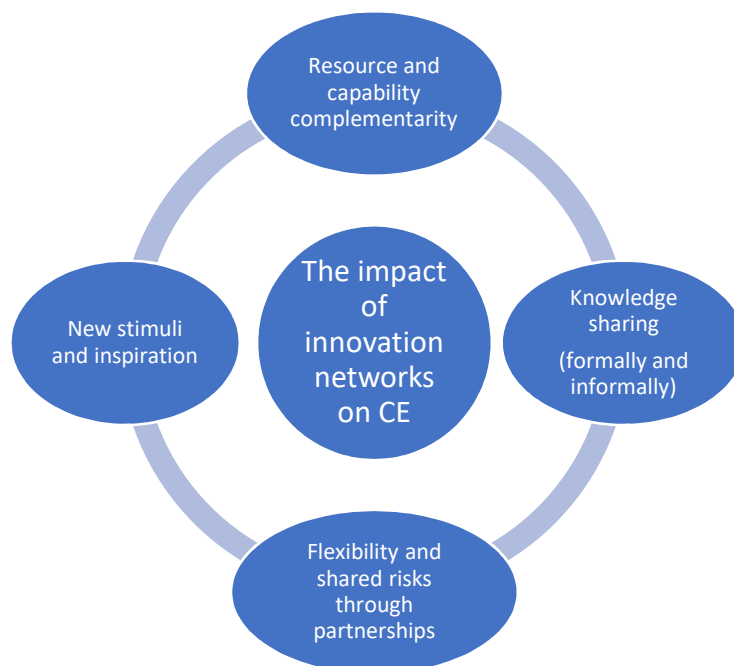


Figure 8 Innovation Networks impact on CE. Own Production - Based on Tidd & Bessant 2014

3.3.2.1.2 Absorptive capacity

One of the most significant externally oriented capabilities of the company is its absorptive capacity. This concerns a company's capability to recognize the value of new external knowledge, assimilate and exploit it in its operations or for commercial purposes (Sakhdari 2014). The structure of *"communication between the external environment and the organization"*, amongst *"the subunits of the organization"* and *"the character and distribution of expertise within the organization"* influence a firm's absorptive capacity (Sakhdari 2014, p.23). As such, the primary reason why some firms are able to value, understand, and apply new knowledge easier is that they already have invested in nurturing their absorptive capacity (Cohen & Levinthal 1990). Thus, absorptive capacity is seen as an important internal resource and especially relevant in regards to absorbing knowledge from networks, which will be discussed in section 3.3.2.1.2.



Figure 9 The relation between networks, absorptive capacity and CE. - Based on Sakhdari 2014

3.3.2.2 Environment

The environment antecedents are considering the external environment to the organization, and although companies have little control over the environment, it is important for them to acknowledge its dynamics as it must rapidly adapt to opportunities and challenges (Zahra 1991).

Although some different terminology has been introduced, the specific aspects are almost identical across literature (Antoncic & Hisrich 2004; Morris et al. 2011; Zahra 1991; Villiers-scheepers 2012). (Ginsberg et al. 1990) refers to competitive, technological, social and political antecedents, (Zahra 1991) refers to dynamism, hostility and heterogeneity, while (Morris et al. 2011) refers to competitive intensity, technological change and product-market fragmentation and emergence.

(Antoncic & Hisrich 2004) reviewed and defined these aspects into dynamism, industry growth, technological opportunities, and customer demands for new products. Here dynamism refers to the extent of changes in technology, demographics, regulation and number of competitors, and the resulting instability due to the continuing changes. For example, increased competition might force companies to seek out new businesses and successfully diversify into other markets (Zahra 1991; Ginsberg et al. 1990), while high industry growth has also been linked to CE, as an increasing number of companies are looking for new ways to take advantage of the growing market (Antoncic & Hisrich 2004). Technological development is linked to CE, as this forces companies to seek ways to reinvent and

renew themselves (Antoncic & Hisrich 2004; Morris et al. 2011). Finally, customer demand for new products encourages CE as companies need to constantly introduce new and innovative products (Morris et al. 2011; Antoncic & Hisrich 2004). It is noteworthy that these above-mentioned factors can be seen as self-reinforcing, as more entrepreneurial firms will lead to an even more dynamic environment, which will then in turn require even more entrepreneurial behavior to survive (Covin & Slevin 1991).

If a company is truly entrepreneurial it will thrive in external environments that are dynamic and demanding. (Burns 2013) relates this to Porters Five Forces and how an entrepreneurial industry will have a low concentration of firms, a high degree of product or market heterogeneity and a constantly changing development.

Moreover, it is important to consider that different business divisions and subsidiaries have different external environments and thus different environmental antecedents for CE. If acknowledged and acted upon this can also pose as an opportunity for a company (Burns 2013).

3.4 Measuring corporate entrepreneurship

It is important to acknowledge the tension when assessing CE performance, as incremental and radical innovation involves different metrics, with the latter much harder to assess. The longer time frame for radical initiatives makes it harder to estimate financial returns, while failure rates and rates of return are considerably higher (Morris et al. 2011).

If an organization is serious about developing a more entrepreneurial organization, it is important to measure specific dimensions associated with a CE promoting environment and assess to what extent CE has been successfully executed. However, assessing CE is complex, as it involves “inherently messy” activities that are hard to control and fairly uncertain (Kuratko et al. 2014). Furthermore, as no companies exist within the exact same context, finding and implementing the right measurements becomes a process for every company. Thus, how to measure CE most correctly has been one of the main questions within the literature, and has brought forward a vast amount of different financial and non-financial measures to assess the outcome of CE and innovation. These include financial measures such as traditional financial measurements (profit, assets growth etc.), R&D expenditure, as well as innovation premium (how much investors value the existing business based on expectations of future innovations) (Zahra 1991; Morris et al. 2011; Matthews & Brueggemann 2015). More non-financial measures have been linked to the ideas generated in an organization, such as measuring the number of ideas turning into innovative experiments or actual patents of IP by employees, the percentage of staff trained in innovation processes, as well as the percentage of new ideas being categorized as incremental

or radical. Besides measuring short-term outcomes, these can point towards change of culture towards innovation in an organization over longer time (Kaplan 2014). Although they differ, both financial and non-financial measurements have been found to have a positive link with company performance (Dyduch 2008; Matthews & Brueggemann 2015; Zahra 1991; Morris et al. 2011; Kaplan 2014; BearingPoint 2011).

3.4.1 Measurement tools

Surveys and interviews can provide useful information about the CE related processes within the companies, such as the motivations and barriers, information sources, external linkages as well as the different types of innovations in focus. However, it should be remembered that entrepreneurship both relates to cognition and actions, and as such one need to assess both the way of thinking within an organization and the performance outcomes. For this, many different instruments such as the EHA, EI, CECI and CEAI has been developed to measure the processes and outcomes, with the most encompassing assessment tool being the EHA, Entrepreneurial Health Audit, a tool that seeks to assess the current level of entrepreneurial intensity and entrepreneurial health of an organization by integrating the EI and CEAI (Morris et al. 2011). However, these tools are very comprehensive and is based on large-scale surveys throughout and across organizations. Furthermore, this kind of research also have its limitations, as complementary economic data will often need to be acquired for a more thorough analysis. Furthermore, it is also difficult to capture the timing of innovation and their impacts, as the full impact on performance are often seen over a longer period (OECD 2005).

As such, companies should also measure CE by linking it to indicators such as profits, income-to-sales ratio, revenue and assets growth etc. (Morris et al. 2011). However, this research has focus mostly on traditional accounting measures and the most commonly used measures has thus not been built on the rationale of economic theory, which holds that firms exist to maximize value for shareholders (Erasmus & Scheepers 2005). As such, combining measurement from *"economic theory together with behavioral approach could be fruitful"* (Duus 1997, p.302). (Dess et al. 2003) also notes how CE research can benefit from the inclusion of more sophisticated financial measures, such as Economic Value Added (EVA) that provides more insights because they recognize the cost of capital and risk of firm's operations.

EVA is a performance metric that calculates the amount of economic value added, and can be defined as net operating profit after taxes subtracted with a capital charge. The goal of EVA is to analyze the cost of investing in a certain project, and assess to what extent this generates enough cash to be considered a good investment for investors and the firm while acknowledging the risks (Shil 2009). In the case of

positive EVA, the entrepreneurial activity is preferable to alternative investments. (Erasmus & Scheepers 2005) found a statistically significant relation between entrepreneurial intensity and longitudinal levels EVA, albeit the authors also noted difficulties of finding a correlation in short-term analyses. Thus, by relating EVA to CE it can serve as a tool to analyze whether a CE initiative has truly created wealth for its shareholders. However, EVA has also seen major criticism, as it is mostly seen as a short-term or historical performance measure, as future long-term investment cannot be objectively measured. As such, EVA is not well suitable for companies that have invested heavily today in more radical innovations and expect only positive cash flow in the distant future (Shil 2009)(Dierks & Patel 1997). Conversely, this can be seen as a benefit, as utilizing EVA will prevent companies and investors from investing 'blindly' in 'innovations' with non-realized future profit (innovation premium), as exemplified during the dotcom bubble.

3.5 Summary of literature review

The notion of CE dates back to the introduction of the entrepreneur, which was brought to prominence by Schumpeter in the beginning of the 20th century, who discussed the role of the entrepreneur and his disrupting effect on the economy. His ideas were later defied by Kirzners idea of entrepreneurship as one being alert to opportunities in the market, acting on more incremental economic possibilities and towards equilibrium in the economy. The notion has also led to thinking about entrepreneurship as a function in a company, as brought to fame by (Penrose 1959) and (Pinchot 1985).

Through the 90's the notion of CE has seen increasing popularity, as large companies struggled to compete in a globalized market with agile competitors. Through the literature review, it is evident that CE can be defined in various ways. As such, we define CE as *"the process whereby an individual or a group of individuals, in association with an existing organization, create a new organization, or instigate renewal or innovation within that organization"* (Sharma & Chrisman 1999, p.18). This corresponds with (Ginsberg et al. 1990) defining CE as an activity comprising strategic renewal, innovation and internal- and external corporate venturing.

In this, innovation plays a crucial element for venturing and renewal in an inter-dependent matter, and has as such received more focus throughout the literature review. Summarizing the definitions, innovation can be defined as the implementation of a new or significantly improved (radical or incremental) product, process, marketing method, or a new organizational method in business practices and organization (OECD 2005), which creates economic value for companies and stakeholders (Duus 2004). This links to the organizations ambidextrous capabilities to balance the need for incremental

(exploitative) and radical (explorative) behavior, and the dynamic capabilities for companies to adapt the organizations resource base to the changing environment.

While initiating CE activities is a way for larger companies to approach renewal and future competitiveness, implementing it is easier said than done. Literature prescribes many different antecedents that can promote CE in organizations, which can be summarized into four over-arching categories. They are differentiated on being internally focused, I.e. Top Management and Organization, as well as externally focused, I.e. Environment and Network. In regard to networks and CE, participating in different kinds of innovation networks has received increasing focus, and is noted as a way for companies to explore and execute new ideas when resource complementarity is also present. Furthermore, innovation units have been discussed and introduced as a concrete form to promote CE. These act as autonomous units within an organization, which is having the sole purpose to promote innovation and company renewal.

Moreover, the literature review touched upon the different ways of measuring CE. The literature is currently dominated by more holistic ways of measuring CE by mainly looking at number of innovations, R&D expenditure, company growth etc. through large-scale surveys. However, less focus has been on developing tools to measure CE in regard to economic theory. Additionally, it does not seem satisfactory to measure CE through financial and soft measurements independently, and as such a combination is required to provide a more concise measurement.

The literature review has resulted in the framework in figure 10 on the following page, which encompasses the aspects from the literature deemed most relevant for answering the research questions. In this, while not traditionally dealt with as CE antecedents, the notions of dynamic- and ambidextrous capabilities are integrated under resources and capabilities. Furthermore, due to the nature of the research, the notion of innovation networks has been specifically included as a network antecedent. This framework will act as a guide through which the cases will be analyzed and synthesized. As mentioned in the delimitation, antecedents can also be referred to as promoters of the CE. As such, the terms will be used interchangeably throughout the analysis in order to provide direct links to the literature.

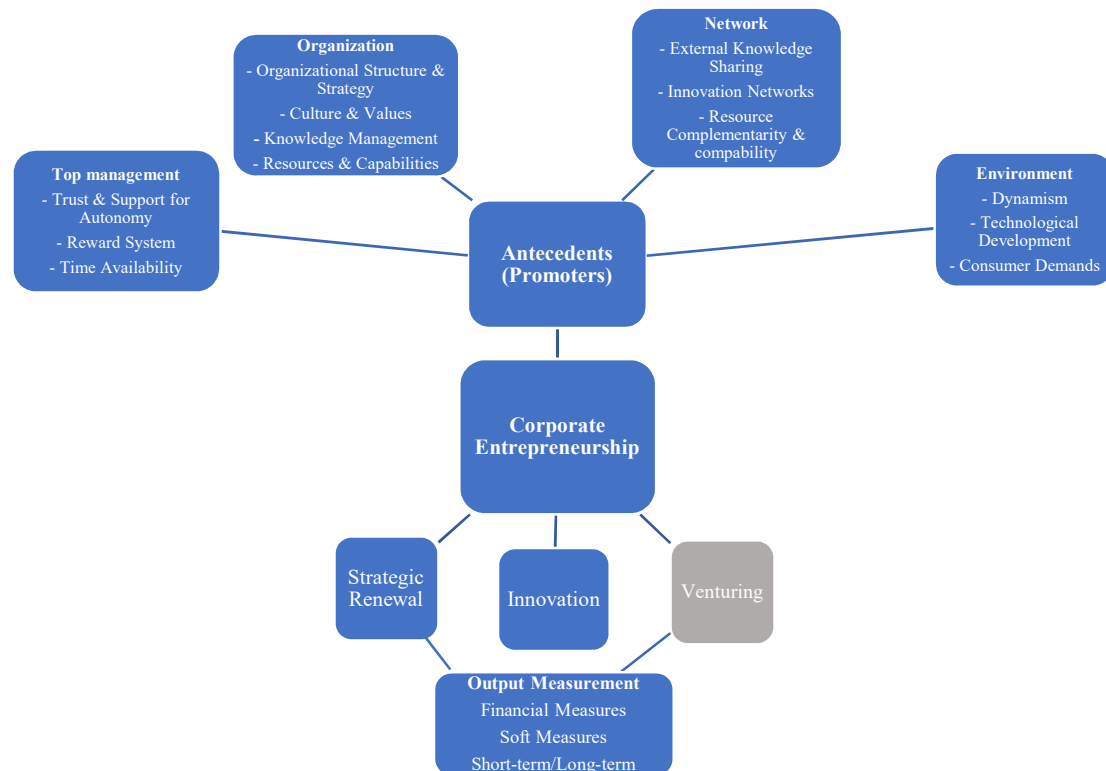


Figure 10 - Theoretical Framework - Own Production

4 Analysis of empirical data

Based on the proposed theoretical framework in the previous section, this chapter seeks to analyze the ways and success of CE in the given companies. Based on the data collected and nature of the different cases, the 'sub-antecedents' does not posses the same level of coverage across cases.

Firstly, this section bring forward single case studies of the four case companies: HedeDanmark (HD Greenlab), ISS (ISS Corporate Garage), Roche (Roche innovation Center Copenhagen) and Tryg (The Camp). Following, the cases will be synthesized in a cross-case analysis that provides ground for answering the research questions. Secondly, this section will bring forward the findings related to the two interviewed innovation networks, namely Danish Food Cluster and Scion DTU.

The findings of this chapter will be synthesized with the findings from the literature in order to put forward a normative framework for companies to promote CE.

4.1 Case companies

4.1.1 HedeDanmark (HD Greenlab)

HedeDanmark is an international trade- and service company that focuses on providing outdoor facility services and solutions. It is part of the fund Hedeselskabet (founded 1866), where a new strategic direction in 2006, led to the establishment of HedeDanmark A/S as an independent company (HedeDanmark 2017a).

The company currently employs approximately 800 employees with revenues of 1.68 billion DKK in 2016, with the organization split into three business units, Outdoor facility Service, Enterprise and Skov, respectively (HedeDanmark 2017c).

HedeDanmark has built their vision and values upon the need for continuous innovative thinking and value-creation, through new technology, methods of working or new forms of collaboration. These innovations are often created together with customers, employees and participations in research groups and networks (HedeDanmark 2017b).

4.1.1.1 Introduction to HD Greenlab

HD Greenlab was established with the intention of continuing, and further developing, the innovative culture in HedeDanmark. This is done by facilitating a “lab” to inspire employees to be even more innovative, while simultaneously allowing ideas to be gathered, build, tested, and learned from (Hansen 2017).

HD Greenlab is positioned in Cortex Science Park (list of companies in Cortex Park can be found in appendix 11), located in the middle of Denmark, (geographically away from the headquarters of HedeDanmark) as to keep core business and innovation in two separate areas). By doing so, the idea is that HD Greenlab can break free of everyday work, while the park also provides access to thousands of students, with competencies within fields such as translation, marketing, IT, and administration (Hansen 2017). Furthermore, Cortex provides an integrated network of companies, as more than 79% are involved in partnerships with one or more companies in the park. Because in the Cortex Science Park, *"it's all about the network (..), with the expertise you need, just around the corner"* (Syddanske Forskerparker 2017) This also relates to how HD Greenlab is operated by only one employee, Kristian Tarp Hansen, who in turn is expected to rely strongly on the knowledge and capabilities the network in Cortex provides (Hansen 2017).

Although HD Greenlab has been established under the project Corporate Garage (IndustriensFond 2014), the innovation unit is more resembling that of innovation outpost as per (Solis et al. 2015) since

it is placed externally amongst start-ups with a main function to connect with these. However, the HD Greenlab is drives an Intrapreneurship Programme, as it provides a platform for employees to bring about ideas for potential innovation.

4.1.1.2 Antecedents of CE

4.1.1.2.1 Top Management

HD Greenlab was established as an independent unit intended to spark extra life into the innovativeness of HedeDanmark (Hansen 2017). As such, the unit is intended to work autonomously, delivering the manager of HD Greenlab power to push an idea directly to the top management of HedeDanmark, thereby overcoming the many layers of communication and bureaucracy that previously slowed down ideas (Hansen 2017). As proposed by (Morris et al. 2011) this is expected to promote CE. Kristian Tarp Hansen is expected to be the only bridge between the multiple levels of HedeDanmark and externals, and is continuously in contact with employees, the top management and potential partners. As top management has for now only placed one employee to run the office with a limited investment, this shows sign of lower support.

As of now there is only a temporary, extrinsic, reward system implemented to encourage idea creation from employees in the form of rewarding the "idea of the month" with a bottle of wine. Currently, there is no intrinsic rewards as otherwise accentuated by (West & Sacramento 2006). However, HedeDanmark seeks to have future reward system be more reliant on providing intrinsic rewards to employees, in form of internal recognition for employees who bring forward good ideas (Hansen 2017).

Related to time availability, the top management of HedeDanmark seems to generally allowing time for innovative endeavors, as if "*someone has an idea, it happens that the manager allow a couple of hours to develop the idea*" (Hansen 2017, 11:26), "*and if the idea shows promise, the employee will get some time to work with it*" (Hansen 2017, 11:26). However, HedeDanmark still faces some problems related to the amount of time employees are allowed to put aside to pursue innovative ideas, as time availability is dependent on the individual managers (Hansen 2017). Moving forward, it is expected that most ideas will be sent to HD Greenlab for evaluation. Here they will be evaluated, and if deemed possessing sufficient potential, they will move to the selection phase of the innovation process and be presented to a steering committee. Decisions will then be made in relation to the potential and amount of time needed or the idea to be developed (Hansen 2017). The fact that the HD Greenlab is run by a single employee might move the problem of time availability, as the single manager in HD Greenlab easily can become overloaded if the initiative becomes successful, thus creating a new bottleneck (Lerner et al. 2007).

4.1.1.2.2 Organization

HedeDanmark has offices spread out across Denmark, as well as being represented through subsidiaries in several countries. In total, HedeDanmark covers 25 unique departments throughout the organization. As such, the organizational structure allows HedeDanmark to cover a wide range of services within the green service sector in many geographical areas (HedeDanmark 2017c), which simultaneously decentralizes a lot of decisions and entrepreneurial initiatives. The size and structure of HedeDanmark, however, also makes it harder for innovation and knowledge to be shared in the company (Jones & George 2012), due to long decision processes, ideas drowning in daily operations, as well as many innovative initiatives being localized within the different subdivisions/departments of HedeDanmark (Hansen 2017).

However, with the implementation of HD Greenlab, HedeDanmark seeks to create a fora for systematically gathering and centering ideas from all parts of the company in one specific unit. While HedeDanmark has a long tradition of having innovation integrated in both core values and business, the unit is also assigned a role to directly affect the innovative culture. According to (Hansen 2017, 41:48), *"it is necessary to develop a culture where the employees contribute, otherwise the unit will slowly 'die' "*. This is mainly done by facilitating events, workshops, and meetings on all levels of the company. (Hansen 2017).

In relation to knowledge management, HD Greenlab has developed a digital "idea box" platform, which makes it possible for all members of HedeDanmark to digitally transfer their ideas directly to the lab. This allows ideas developed by employees, with hands-on experience and in-field knowledge, to be transferred throughout the company, and turned into actual valuable products for HedeDanmark (Hansen 2017).

This also allows HedeDanmark to tap into their plentiful human resources in order to expand their innovative operations (Hansen 2017). However, although HedeDanmark is a large company with significant financial resources, the nature of the unit does not make it appear, as extensive resources are available for the initiative. In terms of the promotion of dynamic- and ambidextrous capabilities as per (Teece 2012; Teece & Pisano 1994; Cantarello et al. 2012), HD Greenlab is expected to have a balanced portfolio of projects involving incremental and more radical innovations. By pursuing both degree of innovations, HedeDanmark can spread the risk of projects, as well as seek to both exploit their current technology for smaller improvements, and explore new possibilities of a more radical nature (Hansen 2017).

4.1.1.2.3 Network

HedeDanmark has strong ties with its partners and customers, and place a lot of emphasis on partner models to improve openness, trust and flexibility as well as continuous value creation in close collaboration with customers (HedeDanmark.dk), which links to the notions of (Powell & Grodal 2006). With the creation of HD Greenlab, and its strategic positioning in Cortex Science Park, HedeDanmark can *"tap directly into the "knowledge-box" that is found at the university"* (Hansen 2017, 06:37), thereby expand their network from customers and partners to including students and other entrepreneurs. Thus, a main reason for the location of HD Greenlab is to expand the network of HedeDanmark, and improve information and knowledge sharing (Hansen 2017).

This also acts as a way for HD Greenlab to stay small and without many resources, but still be innovative and flexible by tapping into low-cost partners (i.e. students) with high resource complementarity. Furthermore, Kristian Tarp Hansen also spend a lot of time moving between the Science Park and the various offices around the country, as to slowly build up social capital and strengthen the personal relations of the network (Hansen 2017). However, as long as this primarily is performed by a single employee, there is a limited absorptive capacity and much of the knowledge might not be shared to all corners of the organization (Sakhdari 2016).

4.1.1.2.4 Environment

The recent years have resulted in an increasing development in pro-environmental and sustainable behavior of companies and their employees. With the position as the leading national supplier of outdoor facility services to public and private companies (HedeDanmark 2017c), HedeDanmark is expected to behave in a proper manner. However, the fact that the company are having a missing competition in Denmark means the company face less competition, which can less pressure to be innovative (Antoncic & Hisrich 2004).

Furthermore, the industry face potential development in terms of the technological development. Drones, satellites or airplanes used to measure the mass and potential value of a forest, sensors spotting garbage at the side of the road, robots and machinery equipped utilized when doing care and maintenance of green areas are some of the newest innovative factors dominating the industry (HedeDanmark 2017b). With the environmental changes due to global warming and all its side effects, future technology will require further change and adaptability for HedeDanmark.

Besides having solid position on the governmental and corporate market in Denmark, the technological development also allows pursuit of B2C markets to meet new consumer demands, by decreasing costs, introducing new products and scale of their operations to fit smaller customers. For example,

HedeDanmark could extend their capabilities of cleaning snow and cutting grass from B2B to B2C, as a potential future source of revenue (Hansen 2017).

4.1.1.2.5 Measuring outcomes

In terms of defining innovations, the underlying philosophy of HD Greenlab is discussed by Kristian Tarp Hansen, as follows: "*Whether you get a patent or not, that's not very innovative in my eyes (...). My definition is, a company that gets 1000 ideas is not necessarily an innovative company. It is only when an idea reaches the market it becomes an innovation.*" (Hansen 2017, 33:04).

However, given the fact that HD Greenlab has only been operating since October 2016, and so far only has had one project making it to the market, there has yet to be established a final set of specific methods to measure the outcomes of the initiative. Thus, there is still unsolved questions relating to the outcome of innovations generated, and how to structure ownership of ideas in terms of credit to employees and departments. "*There is a definite goal of creating growth. How to measure it has been suggested in many different models. But if you let go of the idea just as it becomes successful, who do you credit?, and how?*" (Hansen 2017, 36:04). However, there is an expectation of HD Greenlab securing profitable innovative products and services developed with "*a growth factor of 10*" (Hansen 2017, 33:55).

Specifically, in regard to the ideas generated from the "idea box", Kristian Tarp Hansen can immediately begin assessing the potential of the idea. Here the potential of the idea is initially evaluated versus three factors determining the further process of the idea. 1) The easiness of testing the idea; 2) the amount of time expected to be spend on the idea, as there is a limited time availability; 3) the amount of resources needed compared to the potential outcome. Key for HedeDanmark is spreading the risk of investments, as to why both incremental and radical innovations will be pursued, as long as they show potential (Hansen 2017).

Although not directly measurable, it is the intention to spur openness and a mentality in HedeDanmark towards accepting a failed idea as a source of learning. To ensure learning and a fast-failure mentality, ideas generated should have a maximum cycle-time around 100 days. If the idea has not been tested properly and provided clear evidence of potential rate of success or failure, the test(s) should as a minimum provide solid evidence for deciding to run further tests or cancelling the project (Hansen 2017).

4.1.2 ISS (ISS Corporate Garage)

ISS was founded in Copenhagen in 1901, and after acquiring Abilis in 1998, ISS has become one of the world's leading facility service companies with approximately 500.000 employees across 77 countries. ISS' business model is based on creating value for customers by allowing them to outsource their non-core activities such as cleaning, catering, support, security services etc. ISS' global revenue amounted to DKK 79.2 billion in 2016 (ISS 2016a).

ISS has great focus on challenging status quo, and believe the company should use its size and capabilities to shape the industry. In this, the company recently introduced the ISS way as an overarching strategy, which is a new way of thinking and part of a transformational process to establish a balance of global and local excellence. This includes a greater focus on utilizing internal resources to drive organic growth, while creating a balance to align the businesses by driving global synergies. However, it is still acknowledged that local decision power and autonomy is needed to quickly adapt to local market need (Riber 2017). As such, ISS is trying to find a way to balance the paradox of localization and global synergies.

4.1.2.1 Introduction ISS Corporate Garage

A way to balance this paradox and spur an entrepreneurial culture is seen in the opening of the ISS Corporate Garage (henceforth The Garage). This is a separate autonomous innovation unit, which resides next to the ISS headquarters in a separate building and works with ideation, market validation, commercialization and scaling of new services and business models. Four full-time employees are attached to The Garage, while there is to be 20 rotating participants from different functions in ISS. The Garage has been built as a creative workspace with much functional areas, which are to invite creativity and break with the formality and corporate culture of the central organization with the traditional way of doing this (please see appendix 5 for a 'guided tour' through The Garage) (ISS 2016b; Riber 2017). The Garage officially opened the 23rd of March 2017, and has been granted funding for a period of 18 months, whereafter it needs to show proof of independent profitability in order to continue (Okkels 2017).

As illustrated in figure 11, The Garage is supposed to work with four main areas: 1) Accelerate; 2) Explore; 3) Follow; 4) Engage. On the contrary, the core organization should focus on continuous improvement of core business areas and processes.

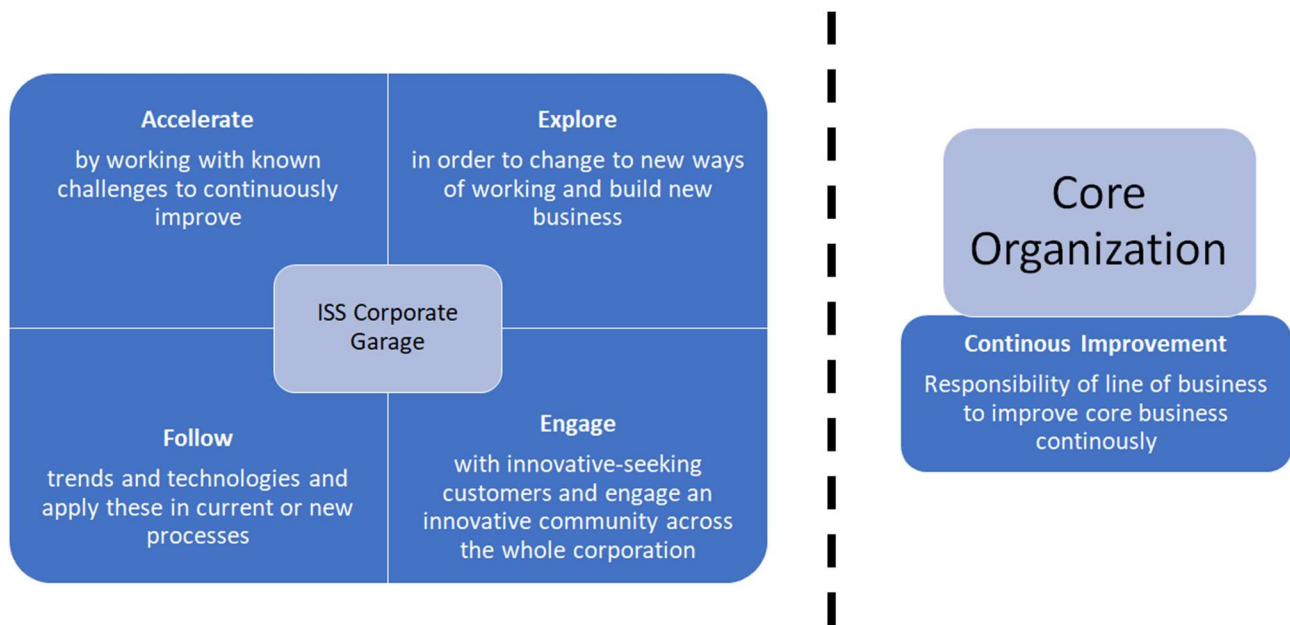


Figure 11 Overview of The Garage's activities. Own Production - Based on Riber, 2016

Amongst the many activities will be company crawls, executive dinners, exploration trips, as well as start-up weekends and entrepreneurial days. Additionally, an app IDEAS@ISS has been launched, where employees can enter and comment on others' ideas. All the themes and ideas stemming from The Garage will be reviewed on an ongoing basis by an innovation board with relevant stakeholders from ISS. This includes Executive Group Management, subject matter experts as well as members from the community (ISS 2016b). By including several relevant stakeholders, ISS follows the notions of how the direction of innovation units should be fully aligned (Solis et al. 2015).

The activities of The Garage mainly relates to the search and selection phase of the innovation process. The idea is to use "pretotyping" as a way to enable a fast failure culture, which will help save unnecessary time spend on waiting for the ideas to be tried out. When a given idea has become validated, it will be sent back to the core organization and implemented accordingly (Riber 2017).

Summarizing, the ISS Corporate Garage has the characteristics of a type of inhouse innovation unit, as it is still located next door to the ISS headquarters (Solis et al. 2015). The Garage is to be an innovation engine for the whole organization, while also running an intrapreneurship programme through the Ideas@ISS app.

4.1.2.2 Antecedents of CE

4.1.2.2.1 Top Management

Due to the decentralized and relatively mechanistic structure of ISS, there has usually not been much direct top management support from ISS headquarters for entrepreneurial initiatives, and prior to The Garage, global innovation was "*not a function we had*" (Riber 2017, 33:29). Thus, innovation and business development is something that has been conducted and greatly supported on decentralized basis in countries or on independent contract level. This has its clear advantages as it enables fast adaptation; yet it also prevents innovations and initiatives to scale (Riber 2017).

With The Garage, the ambition is to "*Unleash the innovation power of ISS*" by building and supporting a unit that can help local innovations and ideas become global, which is something that has previously been a major problem in ISS (ISS 2016b). This unit is seeing great expectations, pressure and support from top management, and has been extensively communicated to the public (Okkels 2017; ISS 2017; Nielsen 2017). The Garage refers directly to the global COO with an autonomous budget and P&L, thereby minimizing bureaucracy (Riber 2017). This clearly shows top management willingness to create a supportive environment for CE and a unit that can facilitate and promote CE throughout the organization (Solis et al. 2015; Morris et al. 2011).

In regard to rewards for entrepreneurial employees, The Garage will have focus on intrinsic rewards in order to not set expectations of extrinsic rewarding, as this is a "*real bad loop to enter*" (Riber 2017, 22:00). The IDEAS app will be built up around a social media logic, where employees can get comments and likes for their ideas, and in that way, be intrinsically rewarded. In this, employees might get comments that further improve their ideas, which they can directly employ in their daily work. Furthermore, it is expected that The Garage participants will be equipped with many new tools that they can use going forward, and as such this training might be enough reward in itself, as also noted by (West & Sacramento 2006). It is still being discussed whether extrinsic rewards should be added. Yet, it is the belief that intrinsic motivations will have the most positive effect on creativity (Riber 2017).

As ISS is a labor-intensive company, it is to be expected that there might be a time availability issue for employees to engage in CE, as some don't have the "*time or energy to get things done*" (Riber 2017, 28:33). To counter this, The Garage will help take over ideas from employees and departments, who will then not need to put excessive time in order to make their ideas reality. Furthermore, the introduction of prototyping can also help bring more time for employees and idea testing, as it allows fast validation or rejection (fast-failure). Internally, there has been an agreement that The Garage has received budget to 'buyout' participants from their normal tasks. However, although this deal has been

made with top management, it is not expected that participants in The Garage will see their original workload decrease (Riber 2017).

4.1.2.2.2 Organization

ISS' organizational structure is not ideal for groundbreaking and widespread innovation, as the decentralized structure and bureaucratic makes it difficult to coordinate innovations and best practices across the company. This is something that is accentuated by (Riber 2017, 08:34) "As, *what we have been bad at, and what is a part of The Garages mandate is to get these ideas to travel across contracts and segments, across countries and markets*". However, there is still expected to be reporting required from The Garage (Riber 2017), which can have severe impact on the flexibility of The Garage (Zahra 1991; Jones & George 2012).

Culture-wise, ISS has a clear entrepreneurial focus on local levels and individual, where floor employees and managers are encouraged to come up with continuous improvements to solve local problems and increase efficiency on site. Due to this individual-focused culture (Zahra 1991), it has not in the same way focused on allowing bigger entrepreneurial projects and promote more radical innovation and risk-taking on corporate level. Moreover, there has not been a culture of sharing across countries and functions, which is something that has worked as a clear barrier to CE. This links to the issue for ISS to reach all 500.000 employees with the same message. This is also extended by the fact that there are clear language and cultural barriers across markets. Furthermore, this is also made more difficult due to the high employee turnover rate and large amount of low-skilled labor that might show low interest in these corporate initiatives (Riber 2017). It is expected that The Garage will improve knowledge management and sharing, which can work as a strong promoter of CE (Zahra 1991).

Furthermore, ISS has a huge resource pool in terms of human capital and localized know-how, as well as financial resources to invest in CE. In fact, research shows that larger service providers are more likely to come up with innovations, as they often have somewhat better innovation processes in place as well as a larger resource pools (Andersen & Queck 2011). Together with ISS's many strong partners and the 500.000 employees, the company does not only have a vast but also diverse resource base, as long as ISS can ensure that this is made available for the initiatives (Tasavori 2011).

In this, The Garage is also a step for ISS to attain Dynamic Capabilities and increase ISS' "*ability to integrate, build, and reconfigure internal and external competencies to address rapidly changing environments*" (Teece 2012). More specifically, it provides the forum to 1) sense and shape new opportunities and threats" through the explore processes, 2) seize opportunities through the activate process, and 3) maintain competitiveness through enhancing, combining, protecting, and reconfiguring

intangible and tangible assets”, with the latter being through a mix of all the processes in The Garage (Riber 2017; ISS 2016b). Introducing The Garage is also a way for ISS to become a more ambidextrous organization as discussed by (Cantarello et al. 2012), by introducing a way to balance exploitation and exploration. While the core business can continue to exploit existing resources for incremental innovation, The Garage has mandate to engage in more radical and explorative innovation. However, there are still ongoing discussion on finding the right balance, as *"We don't have that balance, but we need to have it. We need to balance how much is close to the core business. (..), this is something we need to negotiate with the excellence board, because they then need to do some of the other stuff"* (Riber 2017, 38:12). *"We also need to have our colleagues in the business understand, that in order to deliver, we must also spend more time here (radical innovation)"* (Riber 2017, 45:39)

4.1.2.2.3 Network

ISS has less focus on networking externally for innovation, at least in terms of being physically located next to potential partners in any innovation networks. However, close service-improving partnerships with customer are of great importance to the company (Riber 2017).

Nonetheless, The Garage is also supposed to welcome external stakeholders to co-innovate and knowledge share in open innovation as per (Chesbrough & Appleyard 2007). In this, stakeholders also have a large part in helping validate the ideas, a process that has been optimized to only 72 hours down from several months (Riber 2017). Yet, it seems clear that the main focus in ISS regarding networks is to firstly build up a sufficient ‘internal’ network in order to share knowledge and complementary resources across borders, which then potentially can be followed by developing the company's absorptive capacity before engaging in more networks (Sakhdari 2016).

4.1.2.2.4 External

Facility management is an industry that has generally not been known for its innovative endeavors. However, with a growth of 9% until 2018 (ISS 2016a), companies are seeing increasing pressures from competitors and customers, and cost-cutting and value-adding innovations has become one of the top challenges for FM companies today. The FM industry is highly dynamic with low barriers to entry, as the services are often easy to implement and copy by competitors. This demands continuous innovation, while on the contrary making radical innovations less profitable (Andersen & Queck 2011; Antoncic & Hisrich 2004).

In terms of consumer demands for new products, there is currently a shift away from simply lowering prices, as customers also start to put more focus on access to new skills sets, higher speed, a good total package of services as well as greater “innovations” (Andersen & Queck 2011). As such, FM companies

now have the chance to move from passive suppliers to more proactive strategic partners that offers more than merely outsourcing (Categories & Management 2017). Customers will also expect service providers to be able to support on more peripheral tasks in order to help lower the costs, which requires ISS to develop their employees skills (Redlein & Poglich 2010). Some customer contracts even have specific KPIs for innovation, albeit the pressure for innovation from customers is of more incremental character (Andersen & Queck 2011).

Lastly, there is also many technological opportunities, as the introduction of robotics etc. in FM can help reduce costs severely in an otherwise labor-intensive industry. Virtual Reality and smart buildings are also leading to changes to FM services, as virtual reality provides a whole new overview and selling tool, while smart buildings require a different kind of service level. Furthermore, FM companies find themselves with more and more data on their customers and their buildings and respective services. As such, there is an opportunity for FM companies to switch from just managing assets to use data to the benefits of both ISS and their customers (Categories & Management 2017). These technological changes are also being followed by regulatory and organizational compliances that FM companies must adhere to without increasing costs (ISS 2016a).

4.1.2.3 Measuring Outcomes

At the introduction of The Garage, Thomas Zeihlund, the original initiator of the project, made clear that there is *“no innovation without hardcore business, as innovation without business is simply just a game”*. Furthermore, he added how The Garage does not deserve to survive unless it turns profitable within the first 18 months (Okkels 2017).

However, as The Garage is still in its infancy, there is an ongoing discussion regarding KPIs and ways of measuring the outcomes. A main reason for choosing Ulla Riber as The Garage's leader was her experience with corporate reporting, as it is deemed important to continuously monitor and revise The Garage due to the big investment behind it (Riber 2017). Although all the specific KPIs have not been set, the KPI dashboard is a mix of KPIs regarding the daily running of The Garage, such as number of app downloads, number of events, as well as more innovation-oriented KPIs such as number of ideas generated, and number of failed ideas. Additionally, there is also a financial KPI for revenue generated by new ideas, so the benefits gained from the respective innovations will also be applied to The Garage's P&L. However, *“these still need tweaks. We still need to figure out what 10 KPIs make sense for us”* (Riber 2017, 33:24)

As not all innovations are successful, Ulla Riber also finds KPIs regarding costs of failure highly relevant for The Garage. Through fast failure techniques that can validate an idea in only 72 hours, The

Garage will be able to save ISS a lot of money by allowing less money spent on unsuccessful projects. In this, it can be argued that The Garage becomes a cost-cutting innovation itself. The main way for The Garage to become self-financing is through generating added value for the company, and as such it is not planned that The Garage will foster new businesses and ventures to be sold for a profit (Riber 2017). Thus, ISS is not focusing of the CE aspects of venture, as otherwise discussed by (Ginsberg et al. 1990).

The plan is that the ideas generated through the app and The Garage will firstly be validated through parameters, such as desirability, feasibility, and viability it should be noted that these parameters have not been finally set and defined. The ideas will subsequently be brought forward to the innovation Board, who will discuss the feasibility of the ideas. Going forward it is also the hope that the ideas will be segmented on their degree of innovation, as most of the smaller incremental innovations does not require same amount of time and are easier to implement by the core organization, while The Garage will focus on more radical and transformational innovation that are more difficult to implement and would not have the time availability in the core organization (Riber 2017).

However, it is not all gains from The Garage that can be measured, as it is also expected to result in several intangible gains. This mainly links to building internal and external networks for knowledge sharing, building a community of best practices as well as optimizing processes. Furthermore, the activities and output from The Garage might also result in increased retention of talent and better employee morale, as workers are invited to take part in improving the company.

4.1.3 Roche (Roche innovation Center Copenhagen)

Roche innovation Center Copenhagen (hencefort RICC) was established in 2014, when Roche bought Danish pharmaceutical company Santaris Pharma for a deal worth up to 2.5 billion DKK (Kolby 2014). Santaris Pharma was created in 2003 through a merger of Cureon and Pantheco, and has possessed the sole rights to the exploitation of LNA in pharmaceuticals that can be used across an array of diseases, including cancer (Science Ventures 2007). Throughout the years, Santaris Pharma has been seen as one of the most promising pharmaceutical companies in Denmark with partnerships with many global pharmaceutical companies, including Roche.

The Swiss-based multinational Hoffmann-La Roche AG is the third largest pharmaceutical in the world and the world's largest biopharmaceutical company working across many different segments. Globally Roche employs approximately 94.000 employees across 150 countries, with 18.000 of these working directly with innovation under a CHF9.9 billion R&D budget. It is worth noting that the descendants of the founding families own just over 50% of the voting rights (Roche 2017).

The main purpose of the deal for Roche was to get access to Santaris' LNA-technology and commercialize it to its full potential. After the acquisition Roche decided to keep Santaris' office in Scion DTU, and subsequently RICC became one of seven innovation centers across the world. Today, the unit employs approximately 60 employees, and is continuously investing in its drug discovery and technology platform, which brings together a multidisciplinary team of scientist (Roche 2017). According to Dr. Christoph Franz, Chairman of Roche was to keep the high-performing team with "*very innovative ideas*" and "*scientific entrepreneurship*" (Copenhagen Capacity 2017).

According to literature, RICC can be defined as an external innovation unit (Solis et al. 2015), as it is kept geographically distant from other parts of the organization, as a way to keep autonomy and local entrepreneurial culture.

4.1.3.1 Antecedents of CE

4.1.3.1.1 Top Management

Well aware that future growth and profitable is dependent on a continuous pipeline of products, Roche in general provide great support for CE innovation through large R&D budgets as well as through establishing and providing budget for the 7 semi-autonomous innovation centers. The fact the Roche is also a family-controlled company can ensure a more long-term focus, and in this providing a stronger promoter for CE and innovation (Roche 2017; Rode Hansen 2017; Sakhdari 2016; Yiu et al. 2007). Establishing these innovation centers is a conscious decision to decentralize specific kinds of innovation activities, which can conduct specialized research without the need to balance several different areas. These innovation centers (RICC included) does also not need to commercialize the different innovations, which are feed into the Roche organization at given points in the development cycle. Furthermore, as RICC does not have an independent P&L, and instead just receives a budget every year to be used on research, "*it is more or less 100% innovation*" (Rode Hansen 2017, 05:59).

At Roche, there is also a common understanding that innovations are long-term focused, and that there is room for unsuccessful innovation and subsequent learning. Moreover, RICC has full decision power and autonomy regarding developing on their own RNA platform, although there is a common understanding to research within Roches core areas. However, (Rode Hansen 2017) also states how there still is a latent pressure from Roche for RICC to deliver identifiable wins to justify the acquisition price. This could in theory lead RICC away from more groundbreaking innovations to focus more incremental innovations, which could prove a barrier to CE (Morris et al. 2011).

In order to counter the problem, that "*there are a lot of 'heads' with good ideas, but where should they go?*" (Rode Hansen 2017, 21:26), Roche also have an intrapreneurship program (Solis et al. 2015), and

holds idea generation contests with different focus, where employees and departments are invited and to come up with projects that could be interesting. The employees are also intrinsically motivated by being allowed to spend 10% of their time on so-called “wildcard innovation” and interesting project, while some researchers spend even more time on these kinds of initiatives. RICC even have employees (often specialized scientists), who are not given boundaries in terms of research areas, thus receiving full trust and support for autonomy (Rode Hansen 2017). The fact that there exist specific time structures will indeed promote CE, as per (Lerner et al. 2007).

4.1.3.1.2 Organization

Although operating as a autonomous unit, Bo states how RICC is still subject to more bureaucratic processes as a part of Roche, which makes it necessary for him to engage and spend critical time in the political play, with *"unclear decision matrixes"* (Rode Hansen 2017, 17:48)‘ in a somewhat mechanistic structure. In this, RICC still has to adhere to inputs and requirements from many different stakeholders, which might impede entrepreneurial behavior and slow down innovation processes (Jones & George 2012).

However, the fact that RICC has been set up as autonomous unit on a separate budget has made it possible to retain the autonomous culture and way of working, which (Rode Hansen 2017) sees as one of the most important aspects. In this, *"RICC has freedom under responsibility, and has been promoted to the Champions League"* Bo Rode in (Singh Kailay 2016). The special entrepreneurial culture was an important reason for the purchase by Roche, and while it does not make much sense from a logistical point of view, keeping RICC somewhat autonomous, *is in the long-term about keeping some culture"* (Rode Hansen 2017, 10:09). RICC is also continuously looking into how to improve the culture, and also invites employees to come with suggestions of organizational innovations. This is something that is of severe importance, as *"once the "biotechnicians leave RICC, the culture is likely to leave too. It is hard to foresee the future in regards to the consolidation, and what organization RICC will be in 5 years. (...) Over the last couple of years, we have been able to keep the entrepreneurial spirit."* Bo Rode in (Singh Kailay 2016).

Roche is one of the largest pharmaceutical companies in the world, and subsequently has a major resource and capability base, as well an extensive knowledge management system. This is emphasized by (Rode Hansen 2017) as the large organization can provide resources and knowledge which would otherwise not be accessible. As noted, *Roche gives us access to some different resources, than if we were a independent listed company. Especially, we get access to the knowhow and expertise that is in Roche"* Bo Rode in (Singh Kailay 2016), while *the organization is free from the endless hunt for*

capital, which is [otherwise] a part of being a biotech company". Thus, after RICC was acquired by Roche it has been possible to build up a product pipeline, which would not have been deemed possible as an independent company. After the acquisition, RICC also received funding from Roche for upgrading to "state-of-the-art" research facilities (Rode Hansen 2017). The structure around innovation at RICC is also split into two main areas, namely discovery and research. Discovery is more incremental character; while the research department is making sure Roche will be profitable in the future. This division helps promote ambidexterity at RICC as per (Cantarello et al. 2012), as both incremental and radical innovation is being supported simultaneously.

4.1.3.1.3 Network

Networks are generally seen as important in the pharmaceutical industry, as the issues with exclusivity rights, unpredictable outcomes, competition etc. has forced companies to change business models and engage in various interfirm partnership. Furthermore, mergers and acquisitions are a familiar fixture, while spin-offs and autonomous divisions also are relatively common (Petrova 2014), which the case of RICC is an excellent example of. As collaboration becomes essential, 96% of pharma executives say their companies have plans to collaborate with strategic partners in order to rev up innovation (PwC 2013).

These trends are also evident at RICC, which has several partnerships around various projects, both as part of Roche, but also as a separate entity with partnerships still running from the Santaris Pharma period. RICC is also placed in Scion DTU Science Park in Hørsholm, and are as such a member of large innovation network of smaller and bigger companies placed conveniently within the same area, which should promote CE (Powell & Grodal 2006). A major reason for the acquisition of Santaris was also for Roche to gain access to the Danish science ecosystem, which is seen as particular interesting (Rode Hansen 2017).

However, RICC is currently not seeing the Scion DTU network as a major part and promoter for CE, as least not officially. *"It is actually not a major part (in the way we work), as there is not really much going on, at least not what we have been aware about"* (Rode Hansen 2017, 28:29). However, due to the proximity of companies, most employees build up informal personal and professional networks that has helped facilitate official contact and some sort of knowledge sharing between companies. Bo Rode himself does also engage in several conversations with other companies from Scion DTU, albeit this is not officially facilitated by the network. As such, Bo Rode tells how being in the area indeed brings something to the company, at least in some informal matter. Furthermore, RICC has also made use of the several consultancy companies in the networks, who brings in different resources and capabilities

than the scientists at RICC possess, acting as a clear example of how networks with a wide range of companies are preferable (Street et al. 2007). In regard to this, it has clearly been advantageous that the companies have been next to each other, as it makes it *easier to interact*" (Rode Hansen 2017, 28:29).

Bo Rode also discusses how the facilities at the network Symbion, where Santaris was initially located, invited more for collaboration due to open office spaces and the fact that companies were housed in the same building. In Scion DTU Hørsholm, companies often reside in their own buildings, which makes these 'random encounters' much less likely. However, Bo Rode also notes the difficulties with living door-to-door with- and sharing facilities with somewhat different minded companies, which lead to disagreements. This supports the notions from (Duysters et al. 1999; Chengjiang & Chunyan 2008) on how missing partner fit can eliminate some of the advantages of being in a network. Bo Rode believes that the potential synergies might be fewer for RICC today, as the size of RICC makes it less necessary to share resources and knowledge, while also adding how a bigger company can find it more difficult to navigate partnerships.

4.1.3.1.4 External

The pharmaceutical industry is an industry where the level of CE is highly affected by external factors due to the high dynamics in the industry and role in the everyday society. Firstly, it is evident that the scientific and technological foundation has improved exponentially (PwC 2012). Moreover, there is high dynamism as per (Antoncic & Hisrich 2004), with many incumbent competitors, as well as new ventures, researching to find innovative ways to treat diseases. The pharmaceutical industry is especially attractive to entrepreneurs due to its open access to knowledge, information diffusion as well as possible connectedness to scientific research (Petrova 2014).

The long development cycle to research, test and commercialize the respective drugs has also had a large impact on the innovativeness of pharmaceutical companies. Due to 'limited' patent protection between 20-25 years, companies need to continuously have new and/or improved products in their launch pipe for which they hopefully can have years of exclusivity to help recoup the R&D expenditures. When the patent expires, the market opens up to generic entrants, which often leads to extensive price competition (Petrova 2014). This competitive dynamism might lead the pharma companies away from radical innovations, and toward more incremental innovation that are also easier and cheaper to generate. By having a stack of incremental innovations in the product pipeline, a company can easily switch its support to a new patent-protected drug with minor differences from the original (PwC 2012).

There is also increasing consumer demand for better but also cheaper products resulting in a harder competitive environment. Healthcare payers are imposing new cost constraints on medicines and are more skeptical in valuing new innovative medicine versus the more the economic alternatives (PwC 2012). This trend is not sustainable, and several industry leaders have also lowered their R&D spending. As such, this increasing focus on costs can become a barrier to CE in the pharmaceutical industry. However, many of the big players have simultaneously been experimenting with new R&D structures such as autonomous R&D and innovation units, which can spur creativity and minimize bureaucracy (Solis et al. 2015; PwC 2012).

4.1.3.2 Measuring outcomes

Measuring innovative initiatives is a bit different in the pharma industry, as the development and lifecycle is much longer and uncertain, making it difficult to make initial measurements (Petrova 2014). As such, RICC does not make use of risk-adjusted NPV calculations and the likes per se, as projects simply include too much uncertainty to provide a concrete measure. Instead RICC is working with probability of technical success (PTS), which includes several parameters to measure the probability of success for a given innovation, albeit not the potential economic outcome. In this, Bo Rode also states that many of the economic measurements in the pharma industry are often seen as will guesses and *"quite opaque and always ending at round numbers"* (Bo Rode 36:35). This corresponds with the notions of (Erasmus & Scheepers 2005) in regards to the difficulties of applying traditional measurements in regards to uncertain innovations.

Besides the PTS calculations, RICC is also measured through the number of milestones reached and number of life cycle investment points delivered, in order to monitor that the innovations keep reaching specific stages in the hope that they will one day be commercialized. If a product is launched it will be subject to a more traditional calculation of economic value added versus the initial investments, which is a calculation that will also affect the final price.

By having RICC and the other innovation Centers around the world, there is also many of intangible benefits to be gained for Roche. Most notable is perhaps the fact that retaining a local and autonomous culture will provide higher employee satisfaction, while allowing them to think more freely and proactive. Processes are also expected to be optimized, which can bring value to the company, although this can often be hard to measure (Rode Hansen 2017).

4.1.4 Tryg (The Camp)

The history of Tryg dates back to 1728, where the company (originally named Københavns Brand) was established. In 1911, the name "Tryg" is first mentioned. With approximately 3.800 employees, Tryg is

currently the biggest of insurance company in Denmark, third largest in Norway, and fifth largest in Sweden (Tryg 2017).

Within the last 3-4 years, Tryg has gone through radical changes relating to their innovation culture led by how the organization has been restructured into 3 core areas. The first area is dealing with the core business, the second area is dealing with optimization and development of new products, processes and technology, while the area is an incubation area, where developing and commercializing novel ideas will happen. As a result, Tryg has managed to decrease the launch time of new products from 18 to 4 months (Deloitte 2015).

However, the purpose of innovations is still mixed between generating ideas internally and by acquiring smaller companies. Besides developing a Tryg innovation Business Lab, Tryg has put a lot of effort into being involved in various innovation networks. Tryg is also a member of VentureScout and Startupbootcamp, both working with start-ups, innovation and growth on an international scale. The basis for joining these networks is partly getting access to and ownership of ideas, and partly learning from the innovative and entrepreneurial start-ups (Deloitte 2015).

4.1.4.1 Introduction to The Camp

The Camp is the result of a partnership between Tryg and the industry leading co-working facilitator for start-ups, Rainmaking Loft. Together, they established "The Camp" in October 2016, a concept following the style of Rainmaking Loft (see appendix 6 for a guided tour around The Camp). The Camp is build with a strong focus on networking, and designed as a co-working space for start-ups who can potentially create synergies with Trygs New Business Department, also located in The Camp.

The Camp is located in the corner of Trygs headquarter and has space for 300 people. The Camp is expected to deliver much-needed creativity and alternative perspectives on current and future business models in Tryg. This is also stated in the words of CEO Morten Hübbe: "*The biggest challenge is, without a doubt, securing we enjoy all the richness of ideas that is found in and around Tryg. This in particular requires (...) that we establish the right environments and frames allowing the ideas to grow and mature (...). It may sound easy, but it is actually a challenge we are very serious about.*" (Deloitte 2015, pp.6–7).

Summing-up, Tryg has chosen to establish an innovation unit with the characteristics of a community anchor (Solis et al. 2015), where Tryg has invited start-up's into their headquarters in order to promote a more entrepreneurial culture, while also searching for integration opportunities.

4.1.4.2 Antecedents of CE

4.1.4.2.1 Top Management

The overall intention for The Camp is to be operating autonomously from the core organization. This means The Camp is functioning with a high degree of autonomy, operating in areas not directly related to the core business of Tryg. Managerial responsibilities, and decision making power, is shared between Tryg in the shape of Head of innovation Michael Juhler-Nøttrup (Head of Innovation, Tryg), and Nynne Budtz Christiansen (Rainmaking Employee and General Manager, The Camp). They cooperate in running all daily activities in The Camp, and participate in monthly steering committees with the top management of Tryg (Juhler-Nøttrup 2017). This managed freedom ensures that the activities are still somewhat aligned with the overall strategy (Matthews & Brueggemann 2015), and shows that The Camp has, by having thorough and open communication of all their operations, been able to build up mutual respect and trust in the management of Tryg, as per (Sathe 1985). Over time, The Camp also has gained more power to affect different areas of the core business, as more positive outcome slowly starting to show from The Camp. As a result, the Tryg management and organization building up more support, interest and even pride regarding The Camp (Christensen 2017; Juhler-Nøttrup 2017).

To support this, Tryg has allowed its employees full access to networking and education at The Camp as a way of *"democratizing the access to innovation in the future"* (Christensen 2017, 12:24), showing a clear entrepreneurial promoting as per (Bager et al. 2006) This provides intrinsic motivation to the employees, as they can improve their capabilities while also expanding their knowledge (West & Sacramento 2006) and get exposed to external inspiration (Christensen 2017, 12:24). This will hopefully lead to the ultimate reward: finding a "unicorn" I.e. the innovation that will lead to a future core part of the company's business (Juhler-Nøttrup 2017, 20:35).

As The Camp is an external division of Tryg, employees of Tryg are not directly offered extra time to get involved with the start-ups located in The Camp. However, they are motivated by managers and leaders to swing by the facility and be exposed to the environment, as well as encouraged to talk to members of The Camp. If an idea spur from The Camp or from Tryg's core business, the current system allows employees to pursue the idea, and present it to their managers and potentially develop it further (Juhler-Nøttrup 2017), which can act as a strong promoter for CE (Lerner et al. 2007). From the perspective of The Camp, the autonomy provided to Michael and Nynne allows them to freely use their time to follow any potential start-up or corporate that could lead to cooperation (Juhler-Nøttrup 2017).

4.1.4.2.2 Organization

The placement of The Camp in extension to the head quarters can be seen as a way to promote organic structures within Tryg (Juhler-Nøttrup 2017; Jones & George 2012). The choice of location was to both follow the belief of placing an innovation unit outside of headquarters would ensure a feeling of external inspiration and autonomy for employees, while simultaneously increasing spillovers by placing it within the area of Tryg's headquarter (Juhler-Nøttrup 2017). *"if you really want to make radical innovation, then you have to move out of the existing business, i.e. away from core business. (...) the idea was to bring it [The Camp] in, but gave it the same conditions as if it were external"* (Juhler-Nøttrup 2017, 04:00). This also further supports the strategy of fostering a culture of entrepreneurial thinking, not only in regards The Camp and the start-ups located there, but also Trygs core organization (Solis et al. 2015).

The more organic structure of The Camp is intended to be a 'facilitator of epiphanies' (Christensen 2017). By being physically present in The Camp, the atmosphere, aesthetics, other members, location etc. are all supporting the potential of start-up employees and Tryg employees falling into conversation and creating interpersonal relations and/or being inspired, which ultimately could lead to potential new business ideas/innovations. In general, the intended strategy of Tryg seems to be favouring the more informal aspects of The Camp (Christensen 2017; Juhler-Nøttrup 2017).

As a part of the culture of creating an entrepreneurial way of thinking in Tryg, knowledge is shared both formally and informally amongst members of Tryg and The Camp. Through ongoing steering committee meetings, ideas are assessed and in turn shared downwards in the company to departments/divisions that might find them useful for their specific business area (Christensen 2017; Juhler-Nøttrup 2017). Again, by pursuing a culture of encouraging interaction and knowledge sharing between different individual employees of Tryg and The Camp, Tryg's ability to learn as an organization likewise improves, and further develops the company towards new processes, products, and services (Tidd & Bessant 2014). The sudden inspiration and following development of ideas is highly sought for in The Camp, which also related to the openness towards start-ups being involved partnerships with other companies than Tryg. In this, Tryg seeks to be a first mover and provider of the best offers to start-ups, and the belief is that multiple partnerships increases potential value for Tryg (Juhler-Nøttrup 2017). This follows a more competitive-focused culture of Tryg, seeking direct response to environmental changes by improving industry monitoring and increased experimentation with ideas within Tryg (Zahra 1991).

Despite having more than 3800 employees at Tryg and approximately 20 at Rainmaking Loft in Copenhagen, The Camp is operated by only 2,5 fulltime employees and 2,5 interns, with focus on

utilizing financial and human resources optimally to ensure start-ups can quickly and efficiently can their work. By gathering the start-ups "in-house", the building has seen major renovations, ensuring the facility has multiple conference rooms of different size, a 3D printer, and a lounge-area (Christensen 2017; Juhler-Nøttrup 2017). The large-scale opening and massive PR of The Camp also acts as a promoter for CE, merely by making employees aware of the available resources for CE (Morris et al. 2011; Covin & Slevin 1991).

It is clear that The Camp is a way for Tryg to "the firm's ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments" (Teece 2012; Teece & Pisano 1994). More specifically, The Camp provides Tryg with a unique way to increase their capabilities to sense upcoming changes and opportunities, as frontrunners are located next to them in The Camp. Having the innovation unit working closely with the start-ups, Tryg has also set up a process for seizing these opportunities. Finally, The Camp is expected to be a promoter of a renewal of Tryg's existing assets and competencies to address the new opportunities. The Camp also allows Tryg to engage in exploration, while the core organization can continue to focus on exploiting and improving the current business and its resources. As such, with The Camp in place, Tryg becomes an ambidextrous organization (Cantarello et al. 2012).

4.1.4.2.3 Network

Despite its internal location, The Camp still functions as a innovation network consisting of start-ups possessing competencies in InsurTech-related technical fields. As these have been chosen based on their relevance for Tryg, The Camp are hosting companies with those few specific technologies deemed most essential for the insurance industry in the nearest future. This also means that The Camp has pushed away less obvious types of technology/types of start-ups, thereby decreased the technological width (Juhler-Nøttrup 2017). This is especially important, as the full occupancy of The Camp will demand Tryg to be more selective with the types of start-ups they accept (Juhler-Nøttrup 2017). By being the facilitator of the network, all knowledge and knowhow developed is a potential gain for Tryg, who also has full possibility to continue shape the network in the wanted direction.

Given the focus on specific types of technological competencies the start-ups in The Camp are expected to possess, Tryg has insured a high complementarity of resources in The Camp (Thorgren et al. 2012). The companies represented are involved in high-tech industries such as Big Data and IoT, as well as industries relation to the sharing economy. Key for all start-ups is the potential synergy with Tryg, which links the notions of (Christensen 2008), as it can provide Tryg the flexibility and adaptability of the start-ups. The innovation unit placed within The Camp has a major role in overcoming the various

barriers between start-ups and Tryg, as a mean to increase their compatibility (Juhler-Nøttrup 2017). The success of The Camp has also resulted in Tryg initiating partnerships with other companies as a continuous search for inspirations and business opportunities by allowing them to place their innovation units in The Camp later in 2017 (Juhler-Nøttrup 2017).

4.1.4.2.4 *External*

The insurance industry is facing one of the most critical phases of change within recent years. The Danish industry is characterized by relatively few large actors, such as Tryg, Alm. Brand and Topdanmark, with these three sitting at around 50% market share combined. However, the incumbents still face intensified price competition, which forces the companies to find new ways of minimizing costs or increase value. "Furthermore, almost half (48%) of insurers fear that up to 20% of their business could be lost to standalone InsurTech companies (financial technology in the insurance industry) within the next 5 years. (PwC 2012).

This relates to the continuous development of technology, which can potentially disrupt different kinds of insurance products. For example, self-driving cars might affect the insurance industry dramatically, as the technology improves safety, while also requiring a rethinking of the question of responsibility and ownership. Furthermore, the sharing economy changes the frame of insurances, from solely being focusing on what you own to also including what you use and when you use it (so-called *on-demand* and *pay per use* insurances). Finally, technology allows for new types of insurances, amongst others in digital networks (peer-to-peer), where people get, save and pay together for eventual expenditures, leaving out the middle man (Løck 2016).

The insurance industry faces a change from the traditional few options of standardised insurances towards more personalized and individualized insurances that might even draw big data regarding the health and living habits the of individuals (Wittorff 2017). As technology becomes more sophisticated, an increased number of ethical questions related to the data arises, and insurance companies also need to think the relevance and potential pitfalls of tracking, privacy concerns etc. into their business models. Here Big Data is a major concern, as insurance companies suddenly face the opportunity of utilizing data generated over many years in a fast and effective way, which can potentially changes the entire way of planning in insurance companies (PwC 2012). This will also likely lead to a change in industry regulations, with 88% insurance executives expecting regulatory changes in the coming years (PwC 2012). As such, it is evident that the technological developments that is resulting in increasing consumer demands for new products will act as strong promoters for CE (Antoncic & Hisrich 2004; Morris et al. 2011).

4.1.4.3 Measuring Outcomes

The Camp has yet to finally decide how measure the financial and soft outcomes of The Camp. The Camp has not been operating for long, and currently has the primary focus on creating potential business opportunities from encounters between individuals, as well as change the culture of Tryg towards more long-term oriented goals. Currently, the Camp is actively measuring the number of partnership and the generated revenue from the partnerships, which allows tracking of how The Camp is growing as well as the profitability of the partnerships (Christensen 2017; Juhler-Nøttrup 2017). This kind of measurement provide insights to short-term outcomes, albeit it cannot tell if The Camp is any closer to discovering a unicorn, which is the long-term goal (Juhler-Nøttrup 2017). Thus, the process lead by Michael Juhler-Nøttrup to continuous align and validate the partnerships with Tryg's steering committee and other stakeholders becomes even more important to justify the performance of The Camp, in order to ensure it is congruent with the grand strategy (Zahra 1991).

In terms of the soft outcomes, the launch of The Camp has resulted in a positive change towards the perception of its existence and entrepreneurial culture at Tryg, and employees are starting to show personal interest and pride towards The Camp.

4.2 Cross-case analysis

The following section will bring a cross-case synthesis of the cases in terms of to the current antecedents and promoters of CE, and is as such build on the finding in the previous single-case analyses.

As aforementioned the respective case data does not posses the same level of coverage across respective antecedents, and the overarching groups of antecedents, namely top management, organization, environment and network have thus been chosen as the level for cross-analysis. Below figure provides an overview of the individual cases and the characteristics of innovation units in question.

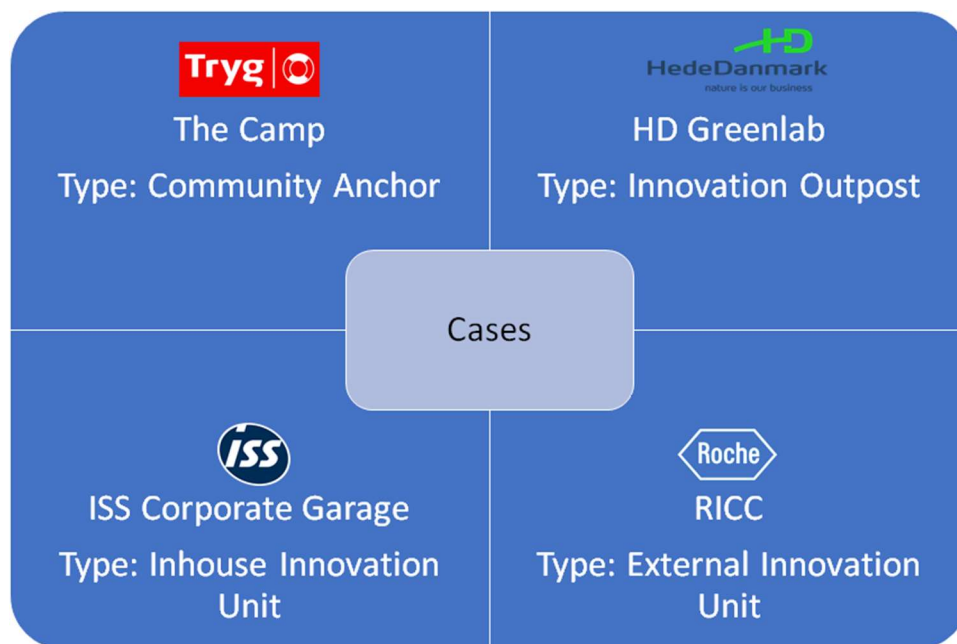


Figure 12 – Overview of cases and innovation unit. Own Production Based on Solis et al 2015

4.2.1 Internal antecedents

4.2.1.1 Top Management

Comparing the level of support that the multiple case initiatives receives from their top management provides an interesting picture of the different effects that top management has on the likely outcome of the initiatives.

HedeDanmark is, and has for many years, been performing well and growing in the Danish market, despite not having an actual unit dedicated to gathering and testing all the ideas generated in the company. Employees have been given time to pursue innovations, which is expected to be continuously supported by HD Greenlab and idea of the month awards (Hansen 2017). By hiring only one employee with a two-year budget for HD Greenlab, it could seem as if the initiative is merely a move from the top management to bandwagon on general trends of investing in CE initiatives and innovation units. Despite

Kristian does possess the autonomy to decide which ideas to follow, it does seem to be the intention of the top management to keep HD Greenlab under the radar (in stark contrast to the other three cases).

The ISS Corporate Garage is also shown great support from the top management of the company, yet with great pressure of valuable outcomes within a short timeframe. As mentioned, The Garage is expected to focus on developing products and services of a more radical nature in contrast to the core organization, which introduces a paradox as transformational and radical innovations will often need a longer timespan of testing and implementing before turning profitable (Riber 2017). As such, it might be the case that many of the radical and transformational innovations from The Garage will not turn profitable within the 18-month trial period as they are more complex and time-consuming. This might lead to focus on smaller incremental innovations in order to get short-term wins and profitability, and can as such end up serving as a strong barrier to CE and ambidexterity (Cantarello et al. 2012). The top management has also allowed employees the extra time to participate in The Garage activities, and if any ideas will be developed by the employees they are to be intrinsically motivated (Riber 2017).

As RICC is allowed continued the same type of research and innovation as it did before being purchased by Roche, it can be easy to believe the top management as being completely supportive of RICC, which is partly true. RICC continues to be placed in Denmark, to sustain their previously developed culture and is highly autonomous to innovate, and employees are even given 10% of their time for "wildcard innovation". The takeover has however resulted in RICC now has some managerial formalities to follow, amongst other delivering financial rapports and other general rapports of performance (Rode Hansen 2017). From organizational point of view, having some degree of control despite trying to keep a decentralized style of control makes sense, as RICC is a part of a greater organization and geographically located far from headquarters. From the perspective of RICC it can be experienced as the top management slows down research through bureaucracy, even though there is still a relatively high degree of autonomy (Rode Hansen 2017).

By securing an alliance with a leading facilitator of co-working spaces in Europe, Rainmaking Loft, Tryg has provided the perfect partner to in terms of knowledge and experience of running projects as The Camp. Furthermore, the top management is providing close to complete autonomy within their budget, providing the freedom to design The Camp to fit the current and future demands for Tryg. For now, all available seats in The Camp have been filled, and it attracts attention from media and other companies, and even improves the employees image of working at Tryg. While the Tryg employees are allowed to participate in The Camp activities, as of yet they are not awarded with extra time or rewards for doing so (Christensen 2017; Juhler-Nøttrup 2017).

All four cases show different degrees of support, which also reflects the different degree of (potential) success of each case. All of the interviewees accentuates the importance of trust and support for autonomy as well as time availability for promoting CE, confirming the notions by (Matthews & Brueggemann 2015; Zahra 1991; Kuratko et al. 2014). However, reward systems is seen as less important, at least in the current phase, albeit both intrinsic and extrinsic rewards are acknowledged as relative to CE, relating to the notions of (West & Sacramento 2006). By relating the cases to the literature, Tryg's The Camp and RICC are arguably the ones with most top management promoting factors for CE. This is especially related to trust and support for autonomy, which is exemplified by the fact that top management has not put up specific deadlines for profitability. This is compared to HD Greenlab ISS Corporate Garage, who have received deadlines for profitability. This relates to the fundamental dilemma of seeking to enhance CE, while simultaneously maintaining corporate control (Sathe 1985; Wit & Meyer 2014).

Another point of interest not discovered throughout the literature review is how all the companies are experiencing different degrees of not only internal support, but also the fact that the support has been externally communicated in different ways. Despite the multi-million-dollar purchase of RICC (Santaris) by Roche, external communicated short-term pressures to defend the investment has been somewhat limited. However, as stated by (Rode Hansen 2017), there is still a more informal pressure to deliver, which could inhibit CE. Conversely are the cases of The Garage and The Camp, where there has been profound backing of the investment in public, putting pressure on the entire initiative to deliver, although simultaneously making employees aware of the resources available for CE. Interestingly enough, HD Greenlab has been kept under the radar, allowing HedeDanmark to cancel the project without losing face in the media, while also allowing work under less external pressure, yet not creating the same kind of excitement throughout the organization as in the other cases.

4.2.1.2 Organization

In line with support of top management, the strength of the organizational antecedent plays a vital role in the success of CE in the cases.

Although HedeDanmark has the ability to provide the lab with a vast pool of human resources, financial resources as well as a culture already being supportive of idea-generation and innovative thinking, HD Greenlab does seem to be strongest case of resources that are not utilized in the initiative. This is problematic as per the notions of (Tasavori 2011; Kuratko et al. 2014; Covin & Slevin 1991), of how the employees perceives the available resources for CE is vital. The fact that HedeDanmark has a long had a clear focus on innovation in their culture poses as a clear promoter of CE (Hansen 2017; Zahra

1991), although it is a necessity that is more clearly integrated into HD Greenlab. However, the strategic choice of having one single employee placed in HD Greenlab seems to be a low investment attempt to further strengthen the culture in the company. Despite the hands-on knowledge they expect Kristian Tarp Hansen to obtain from visiting the various sub-divisions of the company, it seems unlikely that he himself will hold the resources to perform the full process of gathering, evaluating, testing and distributing all ideas solely on the basis of his competencies and small start-ups in the Science Park. Refereeing to the notions of (Sakhdari 2016), it can be expected to be difficult for Kristian Tarp Hansen, as a single individual placed far away from the headquarter, to make radical changes in the culture of HedeDanmark, limiting the absorptive capacities of HD Greenlab.

The fact that ISS is a major company with multiple divisions spread around the globe makes the success rate of The Garage lower to succeed than had the company been smaller (Jones & George 2012). The organizational systems for knowledge sharing developed to create a community, intended to connect all the innovative workers and their knowledge throughout the organization, are mainly operating in English. This directly reduces usability for a large part of the organization, strongest in the company's south American and Asian regions. ISS has provided The Garage with both resources and power to have people flown in from offices around the globe, and will most likely be successful in implementing some valuable innovations from one particular market into larger parts of the organization. However, due to the language and cultural barriers as discussed by (Riber 2017), it might be the case that the community and culture initiated by The Garage will mainly be restricted to similar countries, while successful implementation in other countries will demand additional resources for internal knowledge management and sharing as discussed (Tidd & Bessant 2014).

If the top management can be viewed as slowing down the work of RICC in terms of bureaucracy, they improve the performance in terms of providing sufficient resources to RICC. RICC enjoys the benefit of Roche's resources and capabilities, and in general they face the most favorable situation of all the four cases, with access to both human and financial resources that previously was not available. Also, the unique culture that has developed in RICC prior to their acquisition has been left practically unchanged as to continue the process that RICC has developed. This is however one of the factors that is likely to be changed the most should RICC not meet its objectives (Rode Hansen 2017).

In style with their supportive top management, Tryg seems to have the right set of organizational antecedents backing The Camp. While already having a clear focus on innovation, Tryg has furthermore ensured sufficient resources has been spent on securing the right premises for The Camp to be as successful as possible, including the hiring external experts on innovation and co-working spaces, and

on completely renovating their facilities to create the optimal environment for innovation and knowledge sharing. According to Michael (Juhler-Nøttrup 2017), The Camp has already impacted the culture of Tryg in a positive way. The fact that The Camp has experienced a lot of positive PR about their "innovativeness" also seems to have a self-reinforcing effect on the culture, as employees buy into Tryg being an entrepreneurial organization with room for experiments and creativity. However, it will be interesting to see to what extent this will continue, and how the culture will be affected once The Camp reaches some kind of maturity. The best fitting 25 start-ups have been found and settled in, which means the turnover rate of companies in The Camp will be decreasing, and it is expected that Tryg and the start-ups will enjoy the benefit of improved collaboration due to the longer relationships, as relational capital can promote CE (Thorgren et al. 2012). However, it might be the case that The Camp will reach a state of daily routine, which means that the employees of Tryg will already have met the start-ups, seen the facility etc., and the excitement and cultural change might fade. Thus, Tryg needs to continuously refine and improve The Camp in order to keep it attractive and "new" in the eyes of Tryg employees.

Common for all four cases is the fact that they are large companies possessing vast resources and capabilities, which provides solid foundation for successfully doing CE as per (Tasavori 2011; Kuratko et al. 2014; Covin & Slevin 1991; Zahra 1991). All interviewees emphasize the importance of resources as well as an entrepreneurial culture confirming the notions from literature, albeit not all the initiatives have the same level of access to these. However, the cases also show that while some choose to rely more explicitly on their own resources, i.e. The Garage and RICC, others choose to support their own resources with external expertise, such as HD Greenlab and Tryg. The way that networks support resources and capabilities of the firm will be discussed in the following section.

4.2.2 External antecedents

4.2.2.1 Network

While all case companies are engaged in some form of networks and see the importance of these for promoting following the literature (Sakhdari 2016), their approaches as well as the apparent dependency on networking are very different. The companies with the most focus on networks, is clearly HedeDanmark (HD Greenlab) and Tryg (The Camp), as they have chosen to place their innovation units directly within networks, namely Cortex Park and The Camp.

HD Greenlab has chosen to locate Kristian as a sole employee in Cortex Park. This forces him to interact with the network on a daily basis for complementary resources, as he does not have any other internal resources available. Furthermore, it allows him to integrate more deeply into the network as an

individual, less related to the bureaucracies of a company. Lastly, and perhaps most important, it removes him from the more bureaucratic, rigid and exploitation focused headquarter, to a network of young students and entrepreneurs (Hansen 2017). However, this also poses some disadvantages, as the organization as a whole is separated from the innovation network, with only Kristian as a promoter and gatekeeper of the knowledge generated in the network. Thus, it will undoubtedly be the case that many HedeDanmark employees will not be exposed to the knowledge sharing and culture from the network, which could allow them to otherwise become more entrepreneurial (Solis et al. 2015).

ISS, has less focus on the external network aspect of The Garage. The Garage itself is located next to the ISS headquarters, and is as such the only case not placed physically in some sort of innovation network. Although networking is expected to play part in The Garage activities, as stakeholders are invited to participate in events, ISS is still the company with the least focus on networks. However, this seems deliberate, as the main purpose of The Garage is to create an internal knowledge sharing network first, which has not existed so far. Also, it should be noted that ISS is indeed active in partnerships with customers on-site to improve service, albeit this is on more local levels and can as such not be considered corporate partnerships per se (Riber 2017).

Tryg has chosen an interesting model by placing The Camp and their innovation unit in extension of Tryg's Headquarter, and as a result seem to be the case with most network promoters for CE, as the spillovers are higher with this kind of network (Solis et al. 2015). Here, it is highly interesting that Tryg has created their innovation network themselves, and as such becomes both the facilitator and participant of said network. This allows Tryg to carefully select the members and directly determine and shape the foundations of collaboration without having to rely on any external mediators. For example, it has been a deliberate choice to invite start-ups, as these are expected to bring a more entrepreneurial culture that can hopefully flow into the Tryg organization. In this, Tryg also has a much larger stake in the success of the network, which also provides Tryg a much larger motivation and opportunity for knowledge sharing (Sakhdari 2016). From the interview with an employee from Tryg, it seems clear that The Camp has indeed started a slow transformation of the culture at Tryg, as other employees are already starting new and potential profitable initiatives with the start-ups (Kjærsgaard 2017). Additionally, as a "next step" The Camp will also be to invite other Corporate Innovators to reside at The Camp, which will hopefully provide another interesting aspect to The Camp and its culture. However, it should be noted that this way of networking is also risky, as it can potentially lead to conflicts due to lack of compatibility between the culture of Tryg and the culture of the start-ups gathered under one roof; according to Michael this has not happened. Furthermore, the development of

The Camp pushes in a direction where the partnerships might face possible conflicts in relation to ownership of ideas, sharing of technology and company secrets between partners.

Roche is part of the Scion DTU network by being located at an independent domicile at the Hørsholm Science Park. However, it should be noted that this location might be due to sheer convenience and the historical placement of Santaris Pharma, as the Scion DTU network does not seem as a major promoter for CE (Rode Hansen 2017). RICC only engages in a few self-mediated partnerships with complementary companies in the innovation network, and not in many Scion DTU mediated events and matchmaking sessions. Nonetheless, RICC is still in several partnerships with other companies, as well as more informal networks, as this is seen a necessity in order to stay on-top of new research and have access to complementary resources (Rode Hansen 2017). Ultimately, there is some form of knowledge sharing, which can promote CE (Sakhdari 2016; Powell & Grodal 2006).

Linking to the notions of (Solis et al. 2015), the cases raise an interesting point on whether to be placed inside, outside or even facilitate a network oneself, and whether or not the participants should be the whole company, a department or a single employee. There are undoubtedly advantages and drawbacks with all models as discussed in the literature review, which might also fit some companies better than others ultimately depending on the wanted outcome. For example, is it a deliberate wish to have the network flourish through the whole organization, and have a more general impact on all employees, or is a deliberate wish to have a clear separation of who deals with the networks. Unfortunately, it is too early to bring a conclusion regarding this on the case companies, although all the companies seem to be content with their way of networking. Here it is also important to mention that all the case companies clearly highlight the importance of networks, especially with start-ups companies, in promoting innovation and a more entrepreneurial culture, with all the interviewees seeing this as an area they would like to improve going forward.

4.2.2.2 Environment

While all the companies are profitable market leaders in their respective industries, they are still seeing pressure from the external environment, which acts as strong antecedents for promoting CE (Antoncic & Hisrich 2004). Put shortly, it is unlikely the case companies would have considered their strong promoting of CE, if their external environment had been less dynamic.

A big factor for all companies is the fact that technology is rapidly ‘changing the way of doing things’, and is forcing the companies to stay up-to-date to compete with other incumbents or new entrants driven by technology. In the cases of HedeDanmark and ISS robotics and smart-solutions are changing the industry, Tryg is seeing competition from the so-called InsurTech, while Roche is constantly finding

new tools and knowledge to perfect their research. However, of the case companies it is HedeDanmark that stands the strongest in their competitive landscape with somewhat monopoly in some markets and areas. Ultimately, this can become a barrier for pursuing CE and innovation (Antoncic & Hisrich 2004).

Furthermore, all companies are all seeing increased and different consumer demands for products, albeit in different ways. HedeDanmark and ISS are seeing demand for more innovative, cheaper and technology-enabled solutions, Tryg is seeing demand for more customized and future-proof insurances, while Roche is seeing demand for innovative yet cheaper solutions to diseases.

Through newly established processes, HD Greenlab, ISS Corporate Garage and Tryg The Camp have a major role in exploring external changes and opportunities and finding ways to make sure that the respective organizations are able to exploit these in a more outside-in perspective following the notions of (Day 2011). On the contrary, while RICC is seeing extreme pressure from the environment, the research and innovations themselves comes mainly from inside-out by exploiting its resources through the use the use of the LNA technology platform and other research facilities, which links to the notions of (Barney 1991).

4.2.3 Measuring outcomes

Although all the case innovation units see significant support and pressure from top management, most of the respondents were quite unclear in how they will be measuring their activities, which also links to the fact that all innovation units expect RICC are recently launched. Thus, RICC has more clear measuring KPIs, although these are not directly linked to any economic value, due to the nature of innovations within the pharmaceutical industry. ISS, Tryg and HedeDanmark have more 'soft' KPIs in terms of ideas generated and tested, number of employees engaged etc. Most KPIs also relates to the ideation phase of CE, as the process and responsibility of commercializing the innovation is still untested. It should be noted however, that the cases have set up different forms of financial KPIs, albeit they are somewhat undefined. Currently, the financial KPIs include growth factor of projects (HD Greenlab), revenue generated by new ideas and cost of failure (The Garage) as well as revenue generated by partnerships (Tryg The Camp).

Although the other three cases are fairly new, it is still interesting that the final KPIs and measurement system has not been agreed upon initially and still are being discussed. Measuring the outcomes as well as putting up somewhat clear boundaries and targets is obviously necessary in order to make sure that the mandate is clear, while an initial mutual understanding will undoubtedly ease processes going forward (Solis et al. 2015; Zahra 1991).

This also relates to the misfit between short-term measurement tools and goals, and the long-term horizon of the CE initiatives, making it difficult to verify and measure results (Morris et al. 2011). This however problematizes their situation, as The Garage and HD Greenlab are presented with challenges from top management to deliver within a relatively short-time span in order to survive, which will likely lead away from the more entrepreneurial and radical innovations initially proclaimed. Thus, this somewhat breaks with the initial ideas behind the innovation units, as they quickly become subject to the same bureaucracy and short-term focus as the rest of the organization.

4.2.4 Summary of cross-case analysis

Below model is a visual representation of the cross-case analysis through the researchers external frame of reference, which seeks to provide a quick overview of the different focuses and level of antecedents in the given cases. Points has been given on a scale from 0 (very weak) to 100 (very strong) based on the researchers perception building on the case interviews and collected secondary data.

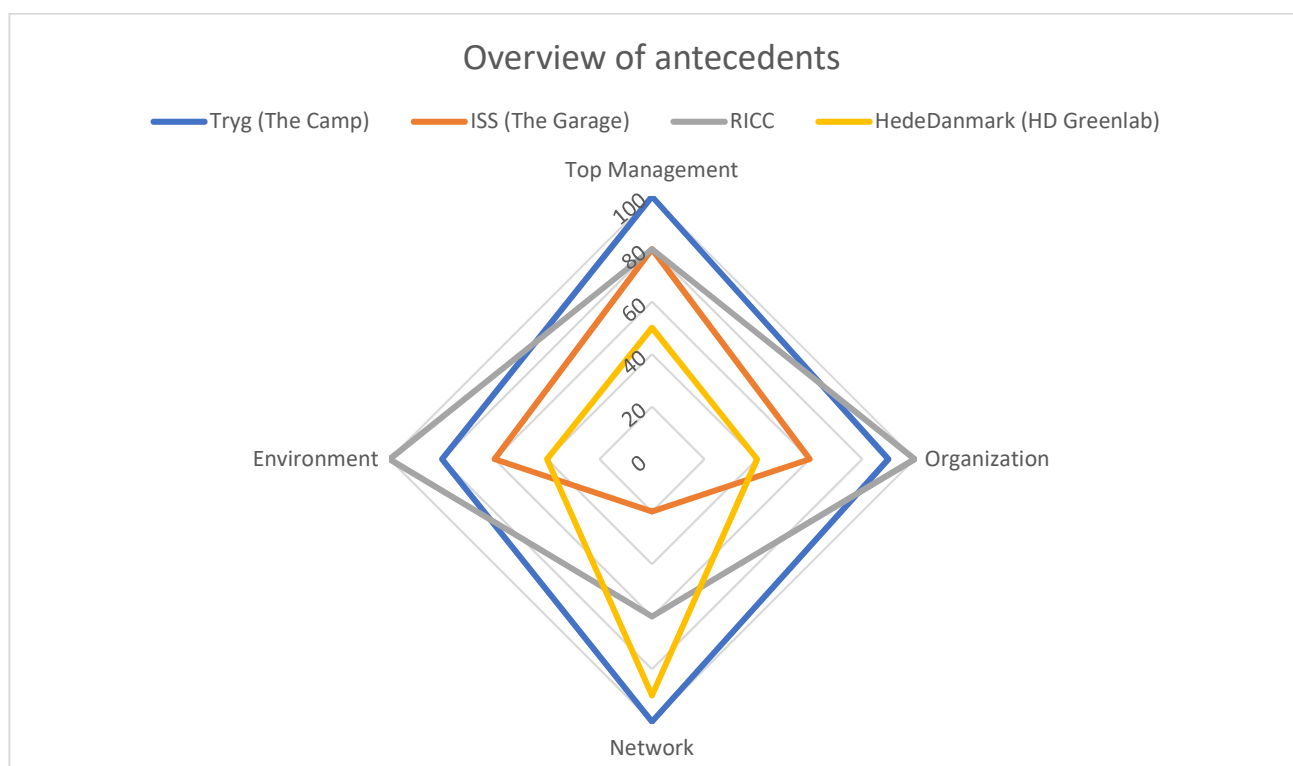


Figure 13 – Overview of antecedents in cases. Own Production

The main outtakes from the cross-case analysis can be summarized in below points:

- Although all companies are large multinational companies they have chosen different approaches to promote CE to adapt to the dynamic environment, with focus on enabling different antecedents.

- All case innovation units except RICC has recently launched with great expectations, and are transitioning from their infancy.
- Common for all the cases is a wish to create a more autonomous unit, where there is time and resources for entrepreneurial and more radical ideas to be generated and collected.
- The innovation units all have an important role in promoting an entrepreneurial culture in their organization, which differs between a more direct aim at changing the culture (The Garage and The Camp), and less focus on actively changing the culture (HD Greenlab and RICC).
- A big differentiator in the cases is the physical location of the respective innovation units and their proximity to network facilities. This is directly intertwined with the type of innovation unit created. Here Tryg, is the first company in Denmark to invite start-ups to reside at their headquarter.
- The companies with highest level of antecedents across the categories is be Tryg and RICC, closely followed by ISS that however scores low in regard to network antecedents.
- HedeDanmark is the case with the fewest antecedents, as top management-, firm-, and external antecedents are relatively low. However, HedeDanmark scores high in terms of network antecedents due to the placement at Cortex Park.
- HedeDanmark is the only case company to already have a fully functional and commercialized innovation due to the initiative. ISS and Tryg are still at the testing stages, whereas RICCs longer research cycle means that potential innovations are still years away from commercialization.
- The innovation units of Tryg, ISS and HedeDanmark does not have a final measurement system in place, and much of the current measurement is based on non-financial measures. RICC has final measurements in place, albeit the focus is on technical probability and not on financial profitability.
- There is a risk that the innovation units will be forced to focus more on incremental innovation in order to satisfy top management short-term, especially as KPIs are not finally defined. This is especially the case with The Garage and HD Greenlab, which has a clear deadline for profitability.

4.3 Innovation Networks

Due to the very different characteristics of Danish Food Cluster and Scion DTU, a direct comparison of the network has not been deemed possible (dispersion of innovation networks members illustrated below). Thus, the following section will deal with the networks independently. This will be followed by synthesis in regards to measuring networks effect, with the two investigated networks as point of reference. A synthesizing of the main findings will be included in the discussion in regards to chapter 5.

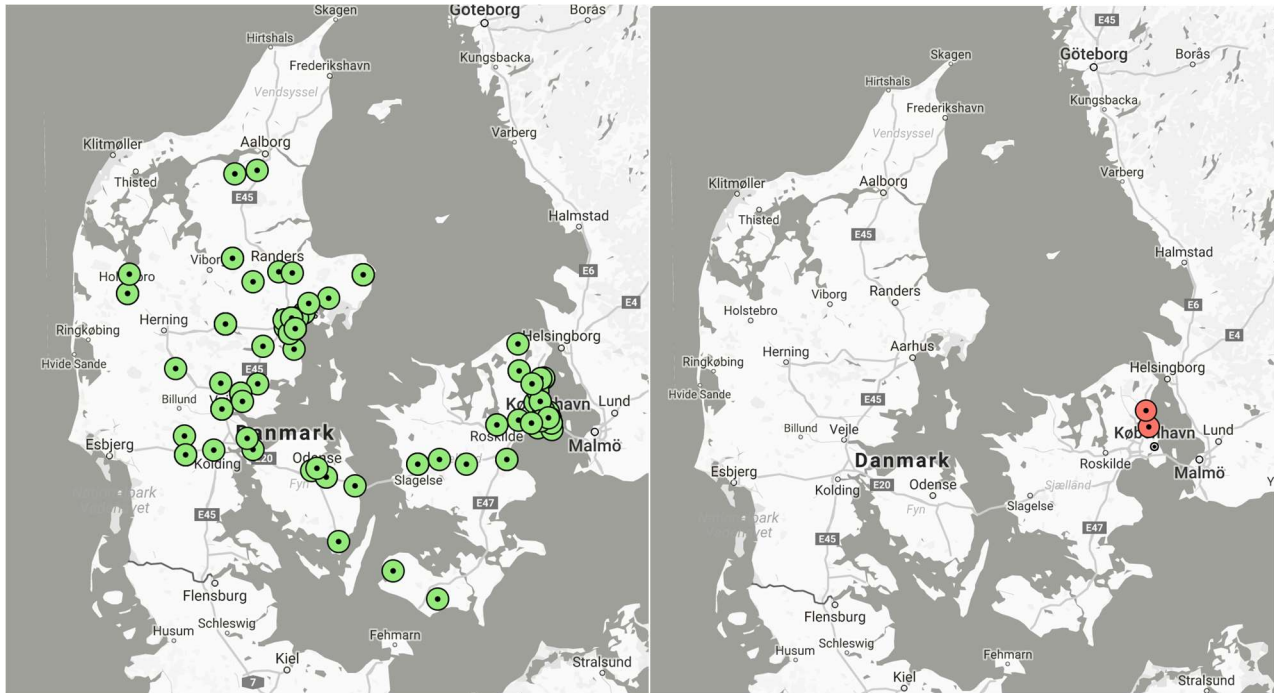


Figure 14 – Comparison of company locations in Danish Food Cluster (Green) and Scion DTU (Red)
Own Production

4.3.1 Danish Food Cluster

Danish Food Cluster is currently the leading innovation cluster within Food innovation in Denmark, and seeks to empower business, academia and public institutions to achieve more innovation by pooling resources through cooperation. More specifically, the network provides a platform for companies to gain visibility and networking contacts by “bringing industry and talent together, while also being presented with relevant events within respective fields to act as inspiration for future initiatives (DanishFoodCluster 2017).

The cluster represents approximately 75% of the turnover in the Danish Food Industry and includes more than 135 members including companies, universities and other knowledge institutions (von Undall 2017). The major part of the members are companies from the food industry, ranging from small start-

ups to large companies such as Arla, Chr. Hansen and Novozymes. While the members all somehow relate to the food industry, they are focusing on different and often supplementary aspects, such as manufacturing, consulting, packaging, technology, retail etc. As of Sep 2014 (DanishFoodCluster 2014), 66% of the members were SMEs, 18% large companies and the remaining 16% were public institutions or private knowledge institutions (see appendix 8 for list of companies). According to the notions of (Street et al. 2007), this wide range of firms should be a promoter of innovation.

4.3.1.1 Analysis of Danish Food Cluster

The fact that the network was based on the specific demand of a critical mass of 70 smaller and larger Danish companies indicates high level of ambition and active pursuit in the network. As opposed to have a public institution create and facilitate the network, Danish Food Cluster is running without any governmental support (von Undall 2017).

Thus, the companies seeking to be part of network have to pay a fee, with the price being based on the size of the company (amounts of employees). Danish Food Cluster charges minimum 2.500 DKK for smaller companies, up to 30.000 DKK for companies with 100 employees or more, making it more attractive for Danish Food Cluster to attract bigger companies to the network. However, Danish Food Cluster is constructed as a diverse network that provides openness and opportunities for both aspiring start-ups and incumbents, stating that *"we would really like to have some of the big ones. (...) but if you look at our members, 60% are small- and medium sized companies"* (von Undall 2017, 12:18). Beside the apparent network benefits, especially the smaller companies enter Danish Food Cluster in order to gain visibility.

(von Undall 2017) sees the biggest barrier for innovation as the fact that companies keep much of their knowledge secret, which hampers rather strengthen the network. This is why the network initiate arrangements to overcome these barriers, most prominently through the roundtables and various events held during the year. These provides every company with a voice, giving opportunity for some to learn and others to teach, idea generation as the discussions move along, as well as improve the unity in the network. On top of these events, Danish Food Cluster is also continuously seeking to matchmake members with one another, where they see a potential for partnerships.

Linking to mutual communication between companies is the focus of Danish Food Cluster on their communication towards the companies in the cluster. Despite having headquarters in Agro Park in Aarhus, the companies in the network are spread out all over Denmark. The geographical distance makes it harder to create personal relations between people (von Undall 2017, 32:36). Thus, Danish Food Clusters host several events throughout the year, where network members get the chance to meet each

other and build personal networks. This includes one annual major event (the general assembly), where all almost members participate, as well as several smaller events around the country. These events can also be hosted at member locations, giving them a chance to gain visibility within the network and suggest topics for discussion. An example of the way that companies are collaborating to promote innovation will be evident with the InnovateFood conference in end of august. Here network members and other stakeholders will be invited to participate in a two-day long open innovation challenge that draws on innovation challenges from 12 companies. This includes keynotes with companies and researchers, network opportunities, and most prominently a case competition where some of the larger members of Danish Food Cluster (e.g. Arla and Chr. Hansen) presents challenges for other members as well as students to solve (von Undall 2017). However, referring to notions of (Sakhdari 2016; Powell & Grodal 2006), the lack of a shared physical location, reduces the potential power of the network, as it diminishes the potential epiphany effect and ability to interact that is possible by having companies door to door. Danish Food Cluster is in general focusing more on the role of facilitator of events and online information sharing (von Undall 2017, 41:42), thereby expecting the companies and their employees themselves to engage in conversation at events.

As Danish food Cluster is an industry specific network (even more niche than, for instance, Scion DTU), this provides ground for stronger ties and compatibility between the companies in the network than companies in broader reaching networks. This common knowledge of the industry will likely make bridging projects between companies easier to initiate, due to high partner fit and compatibility (Thorgren et al. 2012). Nonetheless, it has been the intention to add a wide-range of different resources and capabilities within the network that for example houses food innovators, food manufacturers, marketing agencies, packaging agencies, retailers etc., covering the whole value chain. The cluster is directly analyzing " *who are missing, and who are some of the competent players that can make the cluster better and stronger*" (von Undall 2017, 13:00), and if any type of company is deemed 'missing' or requested from network members, Danish Food Cluster tries to approach potential new members. Adding to this is the strategical decision to create the network as a triple helix consisting of the government, academia and industry (von Undall 2017). The *government* is represented by several Danish ministries and municipalities, 3 out of 4 of the major Danish Universities represents *academia* as well as the *industry* by more than 100 companies (see appendix). By being in direct cooperation with both of these public institutions, the companies can to broaden their network even further, potentially easier access to resources such as students and researchers.

This is however paradoxical, as the concentration in one specific industry can neglect the possibility to draw inspiration and create partnerships across dissimilar industries. For now the network has been

dominated by companies from the food industry, and while Danish Food Cluster is directly pursuing an expansion of the network, there is still some way to go. For instance, Danish Food Cluster is also pursuing partnerships directly with other networks, which can provide complementary resources to the network. As such, Danish Food Cluster seeks engaging in a sort of innovation network ecosystem (Curley & Salmelin 2013), where it is not only the companies that engage in networks, but actually also the networks themselves. In this, networks can be seen as acting like unified collective entities partnering up to get access to complementary resources on behalf of all its members.

4.3.2 Scion DTU

Scion DTU was established by the Technological-Scientific Research Council of Denmark in 1962, as only the third science park in the world. In 2004, Scion DTU merged with the Technical University of Denmark (DTU) and became Scion DTU, covering approximately 200.000 square meters, 250 Danish and international companies and more than 3000 people. These are positioned at two different locations, with 110 companies in Hørsholm and 140 companies in Lyngby (See appendix 9 for list of companies). The science park in Lyngby is catered more towards smaller companies and start-ups, while larger companies are situated in Hørsholm in their own domiciles.

The philosophy of Scion DTU is to offer the best possible environment for high-tech entrepreneurs, and promote engagement between SMEs and companies. As such, there is also much focus on bridging between diverse and complementary companies, knowledge sharing to create an innovative and fast-moving environment, and financially stronger companies seeking opportunities to expand their operations. Besides offering offices to start-ups/companies, Scion DTU provides mentoring, laboratories, prototype workshops as well as strong connections to human resources from DTU.

Scion DTU is currently housing more than 40 companies involved in technological industries such as biotechnology, 20 in development of medical equipment, 30 in robotics and other high quality technologies, 15 in Cleantech, and more than 40 companies in ITK (app, platform, software etc.). These companies includes both small start-ups and big companies such as Siemens, Chr. Hansen, Roche and Danfoss.

4.3.2.1 Analysis of Scion DTU

As mentioned, Scion DTU has many different types of companies and institutions residing, both in terms of firm sizes as well as expertise, aiming to have a "*balanced portfolio*" (Donner 2017, 14:50).

However, the original focus has been on entrepreneurs by offering network activities with companies, technology events, as well as mentoring programs. However, Scion DTU now also seeks to cater more

to companies, as they will be able to bring in lots of expertise and resources in the network. Nonetheless, it has been a challenge to attract and engage the larger companies, albeit some are indeed present.

Steen Donner foresees that partnerships between smaller start-ups and larger companies are especially needed within the biotech industry, with a main trend being how larger companies can help minor players commercialize their products by *"using them as a channel"* (Donner 2017, 02:12). This is not only seen through more traditional partnerships, but also through cases where major companies actually acquire minor players in order to access their technology, and commercialize the products themselves. As a majority of start-ups not have the capital to go to market, this is a particular popular model (Donner 2017).

Steen Donner believes that companies will benefit from engaging in networks such as Scion DTU, as it will provide an environment that will help them *"in all the areas where a corporate is too big and too slow"* (Donner 2017, 04:36). Furthermore, you will be next to other companies, researchers and students with an incredible resource pool that might complement your company. Especially interesting is the fact that these kinds of networks can help provide inspiration and serendipity by just witnessing a start-up pitch, randomly meeting interesting people and building up your personal network informally. This links to how (Burns 2013) sees a clear link between innovation and connectivity, in how formal and informal social processes can help inspire people and bring about innovation. Thus, Steen Donner believes engaging in a network is more useful than establishing more independent innovation units in a location without network, *as they need to be in a environment, with 'other start-ups', where they can get inspiration"* (Donner 2017, 07:25). As Steen Donner puts it: *"it's easier, faster and cheaper to innovate in Scion DTU"*. However, he also states that companies might grow to a certain size, where the network environment becomes less relevant for them, as the growth of a company often leads to more focus on getting the internal organization in place. Yet, Steen Donner sees many companies that deliberately choose not to expand the amount of employees they have, as utilizing the network at Scion DTU is often cheaper and more flexible than hiring more employees. This supports the notions by (Burns 2013) on networks can help growing organizations to still stay small and flexible.

As a new initiative, Scion DTU will be running the inside-out project, which puts focus on working with potential spin-off projects from larger companies. This project has been established, as Scion DTU believes many companies lack the resources or time to focus on initiatives that are far away from the core business, which can be countered by integration into the Scion DTU environment. These ideas will be temporally spun-off from the company, and run as flexible autonomous start-ups within the network

for a longer period, while feeding resources from the company. This is a way to ensure flexibility and a more ambidextrous approach to innovation for companies, and is a more concrete way for companies to improve their innovation and venturing effort, and relates to notions of (Christensen 2008) on how larger companies can benefit from testing innovations in smaller and more flexible companies.

In general, Steen Donner explains how Scion DTU will be more active in facilitating network and innovation in the future, both amongst start-ups as well as for larger companies. Currently, some of the companies in Scion DTU are merely renting the office space, and not using it as an innovation network per se. However, going forward Scion DTU will seek to create different office sections, where ambitious companies might be shuffled around to facilitate even more networking as well as inspiration while also setting up projects targeted more towards companies as with the inside-out project. This will also mean new facilities and buildings constructed with innovation and networking in mind, while hopefully more larger companies will set up departments in Scion DTU. The fact that larger companies are less inclined to participate formally and share knowledge in the networks might link directly to their ability, motivation and opportunity for knowledge sharing as discussed by (Sakhdari 2016). The opportunity to knowledge share is clearly present in the network while companies are also expected to have clear abilities within the areas in question; however, the motivation for larger companies can be expected to be lower due to the many internal resources available.

Finally, it is interesting to examine the types of companies in Scion DTU as per (Thorgren et al. 2012) notions on complementarity and compatibility. Firstly, companies can be seen to have a high resource complementarity, as most companies are very specialized in different niches, and thus have limited resources and expertise in other areas where other network companies complement, including financial resources. However, in terms of compatibility there might be a clash between start-ups and companies, due to the differences in culture, time-horizons, management style, expectations etc., which is something that all parties and especially Scion DTU need to consider in their network activities. As mentioned, partner fit is essential for obtaining the benefits of innovation networks, otherwise potential conflicts might arise that can hurt the overall network (Duysters et al. 1999).

4.3.3 Measuring the network effects

Both networks are actively trying to measure and improve the network benefits through surveys and ongoing discussions with partners (Donner 2017; von Undall 2017). This is seen as a necessity to make sure current members are content and retained, as well as optimizing the network to attract new members. Mette for example tells how Danish Food Cluster holds recurring meetings with key members

to ensure their future backing, and provide them a part in determining the future direction of the network.

Both networks have annual surveys in order to analyze the success of the network and the participating companies. Scion DTUs own research from 2016 shows that 59% of the companies collaborate with other companies within Scion DTU, while 56% work together with DTU students or scientists. In regards to innovations, 81% of the companies have launched new products, while also having issued 151 patents. Furthermore, 72% companies have grown in the recent year, with 62% saying they believe being at Scion DTU has a part in this growth (ScionDTU 2016). Actually, Scion DTU shows evidence that companies in Scion DTU grow more than average Danish companies, which could confirm the notions from research that networking with high resource complementary is indeed favorable for CE and growth (Teng 2007; Antoncic & Hisrich 2004). However, this can be questioned as per (Powell & Grodal 2006) notion on how innovative and growth companies are more likely to enter networks in the first place, which might also be a reason for the higher innovativeness within Scion DTU.

In the Danish Food Cluster survey, the companies at Danish Food Cluster rates the network 7.5 (On a scale from 1 (strongly disagree) to 10 (strongly agree)) in activities relating to innovation, such as the round tables and other cooperation initiatives, while 77% says that maximizing innovation by facilitating interaction between companies through the network is valuable. As such, the members follow the literature in perceiving networking as a promoter of CE. However, organizations only rate 4.8 in the question regarding whether the organization has experienced increased innovation during the membership, which can not be not seen as satisfactory. Nonetheless, while the authors of this thesis do not have access to the raw data behind this survey, it is to be expected that some companies give very low scores, as they are not using the network for innovation per se, while others see a significant gain. Finally, 92% answers that they find network and knowledge sharing valuable, with 64% answers that their networks have increased during their membership of Danish Food Cluster.

5 Discussion

The following sections seek to discuss the findings from the literature as well as empirical data, as a mean to provide answers to the sub-questions of this thesis. These will subsequently lead to the conclusion in chapter 7. The progression of the discussion in relation to the research questions is illustrated below.

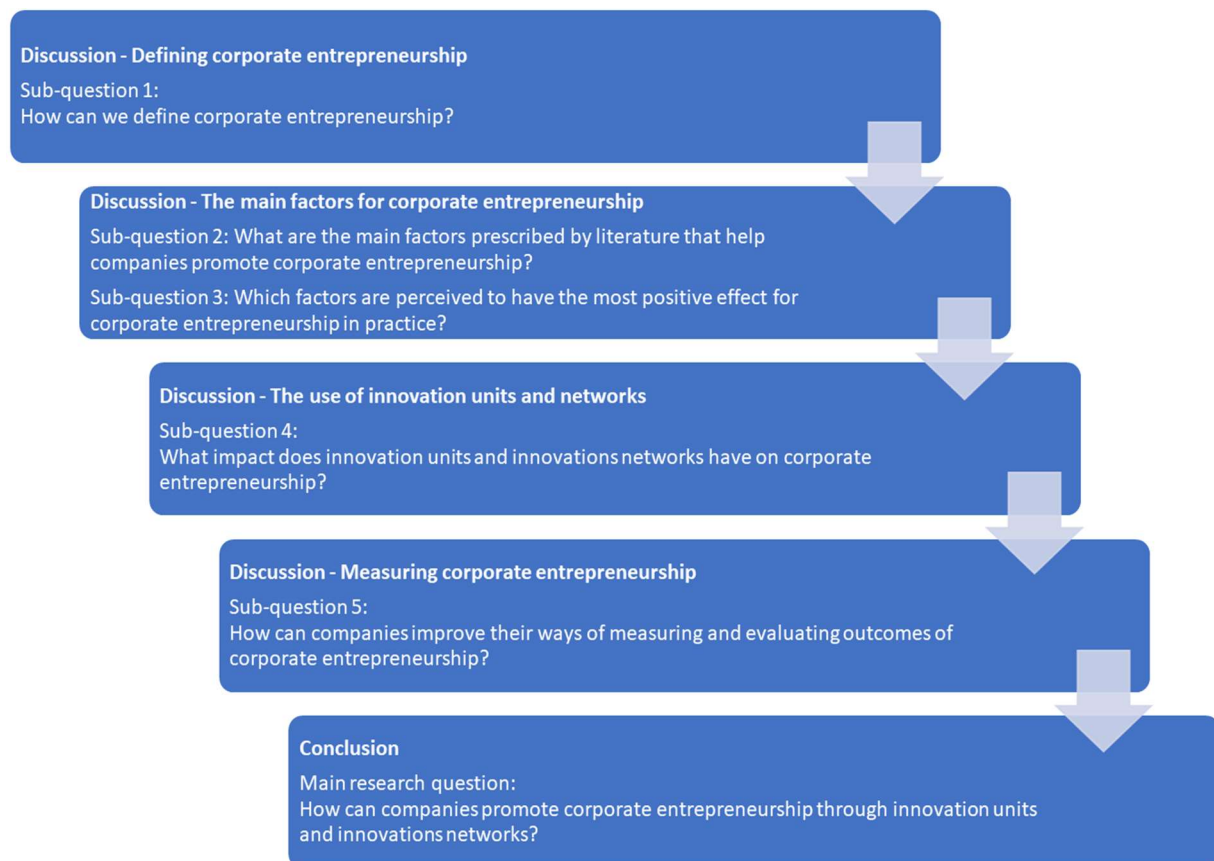


Figure 15 Progression of discussion. Own Production

5.1 Defining corporate entrepreneurship

The concept of entrepreneurship has seen an interesting development through time, since being brought to fame by Joseph Schumpeter, and one of his biggest critics Israel Kirzner. It transitioned from focusing on the individual as main driver behind entrepreneurship, towards being a activity within organizations that has been linked to increasing profitability and competitiveness, referred to corporate entrepreneurship (Zahra 1991). It also developed from focusing on radical innovations and their destructive effect on the market (Schumpeter 1934), towards more incremental innovations aimed at an imbalance in supply and demand (Kirzner 1973), and back to a more balanced mix with much focus on reaching ambidexterity. With the growing interest in the field, academics have developed an increasing

number of alternative definitions of CE, and while often relating to the venturing, innovation and strategic renewal efforts of a company, a universal definition has yet to emerge. Thus, companies should be aware of the different approaches to CE, as they (as presented in this thesis) can cover wide ranges of different notions, which likely can be affective on the success of a given CE initiative.

It was expected that all the case companies would have had some sort of predetermined definition of CE that they would use as foundation of their respective initiatives. However, neither of the companies seems to be directly working with the notion of CE. Rather, focus is concentrated on 'innovation' and "being innovative; a term that is used as an all-encompassing term covering the entire process from ideation, prototyping, testing, and all the way up to the point where innovation is developed and commercialized. Furthermore, innovation might have turned into somewhat of a buzzword (O'Bryan 2013; Gartner 1990), and while many companies seek and claim to become innovative, they often lack full understanding of what becoming innovative requires. In this, companies often claim to launch innovative projects seeking to develop new and radical products or services that will transform the company into a market leader, boosting competitiveness, brand value, and profit. Nonetheless, many innovations may not become successful even if they enter the market, while the aspiration of radical innovations often turns into incremental innovations, or continuous improvement of already existing products (Gourville et al. 2005).

However, CE is more than just innovation, as it is also about enabling the rigid organization and its employees to act in entrepreneurial ways in order to successfully compete with new competitors. By acknowledging the multiple layers of CE, companies would likely be better suited to approach, engage in, and understand the role of innovation as an integrated part of CE. This especially relates to strategic renewal, which is often a necessity for an organization to improve processes and knowledge sharing allowing innovations to prosper (Sharma & Chrisman 1999; Sakhdari 2016). However, this requires that companies are willing to invest the resources required to ensure that they have a holistic and comprehensive approach. This can be problematic for companies that are not inclined, or cannot afford, to devote a certain amount of resources to such a project. Such investments can put pressure on a company to perform, as to why some may stay away from engaging in CE at all, or do small-scale investments with less to lose.

Summarizing the above discussion leads to the answer to sub-question 1:

Although not directly used as a term in the case companies, from an academic point of view, CE can be defined as *“the process whereby an individual or a group of individuals, in association with an existing organization, create a new organization, or instigate renewal or innovation within that organization”*

(Sharma & Chrisman 1999, p.8), This definition has been chosen as it encompasses most of the notions in the literature, while clearly accentuating that CE includes the, intertwined, aspects of venturing, innovation and strategic renewal. (Sharma & Chrisman 1999).

5.2 The promoters of corporate entrepreneurship

The literature review sought to bring a comprehensive overview on the promoters, also called the antecedents, for CE. It is clear that the theory is plentiful, and that many different factors can impact the level of CE in companies. The antecedents have been discussed by many authors, and can generally be grouped within Top Management-, Organization- and External antecedents (Ireland et al. 2003; Covin & Slevin 1991; Zahra 1991; Antoncic & Hisrich 2004). In these categories, the trust and support for CE and autonomy, an organic and flexible company culture and structure, as well as available resources can be seen as the most important antecedents. Additionally, time availability is a must in order to fully take advantage of the other antecedents, as lack of this can create a bottleneck. Moreover, (Sakhdari 2016) also integrates the category of network antecedents dealing with the ability, motivation and opportunity for knowledge sharing, which has become increasingly important in today's environment.

Although divided in different areas, these four categories are intertwined and supportive of one another. Network antecedents for example need relevant organizational resources and capabilities in order to get the optimal network effects. In this, there might be a potential paradox as companies enter networks to promote CE, while they lack the absorptive capability to diffuse knowledge within the organization (Sakhdari 2016). Moreover, despite academia mainly deals with the antecedents as promoters for CE, these should also be seen as potential barriers to CE in the opposite scenarios, for example where top management support and relevant firm resources are not present. The strength and relevance of respective antecedents can also be expected to vary depending on the type of company and the specific extent of CE wanted.

In order to answer sub-question 2, figure 15 on the following page summarizes the main promoters of CE as per the reviewed literature. As illustrated by the arrows, these promoters can be seen as inter-dependent and reinforcing of each other, and organizations can thus not look at these in isolation.

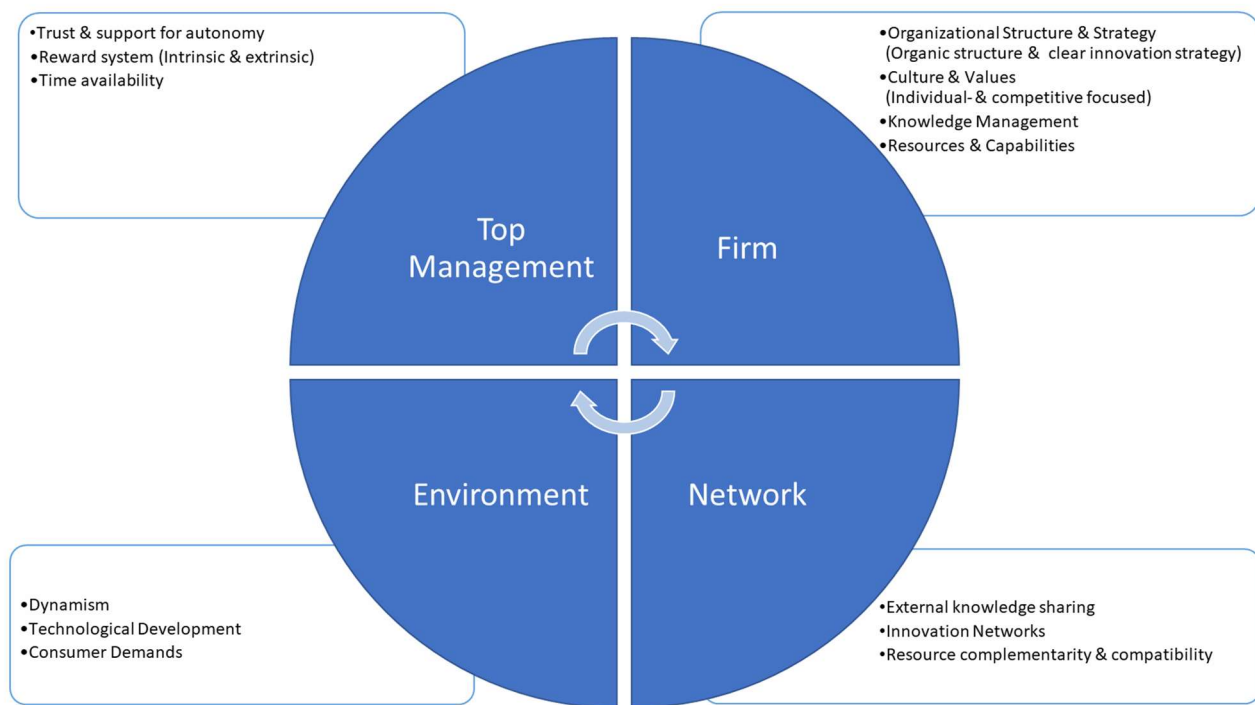


Figure 16 Main promoting factors for CE in literature - Own Production

From the cases, it is clear that autonomy and the implementation of more flexible and entrepreneurial processes and culture is what is most likely to promote CE. Furthermore, all interviewees discuss the importance of having full top management support, available resources and a more entrepreneurial culture as clear promoters. It has also been important for all the interviewees to ensure time availability for relevant employees, as this would otherwise be a clear barrier to CE. This as such confirms the notions from the literature as discussed above.

Interestingly, both (Riber 2017) and (Juhler-Nøttrup 2017) highlights that the mere fact that these initiatives has created a story about the companies innovativeness is already affecting employees to take part in the success, as positive PR is likely to have a self-reinforcing affect where employees might become more risk-seeking and more inclined to be intrapreneurial. While this is not directly discussed in the literature, it can relate to the notions of (Tasavori 2011; Kuratko et al. 2014; Covin & Slevin 1991) on the impact that the employees perception of available resources and support can have on CE. Clearly, the interviewees also relate the increasing promotion of CE to the fact that their external environment has become increasingly dynamic with a growing number of competitors and consumer demands, mainly driven by technological changes.

The model below summarizes the most important promoters according to the empirical data in order to answer sub-question 3:

Case	Quotes	Barriers/Promoters discussed
HedeDanmark (HD Greenlab)	<p>"Normally there is a lot of bureaucracy (...). One can easily drown in everyday work (...), so it is a deliberate strategic choice to not reside within the core business (...). Instead, I sit in an innovative environment and test the ideas that comes in". (Hansen, 2017, 04:25)</p>	<p>Trust and support for autonomy Time availability Innovation Networks</p>
ISS (The Garage)	<p>"So it is our most prominent purpose to get the organization to have an innovative mindset so to speak". (Riber, 2017, 08:34)</p> <p>Language is always a barrier due to our size, as we have a corporate language (English). This automatically excludes a lot of our colleagues. (...). Another barrier is that we do not have the communication channels to engage the 500.000 employees in ISS. (Riber, 2017, 24:58)</p>	<p>Organizational Structure & Strategy Culture and values Knowledge Management</p>
Roche (RICC)	<p>In our case it is about keeping the autonomous culture and way of working. (Rode Hansen, 2017, 10:09)</p> <p>One can say that the hardest part of being innovative in the new context we live (...) is how I spend a lot of time keeping Basel informed (...). All this slows things down. (...) However, if used correctly it can turn into an advantage. Because you get access to resources you would otherwise not have access to. (Rode Hansen, 2017, 15:35)</p>	<p>Trust and support for autonomy Culture and values Resources and Capabilities</p>
Tryg (The Camp*)	<p>"For us it is not just about access to ideas. It is just as much about leaning from the innovative environments' ways of working." (Morten Hübbe, quoted in Industrigruppe Finans, 2015)</p> <p>"The biggest challenge is definitely to ensure that we benefit from all the richness of ideas, in and around Tryg. (Morten Hübbe, quoted in Industrigruppe Finans, 2015)</p>	<p>Organizational Structure and Strategy Culture and Values Innovation Networks</p>

*Figure 17 Main promoting factors for CE in cases – Own Production. * Due to the technical difficulties with the recording of the Tryg The Camp Interview, quotes were instead taken from secondary data.*

These are accentuated by quotes from the interview, and relates to when the interviewees were asked about the main barriers/promoters of CE and innovation, or brought it up themselves. When barriers are mentioned, this is seen as something that could be shaped and improved and in turn become valuable promoters. Generally, the findings from the empirical data support the notions from the literature, as one can see a clear coherence between theoretical and practical notions, while it is also clear that different types of organizations find certain promoters more relevant than others.

Albeit to a different extent, the interviewees also all accentuate the importance of external knowledge and absorbing knowledge into the organization from all kinds of stakeholders, which will be discussed in the following section.

5.3 The use of innovation units and networks

Literature introduces innovation units and networks as more concrete tools for companies to promote CE in larger companies. Innovation units provide an area for larger companies to allow more experimental and radical innovation, often relatively separate from the core business. Furthermore, engaging in innovation networks allow organizations a rich source of inspiration and potential resources, which can help make the next innovation or entrepreneurial initiative possible (Powell & Grodal 2006; Solis et al. 2015; Thorgren et al. 2012).

Common for the cases is that innovation units provide a relatively autonomous forum with a high degree of top management support for dealing with radical innovation and entrepreneurial culture. Following the notions of (Teece 2012; Teece & Pisano 1994; Cantarello et al. 2012), innovation units can also be seen as a way to divide incremental and radical innovation in order to become an ambidextrous organization, while developing dynamic capabilities to sense and seize new opportunities. In this, innovation units acts a way for companies to successfully manage the paradox of exploitation versus exploitation, as discussed by (Wit & Meyer 2014). This can also be seen as a way to improve the adaptability of the organization by introducing a more flexible sub-system to deal with the unknown (Arbnor & Bjerke 2009). The innovation units mainly deal with innovation, and only have smaller focus on venturing and introducing strategic renewal. In relation to the latter, these innovation units can be somewhat too separate from the core organization to spur a more concrete renewal of organizational processes and structure (Solis et al. 2015), although most of the units have this as a sub-task – namely trying to introduce a more entrepreneurial culture throughout the company.

However, in the cases it seems clear that both network and innovation units are expected to bring a lot of value to the overall organization, and help spur a different and more entrepreneurial mindset. It is a concrete way to eliminate some of the barriers to CE, the barriers of bureaucracy and ‘not invented

here” thinking as noted by (Tidd & Bessant 2014), are often eliminated in the innovation units. This is confirmed by (Hansen 2017): *"Normally there is a lot of bureaucracy (...), and one can quickly drown in ones daily work, whereas HD Greenlab is separated from the organization in an innovative environment to test the ideas coming from the employees"* (Hansen 2017, 04:25). Furthermore, all the case companies have vast human capital that is a major source of potential, something that the innovation units can help the organization tap into. This is especially evident in ISS, where *"something that has been lacking before, and now a part of The Garages mandate is to get ideas to travel across contracts and segments, and countries and markets"* (Riber 2017, 08:34). However, it is important that the innovation unit is allowed sufficient time and resources, and that expectations are realistic, as noted by Ulla Riber this can put extensive pressure on the innovation units: *"If we have publicly delivered information last October, then we've decided this January last year. So first time you hear of this as a country manager is a year ago. You have waited for a year, and now it's finally here. "What's going on?" "When are you delivering?""* (Riber 2017, 48:45).

The case of RICC stands a bit different than the other cases, as it was not initially created as a form of innovation unit. Instead, RICC is the result of an acquisition by Roche of Santaris Pharma, and adds learnings of how an entrepreneurial company has been integrated into a larger company, for better or worse. Roche has chosen to keep RICC relatively autonomous in order to keep the entrepreneurial culture and structure, while still providing valuable resources. (Rode Hansen 2017) sees pros and cons with this and greatly value the resource available and the fact that *"this has been about maintaining the autonomous culture and way of working"* (Rode Hansen 2017, 10:09), however also noting that an innovation unit as a part of a corporate always will have to deal with some bureaucracy and short-term demands, and *"difficulties of feeding into every potential stakeholders in such large an organization"* (Rode Hansen 2017, 15:35). This makes it clear that there might be issues in keeping the autonomy and separation of innovation units, especially after the initial euphoria related to the start-up phase has dampened.

In relation to innovation networks, all cases except ISS are part of a physical network, with especially Tryg and HD Greenlab using this on a daily basis, believing that it is a clear promoter of innovation (Juhler-Nøttrup 2017; Hansen 2017). However, it could also be argued that ISS sheer size with approximately 500.000 employees around the world and on-site customers should currently stand as a strong enough network, if just utilized efficiently. (Riber 2017). Before entering a concrete innovation networks, it seems like a correct decision to first built up the 'internal innovation network' and the organizations absorptive capacity, so it can become ready to diffuse external information going forward.

Additionally, this thesis also examined two different external innovation networks, Danish Food Cluster and Scion DTU and their different ways to foster collaboration and subsequent innovation. If judging by internally conducted surveys and comments from the interviewees, both networks seem relatively successful, although there are still some issues to be solved. Here it is a specific interest to engaging larger companies with start-ups, as this is seen to be mutually beneficial as the corporate can “borrow” some of the flexibility and entrepreneurial culture as per (Christensen 2008), while the start-ups get access to know-how, channels and resources. Thus, Scion DTU is now putting more focus on inviting larger companies to their facilities, while Danish Food Cluster is continuously planning together with larger companies on how to improve the network. This links to the notions from Bo Rode Hansen that Scion DTU is not adding much value for RICC, as relevant events and matchmaking for companies are not seemed to be present. This is most likely due to the fact that RICC is residing in an independent domiciles with less 'random' encounters with other companies, while RICC has a lower need for external resource after their acquisition by Roche (Rode Hansen 2017). Simply the networks, at least in current shapes, seem to offer much more to start-ups, which is a paradox as the larger companies are expected to finance the largest amount of network expenditures (Donner 2017).

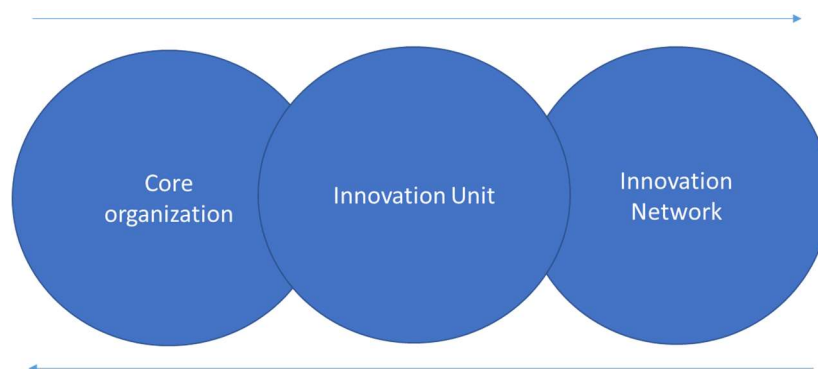


Figure 18 Interplay between organization, innovation units and innovation network - Own Production

Through the cases it is evident that innovation units and networks are not mutually exclusive, and can in fact act as a mediator between the organization and the innovation network, which is illustrated above. This also introduces an interesting question to what extent innovation units and networks should be intertwined, and the placement of these (Solis et al. 2015). Should the innovation units be located in close proximity to the headquarters, or should they be placed further away in a more autonomous location. Furthermore, to what extent should companies seek to reside together with other companies in internally or externally located networks, or should the networks be purely ‘ad-hoc’ like the style of Danish Food Cluster? This choice inevitable has a consequence on the extent to what the overall organization will benefit from this, as the spillovers on culture and other employees are undoubtedly

greater if the core organization is also exposed to this. Through the cases it seems evident that Tryg is currently enjoying the highest benefits from network, as its culture and resources are directly spilling over to the core organization.

In regards to obtaining the maximum benefits from innovation networks, it might be difficult for an organization without an innovation unit to successfully tap into, diffuse and benefit the opportunities, knowledge, and resources lying in an innovation network. Instead, the innovation unit can provide skills and time to engage more in-depth with the network and subsequently sort and share knowledge. This in turn helps develop the absorptive capacity of the firm, which can act as a strong promoter for CE (Sakhdari 2016). Thus, having established an innovation unit might act as an amplifying factor in terms of the benefits gained from being in the network. An alternative is the community outpost approach like HD Greenlab, where a single individual is placed in a network, relatively disconnected from the core organization. While this allows direct access to external resources, this also makes transferring knowledge and culture to the core organization more difficult. This links back to the systems view and sees organizations as a network of sub-systems that are affecting each other (Arbnor & Bjerke 2009). Here innovation units and networks are acting as sub-system of an open system, i.e. the organization enabling it to adapt to the changing environment. An organizations innovation unit can then subsequently be seen as the “glue” making sure that these sub-systems are to benefit of each other, and that knowledge and opportunities from one sub-system can spread and flow to others.

Summarizing the above discussion leads to the answer to sub-question 4:

It is clear that innovation units and innovation networks are seen in both literature and practice as promoting forces of CE, albeit in different ways. If provided with the necessary resources, innovation units can help promote an entrepreneurial culture and renewal of the organization, while introducing a forum and tools for idea generation. The innovation unit can also act as a way for companies to successfully balance the paradox of focusing on short-term or long-term innovations, reaching ambidexterity. Depending on organizational structure and its absorptive capacity, innovation networks can help provide a secondary source of inspiration and resources to a company, often through an innovation unit. However, it is also seen that specialized and resource-rich units like RICC and other larger companies are not benefitting as much from innovation networks (Donner 2017; Rode Hansen 2017). Lastly, it has been discussed that innovation units and innovation networks are not mutually exclusive, and can amplify the positive effects of each other, and interdependently act as a kickstart of CE, as seen in the case of Tryg The Camp.

5.4 Measuring corporate entrepreneurship

The goal of investing in any CE-related initiative is to gain value for the company, and theory has provided multiple methods to measure the outcome of the initial investment. These methods are commonly separated into two distinct areas, one focusing on financial outcomes of CE and one on the more soft outcomes (Dyduch 2008). Given the complex nature of CE, having two directly opposite categories of outcomes to measure and evaluate can provide both valuable insights and complications (Kuratko et al. 2014).

A company can from an early stage perform small-scale measurements of the performance of a CE initiative, more specifically related to the activity generated in relation to it. By tracking the amount of people visiting an innovation unit, the amount of ideas generated and new projects started, new partnerships etc., it becomes possible to evaluate the awareness the project has created both amongst employees as well the initial progress of the initiative (Kaplan 2014). Companies can conduct financial measurements in this stage, however it will not provide a justifying picture, as the initiative will likely need more time to turn profitable. Companies should however start considering financial measurements once ideas begin to move through the innovation process and turn into actual products and services, or learnable failures. Here, companies can begin to conduct financial measurements such as EVA and ROI (Anthony 2013; Shil 2009). It is also in this phase that the first signs of more intangible outcomes can start to show, as for instance the nature of ideas, as well as how processes and culture have spread to other parts of the organization.

As such, this phase is also a critical for the future direction of the CE initiative. If the profitability of innovations launched is used as the overall measurement of outcome, some companies might be satisfied if they obtain financial success, even though they might not undergo any underlying organizational changes. On the contrary, other companies might experience an intangible change in the behaviour of their employees becoming more entrepreneurial and risk-taking, without having produced a single directly sellable or implementable innovation yet (Tidd & Bessant 2014; Matthews & Brueggemann 2015). The organizational learning coming from going through the entire innovation process, including failing projects along the way or when entering the market will likely improve the company's capabilities of developing innovations in the future and provide grounds for potential future economic value (Riber 2017; Tidd & Bessant 2014).

The case companies examined in this thesis seem to be downplaying the aspect of setting long-term milestones and measuring the overall outcome of their initiatives. It is clear, that for the majority of the cases (HD Greenlab, The Garage and The Camp), the initiatives are slowly starting to leave the start-up

phase, as to why the focus is still on getting a solid beginning and implementation. For now, the case companies have expressed the following status in relation to measuring CE and innovation:

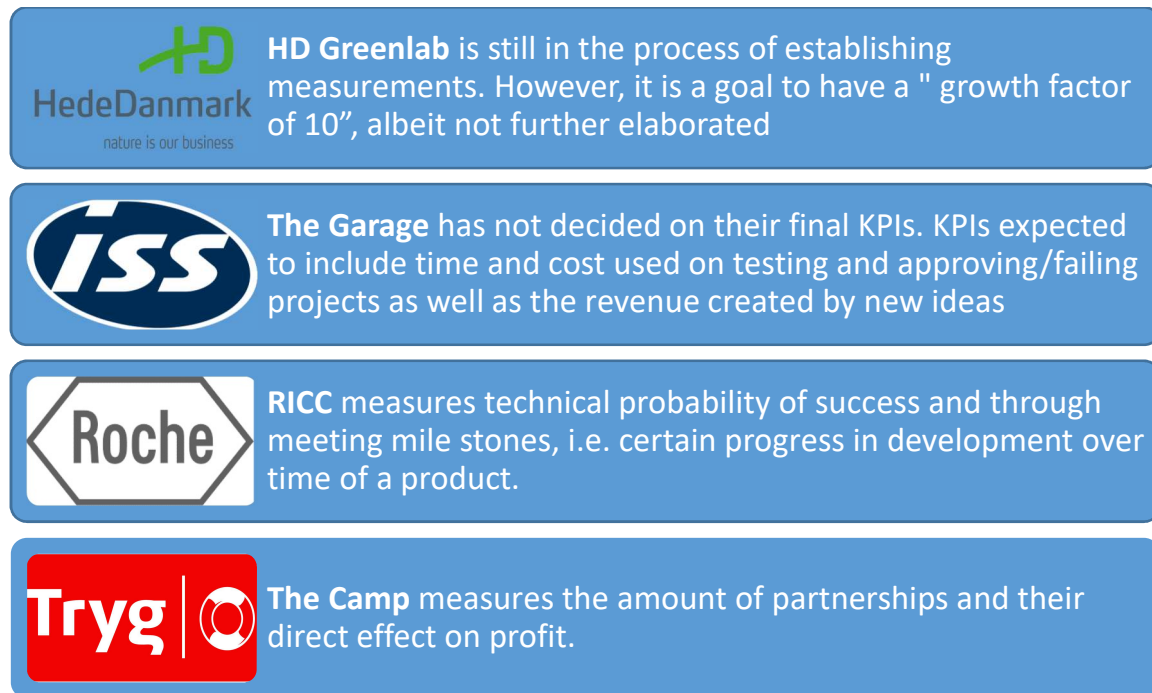


Figure 19 KPIs in case companies - Own Production

HedeDanmark, ISS and Tryg seem to be looking for a long-term change in the culture and business model of the company. This is done by either creating a community of ideation and evaluation of ideas (ISS), connecting and improving current ideation culture (HedeDanmark), or changing the perception of potential new partnerships/business areas (Tryg). Currently, it seems that the companies are merely measuring aspects that points towards the activity generated by the initiatives, such as number of partnerships (Tryg) or number of downloads of the community-creating app (ISS). It should be noted that these alone are not directly applicable as measurements for the long-term changes which the companies seek, and can be providing misleading indicators of the overall development of the initiatives if not supported by additional measurements going forward.

For HD Greenlab and The Garage, measuring and evaluating the short-term and long-term outcomes are especially important, as they are both operating within a 18-24 month period. The financial performance is measurable for those months, albeit radical innovations might not have been developed or have turned profitable yet. Thus, the time pressure for profitability can lead to focus on more incremental innovations as they are easier to measure within a short period, rather than seeking the long-term radical innovations initially targeted. For The Camp, while it is good short-term measurement looking at amount of new partnerships, they should be tweaking the measurements to look specifically into the

amount of ideas that have been implemented throughout the organization, and the concrete value gained from this. The case of RICC stands out differently, as the nature of the pharma industry brings difficulties in measuring initiatives and innovations, where valuations are often a 'wild-guess' (Rode Hansen 2017). Consequently, RICC should continue measuring the technical feasibility of their innovations, as well as measuring the number of ideas coming from the employees.

Summarizing the above discussion leads to the answer to sub-question 5:

Firstly, it is clear that companies should be certain of what outcome they seek to obtain. As CE initiatives can provide both short-term and long-term outcomes of tangible or intangible nature, companies should decide if they seek to measure only the tangible outcomes, i.e. the innovations and their financial performance, if they seek to assess more intangible outcomes such as organizational learnings and changes, or both. Secondly, companies should be aware of what can and what should be measured depending on the progress of the initiative. Financial measurements can be conducted from kick-off, albeit they do not respond fairly to the overall evaluation of the initiative. While some soft measurements are better in the early phase of an initiative, companies should consider mixing the two as the initiatives move further in the process. Furthermore, misalignment in expectations of KPIs can lead to internal conflicts, and progress will quickly meet obstacles, which can harm or ultimately shut down the project. As put by (Riber 2017, 05:56): *In reality I am not that concerned about how we measure, I am more concerned that we agree on the way we measure, and that this is being measured*".

A recommendation of specific measurements will be provided in the normative section.

6 Normative framework

Based on the findings from the literature and empirical data, this chapter proposes a normative approach to promote CE, while also considering the impact of innovation units and innovation networks.

6.1 Stakeholders of corporate entrepreneurship

In order to successfully execute CE it is important that there is a clear overview of the most important stakeholders and their roles. The relationship is illustrated in the model below, where it should be noted that the boundaries between stakeholders are blurred in an iterative process.

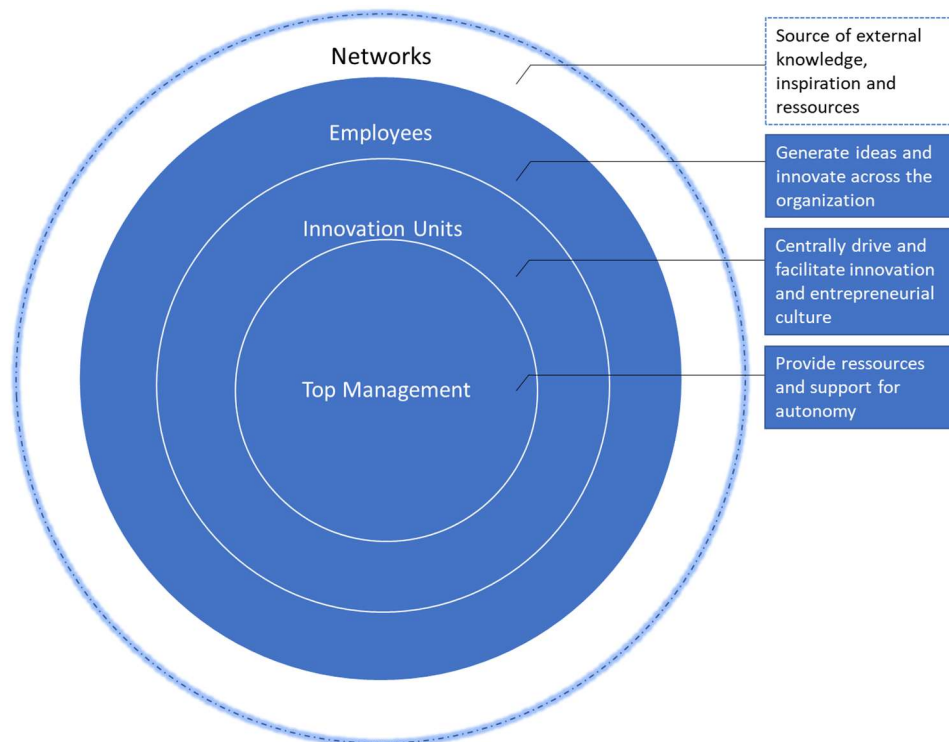


Figure 20 Stakeholders of CE - Own production

Firstly, the importance of top management is emphasized in the literature and through the case interviews, especially in relation to support with resources and autonomy, as well as alignment of the CE strategy with overall corporate objective. Secondly, this leads to the innovation units, whom are to more centrally drive and facilitate ideation, innovation and entrepreneurial activities throughout the organization by utilizing various tools. Thirdly, the remaining employees should be included and innovate across the organization. It is important to note, that these groups are not bound by location and departments, and should collaborate across departments in the organization, both formally and informally. Last is the continuous involvement of external actors from innovation networks, whom are to provide a source of knowledge and complementary resources.

6.2 The corporate entrepreneurship pyramid

Integrating CE can be seen as following the structure of a pyramid, where a solid foundation allows several layers to be built on top. These layers combined are the critical success factors for promoting CE as put forward by the authors of this thesis. These are actions that a company can take themselves, in contrary to the uncontrollable external factors.

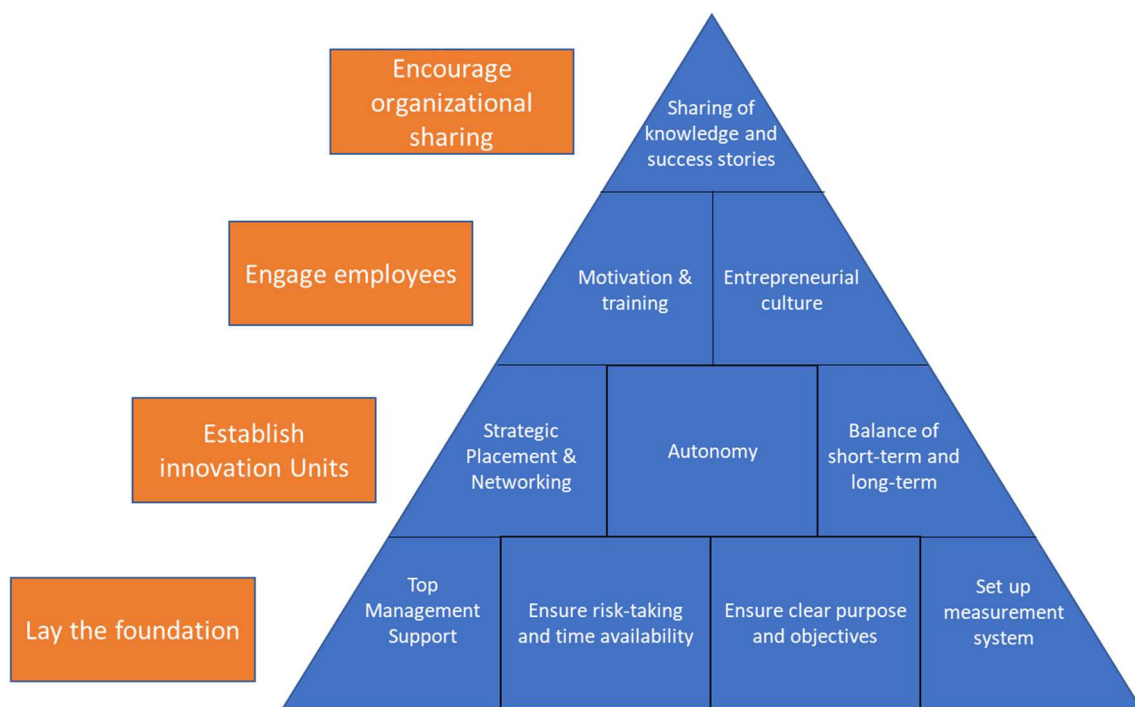


Figure 21 The CE pyramid - Own Production. Adapted from Solis et al

The starting point for any CE related project, be that a specific innovation unit, network entering or more internal projects, should be to lay down the proper foundation for promoting CE. This is illustrated by the bottom row, and relates to the role of top management to ensure proper support, ensuring that risk-taking and time are allowed, securing that the purpose and objectives are aligned and communicated thoroughly, and finally that a measurement system is established. In this, it is important that all this match with the communicated purpose and objective, so there are no unrealistic expectations.

It is important to note that what gets measured is usually what will be done, so measurements should be chosen to reflect both the short-term and long-term goals of a initiative, as well as the given organizational context. This should allow a more quantitative justification, by measurements such as financial performance, growth in users, ideas generated etc. It should also allow for a more qualitative rationalization of a project, by addressing the organizational learnings and changes that comes from

longer periods of time invested in CE initiatives. Key for companies is to thoroughly examine the exact conditions in which the CE initiatives is to perform, which will ensure balance between expectations and goals, and choice of corresponding measurements. Based on the learnings from the literature and empirical findings, the authors of this thesis recommends that companies should look to the following measurements of CE, albeit these can vary depending on the specific company context.

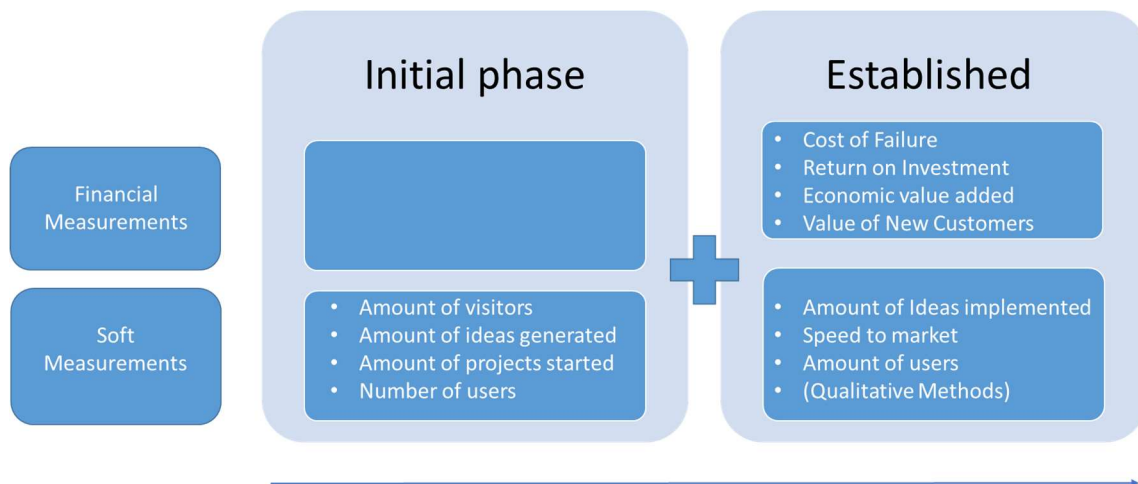


Figure 22 Measurement System of CE- Own Production

The second row of pyramid relates to the establishing of innovation units as champions of innovation processes, and an entrepreneurial culture. Ideally, an innovation unit should be placed strategically, so it moves away from the original facilities of the company, yet is still close enough to have a constant flow of guest and knowledge coming in and out of the organization. In this, it is also a possibility to engage the innovation unit in a network or extensive partnerships, which can provide a secondary source of knowledge. This is dependent on the current structure and absorptive capacity of the organization, as it needs to have the necessary skills to actually make external knowledge flow through the organization. However, most importantly in regard to innovation units is to provide them with a form of autonomy to ensure a clear separation from everyday bureaucracy, and way of doing things. Finally, It is important to create a diverse team of employees that are able to balance dealing with both structured and unstructured environments, as well as the paradox of short-term and long-term focus. These should be able to facilitate a more flexible and creative environment, while still understanding the needs and mindset of a company.

Thirdly, it is of severe importance to engage the employees encompassing the organization by securing their motivation. This can for example be done by having a proper reward and motivational system in order to get employees to participate with ideas and valuable knowledge that can help the organization innovate. Primarily this should be through intrinsic motivations, such as public appraisal, training,

career development etc., nonetheless, employees should also be able to receive a financial reward if the idea turns successful innovation. Additionally, the employees should be engaged in order to build up an entrepreneurial culture, where all employees feel that they have the chance to make a difference and that failure is acceptable. In this, the innovation unit should also be given mandate to have 'company interns' that can bring in new knowledge, while getting a new mindset and tools that can be applied back in the core organization. Furthermore, the innovation unit should continuously host events and workshops that provide employees with tools to become more entrepreneurial.

On top of the pyramid is the final layer that is needed in order to successfully promote CE, which relates to make sure that the whole organization is included and engaged in extensive knowledge sharing both formally and informally, for example through digital platforms. Moreover, it is important to communicate all wins to ensure continuous backing from top management and the organization in order to spur a continuous 'we can do it culture'. However, in the pursuit of quick wins it is important to maintain focus, and not only sort out unfeasible projects, but also delegate more incremental projects that are close to the core organization.

6.3 Sum-up of recommendations for promoting corporate entrepreneurship

Based on the findings in literature and through the empirical data collected, the below points sum-up our recommendation to promote CE. It should be noted that this very much depends on the type of organization, and is thus difficult to generalize.

- Organizations should first create a holistic overview of their entrepreneurial space, the various actors and their responsibilities.
- Organizations must ensure full support from top management, an aligned budget as well as level of risk-taking and time availability.
- Organizations that wish to promote CE must ensure that provided resources and general support matches the objectives given.
- Organizations must set up precise and aligned measurement systems, both for short-term and long-term innovation.
- Organizations should seek to create and strategically place a (semi-)autonomous innovation unit separated from the core business and strategy, which can lead CE initiatives throughout the organization.
- Organizations need to ensure that the innovation unit is strategically aligned with the overall company strategy, and put efforts in areas that can be absorbed by the organization.

- Organizations and their innovation units should ensure an ambidextrous balance in the focus between incremental and radical innovation.
- Organizations (and their innovation units) should tap into innovation networks, and seek to improve their absorptive capacity to allow knowledge flows between networks, innovation units and employees.
- Organizations must design a relevant reward system according to organizational culture, including extrinsic and intrinsic rewards, with focus on the latter.
- Organizations must encourage an informal entrepreneurial culture by providing tools and training for employees.
- Organizations must ensure involvement of employees and departments in knowledge sharing and idea generation.
- Organizations should quickly share success stories throughout the organization to strengthen the mandate and believe in the entrepreneurial initiatives.

7 Conclusion

This thesis has contributed to the research on CE, especially in regards to innovation units and networks amongst select Danish companies. While the case companies all acknowledge the importance of innovation and change in order to survive in the dynamic environment, it was found that the term CE is not widely used in the companies. Instead, companies are using the terminology innovation, which is often seen to encompass many of the same aspects of CE. In contrary to the CE terminology, the main focus is on innovation in regards to products and services, thus somewhat downplaying the importance of strategic renewal in becoming an innovative and entrepreneurial organization.

Furthermore, based on relevant literature and empirical data, this thesis has uncovered several fundamental promoters, also named antecedents, that companies need to consider both prior to and during implementation of CE initiatives. They can be both external and internal, with the latter being shapeable by the organization and amplified by innovation units. In this, the successful implementation of CE depends on various factors that are dependent on the context of the firm. In the cases, top management support, organizational resources and capabilities, an entrepreneurial culture as well as involvement in innovation networks were seen to be the most significant promoters of CE. This supports the existing literature, while accentuating that top management support is critical as it influences the availability of other promoting factors. However, it was also found that all but one case company has yet to define the final measurement systems in regards to their CE initiatives. The lack of focus and alignment on measurements can ultimately lead to a struggle between focusing on short-term wins or focusing on more radical innovations and intangible gains.

This thesis has also presented a normative framework for companies to promote innovation by employing CE in a more holistic perspective as a mean to spur an entrepreneurial culture throughout the whole organization. In this, it is of severe importance to ensure full alignment of the purpose and relevant measures of the innovation unit, if it is to produce successful results that can be integrated into the firm.

In conclusion, it can indeed be beneficial for a company to create an innovation unit that can lead and facilitate CE throughout the organization, in a manner that is separated from the core business. Here the innovation unit can act as a catalyst for CE by shaping its promoters in a structured and reinforcing way. Integrating the innovation unit and organization into an innovation network can further promote CE, as inspiration and resources can spill over.

8 Postscript

8.1 Limitations

In addition to the mentioned delimitations in section 1.4, the research also revealed limitations outside the influence of the researchers. The limitations will be highlighted in this chapter and provide a base for future research introduced in the next section.

Firstly, there are some methodological limitations to consider. As previously mentioned this research only provides a snapshot in time in regard to newly launched initiatives, and as such it has not been possible to analyze the final outcomes of these initiatives, and their longitudinal effect over time on the overall organization.

Additionally, due to limited time and company access, the cases also mainly focus on the specific innovation units, and the processes uncovered. As the interviewed individuals answered from their own knowledge and experiences, it is difficult to make representative of the entire organization and management. Furthermore, it has also not been possible to get a complete and thorough understanding of the measurement processes in place regarding initiatives and the subsequent outcomes. This is mainly expected to be due to the fact that these initiatives are fairly new, as well as how the main focus is currently on implementing the initiatives. Originally, it was the hope to directly validate the cases KPIs against notions from the literature; however, this was not possible.

Finally, despite an elaboration and discussion of the terms CE and innovation throughout the interviews, the term still leave room for interpretation, and it can be assumed that the term could be used based on a different terminology across interviewees and companies. The fact that all the interviews were conducted in Danish can also complicate applying the 'correct' terminologies.

8.2 Future research

Throughout the research, many interesting topics for future research has been uncovered. Below is a list of the most relevant suggestions for future research.

Firstly, further research should seek to analyze several companies engaging in the same innovation network to get an in-depth understanding of the interplay between specific organizations and innovation networks. While it was initially the aim to focus the analysis on different companies within Scion DTU and Danish Food Cluster, it was not possible to establish contact with other relevant companies than RICC. Thus, the network interviews was instead used as complementary data, not directly linked to the cases. This research should include cases of more or less rigid companies, as well as companies with or

without innovation units to examine to what extent these factors influences the gained benefits and promotion of CE.

Secondly, further research should seek to provide an in-depth study of a given organization to look further into the specific processes and tools promoting CE. This could also examine the ways new technologies are changing the ways of knowledge management and employee engagement. This could be linked with a longitudinal study, where the changes of establishing an innovation unit and engaging in a network could be examined over time, based on interviews with top management and members throughout the whole organizations. This would likely provide a richer picture of the benefits of the initiatives in play, while providing evidence of the changes on overall culture and competitiveness. This could be supplemented by other methodologies such as observations and surveys to provide the researcher with an even deeper understanding and measure of how employees are being engaged. This would also allow for the developing or tweaking of specific tools and processes to further promote CE. Especially, interesting could also be to implement some of the recommendations from this thesis in more rigid companies in a longitudinal research, in order to examine to how implementing these can help promote CE.

Linking to the above, future research could provide a more in-depth examination of the financial measuring CE in companies. While this thesis tried to investigate the matter closely, the empirical data gathered did not provide grounds for a thorough analysis on the matter. However, it is clear that measuring and subsequently justifying CE is indeed difficult.

Finally, coming back to the cases in a couple of years could be particularly interesting in order to examines whether the initiatives and resulting innovations have indeed been successful and added value for the company. In this, it is interesting whether the units still exist independently, or if they have been integrated into the core organization, or even closed down.

9 References

- Adonisi, M., 2003. *The relationship between Corporate Entrepreneurship , Market Orientation , Organisational Flexibility and Job Satisfaction*. University of Pretoria.
- Ahuja, G. & Lampert, C.M., 2001. Entrepreneurship in the large corporation: A longitudinal study of how established firms create breakthrough inventions. *Strategic Management Journal*, 22(6–7), pp.521–543.
- Amabile, T.M. et al., 1996. Assessing the Work Environment for Creativity Assessing the Work Environment for Creativity. *The Academy of Management Journal*, 39(5), pp.1154–1184.
- Andersen, M.K. & Queck, P.F., 2011. Service innovation in the Facility Management industry. , (May), pp.1–20.
- Anthony, S., 2013. How To Really Measure a Company’s Innovation Prowess. , pp.1–5.
- Anthony, S.D., 2012. The new corporate garage. *Harvard Business Review*, 90(9).
- Antoncic, B. & Hisrich, R.D., 2004. *Corporate entrepreneurship contingencies and organizational wealth creation*,
- Arbnor, I. & Bjerke, B., 2009. *The Systems View*,
- Attride-Stirling, J., 2001. Thematic networks: an analytic tool for qualitative research. *SAGE Journals*.
- Bager, T., Evald, M.R. & Vintergaard, C., 2006. *Iværksætterne og de etablerede virksomheder* 1st ed., Copenhagen: Børsens Forlag.
- Barney, J., 1991. Barney, J. (1991). Firm Resources and Sustained Competitive Advantage. *Journal of Management*, 17(1), 99–120. *Journal of Management*, 17(1), pp.99–120.
- Bauer, M.W. & Gaskell, G., 2000. *Qualitative Researching with Text, Image and Sound* SAGE, ed.,
- BearingPoint, 2011. Measuring Innovation: Sustaining competitive advantage by turning ideas into value. , pp.1–24.
- Becker, M.C., Knudsen, T. & Swedberg, R., 2012. *Schumpeter’s Theory of Economic Development: 100 years of development*,
- Behrens, J. & Patzelt, H., 2016. Corporate Entrepreneurship Managers’ Project Terminations: Integrating Portfolio-Level, Individual-Level, and Firm-Level Effects. *Entrepreneurship: Theory and Practice*, 40(4), pp.815–842.
- Benner, M.I. & Tushman, M.L., 2003. Exploitation, exploration, and process management: the productivity dilemma revisited. ^ *Academy ol Management Review*, 28(2), pp.238–256.
- Brouwer, M.T., 2002. Weber, Schumpeter and Knight on entrepreneurship and economic development. In *Journal of Evolutionary Economics*.
- Bryman, A., 2012. *Social research methods*, Oxford University Press.
- Burgelman, R.A. & Sayles, L.R., 1986. *Inside Corporate Innovation: Strategy, Structure and*

Managerial Skills,

- Burns, P., 2013. *Corporate Entrepreneurship* 3rd ed., Palgrave Macmillan.
- Burroughs, J.E. et al., 2011. Facilitating and Rewarding. *Journal of Marketing*, 75(July), pp.53–67.
Available at: <http://www.journals.marketingpower.com/doi/abs/10.1509/jmkg.75.4.53>.
- Cantarello, S., Martini, A. & Nosella, A., 2012. A multi-level model for organizational ambidexterity in the search phase of the innovation process. *Creativity and Innovation Management*, 21(1), pp.28–48.
- Cantner, U. et al., 2010. *Entrepreneurship, the new economy and public policy : schumpeterian perspectives*, Springer-Verlag.
- Categories, H. & Management, F., 2017. 7 ways to grow competitiveness in the facility management industry by 2020. , pp.2–5.
- Chengjiang, L. & Chunyan, W., 2008. Cooperative Innovation Risks and Preventions about Intellectual Property Based on Innovation Network --From the perspective of high-tech industrial clusters.
- Chesbrough, H.W. & Appleyard, M.M., 2007. Open Innovation and Strategy. *California Management Review*, 50(1), pp.57–76. Available at:
- Christensen, C.M., 2006. *The innovator's dilemma : the revolutionary book that will change the way you do business*, Collins Business Essentials.
- Christensen, K., 2008. Intrapreneurship: Exploration and Exploitation of Internal Resources. , (September), p.223.
- Christensen, K.S., 2004. A classification of the corporate entrepreneurship umbrella: Labels and perspectives. *International Journal of Management and Enterprise Development*, 1(4), pp.301–315.
- Chung, L.H. & Gibbons, P.T., 1997. The Roles of Ideology and Social Capital. *Group & ORganizational Management*, 22(1), pp.10–30.
- Cohen, W. & Levinthal, D., 1990. Absorptive Capacity : A New Perspective on Learning and Innovation Wesley M . Cohen ; Daniel A . Levinthal Absorptive Capacity : A New Perspective on Learning and Innovation. *Science*, 35(1), pp.128–152.
- Copenhagen Capacity, 2017. Roche Innovation Center Copenhagen. *Copenhagen Capacity*. Available at: <http://www.copcap.com/invest-in-greater-copenhagen/case-stories/roche-innovation-center-copenhagen> [Accessed March 25, 2017].
- Corbett, A. & Neck, H., 2010. Corporate entrepreneurship and the micro-foundations of dynamic capabilities. *Frontiers of Entrepreneurship Research*, 30(17). Available at: <http://digitalknowledge.babson.edu/fer/vol30/iss17/2> [Accessed May 12, 2017].
- Covin, J.G. & Slevin, D.P., 1991. A Conceptual Model of Entrepreneurship as Firm Behavior. *Entrepreneurship: Theory and Practice*, Fall, pp.7–25.

- Covin, J.O. & Miles, M.P., 1999. Corporate Entrepreneurship and the Pursuit of Competitive Advantage. *Entrepreneurship: Theory & Practice*, 23(3), pp.47–63. Available at:
- Cromer, C., Dibrell, C. & Craig, J.B., 2011. A study of Schumpeterian (radical) vs. Kirznerian (incremental) innovations in knowledge intensive industries. *Journal of strategic innovation and Sustainability*, 7(1), pp.28–42.
- Curley, M. & Salmelin, B., 2013. Open Innovation 2.0: A New Paradigm. *OISPG White Paper*, pp.1–12.
- Danish Agency for Science, T. and I., 2011. *The Impacts of Cluster Policy in Denmark*, DanishFoodCluster, 2014. No. 1 in food innovation? , (1).
- DanishFoodCluster, 2017. Our reasons for being. Available at: <http://danishfoodcluster.dk/why-we-do-it/reason-for-being/> [Accessed April 2, 2017].
- Day, G.S., 2011. Closing the Marketing Capabilities Gap. *Journal of Marketing*, 75(4), pp.183–195.
- Deloitte, 2015. Innovation i den finansielle sektor. , (December).
- Dess, G.G. et al., 2003. Emerging issues in corporate entrepreneurship. *Journal of Management*, 29(3), pp.351–378.
- Dierks, P.A. & Patel, A., 1997. What is EVA, and how can it help your company? *Management Accounting; Montvale* 79.5, pp.52–58.
- Drucker, P., 1985. Innovation and entrepreneurship: Practices and principles. *Personnel Strategies and Productivity*, 10(1), pp.105–109.
- Duus, H.J., 1997. Economic Foundations for an Entrepreneurial Marketing Concept. *Scandinavian Journal of Management*, 13(3), pp.287–305. Available at:
- Duus, H.J., 2004. Innovationsdebat blokerer for innovation. Available at: <http://borsen.dk.esc-web.lib.cbs.dk/nyheder/avisen/artikel/12/1414688/artikel.html?hl=YTozOntpOjA7czo0MDoiSW5ub3ZhdGlbnNkZWJhdCBibG9rZXJlciBmb3IgaW5ub3ZhdGlvbil7aToxO3M6MTA6Imlubm92YXRpb24iO2k6MjtzOjM6ImZvcil7fQ,,> [Accessed January 25, 2017].
- Duysters, G., Kok, G. & Vaandrager, M., 1999. Crafting successful strategic technology partnerships. *R and D Management*, 29(4), pp.343–351. [Accessed February 4, 2017].
- Dyduch, W., 2008. Corporate Entrepreneurship Measurement for Improving Organizational Performance. *Journal of Economics & Management*, 4, pp.15–40.
- Elkjær, J.R., 1992. *Entreprenører, Markeder og Hierakier*. Københavns Universitet.
- Erasmus, P. & Scheepers, R., 2005. Intensity and Shareholder Value Creation. , 6(Morris 1998), pp.229–256.
- European-Commission, 2017. No Title. Available at: http://ec.europa.eu/growth/smes/business-friendly-environment/sme-definition_da [Accessed February 27, 2017].

- Financial Times, 2009. *Managing in a downturn : leading business thinkers on how to grow when markets don't.*, Financial Times Prentice Hall.
- Freeman, C., 1982. *The economics of industrial innovation*, Pinter. Available at: h
- Gammelgaard, J., 2007. Why not use incentives to encourage knowledge sharing? *Journal of Knowledge Management Practice*, 8(1), pp.1–6.
- Gartner, W.B., 1990. *What are we talking about when we are talking about entrepreneurship?*, Elsevier Science Pub. Co. Available at: [Accessed May 11, 2017].
- Ginsberg, A., Guth, W.D. & Ginsberg, A., 1990. Corporate Entrepreneurship (Guest Editors' Introduction). *Strategic Management Journal*, 11(4), pp.5–15.
- Gourville, J.T. et al., 2005. The Curse of Innovation: Why innovative New Products Fail. *MSI Reports*, 5–4(Four), pp.2–23.
- Guion, L.A., 2002. Triangulation: Establishing the Validity of Qualitative Studies. *Institute of Food and Agriculture Sciences*, pp.1–3.
- Guth, W.D. & Ginsberg, A., 1990. Guest Editors' Introduction: Corporate Entrepreneurship. *Strategic Management Journal*, 11(4), pp.5–15.
- HedeDanmark, 2017a. HedeDanmarks historie. Available at: <http://www.hededanmark.dk/Historie.8373.aspx> [Accessed March 4, 2017].
- HedeDanmark, 2017b. Nytænkning. Available at: <http://www.hededanmark.dk/Nytænkning.8357.aspx> [Accessed March 4, 2017].
- HedeDanmark, 2017c. Om HedeDanmark. Available at: <http://www.hededanmark.dk/Om-HedeDanmark.8363.aspx> [Accessed March 4, 2017].
- Hougaard, S., 2005. *The Business Idea*,
- IndustriensFond, 2014. Corporate Garage. Available at: <http://www.industriensfond.dk/CorporateGarage> [Accessed April 1, 2017].
- Ireland, R.D., Kuratko, D.F. & Covin, J.G., 2003. Antecedents, elements, and consequences of corporate entrepreneurship strategy. *Academy of Management Proceedings*, pp.L1–L6.
- ISS, 2017. About ISS, Corporate Garage. Available at: <https://www.issworld.com/about-iss/innovation> [Accessed March 1, 2017].
- ISS, 2016a. *Annual Report*,
- ISS, 2016b. Welcome to the ISS Corporate Garage.
- Jones, G.R. & George, J.M., 2012. Essentials of Contemporary Management. *Essentials of Contemporary Management, Fifth Edition*, p.189.
- De Jong, J. & Marsili, O., 2011. Schumpeterian and Kirznerian opportunities : An empirical investigation of opportunity types. *Druid 2011*, pp.1–26.

- Kaplan, S., 2014. How to measure Innovation (How Get Real Results). Available at: <https://www.fastcodesign.com/3031788/how-to-measure-innovation-to-get-real-results> [Accessed March 16, 2017].
- Kaplan, S., 2016. So Many Corporate Innovation Labs, So Little Innovation — BIF Speak — Medium. *Business Innovation Factory*. Available at: <https://medium.com/bif-speak/so-many-corporate-innovation-labs-so-little-innovation-133738ad74c2#.mym0xi71>.
- Keleman, M.L. & Rumens, N., 2008. *An Introduction to Critical Management Research*,
- Kirzner, I.M., 1973. Competition And Entrepreneurship. , p.252.
- Kirzner, I.M., 2008. The alert and creative entrepreneur: A clarification. *Small Business Economics*, 32(2), pp.145–152.
- Kolby, M., 2014. Schweizisk medicinalgigant køber Santaris Pharma. *Business.dk*. Available at: <http://www.business.dk/medico/schweizisk-medicinalgigant-koeber-santaris-pharma>.
- Kuratko, D.F., 2009a. *Introduction to entrepreneurship*, South-Western.
- Kuratko, D.F., 2009b. The entrepreneurial imperative of the 21st century. *Business Horizons*, 52(5), pp.421–428.
- Kuratko, D.F., Hornsby, J.S. & Covin, J.G., 2014. Diagnosing a firm's internal environment for corporate entrepreneurship. *Business Horizons*, 57(1), pp.37–47.
- Kuratko, D.F., Montagno, R.V. & Hornsby, J.S., 1990. Developing an Intrapreneurial Assessment Instrument for an Effective Corporate Entrepreneurial Environment Author (s): Donald F . Kuratko , Ray V . Montagno and Jeffrey S . Hornsby Published by :.
- Kvale, S., 2007. Doing Interviews. , 2, pp.34–51. Available at: <http://dx.doi.org/10.4135/9781849208963>.
- Kwoh, L., 2012. You Call That Innovation? - WSJ. *Wall Street Journal*. Available at: <http://www.wsj.com/articles/SB10001424052702304791704577418250902309914> [Accessed January 25, 2017].
- Lassen, A.H. & Sørensen, S., 2006. Intraprenørskab some banebrydende innovation og kontrolleret ledelse - et krav om balance. In *Iværksætterne og de etablerede virksomheder*. pp. 65–75.
- Lerner, M., Zahra, S.A. & Kohavi, Y.G., 2007. Time and Corporate Entrepreneurship. *Advances in Entrepreneurship, Firm Emergence and Growth*, 10, pp.187–221.
- Løck, S., 2016. Forsikringsbranchen i digitalt uvejr. , pp.15–18.
- MacMillan, I.C., Block, Z. & Narashima, P.N., 1986. Corporate venturing: alternatives, obstacles encountered, and experienced effects. *Journal of Business Venturing*, 1(2), pp.177–192.
- Matthews, C.H. (Economist) & Brueggemann, R., 2015. *Innovation and entrepreneurship : a competency framework*,
- Ministry of Higher Education and Science, 2017. Innovation Networks Denmark. Available at:

- <http://ufm.dk/en/research-and-innovation/cooperation-between-research-and-innovation/collaboration-between-research-and-industry/innovation-networks-denmark> [Accessed February 3, 2017].
- Mintzberg, H., Ahlstrand, B. & Lampel, J., 1998. *Strategy safari: a guided tour through the wilds of strategic management*, New York: THE FREE PRESS..
- Morris, M.H., Kuratko, D.F. & Covin, J.G. (Jeffrey G., 2011. *Corporate entrepreneurship and innovation : entrepreneurial development within organizations*, South-Western Cengage Learning.
- Muijs, D., 2005. *Doing quantitative research in education with SPSS*, Available at:
- Nason, R., McKelvie, A. & Lumpkin, G.T., 2015. The Role of Organizational Size in the Heterogeneous Nature of Corporate Entrepreneurship. *Small Business Economics*, 45, pp.279–304.
- Nielsen, C.B., 2017. Vil du have rengøring derhjemme som fryns? Available at: <http://finans.dk/erhverv/ECE9520871/vil-du-have-rengoering-derhjemme-som-fryns/?ctxref=newarts> [Accessed March 2, 2017].
- O'Bryan, M., 2013. Innovation: The Most Important and Overused Word in America | WIRED. Available at: <https://www.wired.com/insights/2013/11/innovation-the-most-important-and-overused-word-in-america/> [Accessed January 25, 2017].
- O'Reilly III, C.A. & Tushman, M.L., 2007. Ambidexterity as a Dynamic Capability: Resolving the Innovator's Dilemma. [Accessed May 12, 2017].
- OECD, 2005. *Oslo Manual Guidelines for collecting and interpreting innovation data*, Available at: <http://scholar.google.com/scholar?hl=en&btnG=Search&q=intitle:Oslo+Manual#0>.
- Okkels, S., 2017. Rainmaking Summit : Første skridt på vejen til et venskab mellem corporate og startup. , pp.2016–2017.
- Owyang, J., 2016. The Ten Types Of Corporate Innovation Programs. *Huffington Post*. Available at: http://www.huffingtonpost.com/jeremiah-owyang/the-ten-types-of-corporat_b_11285524.html [Accessed February 2, 2017].
- Penrose, E., 1959. The Theory of The Growing of the Firm. *OXFORD, University Press*, p.301.
- Petrova, E., 2014. Innovation in the Pharmaceutical Industry: The Process of Drug Discovery and Developement. In M. Ding, J. Eliashberg, & S. Stremersch, eds. *Innovation and Marketing in the Pharmaceutical Industry*. Springer-Verlag New York, p. 768. Available at: <http://link.springer.com/10.1007/978-1-4614-7801-0>.
- Pinchot, G., 1985. Introducing the “intrapreneur”: Successful innovators in large companies sometimes function as in-house entrepreneurs, running projects as independent innovators would. *IEEE Spectrum*, 22(4), pp.74–79. Available at: <http://ieeexplore.ieee.org/lpdocs/epic03/wrapper.htm?arnumber=6370622>.
- Powell, W.W. & Grodal, S., 2006. *Networks of Innovators*, Oxford University Press. Available at: <http://oxfordhandbooks.com/view/10.1093/oxfordhb/9780199286805.001.0001/oxfordhb->

9780199286805-e-3 [Accessed January 25, 2017].

PwC, 2012. From Vision to Decision - Pharma 2020. *PwC Pharma 2020*, p.56. Available at: <http://www.pwc.com/gx/en/pharma-life-sciences/pharma2020/vision-to-decision.jhtml>.

PwC, 2013. Managing innovation in pharma. *PwC*. Available at: <http://www.pwc.com/gx/en/industries/pharmaceuticals-life-sciences/managing-innovation-in-pharma.html>.

Redlein, D.A. & Poglich, R., 2010. *Trends and Developments within Facility Management*,

Roche, 2017. About Roche. Available at: <http://www.roche.com/about.htm> [Accessed March 25, 2017].

Sakhdari, K., 2016. Corporate Entrepreneurship: A Review and Future Research Agenda. *Technology Innovation Management Review*, 6(8), pp.5–18.

Sakhdari, K., 2014. Externally Oriented Capabilities and Corporate Entrepreneurship: Institutional and Managerial Contingencies.

Sathe, V., 1985. Managing an entrepreneurial dilemma: nurturing entrepreneurship and control in large corporations. *Frontiers of Entrepreneurship Research*, pp.636–656.

Saunders, M.N.K., Lewis, P. & Thornhill, A., 2012. *Research methods for business students*, Pearson.

Schumpeter, J.A., 1942. *Capitalism , Socialism, democracy*,

Schumpeter, J.A., 1934. *The Theory of Economic Development*,

Science Ventures, 2007. Santaris Pharma køber universitetspatent. Available at: <http://scienceventures.dk/uploads/media/Santaris.pdf> [Accessed April 10, 2017].

ScionDTU, 2016. Performancetal for Scion DTU. , p.2016.

Sharma, P. & Chrisman, J.J., 1999. Toward a Reconciliation of the Definition Issues in the Field of Corporate Entrepreneurship. *Entrepreneurship Theory and Practice*, 23(3), pp.11–27.

Shil, N.C., 2009. Performance Measures: An Application of Economic Value Added. *International Journal of Business and Management*, 4(3), pp.169–177.

Singh Kailay, S., 2016. Tidl. Santaris-direktør: Vi er rykket i Champions League. *Finans.dk*.

Sloane, P. & Ed, O., 2017. The Rise of the Corporate Innovation Unit – Innovation Excellence The Rise of the Corporate Innovation Unit. , pp.2015–2017.

Solis, B. et al., 2015. The Innovation Game : Why and How Businesses are Investing in Innovation Centers Why Should Companies Launch Innovation Centers ? *Capgemini Consulting*.

Starr, J.E. & MacMillan, I.C., 1990. Resource cooptation via social contracting: Resource acquisition strategies for new ventures. *Strategic Management Journal*, 11(1), pp.79–92.

Stevenson, H.H. & Jarillo, J.C., 1990. A Paradigm of Entrepreneurship: Entrepreneurial Management. *Strategic Management Journal*, 11, pp.17–27.

- Street, W.F. et al., 2007. Interfirm Collaboration Networks : The Impact of Large-Scale Network Structure on Firm Innovation. *Management Science*, 53(7), pp.1113–1126.
- Syddanske Forskerparker, 2017. Cortex Science Park. Available at: <http://www.syddanskeforskerparker.dk/fileadmin/Tilbud/nabo-samarbejder.pdf> [Accessed February 10, 2017].
- Tasavori, M., 2011. Corporate Social Entrepreneurship at the Bottom of the Economic Pyramid : Antecedents and Outcomes in India.
- Teece, D.J., 2012. Dynamic Capabilities: Routines versus Entrepreneurial Action. *Journal of Management Studies*, 49(8), pp.1395–1401.
- Teece, D.J. & Pisano, G., 1994. The Dynamic Capabilities of the Firm. *Industrial and Corporate Change*, 3, pp.538–556.
- Teng, B.S., 2007. Corporate entrepreneurship activities through strategic alliances: A resource-based approach toward competitive advantage. *Journal of Management Studies*, 44(1), pp.119–142.
- Thorgren, S. et al., 2012. Unleashing synergies in strategic networks of SMEs: The influence of partner fit on corporate entrepreneurship. *International Small Business Journal*, 30, pp.453–471.
- Tidd, J. & Bessant, J.R., 2014. *Strategic innovation management*,
- Tryg, 2017. Fakta om Tryg. Available at: <http://www.tryg.dk/om-tryg/fakta-om-tryg/index.html> [Accessed April 1, 2017].
- Turner, T. & Pennington, W.W., 2015. Organizational networks and the process of corporate entrepreneurship: how the motivation, opportunity, and ability to act affect firm knowledge, learning, and innovation. *Small Business Economics*, 45(2), pp.447–463.
- Uddannelses- og Forskningsministeriet, 2017. Innovation Networks Denmark. Available at: <http://ufm.dk/en/research-and-innovation/cooperation-between-research-and-innovation/collaboration-between-research-and-industry/innovation-networks-denmark> [Accessed January 29, 2017].
- Vaupel, R., 2016. 5 Key Principles When Creating Your Corporate Garage. , pp.2016–2018.
- Vaus, D. d., 2001. *Research Design in Social Research*, London: SAGE.
- Viki, T., 2017. Should innovation units be physically separate from the core business ? , pp.1–6.
- Villiers-scheepers, M.J. De, 2012. Antecedents of strategic corporate entrepreneurship.
- West, M.A. & Sacramento, C.A., 2006. Flourishing in Teams: Developing Creativity and Innovation. , pp.24–44.
- Wheelen, J.D. & Hunger, T.L., 1988. Strategic management and business policy.
- Wit, B. de. & Meyer, R., 2014. *Strategy : an international perspective*, Cengage Learning EMEA.
- Wittorff, J.Ø., 2017. Tryg åbner hovedkvarteret for it-iværksættere : Derfor er it så vigtigt for Tryg En

positiv samfundsudvikling betyder , at forsikringsselskaberne må omstille sig og finde på The Camp. , pp.1–5.

- Xie, X. et al., 2013. What affects the innovation performance of small and medium-sized enterprises in China? *Innovation*, 15(3), pp.271–286. Available at: <https://www.tandfonline.com/doi/full/10.5172/impp.2013.15.3.271> [Accessed January 22, 2017].
- Yin, R.K., 2009. *Case Study Research: Design and MEthods* Fourth Edi., SAGE.
- Yiu, D.W., Lau, C. & Bruton, G.D., 2007. International Venturing by Emerging Economy Firms: The Effects of Firm Capabilities, Home Country Networks, and Corporate Entrepreneurship. *Journal of International Business Studies*, 38(4), pp.519–540.
- Zahra, S.A., 2005. *Corporate entrepreneurship and growth*, Edward Elgar.
- Zahra, S.A. & George, G., 2002. Absorptive Capacity: A Review, Reconceptualization, and Extension. *The Academy of Management Review*, 27(2), pp.185–203.
- Zahra, S. a., 1991. Predictors and financial outcomes of corporate entrepreneurship: An exploratory study. *Journal of Business Venturing*, 6(4), pp.259–285.

Interviews

- Christensen, N., 2017. *Interview with Nynne Christiansen, Steen Kjærsgaard and Michael Juhler-Nøttrup, The Camp, TRYG, 06-04-2017*
- Donner, S., 2017. *Interview with Steen Donner, Scion DTU, 21-02-2017*
- Hansen, K.T., 2017. *Interview with Kristian Tarp Hansen, HD Greenlab, HedeDanmark, 15-03-2017*
- Juhler-Nøttrup, M., 2017. *Interview with Nynne Christiansen, Steen Kjærsgaard and Michael Juhler-Nøttrup, The Camp, TRYG, 06-04-2017*
- Kjærsgaard, S., 2017. *Interview with Nynne Christiansen, Steen Kjærsgaard and Michael Juhler-Nøttrup, The Camp, TRYG, 06-04-2017*
- Riber, U., 2017. *Interview with Ulla Riber, Corporate Garage, ISS, 07-03-2017*
- Rode Hansen, B., 2017. *Interview with Bo Rode Hansen, Roche Innovation Center Copenhagen, 04-04-2017*
- von Undall, M.M., 2017. *Interview with Mette von Undall, Danish Food Cluster, 19-04-2017*

10 Appendices

10.1 Appendix 1 - Profile of interviewees

Interviewees	Relevance	Current Occupation	Work Experience	Education	Style of interview
Ulla Riber	Company professional	Head of ISS Corporate Garage	Head of Programme, Reinventing Coop Loyalty Programme; Group CSR Manager Nilfisk	Cand. Merc., CBS	1 hr face-to-face interview at ISS Corporate Garage
Kristian Tarp Hansen	Company professional	Head of HD Greenlab at Hededanmark	IT-Entrepreneur	Bsc. in Product Development and Innovation & Msc. In Global Supply Chain Development, SDU	1 hr telephone interview
Bo Rode Hansen	Company professional	President at Roche Innovation Center Copenhagen	Seasoned Business Leader within the RNA Space. CEO, Santaris Pharma	Msc. In Biochemistry, Copenhagen University. MBA, Henley Business School	1 hr face-to-face interview at Roche Innovation Center Copenhagen
Steen Kjærsgård	Company professional	Commercial Account Manager at Tryg Insurance (working with Startup accounts)	Insurance seller and manager at Tryg since 1997	Exam. Erhvervsassurandør	1 hr group interview at The Camp and guided tour at The Camp
Michael Juhler-Nøttrup	Company and Network Professional	Head of Innovation at Tryg Insurance & Founder of The Camp	Business Developer and Innovation Consultant at Tryg; various positions within change management	Cand. Comm at Roskilde University	1 hr group interview at The Camp and guided tour at The Camp
Steen Donner	Network professional	CEO at Scion DTU	CEO, Copenhagen Capacity	Cand. Merc. Jur, Aarhus Business School	1 hr face-to-face interview at Scion, DTU
Mette	Network	Project director	Sales Manager,	Diploma of	1 hr telephone

Mecklenburg von Undall	professional	at Danish Food Cluster	VisitAarhus Convetion; Head of Project and Marketing, Turbinehallen	Leadership, Business Academy Aarhus	interview
Nynne Budtz Christiansen	Network professional	CEO at Scion DTU	Associate Professor and External Lecturer in Innovation, DTU Owner and Co-Founder of two startup mentoring companies	Msc. In Leadership and Innovation in Complex System, Aarhus University	1hr group interview at The Camp and guided tour at The Camp

10.2 Appendix 2 – Interview Guides

Interview guide for Innovation units

Briefing:

- En kort introduktion om os og vores projekt.
- Den interviewedes rettigheder angående anonymitet og frivillighed til at svare
- Information og spørgsmål om interviewet må optages

Interviewet:

1. Kan du give en kort introduktion til dig selv (job, uddannelse, erfaring)?
2. Kan du fortælle lidt om afdelingen generelt?
 1. Arbejder afdelingen på tværs af alle områder I arbejder med eller er den mere centreret i enkelte områder?
 2. Hvor uafhængige er I af den centrale organisation?
3. Arbejder I decideret med udtrykket Corporate Entrepreneurship/Intraprenørskab, og hvordan er dette evt. anderledes end almindelig innovation?
4. Hvad var årsagen til, at I oprettede en innovations afdeling
 1. Hvorfor er det nødvendigt for jer at innovere?
 2. Føler I jer overhalet på nogle områder af mindre virksomheder?
5. Hvad har generelt været jeres største barriere for Innovation?
6. På hvilken måde hjælper innovations afdelingen med at afhjælpe disse?
7. Ser I denne form for afdeling som den 'perfekte' måde at opdele exploration / exploitation (fokus på core business og nye ideer).
 1. Arbejder I mest med gradvis eller radikal innovation?
8. Hvordan bruger I medarbejdere til at generere ideer og hvad får disse ud af det (ejerskab)?
 1. På hvilke dele af innovationsprocessen inkludere I afdelingen/medarbejderne?

2. Fra start til slut, eller bliver idéen først overført til den centrale organisation når den skal eksekveres?
9. Hvilke stakeholders bidrager mest?
 1. Suppliers, Customers, employees?
 2. Hvad er jeres forbehold ved at bruge stakeholders?
10. Har innovations afdelingen været med til at skabe en 'fast failure' mentalitet så projekters rentabilitet hurtigere bliver afklaret?
11. Hvordan prøver I at overføre mentaliteten til alle andre afdelinger/alle medarbejdere?
 1. Og lykkedes det? Er der skabt en mere informal innovations kultur?
12. Hvad er den foreløbige evaluering på projektet?
 1. Har I haft nogle succeser allerede?
13. Hvordan vurdere/måler I rentabiliteten/succesen af initiativerne/innovationer?
14. Hvad er fremtidsplanerne for afdelingen?
15. Har I pt. eller har I andre initiativer I støbeskeen der skal fremme innovation? F.eks. sparringsprojekter, deltagelse I netværk, medarbejder konkurrencer osv.

Debriefing:

- Den interviewede har mulighed for at tilføje yderligere hvis ønsket
- Den interviewede spørges om der forefindes mere uddybende materiale end det der findes på hjemmesiden
- Den interviewede spørges om dennes mening om interviewets form
- Den interviewede takkes for dennes tid og tilbydes at modtage det endelige produkt.

Interview guide for innovation networks

Briefing:

- En kort introduktion til os selv og vores projekt.
- Den interviewedes rettigheder angående anonymitet og frivillighed til at svare
- Information og spørgsmål om interviewet må optages
- Interviewpersonen bliver bedt om at præsentere sig selv kort.

Interviewet:

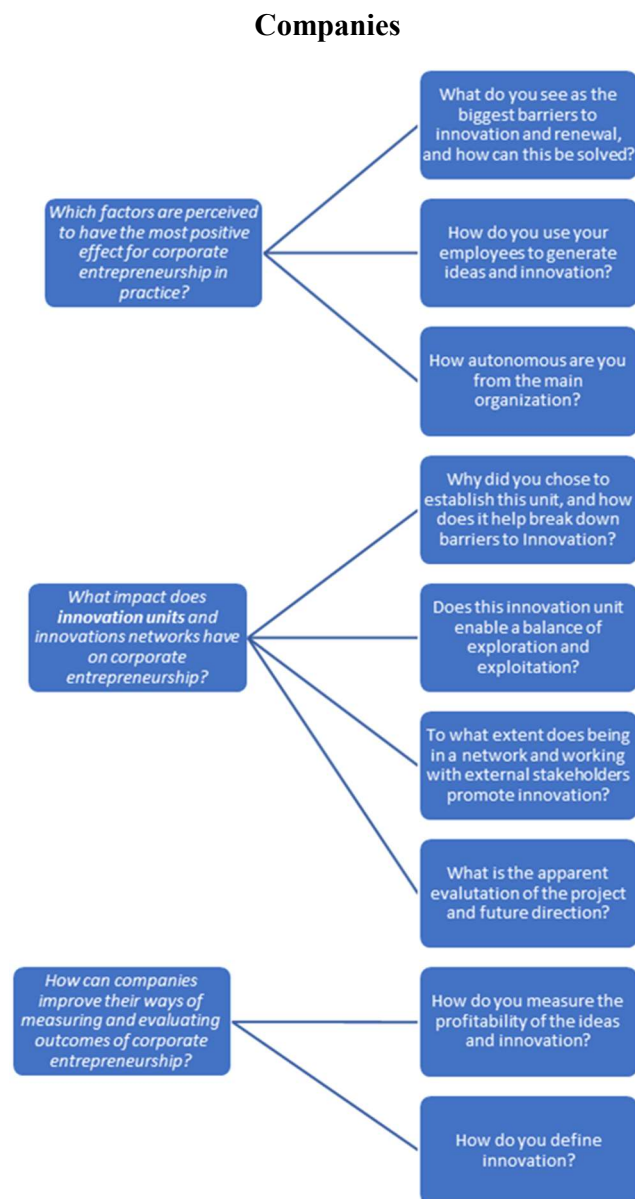
1. Kan du fortælle lidt om baggrunden for jeres netværket, og hvordan det fungerer i praksis?
2. Hvad ser du generelt som de største barrierer for danske virksomheder til at innovere og genopfinde sig selv, og hvordan kan det løses ved hjælp af netværk?
3. Kan du fortælle lidt om de forskellige typer virksomheder der kommer til netværket, og deres forventninger?
 - a. Er de virksomheder allerede mere innovative end gennemsnitlige virksomheder?
4. Har i en udvælgelsesproces ang. de virksomheder der kan være med i netværket, og prøver i at "headhunte" specifikke typer virksomheder f.eks. for at få diversitet, eller skaffe ressourcer som ikke allerede er repræsenteret?
5. Kan du fortælle mere detaljeret, gerne med eksempler, hvordan I faciliterer virksomhedsnetværk, og innovation?

- a. Hvad ser du som den mest signifikante "promoter" af innovation og entreprenørskab i netværket?
 - b. Matcher i virksomhederne aktivt, eller lader i det passivt ske via arrangementer?
6. Har du et indtryk af hvor meget virksomhederne er her for netværk og "blive set" af andre virksomheder, og hvor meget de er her "bare" for at deltage i informative events eller for lokationen?
 - a. Hvor meget har store, små og "andre" virksomheder at sige hos jer?
7. Hvordan ser I forskellen mellem formel og uformel interaktion mellem virksomhederne, og dennes effekt på innovation?
8. Hvad er den typiske samarbejdsform I ser i netværket? Er det mellem samme type virksomheder, samme størrelse, store med små eller?
 - a. Specifikt, er vi interesseret i at høre om sammenspillet mellem startups og mellemstore virksomheder, og hvad de respektive parter får ud af det?
9. Kan du komme med nogle konkrete eksempler på virksomheder som har ændret sig "radikalt" eller lanceret radikale projekter efter de er kommet med i netværket?
 - a. Og måske eksempler på virksomheder der ikke har fået succes i netværket?
10. Hvordan måler I på Innovation?
 - a. Er det både noget I foretager internt, eller også noget i måler sammen med virksomhederne i netværket?
11. Hvad byder fremtiden for netværket på?

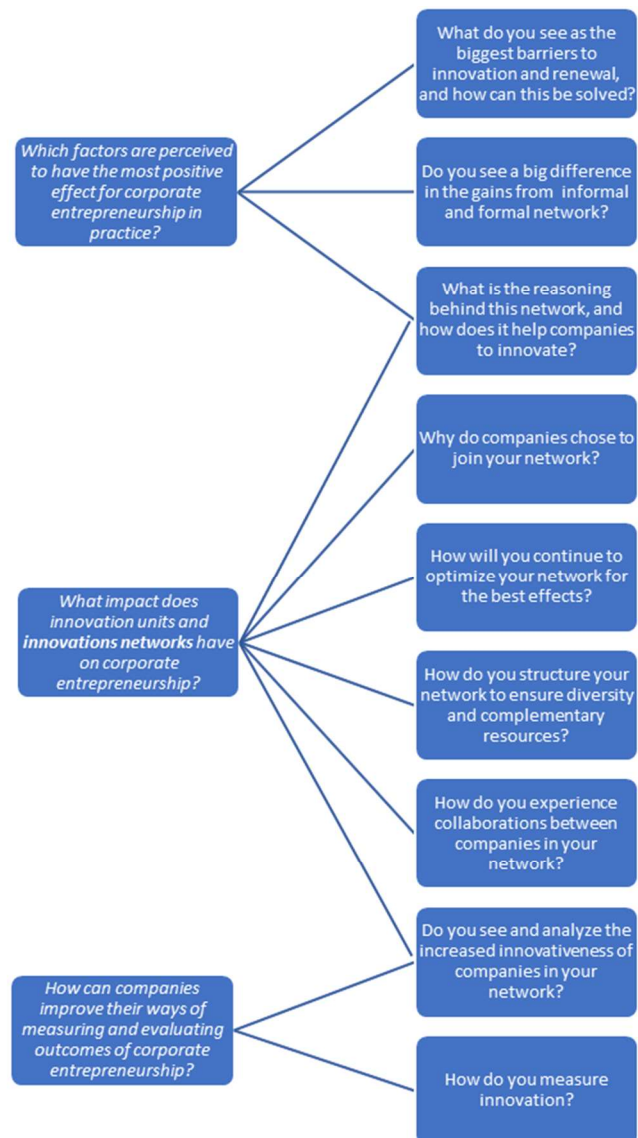
Debriefing:

- Den interviewede har mulighed for at tilføje yderligere hvis ønsket
- Den interviewede spørges om der forefindes mere uddybende materiale end det der findes på hjemmesiden
- Den interviewede spørges om dennes mening om interviewets form
- Den interviewede takkes for dennes tid og tilbydes at modtage det endelige produkt.

10.3 Appendix 3 – Outline of links between interview guides and research questions



Networks



10.4 Appendix 4 – Notes from Tryg The Camp Interview

- Michael har ingen forsikrings baggrund.
- Forsikring generelt en kedelig branche set udefra
 - Tryg prøver at lave lidt "sjov og ballade"
- Facilitere tilfældigheder
 - Partnerskab og pilot projekt på halvanden uge/to uger på en platform.
 - Det kunne være interessant at få ind i Tryg, så de kunne yde garanti forsikring på e-handel osv. (tænker garanti handel mod kursudsving?)
 - Nynne og Michael: Det her sted facilitere tilfældigheder, det skaber en helt anden kultur.

- Steen arbejder med CSE og synes det er virkelig interessant. Og han får bedre og bedre forståelse for hvad de startups egentlig går og laver. Tæt samarbejde mellem sælgerne og Tryg så de sikre de bedste produkter.
 - Rigtig stor hjælp for ham.
- De håber på en unicorn, som de kan have som kunde eller måske opkøbe?
- Corporate Innovators starter til efteråret.
 - På halvanden uge har de haft sat 10 møder op. Ret stor interesse
 - Michael ser ingen konflikt med andre virksomheder kommer derud.
 - Tværtimod kan corporate innovators give en masse til hinanden, da de arbejder mere ens end corporates
 - Også selling point for startups at der er flere corporates de kan trække på.
 - Ingen krav til startups at Tryg har første prioritet
 - Ses som det næste naturlige skridt
- The Camp skal også til at være lidt mere selektive nu
- Små events for alle interessede i at komme til the camp og lære lidt om nye teknologier osv.
 - Det er frivilligt, men Michael har hørt om at nogle afdelingsledere "presser" deres medarbejdere derhen fordi det måske kunne være lærerigt.
- Har I set stor modstand?
 - Generelt har top management været meget pro dette, men der har været nogle der har været imod også. Selvfølgelig også nogle imellem.
 - Skeptikerne er begyndt at blive overbevist nu, fordi det virker til at gå ret godt.
- Også mange tryg medarbejdere og afdelinger der leger med startups uden om Michael
 - Det er ok, men de skal stadigvæk prøve at få "sejrene".
- Tryg frontrunners på dette, men mange begynder at komme efter.
- Stor branding værdi, som har været med til at ændre overall kultur
 - Nynne ser PR som et værktøj til at skifte kultur
 - E.g. Tryg ses som en innovativ virksomheder = folks mindset bliver påvirket.
- Startups skal ikke brug for meget tid på Corporates som ikke er "klar"
- Ikke så meget andet uden om samarbejder end specifik forsikringsydelser som bliver lavet
- Mange eksempler med deleøkonomi og hvordan det ændre forsikring.
- Bevidst placeret i hovedkontor. Vil gerne bevare forbindelse, men samtidig have et sted der kan køre selv. Føler det er sket det optimale med The Camp.
- Det meste der foregår er umiddelbart uformelt. Folk mødes på gangene og får kendskab til hinanden og udvikler partnerskaber
 - Ideelt var det hele open space.
- Michael siger at Tryg er blevet magnet for startups (altid har været det), men endnu mere nu. Tryg vil eje startup markedet mht. forsikringer.
- Der er meget samspil mellem Tryg, Innovation Lab og The Camp
 - F.eks. kan de komme til Innovation lab hvis de har nogle større problemer/udfordringer.
- Innovation Lab er ikke så kreativt anlagt ala ISS
- Det handler meget om at skabe kulturen, og egentlig ikke så meget om de enkelte innovationer.
- Umiddelbart ret flydende ifb. Tryg, The Camp og innovationer.

10.5 Appendix 5 – ISS Corporate Garage ('Guided Tour')

The ISS Corporate Garage is located in an external building approx. 100 meters from the HQ on ground floor. The entire floor is designed to be visually minimalistic, but of high functionality. The idea is to work through the main part, from section to section like following a journey or process, and then use the unique rooms according to demand/stage of the journey.

Once entering through the door, the first thing encountered is what appears to be a coat hanger, but is in fact a hanger for neckties, as to make people leave the "corporate" uniform and with it the corporate mindset. From here one goes directly into an open kitchen, which besides provides hot and cold beverages can provide the staff and any potential guests the opportunity to cook/heat a meal.

Turning left, one enters an open office space, with furniture and walls on wheels allowing rearranging according to the amount of people in the room and/or the activity performed. This particular room also has several big wooden boxes hidden away under a bench, intended to be a temporary placement for any personal computers, mobile phones etc to ensure that "everyday work" is put aside, as people are supposed to leave the "work" they came from and focus on being present.

From here on, there is a conference room located to the left of the office space called the "green room". In here, several plants are hanging from the ceiling, the walls are black (in contrast to the light/white theme throughout the rest of the garage) and can be written on. If needed, one can close the door and dampen sound from the rest of the garage, while the glass walls between the green room and the office space keeps the room somewhat open. This is the only room that somewhat resembles a normal office environment.

If turning away from the "green room", one encounters two different rooms on the right (in the centre of the garage) while walking towards the opposite corner. Firstly, a tiny Japanese inspired relaxation room is seen, full of white paper lamp shades brightening up the completely white room. Next is an area in the garage with moveable walls, allowing the area to be broken up into a square, a horse shoe formation etc. Again, all with walls that can be written on.

The far end of the garage is split into the so called "convergence room", where any person can go and sort out between ideas generated and pick those few ideas worth taking forward, and then continue to the last part of the journey, where the ideas are presented on a wall for evaluation of other members/people in the garage. People have the opportunity to support their favourite ideas with fictive money, allowing a fun, but effective way of sorting and moving forward with certain ideas.

Finally, the desks of the garage's daily personal is located (behind the kitchen) - also movable – and the tour through the garage has been completed.

10.6 Appendix 6 – The Camp ('Guided Tour')

The Camp is located at one corner of Tryg's head quarters, connected to the rest of Tryg's buildings by a overpass crossing from one of the buildings sides. Inside, The Camp covers two floors, with main entrance in the bottom. Both ground and first floor are designed to have offices all around the outer walls of the building, separated by a path for walking between the offices and then an additional "layer" of office-space towards the middle. Occasionally between the offices, one can find a small "time out" room, suitable for clearing one's mind or taking an important phone call.

On ground floor, the centre block seems to be breaking the floor up into 4 semi-separate areas in each corner, where people have the possibility to have meetings, eat, brainstorm or play around with the gaming stations or gadgets for detaching from work for a while. This is also the place, where residents of The Camp will have the possibility to showcase their products, albeit this was not in place yet. These “corner-areas” are without ceiling, and from the first floor one can look down, providing a feeling of openness in the building. In the centre of the first floor one finds a station providing beverages, and all around tables and chairs in style with the ground floor. This so-called "terrace" is also supposed to invite for more informal networking activities throughout the day, while also hosting Friday Bars and other social events.

All offices, conference and time out rooms are having glass doors/walls towards the walking path, creating a feeling of openness and transparency of how The Camp is full of life and activity, while at the same time providing the people sitting the different offices the privacy of being able to close the door and isolate their office from external noise. Trygs Innovation department is placed on the ground floor of The Camp in an open space next to the startups. All needed facilities are available at The Camp; however, the residents are still invited to walk around the Tryg Headquarters, for example by dining at the canteen or meeting up with potential partners from Tryg not directly associated with The Camp.

10.7 Appendix 7 – Example of thematic network analysis

Thematic network analysis

Thematic networks are web-like illustrations that summarize the main themes constituting a piece of text (Attride-Stearling, 2001). More specifically, they thematize the extraction of: (i) lowest-order premises evident in the text (Basic Themes); (ii) categories of basic themes grouped together to summarize more abstract principles (Organizing Themes); and (iii) super-ordinate themes encapsulating the principal metaphors in the text as a whole (Global Themes).

First step: narrow the text down to codes. In this example, parts of text have been presented with their code (written in bold).

Code: Innovation

02:35 Ulla: **Hele ordet innovation er sådan lidt: hvad innoverer man, hvordan innoverer man, og hvordan definerer vi det? Fordi en virksomhed som ISS bliver ikke 150 år gammel hvis man ikke går hver eneste dag og gør tingene lidt bedre. Og hvornår hedder det så en innovation, og hvornår er det bare noget man gør lidt bedre end man gjorde i går. Det er det felt jeg altid har arbejdet i. I forskellige positioner, i internationale virksomheder, med base i DK [Definition].**

38:20 Ulla: **Nej. Den balance har vi ikke, men den skal vi have. Vi skal balancere hvor meget der er tæt på core business, som er accelerate i virkeligheden[Balance]. Rigtig meget af det der ligger i accelerate er innovationer der er lavet fordi der har stået en ISS kollega ude hos en kunde som har haft et problem, og på baggrund af det har man løst problemet. Så har man lavet en eller anden løsning, f.eks. en app. Og det er jo enormt tæt på core business. Og det er det vi gør i dag. Det skal vi gøre. Så er der det der hedder adjacent, som ligger ved siden af core business [Core Business].**

Og så skal vi lave det der hedder transformational. Og ideelt set skal vi jo bruge 60-70-80% af vores tid på transformational fordi 85% af det vi kommer til at lave heroppe det bliver aldrig til noget fordi du

fejler vildt meget når man skal lave sådan nogle store eksperimenter [Radical]. Eller ikke store, man skal lave vilde eksperimenter = big and hairy. Så for at det balanceres skal vi bruge 60-70% af vores tid her, og måske kun 10% af vores tid på accelerate. Men den balance har vi ikke endnu, og den skal vi også have forhandlet på plads med strategi og de der excellence board, fordi de skal så lave nogle af de andre ting[Definition].

Strategy:

11:23 Ulla: Vi har 4 temaer – nu tegner jeg, og så kan i tage billeder bagefter. Væggene er magnetiske, man kan skrive på dem og alting. Det er super cool.

Vi har 4 ting vi skal gøre: Vi skal explore, follow, accelerate og vi skal engage. Det er de 4 ting vi skal i garagen. Så når du spørger hvad det helt konkret er vi gør, så er noget af det (noget er vi ikke gået i gang med endnu):[Strategy] i explore kategorien laver vi startup weekends, vi holder innovation workshops, vi holder hack-a-tons, vi laver strategiske sammenarbejder med vores leverandører og kunder om at idegenererer og co-creator, bruger Google design sprints (inspireret af Google venture) og kører dem. Det er vi i gang med, og vi har holdt den første startup weekend hvor vi mødes fredag eftermiddag. Så er vi 20 mennesker der er samme i 72 timer. Og mandagen efter er vi ude og validere en prototype som vi kalder det. Fredag med prototypen i baghovedet; mandag ude hos kunden og prototype. Tirsdag beslutter vi om det er en idé vi skal gå videre med. Det vil sige, at det det koster os at få en kundevalidering på den er 72 timer. Det er fuldstændigt uhørt i ISS' historie. Det tager flere måneder. Hos os tager det 72 timer. Så explore er co-creation, ideation, design sprints, startupweekendes og workshops.[Explore]

13:35 Vi kommer til at holde noget der hedder executive dinners, hvor man som ledergruppe (i england f.eks.) kan bestille en executive dinner her. Typisk så er man på besøg på HK (hvis man landeledelse) en dag, og holder en masse møder, og så tager man ind til byen og spiser om aftenen. Vi siger: lad vær med det; kom her over og spis i stedet for. Vi har fuldt køkken, fantastiske kokke, vi laver en konge lækker dejlig 3-retters menu til jer. Og mens vi spiser de 3 retter tager vi jer igennem en challenge eller en ideation proces. Prøv noget andet. Nyt værktøj. Tag slipset af og kom herover. Execvtive dinner foregår på den måde, at de skal komme med en challenge. Den er der nogle krav til. Den skal være big and hairy. De må ikke selv kunne knække den. Det skal være forretningsorienteret. De skal være enige om, at den vil de gerne knække. Og så garanterer vi dem, at når de går herfra, så kan det godt være de ikke har en løsning, men de har i hvert fald et nyt sæt briller til at kigge på deres udfordring med. Og så kører vi sådan, at man må skrive på duen, og alt sådan noget triggeret brainwalking noget. Det er explore kategorien.[Explore]

14:42 I Follow er det garagens ansvar at sikre, at hvis der kommer en AirBnB eller Uber inden for vores industri, så er det enten os selv eller er det nogen vi kender og ved det kommer. Eller vi som minimum ved hvor "cracks" er i vores forretningsmodel. Fordi når er man er så stor en virksomhed som vores, så er der masser af huller i vores forretningsmodel fordi den er så vidtrækkende. Så hvis vi ikke selv kommer cement i de der huller på den ene eller anden måde, så er der nogle andre der finder ud af, at der er en golden opportunity. Og så tager de den. Og det skal vi sikre, at vi er på toppen af. Så det her er rigtig meget en radar, en tech-radar, tage til konferencer, netværke, kende de rigtige mennesker, sørge for vi sidder i paneler, grupper, alt muligt rundt omkring. Det er det politiske system. You name it. Og

den er vi selvfølgelig ved at ramme ind, fordi man kan bruge hele sit liv på at tage fra konference til konference rundt omkring i verden. Her har vi et tæt samarbejde med f.eks. IBM som strategisk partner, ISS omkring technology-radar. Hvad er det for nogle teknologier der kommer ind til os, hvor eksponentielle er de osv. Institut for fremtidsforskning også.[Follow]

15:50 Jeppe: er det så stadigvæk jer der er followers, altså f.eks. tager ud til de konferencer. Er det stadigvæk jer 4 der sidder her (Corporate Garage).

Ulla: Ja. Den er vi ikke helt så skarp på endnu, altså hvordan vi gør det. I udgangspunktet så ja, så vil det være os.

16:10 Jeppe: Det kræver utroligt meget kan man sige; I skal være inde over hele virksomheden for at gøre det.

Ulla: Nej. Vi har sådan et annual wheel som vi heller ikke har besluttet os for hvordan ser ud endnu. Her kommer vi til at have kvartalvise temaer. Så vi siger, f.eks. lige om lidt kigger vi i Q2 2017 og her kigger på vi B-B-C. I dag sælger vi til Nordea. Vi ordner deres kopipapirer, kaffe gør rent, står for kantinen, booker mødelokaler, har deres transport til og fra lufthavnen, deres interne post; vi sørger for hele den bygning fungerer fra morgen til aften. B to B. I den bygning sidder der 3.000 mennesker. Dem sælger vi ikke noget til i dag. Er det ikke interessant? Vi er der jo i forvejen. Skulle vi ikke ordne rensetøj for dem? Hente børn. Vil du ikke have mad med hjem du lige kan lune i ovnen? B-B-C. Det er et interessant tema; at se om der er noget business revenue i det. Så kræver det at vores radar/vores follow i det her kvartal kigger på det her.[Strategy]

17:30 Så har vi accelerate. Det er det her innovation, innovators community. Det er her vi sikrer at de bedste af de bedste ideer, der slet ikke kommer herfra (Garagen red.), at dem får vi accelereret. Så de bedste ideer der er ude i landende, og de bedste ting, at få dem nursed og hjulpet til rent faktisk at kunne veksle ud over den kontrakt eller det land de kommer fra. Det kommer vi til at gøre på den måde, at vi kommer til at invitere folk til at komme herop og sidde. Så når nu vi ved, at vi både i Israel, Holland og England har lavet den her app som gør, at man kan bestille aftensmad nede i kantinen til at tage med hjem (det gør man bare om formiddagen; betaler via sit kreditkort) og så står det klar nede i kantinen kl. 14 når man er på vej hjem. Det er sådan en interessant offering herinde. Den ved vi eksisterer i Israel, Holland og England; det er 3 hvidt forskellige apps, og de synes alle 3 de har lavet det mest geniale setup. Vores opgave er her, at få fat i de 3 folk der har lavet de 3 apps, få dem fløjet til København, sæt dem ned i en uge, og sagt til dem: nu skal I finde ud af hvad er den bedste af de 3 løsninger vi har, og er det noget vi kan løfte op til noget vi kan implementere i Sverige, Norge, Tyskland osv. Og det hjælper vi med. Så vi accelererer det der allerede sker derude [Accelerate].

18:54 Og den sidste, men absolut ikke den mindst vigtige, den hedder engage. Og engage er 2 ting. Den ene er, at sikre at de conversations vi har med vores kunder kommer på et højere niveau. Fordi ISS bliver betragtet som en innovativ player i vores industri. Der er ingen af vores konkurrenter der har sådan noget som det her/gør sådan noget som det her (Garage). Og det er en helt anden dialog med kunden når du siger: må vi ikke komme og teste nogle ting hos jer? Vi vil gerne eksperimentere nogle nye ting vi går og laver. Kunderne synes det er fantastisk. Og super interessant at et facility service firma engagerer sig på den dagsorden. Så der er sådan positioning af ISS som en global innovation player, og den anden ting er engagement af hele vores community. Det er de 4 ting vi arbejder med [Engage].

Ambidexterity: 45:39 Jeppe: Hvordan ift. exploration og exploitation. Du havde lidt med core business og nye ideer, hvor I har fokuset på de her 60-70-80% som det ideelle.

Ulla: Vi har ikke sådan en balanced portfolio endnu, hvilket vi bliver nødt til at have. Den ene er den der med core business, adjacent og transformational. Og det her er måske noget til 6 måneder (core), der her er 6-18 måneder (adjacent) og det her er 18 og derud af [Balance]. Og for at komme i mål med noget i det her transformational, så skal du bruge rigtig lang tid på det fordi det fejler rigtig meget af det her oppe. Det her (core) behøver du ikke bruge så meget tid på, fordi meget af det er så tæt på forretningen, at det er kendt stof. Så der er en eller anden logik omkring balanced portfolio der. [Radical]

En anden balanced portfolio vi skal have er den her hvor vi har change (big change) og her har du incremental improvements. Jeg tror lidt det er det samme som du snakker om. Her går man og skruer og gør tingene lidt bedre hele tiden [Balance]. Og den ene ting er så customer centric, eller et anden godt ord for det (du må selv vælge) er ISS process. Hernede (nederst til venstre) der ligger der en app til ISS employees for at gøre et eller anden som gør kunden gladere, men som kunden aldrig ser. Det er f.eks. en app hvor all ISS medarbejdere kan indrapportere en pære der er gået i stykker/skal skiftes, et køleskab der står og lægger eller en ventilator der er gået i stykker, som gør man piv nemt kan få tilkaldt den rigtige ressource og få det repareret. Det lægger de aldrig mærke til, for det er en del af vores leverance apparat. Og det er bare sådan en lille "det skal vi selvfølgelig gøre lidt bedre". I dag tager vi en telefon og ringer til en eller anden der så siger "Nej det er ikke mig der laver ventilatorer, du skal have fat i Jørgen", og så skal vi ringe til Jørgen. Det er sådan noget som en app der kan gøre det..[Core Business] Vi vil rigtig gerne være her oppe. Man kan sige, accelerate hernede, det vi rigtig gerne vil accelerate, det er det der ligger her. Det her det gider vi faktisk ikke accelerate, det er interne ISS processer. Det er continuous improvement; det sker ovre i forretningen. Det er ikke os. Vi vil gerne accelerate det der giver kunden værdi. Så det her er vores [Accelerate]. Så hvad er så balancen, og hvad er balanced portfolio, så har jeg ikke svaret på det endnu, fordi vi har kun været her i 5 uger, men der er en logik vi skal have til at hænge sammen [Balance]. Og vi skal også have nogle af vores kollegaer i forretningen til at forstå, at for at levere noget her, så kræver det man bruger meget tid her [Radical].

Step 2: the coded parts of text represents various themes which are being discussed, leading to some overall themes identified.

1. Codes	2. Discussed Themes	3. Themes Identified
<ul style="list-style-type: none"> - Innovation - Strategy - Ambidexterity 	<ul style="list-style-type: none"> • Definition • Radical • Core Business • Strategy • Explore • Follow • Accelerate • Engage • Focus • Balance • Time 	<ol style="list-style-type: none"> 1. Need for clear differentiation between innovations 2. Different strategies are needed for core business, and for more radical innovation. 3. Focus to be on radical innovations

Step 3: once there has been identified some themes, they work as the basic themes allowing grouping of organizing themes, and further global themes.

1. Basic Themes	2. Organizing Themes	3. Global Themes
1. Need for clear differentiation between innovations 2. Different strategies are needed for core business, and for more radical innovation. 3. Focus to be on radical innovations.	Ability to balance incremental and radical innovations	Change

When the global themes have been established and verified, the thematic networks are in an explorable format, allowing for interpretation of the themes.

10.8 Appendix 8 – Members of Danish Food Cluster

Extracted from <http://danishfoodcluster.dk/who-we-are/directory/>







LAB SERVICE



10.9 Appendix 9 – List of companies in Scion DTU

The following list is extracted from <http://sciondtu.dk/virksomheder-i-forskerparken/?category%5B%5D=4&place%5B%5D=0>

Hørsholm	
Medtech	CMC Consult A/S CroxxMed Eye-Go A/S GenoKey GoSeqIt HB Medical IMP Engineering Jacobsen Pharma & Medtech Advice Medical Prognosis Institute Medicoindustrien Medtronic R&D Diabetes Denmark Particle Analytical Rion Co., Ltd. Scanex Medical Systems Tracer Pharma Visiopharm
Biotech	ALK-Abelló Bavarian Nordic Bioneer ChemPartner Chr. Hansen Cytovac DDD-Diagnostic Ecron Acunova Ellipse Expres2ion Biotechnologies FMC Glycom Gubra MC2 Biotek Mipsalus Parasite Technologies Roche Tannermedico Unizyme Laboratories Ventac Partners
Cleantech	Clean Charge Solution Cumulus

	Dall Energy Danish Renewable Energy A/S Danish Waste Solutions DHI GL-Turbo International SunTube ApS
ICT	2test Bitdefender CapNordic Colding Consult Comcores Contica Easy Speedy Exit Fugro Areal Mapping A/S Ingeniør Poul Colberg Olsen Intravision IT-Afdelingen Kapow Technologies Medodan National Instruments Danmark Smart Business Process Automation Tangora Software Tryg Consult Wilta Shipping
Other	3P Third Party Testing A-Apoteket A-Mag Leasing P/S Aktieselskabet Trap Danmark Alert Systems ApS Altoo Measurement Science Anapa Biotech Anemo Analytics ApS AquaDania A/S Bawat A/S CIM Industrial Systems A/S CiVi Biopharma A/S Corporate Voice Cre8tek Dansk Gasteknisk Center Danspray Consult FirstMind FluSens ApS, Denmark Force Technology

	Gemba Innovation A/S Gemba Seafood Consulting A/S Gitte Schreyer Harald V. Lassen Hertz & Co. Forsikringsmæglere Inspicos JJ X-Ray Kirkholm Maskingeniører Kragelund Consulting Loudsoft Lu Consulting Madsamling Mannaz Marvell Denmark MMF Consult Muinmos Mycometer Norwerk ApS Novitas Innovation Opus Pareta Riemann RQ Solutions Sabic-Nordic A/S Saxslab SFK Food A/S SQC / Skaanning Quality & Certification Technoconsult Theill Warming Rådgivning c/o Dall Energy Thürmer Tools TRD Surfaces Visiana Whitebox World Courier A/S
Lyngby	
Medtech	AUDIENTES Aps BalancAir Aps Boel Nordic Copac Aps Daintel DJLI A/S In.Tool ApS Marq-Medical MedTrace

	Nanovi OCTLIGHT Platisens Aps RSPR Pharma SpiroFriend Technology Aps UniGroup Unisense
Biotech	ArtScience Caslo Cortex Technology ImmuMap Services Intomics Movesca
Cleantech	1st Mile Advice2u Ballast Water Monitoring Ceko CEKO Aps EKOVENT ETEQ Venture FOM Technologies Fremsyn Greenstream Japan Meteorological Corporation KNXsolution LM Windpower MASH Biotech ApS Resen Waves SBT Aqua Similix UniBio A/S Urban Water Vessel Performance Solution
ICT	Acarix Aqoola Arcanic Authel Systems Aps Axcon B & R Industriautomatisering Barrowa Blue Access Blue Position ChannelCRM ClearViewTrade

	<p> Comsol Cookie Information eBrand Services EDR & Medeso ESG Insight FutureLink Interweb Consulting ISIS Papyrus Nordics JRE Konsolidator Legind Technologies Logos Logit A/S Mindkey Software Minuba MobiLAB Nexcom Odeon SKAARHOJ SquidHub Storybase.com IVS Strusoft DK Swantec Software and Engineering Teknisk Løsning TracTrac </p>
Others	<p> Bauritec I/S Bifrost Communication Aps Capres Copenhagen Compliance Copenhagen Nanosystems CPC - Center for Product Customization Cumulus Bio CVA Elektro-optik ApS Danfoss Dethlefsen Communication EcoSign Epcos Fluidan Free Energy Googly Fruit Aps GreenHouseIT Guardian IP Consulting Hermes Traffic Intelligence Hybrid Kommunikation Integration X </p>

	Intenz Investor Asset Management InvestorNet Keystones LEAP Technology LED iBond Lederskab Matin Partners Mind United NIL Technology Nordic Innovators Northern VO Novedas Mitas obli-Q Reliasset ReTuneDSP Saxocon Secuyou Aps Seed Capital Siemens SiteShop Smartgurlz Telco TJ Management Trafitec Waves Education Weel & Sandvig Ørtoft A/S
--	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

10.10 Appendix 10 – List of companies in The Camp

Extracted from <http://thecamp.io/our-heroes>



LavaPoint

kil@lavapoint.dk

Lavapoint is a dedicated IT-agency dedicated to internal and external corporate communication solutions. The work is mainly on modern mobile intranet solutions for ambitious customers. Lavapoint has developed a standard platform for portals, primary dedicated Corporate Intranets.



Airship One

lei@airship.one

We believe in a world where great technology drives humanity toward the stars and solves even the most urgent global challenges. As mankind steers towards new horizons, we empower people each step of the way by creating disruptive technologies that help navigate this ever-changing society and give you more "TIME TO BE HUMAN.™"



Aqubiq

peter.nortoft@aqubiq.com

We help people reduce water waste through intelligent technology.



Erhvervspsykolog Dorte Adamsen

dir@dorteadamsen.dk

Dorte Adamsen is a business psychologist who specialises in management, communication, cooperation, organisation and business development



DrugStars

cm@drugstars.com

DrugStars is creating a global movement of patients that are #GivingByTaking. Just take your medicines as prescribed by your doctor, and use the DrugStars app to activate donations to health charities for free.



Edison Law

kh@edisonlaw.dk

Kristian from Edison Law works with already funded start-up companies, and specialises in the internet, software, fintech, biotech and medtech industries



Finn Kollerup

finn@finnkollerup.com

Finn Kollerup creates systematic and tangible innovation strategies and implementation, through projects, events and knowledge on a global scale



Wuxus

kk@wuxus.com

Wuxus is an online marketplace and infrastructure for road freight transportation. Here haulers and transport buyers can easily and directly find each other without the need of brokers. As transport buyer you can easily find and book transportation for your goods online and direct. As a hauler you can show and market your free capacity regardless of where your trucks are on their route.



Kring

We believe that the most human-centric companies will end up dominating the markets they operate in. We believe that innovation will create an abundance of well-being, health and affluence. And we believe that successful leadership is about facilitating co-creation of this. That's why we talk about People, Planet & Profit.



Monsido

Jjo@monsido.com

Monsido makes it easy to maintain your website with a comprehensive online tool which contains everything you need for complete web governance



now now

charlotte@nownow.dk

nownow transforms strategy-reports into one overall picture covering the most essential parts of the strategy such as vision, mission, values and strategic focus areas. It gives you navigability, magnetism and clear communication. nownow offers a repertoire of visual support such as graphic facilitation, visual tool design and visual crash courses.



Riisolution

tr@riisolution.dk

Riisolution creates pre-build websites and tailor-made design solutions for Wordpress, Joomla etc, to help you create a visual identity, which suits your company best



TripMe

info@tripme.dk

TripMe offers a unique cloud service for the travel industry including an app for travelers. Our service is a valuable tool to improved customer service, effectiveness, and increased revenue.



Anyware Solutions

info@anyware.solutions

Anyware Solutions has created an ultra-small lamp socket, which turns your lamps and home, into a smart-home. It can detect sound, temperature, humidity as well as light.



Everyone Print

tavs@everyoneprint.com

EveryonePrint is revolutionising the printing industry by making it easy and accessible to print documents in high quality from any device, even your smartphone. If you know how to email or browse on your phone, you know how to print!



Choker Design Studio

studio@chokerdesign.dk

Choker Design Studio is a creative and quality conscious graphical partner for your company's visual communication. Kickstart your company's visual communication for both online and offline media!



Innocate

gitte@innocate.com

Innocate creates innovative health promoting interactions between professionals and patients/citizens. We provide competence development and use design thinking to develop dialogue tools in the public health sector and medical industry.

Dansk Drone Kompagni

hans@dronekompagniet.dk

Dansk Drone Kompagni delivers drone footage for all occasions. Need to inspect a windmill or building visually? Or do you need areal footage for a commercial or a project? Dansk Drone Kompagni does it all



LENEO

peter@leneo.io

LENEO provides a digital platform for handling leasing-deals online. The platform is completely scalable, and handles all types of leasing



Uniconta

info@uniconta.com

Uniconta is Erik Damgaard's new, lightning-fast cloud-based ERP system



Your Business

rene@yourbusiness.dk

Yourbusiness is a Full Service Communications Agency who specialises in online marketing, PR management, website development, SEO and strategy development



NewBanking

cvl@newbanking.com

Newbanking is a combined payment and KYC/AML platform, which makes it easy and cheaper to comply with international and local regulation. NewBanking operates across almost all borders, currencies and major card schemes in the world.



Queue-it

ley@queue-it.com

Queue-it is a virtual waiting room system designed to manage website overload during extreme end-user peaks.



AutoWise

swj@autowise.dk

We call ourselves AutoWise because we have an in depth understanding of both cars and economics, and is therefore your solution for new and used premium cars.



Live Boox

cd@liveboox.com

Liveboox.com is an online Danish book service for e-books and audio books within every imaginable genre

Intrata

gitnielsen@gmail.com

Gitte Nielsen from Intrata is a business psychologist who specialises in management, communication, cooperation, organisation and business development

North Tech Group

North Tech Group is exploring and developing ideas in the FinTech and LegalTech spaces.

10.11 Appendix 11- List of Companies in Cortex Park

Extracted from <http://www.syddanskforskerparker.dk/index.php?id=16>



Jero Consult



