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How intrapreneurs build social capital to overcome barriers for radical innovation

A single case study at a retail bank

by

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Abstract

Title: How intrapreneurs build social capital to overcome barriers for radical innovation

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Research question: "How do intrapreneurs build social capital to overcome barriers when conducting radical innovation projects?"

Methodology: Investigating how intrapreneurs build social capital to overcome barriers for radical innovation, this single case study applied a qualitative research method. The financial industry was chosen as a suitable industry to investigate challenges intrapreneurs face. Through semi-structured interviews with radical intrapreneurs this study created original knowledge social-capital building strategies. The data analysis and the development of the grounded theory model followed the suggestions by Gioia, Corley and Hamilton (2012).

Theoretical Perspectives: This study contributes to the theory of social capital and radical innovation. It offers a new perspective on social capital by investigating it from the perspective from the individual intrapreneur. The work furthermore adapts the barriers perspective focusing on what hinders rather than enables radical innovation.

Conclusion: Intrapreneurs build social capital for radical innovation through five different approaches. These help to establish trusted relationships, create a common understanding for ideas and working styles and foster a diverse network for the intrapreneur. These forms of social capital enable the intrapreneur to access resources they would not possess otherwise and make their surroundings more open to new ideas. All this leads to the intrapreneur being able to overcome radical innovation. These results are further strengthened by the finding that intrapreneurs who do not invest in social capital experience the barriers for radical innovation stronger than intrapreneurs who do. Last, this work found that challenges that can hinder the development of social capital are the need to invest great effort to build social capital, that changing mindsets happens slowly and that manager and employee discontinuity place a great threat on the establishment of trusting relationships.

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1. Introduction

1.1. Background

The current fast changing economic environment puts established companies under pressure (Baruah & Ward, 2014). To deal with this situation it has been widely acknowledged that companies need to develop the ability to constantly innovate (Story, O'Malley, Hart & Saker, 2008). To stay competitive managers need to find a mix of incremental and radical innovation (Forés & Camisón, 2016).

Incremental innovations are linear developments of existing products, services and technologies (Assink, 2006). They ensure that the company keeps up to improvements in their current business (Forés & Camisón, 2016). Radical innovation on the other hand drastically changes the value offering and the processes of a company and a market (Green & Cluley, 2014). They have the potential to change the face of an industry completely in terms of processes and offerings but also in terms of competitors (Christensen, Raynor & McDonald, 2015). This brings the risk for corporations to become irrelevant (Bower & Christensen, 1995). Companies therefore must be good at radical innovation in order to survive (O'Connor & Ayers, 2005)

Although this has been known and accepted for a while, innovations are still difficult for companies. Kuratko, Morris and Covin (2011) sum up the problem: "*Innovation is about the unknown. Management is about control. How do you control the unknown?*" (p.62). This is especially true for radical innovation projects. Because of the constantly changing nature they face a number of barriers inside the organization (Sandberg & Aarikka-Stenroos, 2014). First, wide-spread decision making powers and strict hierarchies in a company make the work for radical innovation difficult (Story, O'Malley, Hart & Saker, 2008). Second, fear of change and failure lead to a *restrictive mindset* that blocks decisions in favor of radical innovation (Sandberg, Aarikka-Stenroos, 2014). And last, ideas get rejected as they are perceived as external and not understandable (Bessant, Öberg & Trifilova, 2014).

How to overcome these barriers has been widely discussed in the literature. *Overcoming a barrier* is used in the literature mainly to describe the process of getting around one part of the problem, but not necessarily to achieve the final approval of a project (Antons and Piller, 2015; Baruah & Ward, 2015) For incremental innovation a number of processes have been proposed to ensure the quality and success of the project (Cooper, Edgett & Kleinschmidt, 2001). These

processes, however, do not work as well for radical innovations as they are in greater need for open structures to evolve best (Khurana & Rosenthal, 1998). Instead literature has highlighted the need to overcome these barriers with the help of social capital (McDermott & O'Connor, 2002).

Social capital describes the idea that it is of value that individuals in a network support each other (Adler & Kwon, 2002). Social capital theory is concerned with the relationships between individuals in a network (Nahapiet & Ghoshal, 1998). Researchers look at how these connections are established and maintained and what benefits the participants draw from these connections (Tsai & Ghoshal, 1998). For radical innovation, the benefit from social capital is seen in the relationships that actors use to build trust, access resources, and create knowledge (Camps & Marques, 2014; O'Connor & McDermott, 2004; Anderson, Park & Jack, 2007). These things need to be gained with the help of social capital in the context of radical innovation, as the processes in place for incremental innovation, do not work for radical innovation (O'Connor & McDermott, 2004).

1.2. Problem Formulation

Social capital theory mostly is undertaken from an organizational point of view. However, for radical innovation the individual pursuing the project is key for success. Granovetter (1973) finds that as central managers are responsible for keeping an overview about the company and controlling the processes, radical ideas are more likely to arise from individuals at the periphery of the company. These individuals that push radical innovation projects forward are called *intrapreneurs*. An intrapreneur is an employee who acts entrepreneurial inside established organizations (Martiarena, 2013). They take ownership for an idea and ensure its success (Seshadri & Tripathy; 2006). Intrapreneurs act based on their intrinsic motivation as the connection between the current and future business (Seshadri & Tripathy, 2006; Baruah & Ward, 2014). They represent a great chance for companies to innovate radically.

Despite the wide acceptance that social capital is important for radical innovation, little attention has been paid to how to build social capital that helps intrapreneurs to overcome barriers for radical innovation. Kuratko, Covin and Morris (2014) list advice how intrapreneurs can build social capital to be more successful in innovation projects but do not display the effect of these approaches. Burt (2000) gives insights into how intrapreneurs need to structure their network to be successful but leaves out the influence of relationships and mindsets in the company. Dutton and Ashford (2001) give practical advice on how to use different approaches

to sell ideas inside the company but do not draw the connection to social capital, leaving the intrapreneur and the reader with a question mark on the functionality of the strategies.

Overall, literature exists on how intrapreneurs build social capital and how social capital and radical innovation are connected. However, the transfer from building social capital up to the impact of barriers for radical innovation has not been dealt with explicitly. Drawing this connection is necessary to make the knowledge of social capital on an organizational level, applicable on the individual level. Through this, the call of McDermott and O'Connor (2002) is followed, to look more specifically on how social capital can help to overcome barriers for radical innovation.

Furthermore, the existing literature has been built mainly on quantitative analysis. This makes sense for social network analysis like Burt (2000) and is helpful to test relationships between existing concepts (Camps and Marques, 2014). However, this study follows the idea of Hoang and Antoncic (2003), who in their review on social network theories and entrepreneurship, call for more qualitative research, to be able to find new, original approaches to build social capital for radical innovation.

Last, previous research has focused on understanding what enables radical innovation (Cloutier, 2012). This is useful create an environment in which radical innovation can grow (Damanpour, 1991). However, looking at radical innovation from the perspective of an intrapreneur it is relevant to know what challenges can be expected throughout the way and how to overcome them. Sandberg and Aarikka-Stenroos (2014) point out that this perspective is researched too little. As O'Connor and McDermott (2004) point out the importance of social capital to overcome barriers for radical innovation, the research question for this work is:

“How do intrapreneurs build social capital to overcome barriers when conducting radical innovation projects?”

1.3. Research strategy and purpose

The aim of this study is to close the identified research gap and enrich the social capital literature in connection with radical innovation. With the focus on the perspective of the radical intrapreneur this work aims to clarify the connection between the actions of the individual, its impact on social capital and finally radical innovation.

As the complete journey from the action of the intrapreneur over the creation of social capital to overcoming radical innovation barriers has not been studied up to this day and the research on approaches to build social capital has been fragmented this work adapts a qualitative, inductive research strategy to create first-hand knowledge through qualitative semi-structured interviews. This is supported by Hoang and Antoncic (2003) who point out the need for more qualitative research in the field of social capital. As the focus of this work are the connections that intrapreneurs build in the company an interpretivist approach will be adopted to be able to understand the human behavior rather than attempting to explain it (Bryman & Bell, 2015). By using a single case study approach the interactions in the case company can be investigated in detail. To control for project specific biases, the interviewees are asked about multiple different projects.

The study is conducted in the context of a Swedish retail bank. The context of the financial industry was found to be interesting for the purpose of this study as the financial industry is reported to be in great need for radical innovation while being unable to live up to this requirement (Forcadell, Aracil & Ubeda, 2020). As Das, Verburg, Verbraeck and Bonebakker (2018) furthermore confirm, that the challenges that were found for radical innovation in general, can also be found in the financial industry, it was to be expected that the previously identified barriers will be found strongly in this company, making it suitable to study how intrapreneurs try to overcome them.

The results will be analyzed with the help social capital theory. This theory perceives organizational networks as three different dimensions. First, the structural dimension, which describes the number and the structure of connections in a network (Burt, 2000). Second, the relational dimension, which looks at the quality of the relationships between individuals (Borgatti & Halgin, 2011). And third, the cognitive dimension, which is concerned with beliefs and mindsets in an organization and how close or different they are from one another (Tsai & Ghoshal, 1998). This lens of social capital theory allows the researcher to dive deeper into the human interaction to analyze different levels of the phenomenon (Camps & Marques, 2014).

Overall, the research on social capital for radical innovation is enriched on a theoretical level by showing explicitly how building social capital weakens the effect of radical innovation barriers. On the practical level this research gives concrete advice to intrapreneurs how to act when working with radical innovation. The results of this research will be validated through a close comparison to existing literature after the presentation of the findings ensuring both original insights and strong, reliable results.

1.4. Case company

In the following case study, the case company is a multinational bank with headquarters in Sweden. It has around 5000 employees in different European countries with the majority being in Sweden.

In recent years, the bank experienced some troubling times. This led to frequent changes in higher management. The recent CEO aims to transform the traditionally conservative company into a digital innovative business.

Inside this environment there are two distinct units that are responsible for innovation projects. One is responsible for incremental innovation and is working on product improvements. In this department ideas are initiated either through input from colleagues that go through the stage-gate process or by senior managers. The ideas are then developed and implemented by a project manager outside the innovation team.

On the other hand, the radical innovation team is much less connected to the core of the company. Even though the ideas all contribute to the success of the company in the long run, they are developed outside the daily business of the bank, tapping just occasionally into corporate resources. The ideas are generated and tested through an open-cycling process. This team, consisting of five team members and one team leader by the time of the study, is the core of this study. By the time, it was supervised by the Chief Business Development Officer who reported directly to the CEO.

2. Literature Review

2.1. Intrapreneur

As this work contributes to literature on intrapreneurs strategy, the term *intrapreneur* will be defined in the next section. Intrapreneurs are employees that pursue intrapreneurship projects in a company (Camelo-Ordaz, Fernández-Alles, Ruiz-Navarro & Sousa-Ginel, 2011; Martiarena, 2013). Intrapreneurship is commonly defined as pursuing entrepreneurial activities within an established organization instead of creating a new venture (Parker, 2011; Camelo-Ordaz et al. 2011; Seshadri & Tripathy, 2006). This means that new business and venture opportunities are exploited with the resources and the ownership of the organization. The widely cited article by Antoncic and Hisrich (2003) is providing an extensive discussion on the definition of intrapreneurship, additionally it includes the establishment of new process in a company. This is in line with one of the earliest definitions of intrapreneurship by Collins and Moore (1970) who see the creation of new structures in an organization as a crucial part of intrapreneurship. As the work by Antoncic and Hisrich (2003) appears to have the most solid foundation and is frequently quoted, in this work **intrapreneurship includes both the creation of new business and of new processes inside a company.**

Looking at the intrapreneur instead of intrapreneurship means analyzing the phenomenon from the individual's point of view (Blanka, 2018). An intrapreneur, according to Seshadri and Tripathy (2006), is characterized by taking ownership for the success of the company and for the intrapreneurial projects. Blanka (2018) and Camelo-Ordaz et al. (2011) support this view and see them as pro-actively pushing the innovation project forward. Martiarena (2013) aims to demystify the character of intrapreneurs by showing that they have similar values and goals as normal employees. This points towards that a person can be an intrapreneur in one project and a normal employee in another. **Based on the previous discussion, this work defines intrapreneurs as an individual who shows ownership to drive an innovation project forward inside the company** (Camelo-Ordaz et al. 2011).

2.2. Radical innovation

2.2.1. Definition

In order to sustain a long-term competitive position in the marketplace, a firm is dependent on its ability to foster and realize innovations (Leifer, O'Connor & Rice, 2001). The term innovation itself refers to “*an idea, practice, or material artifact perceived to be new by the relevant unit of adoption.*” (Dewar and Dutton, 1986, p. 1422). In this context, it can be differentiated between innovations that gradually redefine a product or a process (incremental) and innovation that trigger a major transformation (radical) (Camps & Marques, 2014). As radical innovation differs significantly from how incremental innovations are approached within an organization, it is important to clearly differentiate between the two types of innovation (McDermott & O'Connor, 2002).

According to Dewar and Dutton (1986) the main difference between radical innovation and incremental innovation is that they differ in their technological novelty and newness to the adopting unit. Similar to this approach, McDermott and O'Connor (2002) distinguish between radical innovation and incremental innovation through the scales market uncertainty and technological uncertainty, where radical innovation scores higher on both scales. Both articles determine the radicalness of an idea through its impact on the end-user. This view is further supported by Christensen, Raynor and McDonald (2015) who see an idea as disruptive when it serves at first new product-segments and from there emerges to change the landscape of the old industry. They also mention that these innovations have a hard time being accepted in the company as they do not perform well at the traditional performance scales. This points to the internal side of radical innovation.

Camps and Marques (2014) agree with the previous authors that radical innovation leads to a major transformation of a product or service but add that also the internal processes can experience a great shift to classify an idea as radical. Kesting and Ulhøi (2010) describe this as “*deliberate and purposeful changes of a firm's set of routines*” (p.69). This is supported by Green and Cluley (2014) who focus on the internal effect of radical innovation. Bessant, Öberg and Trifilova (2014) argue that the radicalness of an innovation should be evaluated based on the internal situation of a company. Linton (2009) underlines that an innovation might be radical for one company but not for another.

As the focus of the work is to analyze how intrapreneurs deal with internal barriers of radical innovation, the radicalness of projects will be evaluated from an internal perspective and therefore follow the line of argumentation of the latter authors. This means that both the impact on the value offering and on the processes of the company will be evaluated in the context of the case organization. Based on the previous discussion, the definition for radical innovation in this paper stands as follows:

Radical innovation changes either the processes in the company or the value offering for the customer radically (Bessant, Öberg & Trifilova, 2014; Kesting & Ulhøi, 2010).

To avoid confusion, it should be mentioned that the terms discontinuous, breakthrough, disruptive and revolutionary are sometimes used to describe similar types of innovations (Crossan & Apaydin, 2010). However, since the words point to slightly different meanings and perspectives, in this thesis *radical innovation* will be used exclusively.

After defining what radical innovations are it is relevant to understand how working with incremental and radical innovation differs. There is a wide agreement in the literature that working with radical innovation challenges the organization in two ways: First, radical innovation does not follow linear processes as incremental innovation does (Assink, 2006). In fact, they do not follow the established processes, as these are made to exploit ideas in the most efficient way rather than exploring for new opportunities (Vlaar, Vries & Willenborg, 2005). To fully capitalize on the potential of a radical innovation these established processes need to constantly change (Story, O'Malley, Hart & Saker, 2008). Second, radical innovation inhabits a great part of uncertainty (O'Connor & McDermott, 2004). Their value and revenue is often not clearly defined at the beginning and just slowly emerges over time (Birkinshaw, Bessant & Delbridge, 2007). Both specifications clash with the nature of corporate organisations that are made for efficient exploitation of proven ideas and concepts (Bessant, Öberg & Trifilova, 2014).

2.2.2. Challenges for radical innovation

The identified clashes lead to challenges that intrapreneurs experience throughout the process. Hölz and Janger (2012) point out that there are external and internal challenges. However, in line with the focus of this thesis only internal challenges will be considered. Focusing on the barriers for radical innovation means to look at what stops radical innovation (Sandberg & Aarikka-Stenroos, 2014). This stands in contrast to studies from authors like O'Connor &

Ayers, 2005) who focus what might initially foster radical innovation. Focusing on the barriers allows to develop more concrete results on how social capital can contribute to radical innovation (Sandberg & Aarikka-Stenroos, 2014).

Literature has identified a number of barriers for radical innovation. Vlaar, De Vries and Willenborg (2005) found incompetence as a major problem. This is supported by Assink (2006) who points out the need for special skilled workers for radical innovation. Also Sandberg & Aarikka-Stenroos (2014) support it with their barrier of lack of competencies. They furthermore add that a lack of resources can be a hurdle. Despite the support by Assink (2006) both barriers are mentioned overall rarely in the literature. One reason for this might be that the literature focuses more on the challenges that arise directly from the differences between radical and incremental innovation as described before.

More frequently researched is the problem of an unsupportive organizational structure, where *“hierarchical arrangement of lines of authority, communications, rights and responsibilities in the firm”* (Sandberg & Aarikka-Stenroos, 2014, p.1298) hinder the development of radical innovation. As organizational structures need to be constantly adapted for radical innovation, the network’s inflexibility can turn into a barrier for innovators (Story et al., 2008; Vlaar, De Vries and Willenborg, 2005). The hierarchies that serve well for the exploitation of ideas are in the way when it comes to radical innovation (Assink, 2006).

The most important barrier for radical innovation appears to be the problem of a restrictive mindset (Sandberg & Aarikka-Stenroos, 2014). The authors describe this to consist out of a *“fear of change, fear of failure, conservative decision-making, and restrictive organizational culture”* (Sandberg & Aarikka-Stenroos, 2014, p.1298). Assink (2006) supports this as he also finds a risk-averse mindset as a great problem for innovation. Birkinshaw, Bessant and Delbridge (2007) furthermore add the difficulty of breaking routines that are enforced by a conservative culture. The negative connection between a restrictive mindset and radical innovation is empirically backed up by Büschgen, Bausch & Balkin (2013).

An important part of the restrictive mindset is a concept that has been mentioned frequently in this context: The Not-Invented-Here-Syndrome (Bessant, Öberg & Trifilova, 2014; Antons & Piller, 2015; Assink, 2006). Katz and Allen (1982) define the not-invented-here syndrome as a resistance to consider that externals might contribute important knowledge to the own work. Burcharth, Knudsen and Søndergaard (2014) specify that externals in this context can be both external to the organization but also to the team, getting input from other departments in the

company. The fact that it is not exclusively a problem for radical innovation but also for incremental innovation might be the reason that the influential article on barriers in radical innovation by Sandberg & Aarikka-Stenroos (2014) has not mentioned it as an own barrier. However, as this literature review has shown that it is found frequently as a barrier in radical innovation it will be considered in the further discussion.

Overall, the analysis has shown that the unsupportive organizational structure, a restrictive mindset and the Not-Invented-Here-Syndrome are common barriers intrapreneurs face when working on radical innovation projects. There is also support for the lack of competencies and resources to be a barrier, but the research indicates that they have to be seen as secondary.

2.2.3. Radical innovation in the financial industry

One industry that has to face many innovations in the last decade is the financial industry (Das, Verburg, Verbrack & Bonebakker, 2018). The factors leading to this change are discussed in a small but substantial part of the academic literature. It is widely acknowledged that the financial crisis in 2007/2008 has led to a number of changes in the legislative framework (Vives, 2019). Some argue that the changes in risk management and transparency have forced banks to rethink their processes (Das et al., 2018), whereas others focus more on the opening of the market for other players (Singer, Avery & Baradway, 2008). The latter has opened space for a number of new market-entrances taking advantage of new technologies and capitalizing better than traditional banks on the opportunities of digitalization (Vives, 2019). These observed changes in the market conditions have caused a pressure for these established firms to start investing in radical innovation projects in order to survive (Das et al., 2018). However, despite a number of incremental improvements in the last years, the industry is still seen as being unable to innovate radically (Forcadell, Aracil & Ubeda, 2020).

Despite the realization that radical innovation is important for the banking industry the research on challenges for radical innovation is rare. Only two articles have dealt explicitly with challenges for innovation in this specific industry context. Vermeulen (2004) found four major challenges for innovation without differentiating between incremental and radical innovation. More recently, Das et al. (2018) found six barriers for radical innovation.

Both articles find strong support that the previously stated barrier for radical innovation of an *unsupportive organizational structure* is also present in the financial industry. Furthermore, they also find that a *risk-averse mindset* is hindering innovation (Das et al., 2018; Vermeulen,

2004). This is further supported by Nishiyama (2007) who concludes in his study that banks are in general risk-averse. Lastly, also the *not-invented-here syndrome* was found in the study by Das et al. (2018). Therefore, it can be concluded that the chosen case company can be expected to experience all three major barriers for radical innovation that are part of this study.

2.3. Social capital theory

2.3.1. Overview

When looking for advice how to overcome barriers in radical innovation projects, intrapreneurs will find one statement over and over again: That the intra-company network of an intrapreneur is important for the success of the project (Griffin, Price, Vojak & Hoffman, 2014; O'Connor & McDermott, 2004; Kuratko, Morris & Covin, 2011). O'Connor & McDermott (2004) base their reasoning on the lack of trust building initiatives in radical innovation processes. Therefore, the next section will deal with social capital theory and how intrapreneurs can use social capital in radical innovation projects.

Social capital emerged as a concept from social science and describes the connections, norms and social trust in a community or an organization as sources for “coordination and cooperation for mutual benefit” (Putman, 1995, p.66). It was quickly adopted by business research and boils down to “advantages that participants in social contexts gain from their interactions” (Oparaocha, 2015, p.542). Social capital is therefore essentially about the relationships between individuals (Nahapiet & Ghosal, 1998). For the individual the value of the network is determined by “*the sum of the actual and potential resources embedded within, available through and derived from the network of relationships.*” (Ahn & Kim, 2017, p.2). From an organizational perspective the social capital of a company is made up from the sum of the connection between its members (Chang & Chuang, 2011).

The term social *capital* is used to underline that social relations can be as important as an asset for organizations as financial and other forms of capital (Portes, 1998). It highlights its functionality as being exchangeable for other goods and services (Adler & Kwon, 2002). In contrast to other forms of capital, social capital is not owned by one person but exists in the relationships between the people (Anderson, Park & Jack, 2007)

One field that is frequently researched is the connection of social capital and innovation. In their quantitative analysis Yeşil and Doğan (2019) found a clear connection between social capital, innovation capabilities and innovation. Carmona-Lavado, Cuevaz-Rodríguez and

Cabello-Medina (2010) not only support this but further specify that this relationship gets stronger for more radical projects. Lastly, McDermott and O'Connor (2002) and Story et al. (2008) state that networks are important for radical innovation.

2.3.2. Three dimensions

For a deeper understanding of what social capital consists of, several authors have taken a multi-dimensional approach looking at social capital from different perspectives (Camps & Marques, 2014). In the following the three dimensions of social capital, the structural, the relational and the cognitive, as defined by Tsai & Ghoshal (1998) will be discussed.

2.3.2.1. Structural dimension

The literature describes a network as consisting of actors or knots that are connected by ties (Borgatti & Halgin, 2011). The *structural dimension* looks at who an actor reaches with the network and how this is achieved (Nahapiet and Ghoshal, 1998). These authors see the foundation for the structural dimension in the work on social networks by Granovetter (1973) and Burt (1995). They stress the importance of considering which positions the contacts possess in a network, how the contacts are related to each other and very simply how many contacts an actor has. One important part in the categorization of connections is the differentiation between *formal* and *informal* ties (Camps and Marques, 2014). This categorization, aiming to explain from a top-down perspective the connection of people, is supported by many authors in the field (Park et al. 2014; Tsai & Ghoshal, 1998). Monnavarian and Ashena (2009) have further categorized the structural dimension into *formal*, *informal*, and *relational* social ties. As the relational aspect will be covered in an own dimension later, it will not be considered here (Tsai & Ghoshal, 1998). Overall, the structural dimension is about who an actor can reach over which channel. It also looks at the type of relationship, formal or informal, and the position of the actors in the network but does not consider the internal nature of the ties.

The structural dimension is important for the value of a network as it determines how far an actor's network can reach (Burt, 2000). The underlying idea is that having a broad network helps intrapreneurs to tap into different sources of knowledge and combine them to new ideas (Burt, 2000; Björk & Magnusson, 2009). This process is conceptualized from a creativity point of view by Sundgren (2003) when talking about tapping into different fields to create

innovation. O'Connor and McDermott (2004) as well as Park et al. (2014) highlight the importance of informal networks as they help to overcome structural barriers for the creation of new knowledge. Burt (2000) describes one way of doing so as acting as an information broker between not connected dots in the network. Through this strategic position in the network the broker can get access to further knowledge. Having a broad network is furthermore beneficial as Anderson and Park (2007) describe that it enables intrapreneurs to “access resources they would not possess otherwise.” (p.250).

2.3.2.2. Relational dimension

The *relational dimension* deals with the “*relations people have, such as respect and friendship*” (Nahapiet & Ghoshal, 1998, p.244). It is concerned with how the ties between actors are established and maintained (Borgatti & Halgin, 2011). Factors such as commitment, mutuality, co-operation and satisfaction are considered in this dimension (Park, Kim & Krishna, 2014; Story et al., 2008). An important aspect of the relational dimension is the establishment of trust and trustworthiness between participants (Tsai & Ghoshal, 1998). It is seen as a central measurement for the quality of the relationships in a network (Camps & Marques, 2014). Overall, the relational dimension is about the thoughts and attitudes actors have towards each other. It is important for the evaluation of the quality of social capital as it determines if the connections, that are described by the structural dimension, are established based on trust that allows the sharing of support and knowledge.

Having a good and trusted relationship with the co-workers is especially important for radical intrapreneurs, according to O'Connor and McDermott (2002), as their projects do not follow the standard procedures, designed to build this trust. The quality and thus the established trust and trustworthiness in the relationships observed in the intraorganizational network are identified as particularly important to the success of innovation projects (Oparaocha, 2016; Hart et al., 2008; Park et al., 2014). A trusting relationship can help to decrease initial reservations towards an idea, as found in the literature on the not-invented-here syndrome (Burcharth, Knudsen & Søndergaard, 2014). Yang, Chou and Chiu (2014) find that close contacts can help to overcome structural barriers and access resources faster. If intrapreneurs do not have yet a connection to an important group, their trusted contacts can help them to build this credibility (Anderson, Park & Jack, 2007). Burt (2000) summarizes this in the following way: “*The well-known solution is for the outsider to speak through an inside*

sponsor.” (p.399). This means that the intrapreneur finds someone in the network who speaks in favor of the project to increase the support for it (Hoang & Antoncic, 2003).

2.3.2.3. Cognitive dimension

In contrast to this, the *cognitive dimension* is concerned with ideas, visions, and mindset that each actor has on his own but that participants in a network can have in common (Camps & Marques, 2014). The authors describe that these common strains of thoughts ease collaboration as actors share the same vision, narratives, and languages. Tsai & Ghoshal (1998) find that this dimension is the least defined dimension. Monnavarian and Ashena (2009), for example, also count *trust* to the cognitive dimension. However, as trust is anchored in the tie between two people and not each other’s individual strain of thoughts, adding trust to the cognitive dimension would confuse the definitions and is not considered as such in this work.

The cognitive dimension is important to consider in the framework as it allows to estimate how difficult the collaborations in an organization can be. Haas and Mortensen (2016), for example, write in their paper on team dynamics, that a shared mindset is important for effective teamwork. This is specifically difficult for intrapreneurs that work in the environment of a restrictive mindset (Camps & Marques, 2014). This is supported in the literature on the not-invented-here syndrome as Antons and Piller (2015) highlight the need to change employees’ attitudes to overcome this barrier. Furthermore, Cohen and Levinthal (1990) find that individuals have an easier time accepting a new idea if they can integrate it into an existing framework. This is supported by Bessant, Öberg and Trifilova (2014) who suggest that for radical innovation common knowledge and beliefs in the company need to be reframed. This is expected to further mitigate the risk of the not-invented-here syndrome.

2.3.2.4. Connection between the three dimensions

Last, the three dimensions of social capital are highly interrelated (Nahapiet & Ghoshal, 1998). To follow the strategy of being endorsed by someone else (Anderson, Park & Jack, 2007), a widespread network is beneficial (Burt, 2000). People who share a common mindset are more likely to trust each other (Camps & Marques, 2014). On the other hand, a trusting relationship also makes it more likely that actors are open for the ideas and vision of their opponent (Tsai & Ghoshal, 1998). Finally, a shared vision in an organization increases the likelihood that new connections are created (Nahapiet & Ghoshal, 1998).

Across the three dimensions of social capital, three patterns how social capital can help in radical innovation processes can be found. First, a wide network helps intrapreneurs to tap into different domains to come up with new ideas (Burt, 2000; Sundgren, 2003). The same network in combination with trusted relationships also gives the intrapreneur *access to resources* (Burt, 2000; Yang, Chou & Chiu, 2014). Last, trust and a shared understanding of the situation and content increase the *openness to new ideas* (Burcharth, Knudsen & Søndergaard, 2014; Antons & Piller, 2015). All three concepts are well established in the literature. However, the investigation of most of the articles happens on the organizational level (Tsai & Ghosal, 1998; Oparaocha, 2016; Adler & Kwon, 2002). Just a few authors are trying to investigate how individuals build social capital for innovation (Anderson, Park & Jack, 2007). To fill this gap and provide intrapreneurs with knowledge how they can build social capital to overcome radical innovation barriers witnessed in the banking sector is the purpose of this study.

2.3.3. Social capital building for radical innovation

Searching for literature on how to build social capital for radical innovation, the researcher is going to be disappointed as this field has not been touched explicitly so far. Therefore, in the following part, literature on social capital building in general will be mixed with strategies that intrapreneurs use when pursuing radical innovation projects and that can be related to building social capital. The structure will follow the three dimensions of social capital, presented above.

To increase the value of the *structural dimension* of social capital, intrapreneurs invite different levels of hierarchy to contribute to the project (Dutton & Ashford, 2001). Where O'Connor and McDermott (2004) focus on including top-management, Dutton and Ashford (2001) additionally highlight the importance to include middle-management and front-line employees to ensure early trust in the project and access to resources. Kurtatko, Morris and Covin (2011) furthermore mention the strategy to use the established network to get access to other actors to increase the reach of the own network.

The last strategy clearly shows the interconnection between the dimensions, as Burt (2000) interprets the same strategy as a way to increase trust and therefore contribute to the *relational dimension*. Kurtatko, Morris and Covin (2011) suggest that intrapreneurs should first be active in small scale projects to gain initial trust before promoting bigger projects which is also supported by Griffin et al. (2014). Geertshuis, Cooper-Thomas and Price (2013), on the other hand, promote the exchange of favors as a tool to build familiarity and trust between actors.

The last strategy identified in this section, builds the bridge between the *relational* and the *cognitive dimension*. Griffin et al. (2014) and Dutton and Ashford (2001) describe how intrapreneurs present their projects with a great focus on data. They explain this tactic with the realisation of the intrapreneurs, that the shared mindset in the business environment is that data is a reliable source for arguments. It can therefore be argued that the intrapreneurs adapt on the cognitive dimension to their environment to build a trusting relationship.

This stands in contrast to the first strategy in the *cognitive dimension*, where intrapreneurs present their idea repeatedly until the principle becomes a shared understanding in the company (Dutton & Ashford, 2001). This is also found by Griffin et al (2014) who phrase it as “plant[ing] seeds” (p.1369) to create a common understanding of the project which eventually is supposed to lead to trust in the project. Another way is to “share information” (Kuratko, Morris & Covin, 2011, p.365) that can increase the understanding for the idea.

Last, it should be mentioned that the literature also finds reasons to not build on social capital for radical innovation. Dutton and Ashford (2001) advise the intrapreneur to carefully consider whether it is worth to include a stakeholder and if it might be more efficient to focus on the work first. This strategy is termed *bootlegging* in the literature and represents the idea of working in secret at the beginning to protect the original character of the idea from outside influences (Augsdorfer, 2005).

2.4. Connecting the theories

Through the course of this chapter several connections between the topics have already been shown. In the last section of this chapter, these relationships and the overall framework for the further discussion will be presented.

The chapter started off with defining the intrapreneur as the actor for radical innovation projects for the rest of the course. In the following, radical innovation was defined as changing the process or the value offering in a company drastically, which lead to challenges for radical innovation. The general distinctiveness of radical innovation to not follow pre-defined processes and requiring the organization to be able to constantly adapt was presented and then transformed into three concrete barriers for radical innovation, that could also be found in the financial industry. Next up, the ways how social capital can help to overcome barriers for radical innovation. The chapter closes with an overview of different methods on how to build social capital, divided into the three dimensions of social capital, and how this can potentially

help to overcome radical innovation barriers. This last part was based on literature that is not explicitly written for the context of radical innovation. Investigating strategies how intrapreneurs can build social capital to overcome barriers to radical innovation is the purpose of this paper.

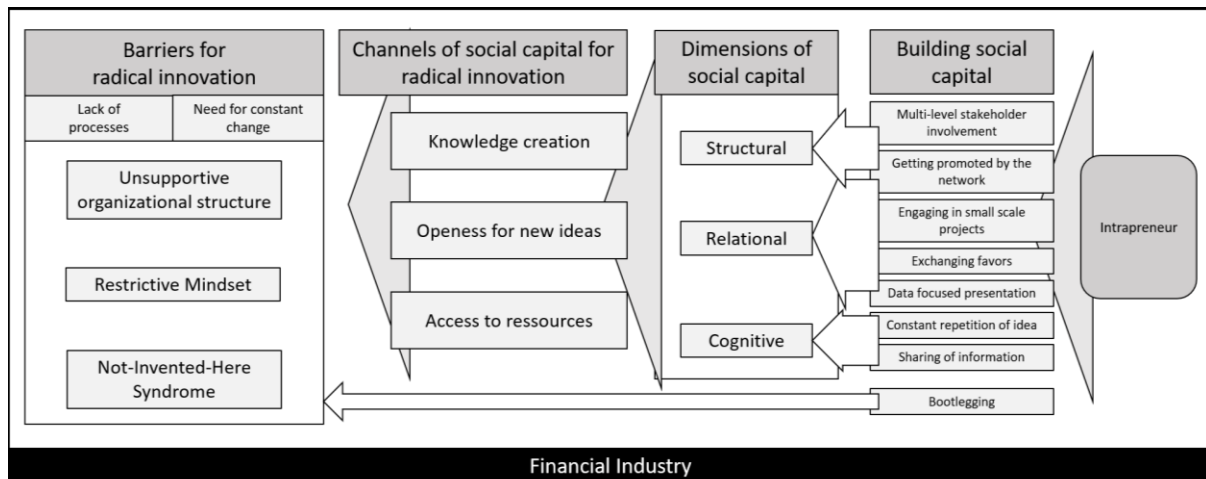


Figure 1: Summary of literature review

3. Methodology

3.1. Research Approach, Design and Process

3.1.1 Epistemology and Ontology

The qualitative research method being undertaken in this thesis aims to investigate the social ties of individuals in the corporate organizational context, which in regards to epistemological considerations relates to the interpretivist approach which is characterized by studying the phenomenon of the social world (Bryman and Bell, 2015). Adopting the interpretivist approach means focusing on understanding human behavior. This stands in contrast to the positivist approach which focuses on explaining human behavior (Bryman and Bell, 2015).

Furthermore, the ontological position being undertaken is constructivism (Bryman and Bell, 2015). This approach of ontology views social entities as social constructs influenced by the perceptions and actions made by the social actors within these entities (Bryman and Bell, 2015). Additionally, constructivism views the organizational context as being in constant revision rather than in a permanent static state (Bryman and Bell, 2015). The focus of theory in this thesis on the concept of social capital and intraorganizational networking is highly related to the social construct of the corporate organization being case studied. However, what is important to admit is the authors' potential risk of viewing the world and social entity being studied with subjectivity (Bryman and Bell, 2015). In order to mitigate this risk, the authors have taken precaution actions in terms of reflecting upon how 'personal idiosyncrasies and implicit assumptions' might impact the undertaken research approach (Bryman and Bell, 2015, p. 714).

3.1.2 Research strategy

In accordance with the chosen interpretivist and constructivist research approach presented above the study aligns with two of the fundamentals that defines a qualitative research strategy (Bryman and Bell, 2015). Additionally, since the research aims to get an in-depth qualitative detailed understanding of the social world being researched the authors will consequently face a need to at the maximum extent possible interpret these phenomenon from the point of view of the people and events being studied (Bryman and Bell, 2015). This further implies that in order to genuinely be able to identify and reveal patterns and perspectives of the phenomenon being studied, this is enabled by the open-ended and flexible structure which characterize the

qualitative research (Bryman and Bell, 2015). In the context of these considerations an inductive strategy to theory building is mainly taken, meaning that theory is the outcome of the research (Bryman and Bell, 2015). However, since the authors have gotten themselves a better understanding of the theoretical concepts being applied to the phenomena studied before the actual data collection ties into the characteristics of a deductive strategy (Bryman and Bell, 2015). The literature states that the inductive and deductive strategies should be viewed as ‘tendencies rather than as a hard-and-fast distinction’ (Bryman and Bell, 2015, p.25). The commonly observed combination of strategy use has in the literature emerged into what is referred to as an abductive research strategy which also defines the approach of this thesis (Bryman and Bell, 2015).

3.1.3 Research design

The research design for this thesis constitutes a single case study of a single organization, which implies in-depth and intensive analysis of the unique contexts and features of the object being studied, which is referred to as an idiographic approach (Bryman and Bell, 2015). This consequently implies the focus of particularization rather than generalization which due to the characteristics of case studies is restricted to the context being studied (Bryman and Bell, 2015). In this thesis the single case study approach enables the researchers to explore the organizational network that intrapreneurs act within in their work to pursue radical innovations and overcome acknowledged radical innovation barriers. Thus, this implies that the level of analysis is at an *individual* level (Bryman and Bell, 2015).

3.1.4 Research process

The research process was initiated through *unstructured interviews* in two different rounds (Bryman and Bell, 2015). First, an interview was conducted with the Head of radical innovation for the researchers to familiarize themselves with the existing radical innovation context in the company. This enabled the identification of a few research topics that were further investigated through academic literature. This initial academic research was followed by a second round of unstructured interviews with four employees, working with radical innovation, in the investigated case company. The interviews followed an explorative approach that further enabled the researcher to determine which of the identified research topics that would ensure that a sufficient amount of qualitative data could be collected within the company. This was followed by an extensive literature research within the chosen thesis topic. This enabled the

researchers to identify a gap in the literature where contribution with new knowledge and understanding is needed (Bryman and Bell, 2015). The conducted literature review then served as the basis for the later developed *interview guide* (Bryman and Bell, 2015).

The next step was to conduct *semi-structured* interviews with selected interview participants, these followed the general guidelines by Bryman and Bell (2015). The collected data was later analyzed through the grounded theory framework presented by Gioia, Corley and Hamilton (2012). The findings from the conducted data analysis was then further discussed in relation to the frameworks and concepts presented in the literature review (Bryman and Bell, 2015). Finally, a concluding answer to the studied research question was fulfilled and presented (Bryman and Bell, 2015).

3.2 Data collection method

3.2.1. Unstructured interviews

In order to let the researchers, familiarize themselves with the radical innovation context in the case company unstructured interviews were conducted with four employees working at the radical Innovation department. The preparation for the interviews followed a ‘aide-mémoire’ with a very brief set of radical innovation related topics to ask about (Bryman and Bell, 2015). Since the aim of the interviews was to ideate and explore potential research topics none of the interviews were recorded. Furthermore, the interviews followed a conversational character which enabled the researchers to follow up on issues that seemed to be of further interest (Bryman and Bell, 2015).

The interviewee sample consisted of the Head of Innovation Department along with three subordinates working as Innovation Leads. This enabled the researchers to both get the holistic picture of the Innovation Department’s position and relation with the rest of the organization as well as more radical innovation project related content from the Innovation Leads.

Interviewee	Role	Date of interview	Recorded & Transcribed
B	Innovation Lead	20.02.2020	No
C	Innovation Lead	21.02.2020	No
D	Innovation Lead	21.02.2020	No
E	Head of Innovation Department	19.02.2020	No
		05.02.2020	No

Table 1: Unstructured Interviews

3.2.2. Semi-structured interviews

In order to fulfill the chosen research purpose and enable a collection of topic specific and information rich data, semi-structured interviews were conducted (Bryman and Bell, 2015). Since the level of analysis is set to investigate the reality and perceptions of the individual intrapreneur, in his or her work to pursue radical innovations, the interviews were performed with open-ended questions to allow the interviewee to freely express his or her interpretations (Bryman and Bell, 2015). This approach reassured a desired level of flexibility to the interview process which thus enabled the researchers to ask follow-up questions to issues the interviewee brought up that were not covered in the developed interview guide (Bryman and Bell, 2015). The interviews lasted for approximately one hour each.

3.2.3. Interviewee selection

Based on the research purpose, to investigate how intrapreneurs build social capital to overcome barriers when conducting radical innovation projects, the individuals of interest to interview consequently were those acting as intrapreneurs within the case company. Consequently, a purposive sampling was applied, which implies that the interviewees were chosen in a strategic way to achieve relevance for the research question (Bryman and Bell, 2015).

Furthermore, in order to be selected the following criteria was needed to be fulfilled. Each interviewee must have been involved in at least one radical innovation project by showing ownership to drive the project forward inside the company and thus be referred to as an

intrapreneur (see chapter 2.1). In line with the definition of radical innovation in this work a project was approved to be radical if it had the potential to cause a major shift in the internal processes or the value offering of the company (see chapter 2.2.1). The collected information, regarding the characteristics of the innovation projects, mentioned in the unstructured interviews helped the researchers to navigate themselves to the relevant employees. Furthermore, a formal verification of the characteristic of the innovation projects as being radical was concluded through two open-ended questions asked in the interviews. This will further be presented in the next section. The table below presents the sample of interviewees.

Data Collection Sample				
Interviewee	Role	Date of interview	Recorded & Transcribed	The number of RI projects involved in
A	Head of B2C & Marketing	30.04.2020	Yes	I
B	Innovation Lead	30.04.2020	Yes	II
C	Innovation Lead	29.04.2020	Yes	II
D	Innovation Lead	29.04.2020	Yes	II
E	Head of Innovation Department	29.04.2020	Yes	IV
F	Senior Data Scientist	29.04.2020	Yes	I
G	Innovation Lead	29.04.2020	Yes	II

Table 2: Data Collection Sample

3.2.4. Interview guide design

In accordance with the guidelines of a semi-structured interview method an interview guide was created in order to make sure that the interviews followed a coherent interview pattern covering all the essential questions (Bryman and Bell, 2015; Appendix I). The guide included open-ended questions clustered into a list of fairly specific topics, deriving from the research

question, that aimed to give a sense of direction for the interviewee as well as enable the person to reflect and thus contribute with rich data (Bryman and Bell, 2015). However, deviation from the questions or the given order in the interview guide was legitimized in order to be able to stay somewhat flexible as well as ensure a pleasant interview flow (Bryman and Bell, 2015).

The first part, *Introduction*, in the interview guide follows what Bryman and Bell (2015, p.488, 490) refers to as ‘facesheet information’ which through ‘introducing questions’ provides the researchers with contextual information about the interviewee’s position and background in the case company.

The second part, *Radical Innovation*, aimed through ‘direct questions’ (1) explore which innovation projects that the interviewee had participated in and (2), define whether the projects could be categorized as radical or not (Bryman and Bell, 2015, p.490). Through asking these questions the researchers could reassure that the interviewee’s answers to the following questions in the interview guide were based upon experiences originating solely from radical innovation labeled projects. This consequently enabled the researchers to make sure that only data that would contribute in answering the stated research question was collected. In case of undertaken innovation projects that did not fulfill the criteria for radical innovation the interviewee was kindly asked to only refer to the projects fulfilling the radical innovation criteria. In the table below four identified projects, fulfilling the criteria as radical, are presented with an illustrative quote together with the definition of radical innovation that emerged from the literature review (section 2.2.1).

Radical Innovation Projects	
Definition	“Radical innovation change either the processes in the company or the value offering for the customer radically” (Ch 2)
Project	Illustrative quote of the project being radical
A	“I think the radical bet was the technology and that was to create a new website. Websites are not innovative, per se, but the technology was” (E)
B	“It could potentially change almost all our processes because the way that we onboard customers, for example, it could be changed radically with the [new innovation] system and get all the information from the customers from one place. We can do credit scoring in a better way. Yeah, so I think they will impact like almost all areas in some way.” (C)
C	“It's to create essentially a new product or a new service that enables retailers to add more sustainable consumption patterns into whatever product it is that they are selling” (E)
D	“The [partner company] credit was radical. It's a not so traditional way of looking at credit and it's a kind of another user experience then the stuff we have today”. (G)

Table 3: Radical Innovation Projects

The following three sections of the interview guide tap into each of the studied radical innovation barriers, namely: *unsupportive organizational structure*, *the not-invented-here syndrome* and a *restrictive mindset*, which are presented in section 2.2.2. in the literature review. It should be mentioned that these barriers do not serve as a way to divide the data set in the later data analysis, rather it serves as a baseline for the thesis in order to enable a discussion on how social capital can be built to overcome barriers faced in radical innovation projects. In order to verify that these barriers also took place in the case company, explorative questions were asked that directed the interviewees to explain their experiences of these barriers. In the three tables below, it is verified that each interviewee had experiences of each and every studied barrier which is shown through an illustrative quote. Additionally, the tables provide a definition of each barrier in correspondence to what is being presented in the literature review, section 2.2.2.

Barrier A: Unsupportive organizational structure	
Definition	<p><i>“hierarchical arrangement of lines of authority, communications, rights and responsibilities in the firm”</i></p> <p>(Sandberg & Aarikka-Stenroos, 2014, p.1298)</p>
Interviewee	Quote
A	"The ongoing battle I would say or power struggle in [the company] is between the Central department and 'market A'. When you don't satisfy 'market A', 'market A' will do everything they can to get a close down."
B	"There is a formal power or formal decision making routine, which didn't want to support, so allocate more money, because in waterfall organization you have spent your full budget the next couple of years, actually, with planned projects."
C	"in 'Case Company' Bank I have encountered a lot of problems with decision making. So it has been really hard to find actually people that can take the final decision. it's not one person that takes a decision, you need multiple members of the upper management team. So you need the CTO, the CEO, the COO, and CTO, you need all of them to actually be approving something."
D	"So, one of the barriers I would say it has to be working in a global organization where you have to work globally and also locally. I think that's really hard because at many times I think we've been working on stuff, the same stuff actually, in global and also, things are being done locally as well. That's kind of overlapping each other."
E	And then we say, "Yeah, but you know, they do whatever the hell they like, and they do whatever the heck they like". Yes, that is true, because they have no choice. And I'm part of that problem. I'm also doing whatever the hell I want. Because there's no coordination, there is no agreement.
F	"Since we [Innovation Department] didn't follow any of the regular processes in the bank was because we didn't develop a useful product. We were developing something completely different. People that have this power said; but you didn't follow the process, so you cannot just put it into production. It has to start from scratch."
G	"we were put like, the Innovation Department, was put on the side and it was like, separated from the organization."

Table 4: Barrier A - Unsupportive Organizational Structure

Barrier B: The Not-Invented-Here Syndrome	
Definition	Katz and Allen (1982) define the not-invented-here syndrome as a resistance to consider that externals might contribute important knowledge to the own work.
Interviewee	Quote
A	"they [the project team] tried to like, promote the thing, but not telling too much because they felt that somebody would be saying that, hey, you need to stop this. I don't like this idea."
B	"it seems like that 'market A' has this approach everything the central does, we don't want it we want to build it ourselves."
C	"In my experience when I come with something that I thought and I plan on so on, and I just present it, the reaction is usually really negative."
D	"we couldn't figure out what was wrong with our platform and why they didn't want to use it."
E	"And usually what happens is that, when people get defensive, when the not invented here syndrome gets activated, the person selling the product takes it as an attack on the person as well. So we're both in attack mode. And to a degree, that's usually what happens with us and 'market A', because 'market A' had the competencies as well."
F	"It is exactly what we have experienced."
G	"We didn't get the support from the company or the local markets. I think that was our everyday life challenge when we came to work."

Table 5: Barrier B - Not-Invented-Here Syndrome

Barrier C: Restrictive mindset	
Definition	<i>“fear of change, fear of failure, conservative decision-making, and restrictive organizational culture”</i> (Sandberg & Aarikka-Stenroos, 2014, p.1298)
Interviewee	Quote
A	"we have values such as dare to be different. And that should in my mind promote really open trying of new things. But I would say that it's not happening that often"
B	"when you don't understand it, in this conservative organization, you just say: No! You don't have time to actually get into understanding new stuff."
C	"I think that the industry in general is a little bit conservative, but the bank in particular is super conservative"
D	"So we have a lot of old school banker people and people who are working with security. They've been working with the same platform for a long time and when we come in and say we want to use [new innovation], for example, then they get, of course, uncomfortable because it's a new technology."
E	"So for example we [the organization] have a tendency to do top down and waterfall because we [the organization] think is less risky."
F	" I think there are a couple of those values that are not put into place. And one of the values that I preach the most, I think is the best, is dare to be different. And there is where innovation should be. And there is where I don't find this value in the bank, dare to be different. Okay, I'm different. I come with a great idea. And everybody is nooo."
G	"I guess it's just the traditional way of working in waterfall projects and all kind of that. Not being so flexible in terms of changing how we work."

Table 6: Barrier C - Restrictive Mindset

The interview continued by first asking explorative questions in regard to what actions the interviewees had taken in order to overcome these perceived, above mentioned, barriers. This was followed up through questions aiming to investigate into the actual outcome of the presented actions and strategies being undertaken by the intrapreneur. This was further followed up by ‘direct questions’ which tied into the social capital related dimensions; *structural*, *relational* and *cognitive* which are presented in section 2.3.2. in the literature review. Here, the researchers aimed to extract data would give an in-depth understanding of how social capital was seen to be built through the actions taken by the intrapreneur to overcome radical innovation barriers. The questions relating to the dimensions of social capital were asked once per barrier.

The structural dimension based on section 2.3.2.1. in the literature review was incorporated into the interview by asking ‘direct questions’ that aimed to give an insight into how the intrapreneur interacted with the intra-firm network in his or her attempts to overcome radical innovation barriers. The questions were formulated based on the literature conducted by Nahapiet and Ghoshal (1998) as well as Camps and Marques (2014) who distinguish the structural dimension between formal and informal network ties.

The relational dimension based on section 2.3.2.2. in the literature review, was incorporated into the interview by asking ‘direct questions’ with the purpose to get an understanding of how the ties between the intrapreneur and other actors in the intra-firm network were established and maintained (Borgatti & Halgin, 2011). Since a trusted relationship with the co-workers is especially important for radical intrapreneurs, the questions aimed to further explore whether and how the intrapreneurs build this trust (O’Connor and McDermott, 2002).

The cognitive dimension based on section 2.3.2.3. in the literature review, was incorporated through asking ‘direct questions’ with the purpose to understand whether and how the intrapreneurs impacted shared ideas, narratives, and mindsets externally to the radical innovation department (Camps & Marques, 2014).

The last part, *Concluding*, aimed to wrap the interview to an end by asking the interviewee to add any further insights to the discussed topics that had not yet been mentioned. This was done in order to stay truly explorative and potentially generate further knowledge that otherwise would have got lost.

3.2.5. Interview preparation

Due to the COVID-19 pandemic being current during the time that this thesis was conducted the circumstances highly negatively affected the possibility to conduct face-to-face interviews. Instead the interviews were executed through the online video conference platform Zoom. This method kept the authors able to still consider the verbal communication, however, the quality of non-verbal signs of communication such as body language was partly deteriorated (Bryman and Bell, 2015). In order to enrich the collected data, the interviews were undertaken by both the thesis authors (Bryman and Bell, 2015). Whereas one played the active role asking the interview questions and moderating the interview forward, the other person had a more passive role, making sure that the interview was conducted in a coherent way by asking additional

following up questions which thus enabled the achievement of enriched data (Bryman and Bell, 2015).

The interviews were conducted in English due to the author's different native languages and the requirements for the university master program. In accordance with the GDPR regulations all the interviews were recorded and transcribed in order to enable a reliable data analysis (Bryman and Bell, 2015).

3.2.6. Ethical considerations

Bryman and Bell (2015) discuss four ethical principles that are commonly used when conducting business research. These are: (1) 'harm to participants', (2) 'lack of informed consent', (3) 'invasion of privacy' and (4) 'deception' (Bryman and Bell, 2015). Each interview was performed in alignment with these guidelines. Below a justification will be presented.

In order to avoid *harm to participants* each respondent was prior to the interview provided with the information that the interview would be treated in a confidential way and all information provided by the interviewee as well as company name and title would be presented fully anonymously in the written thesis. As suggested by Bryman and Bell (2015) this increases the likelihood of the interviewee to become more open and provide detailed enriched data around the discussed interview topics.

An informed *consent* was confirmed by, prior to the interview, providing the interviewee with general information about the research topic being studied in the case company, the criteria that the interviewee had been selected upon and the research process. The interviewee then gave a written consent of taking part of the information presented about the thesis, to be recorded and that quotes anonymously were to be published.

To avoid *invasion on privacy* the interviewee was informed about the voluntary nature of the interview participation and the right to at any time skip to answer a question if being uncomfortable or to withdraw from the research project without the need to give a reason.

Finally, the fear of *deception* was eliminated by informing the interviewee about that the recording from the interview only would be used for the purpose of conducting a master thesis and that the data are to be deleted after the submission of this paper.

3.3 Data analysis

To achieve the aim of the research to explore new concepts and develop novel grounded theory, in regards to how intrapreneurs build social capital to overcome barriers when conducting radical innovation projects, the data analysis framework developed by Gioia, Corley and Hamilton (2012) was considered appropriate. The decision was additionally based on the rich amount of data that was gathered through the semi-structured interviews. This calls for an analysing methodology that manages to extract details and patterns in the data set while simultaneously enabling a structured and transparent process between the raw data and the emerging concepts, themes and dimensions, which the multi-step framework by Gioia, Corley and Hamilton (2012) provides with. This implies that large amounts of collected data more easily are enabled to be traced back to the origin quotes expressed by the interviewees.

Before coding, the interviews were transcribed in accordance with the guidelines presented by Bryman and Bell (2015). In case of unintelligible words, these were labeled as {???} in order to stay faithful to the interviewee (Bryman and Bell, 2015, p.496). Furthermore, the data set was explored through a fully inductive way which aligns with the analysis approach taken by Gioia, Corley and Hamilton (2012). This is empathized due to the importance to conduct the data analysis without looking too much into the existing literature in order to decrease the confirmation bias which otherwise is likely to lead to restricted research outcomes rather than novel ones (Gioia, Corley & Hamilton, 2012).

Within each transcribed semi-structured interview open coding was conducted which was executed through a division of the data set into two categories, namely: (1) actions undertaken to overcome the studied barriers to radical innovation and (2) the perceived outcomes of undertaking these actions. The coding was done through extracting relevant quotes which served as a way to in the next step produce 1st-order concepts that thus aimed to “adhere faithfully to informant terms” (Gioia, Corley & Hamilton, 2012, p.20). By following this strategy, the researchers aimed to avoid the problem of ‘losing the context of what is said’ (Bryman and Bell, 2015, p.597). To increase the validity of the extracted data a form of triangulation was applied through individual analysis of the transcript by both researchers (Bryman & Bell, 2015). At this point of the data analysis stage the two categories of data were in the following steps managed in two separate ways.

Focusing on the first category namely, actions undertaken to overcome the studied barriers to radical innovation, 2nd-order themes emerged while still staying literature blind by identifying

similarities among the 1st-order concepts that thus helped to further “explain the phenomena” being observed (Gioia, Corley & Hamilton, 2012, p.20). It should also be mentioned that the 2nd-order themes were developed based on a minimum criterion of two interviewees expressing similar experiences or perceptions in order to increase the credibility of the research findings and create robust grounded theory. Furthermore, from the 2nd-order themes aggregate dimensions were developed aiming at condensing the analysis into perspicuous findings (Gioia, Corley & Hamilton, 2012).

Switching focus to the second category of the data set namely, the intrapreneurs’ perceived outcomes of undertaking these actions, the data analysis proceeded as follows. The identified outcomes in the data set were connected to the seemingly related 2nd-order theme. The outcomes were then clustered together with the aggregate dimension that derived from the 2nd-order theme. In this way the researchers were able to identify outcome patterns for each aggregate dimension. Finally, a grounded theory model was developed by cycling between concepts, themes, dimensions and literature in order to clarify “all relevant data-to-theory connections” and thus illustrate these dynamic interrelationships (Gioia, Corley & Hamilton, 2012, p.22). To conclude, the customized way that the data analysis was conducted through still aligns with Gioia, Corley & Hamilton (2012, p. 26) that refers to their proposed methodology as to be seen as a “flexible orientation toward qualitative, inductive research that is open to innovation”.

3.4 Reliability, Validity & Generalizability

Due to the qualitative nature of the conducted research *external reliability* is seen to be difficult to fully achieve since “it is impossible to ‘freeze’ a social setting” (Bryman and Bell, 2015, p.400). Despite this the researchers have aimed to somewhat strengthen the possibility for replication by adopting an “auditing approach” which involves providing the reader with complete documentation of the research process (Bryman and Bell, 2015, p. 403). This increases the transparency and trustworthiness of the research (Bryman and Bell, 2015). Additionally, Bryman and Bell (2015) suggest that the replication difficulties are seen to be mitigated through, in the same social setting, adopt the same roles as the original researchers had.

The researchers have achieved *internal reliability* by closely collaborating throughout the research process which implied a great extent of time divided to reassure that the interpretations of what the researchers “saw and heard” was coherent and agreed upon (Bryman and Bell,

2015, p.400). Consequently, an *inter-observer constituency* is fulfilled in the study (Bryman and Bell, 2015).

The *internal validity* in qualitative research is achieved by making sure that the observations being conducted, and the developed theoretical concepts are well aligned (Bryman and Bell, 2015). This was fulfilled since the researchers, during a period of four months, participated in the social context of the case company.

In regards to *external validity* Bryman and Bell (2015) states the difficulties to achieve this criteria since qualitative research usually is based on small samples and case studies which corresponds with the characteristic of this thesis as well. Despite this obstacle, external validity, implying the extent to which the findings can be generalized to a larger audience, was enabled through analyzing the data with the help of the framework developed by Gioia, Corley and Hamilton (2012) (Bryman and Bell, 2015). This method emphasizes the extraction of “transferable concepts and principles” that thus can be transferred from one setting to another relevant domain (Gioia, Corley & Hamilton, 2012, p.24).

4. Results

In this chapter an overview of the findings that emerged from the data analysis will be presented. To ease the reading flow the structure of the findings are given as follows. The chapter is divided into six sub-chapters. Together they represent the identified approaches that intrapreneurs, in one way or combined, were seen to follow to pursue their radical innovation projects and by that consequently overcome perceived radical innovation barriers. The identified approaches are: *The Proof Approach*, *The Constant Selling Approach*, *The Multilevel Relationship Approach*, *The Network Help Exchanging Approach*, *The Teaching Approach* and finally *The Closed Approach*. Under each approach the sub-chapter follows the same structure. First, it starts by describing the characteristic of each approach. Second, it presents and describes the 2nd-order Themes. This is further supported by representative quotes derived from the interviewees. Third, under each identified approach, or to be the correct aggregate dimension, a summarizing visualization of the data structure is presented in order to provide transparency to the data analysis process (Gioia, Corley & Hamilton, 2012). Fourth, each sub-chapter concludes by a presentation of the outcomes for each identified approach (aggregate dimension). A complete list of representative quotes can be found in Appendix II and III.

4.1. The Proof Approach

4.1.1. Illustration

The proof approach is an aggregate dimension that explains how the use of concrete illustrations acts as justifying the value of the radical innovation idea. In this aggregate dimension one 2nd-order theme was identified which is: **Convince by showing concrete results.**

Convince by showing concrete results: This theme describes how intrapreneurs developed pedagogical illustrations of their radical innovation ideas to be perceived in a more convincing way and thus be able to push their ideas forward.

“they wanted to like have the pilot and then show that ‘hey, this [radical innovation idea] is much faster and better working’ and like build a case and then show through it that ‘hey, this is better’.” (A)

“used prototype to convince colleagues of ideas” (D)

“I am the backend part of the team. So I was more interested in actually producing the figures for the business case that they were talking to people explain it to people and this is a change management thing.” (F)

“The best way to do things is to have a working prototype. There's nothing better than that. The process of getting to the prototype, some people will disagree with you or not.” (E)

1st-order Concepts	2nd-order Themes	Aggregate Dimension
Build a business case to proof the value of the innovation	Convince by showing concrete results	The proof approach
Building a business case to in a stronger way convince people		
Have a working prototype		

Table 7: Data Structure for The Proof Approach

4.1.2. Outcome of approach

As for the outcome of the Proof Approach the findings show that concrete illustrations of radical innovation ideas are perceived to **increase the level of understanding**, among the targeted company employees, as for how the innovation project will deliver novel value to the company.

“So from the reactions, I would say that I think we planted the seeds in everybody's mind of how we can do this and how ready it is.” (D)

“We have gotten the company aware of that ‘project B’ is the future.” (D)

Furthermore, this approach was simultaneously seen to **improve the trust** that people in the company possess towards the radical innovation team.

[Illustrates the effect from showing a prototype] *“Now we see a lot more movements and we have got a lot more trust I think in our team.” (D)*

4.2 The Constant Selling Approach

4.2.1. Illustration

The constant selling approach represents an aggregate dimension that revolves around the constant spread of the essence of the innovation idea to the broad company audience. This is

done through communicating at both arranged events as well as through casually talking to people in the company. For this aggregate dimension five 2nd-order themes were witnessed: **‘Talks’ to broad company audience, Transparent communication, convince trough showing enthusiasm, lobbying to increase people’s awareness, ‘Small’ talks.**

‘Talks’ to broad company audience: This theme refers to how the intrapreneurs through companywide presentations aimed to influence the broad audience about their radical innovation ideas. The strategy to openly present their work progress was made through travelling to the different markets as well.

“We do talks in, like every Friday we have a 'Prata'. So we have done a lot of talks to the whole company. Or, yeah, I'm with teams and 'manager A' have been involved a lot in that and 'manager C' has been talking to teams.” (C)

“What we try to do is that we have done a few like ‘talks’. We have done like some hackathons, some partnerships with innovation hubs and bring in people there and from different areas, have some videos content in the web, in the intranet. Yeah. And basically just trying to talk to people and trying to influence.” (C)

“I mean, we're talking about this and we have traveled to a couple of countries and talking about ‘project B’ and how we can utilize that in different areas.” (D)

Transparent communication: This theme relates to how some of the intrapreneurs followed the strategy to work with open cards which implies to let radical innovation ideas intentions become known to other people as well.

“I always have the theory of being completely transparent.” (F)

“I'm very open to transparency and communication. I'm not a person that likes to put stuff under the carpet. I rather prefer they come and tell me about their problem. So we can solve it. It doesn't matter if I'm the problem or if whatever the problem is.” (G)

Convince trough showing enthusiasm: This theme illustrates how intrapreneurs displayed their personal eagerness and emotional investment connected to their proposed radical innovation projects. Through this they aimed to be perceived in a more convincing way.

“When I was discussing, for example, in the phone with a market ‘D’ or market ‘C’ (...) I told that I'm really happy about it [project A] and feel that we are able to do a lot of development in the new platform and so on.” (A)

“Use your personal enthusiasm. To say this is actually something I will put my job on

the line to do this. This is how much I believe in it. Because if all of a sudden if you can't discuss either the metrics or the KPIs and anything with this type of stakeholders because it's simply out of reach of their understanding. Then you have to go into the emotional part and that is really putting your job on the line saying 'yeah, this is it. If you don't believe me fire me.'" (B)

Lobbying to increase people's awareness: This theme deals with the intrapreneur's desire to raise awareness around their radical innovation project through different kind of influencing methods.

"I have tried a lot to do like indirect approach and make them excited from other sources that is not me from more trusted sources, and from people that actually understand the problem and deal with that issue every day." (C)

"I was basically trying to lobbying it for other colleagues (...) And our country manager was lobbying it for the other country managers and her boss. So like, basically everybody on their role and level, I would say, were lobbying it." (A)

"The biggest challenge of the whole team has been change management to actually start with very, very tiny steps, talking to people, making the people aware of the real difficulties of this, the real advantage of these things." (F)

'Small' talks: This theme highlights how intrapreneurs utilize given opportunities during a working day to chit chat with people externally to the radical innovation department about the intrapreneur's ongoing projects.

"Sometimes during Fika, someone could sit down 'Oh, I went past your room with all the post-its and pictures and it looks fun. What was that? Then I tell him about it. And then it could be me inviting myself to team meetings. And then also others are like "Oh I heard you were in that team. Can you come and talk with us?" (G)

"So there is the formal presentations of course that goes through my manager. But then there is the informal talk by the coffee machine and hallways and all that." (B)

"Each time you find someone in the elevator or here or there or you go to their desk and talk to them and tell them what are you working with, what is interesting and what the possibilities are." (F)

1st-order Concepts	2nd-order Themes	Aggregate Dimension
Involved in 'get togethers' and giving talks to the company	'Talks' to broad company audience	The Constant Selling Approach
Invite people through talks		
Onboard the critical mass of people		
Networking trips to different markets to create increased awareness of the innovation project		
Strategy to be completely transparent	Transparent communicating	
Open to transparency and communication		
Strategy to onboard other markets by showing enthusiasm	Convince through showing enthusiasm	
Use personal enthusiasm and show your emotional involvement to onboard people		
Indirect lobbying strategy making people excited from other trusted information sources	Lobbying to increase people's awareness	
Lobbying as a strategy		
Everybody at their level were lobbying it		
Connect with the internal network by lobbying		
Making people step by step aware of the advantages of these things		
Talk to interested people over 'Fika'	'Small' talks	
Talk in the hallway or by the coffee machine		
Politics around the coffee machine		
To put in this seed of the idea in everybody's mind when meeting them in the elevator, at their desk etc.		

Table 8: Data Structure for The Constant Selling Approach

4.2.2. Outcome of the Approach

The outcome of the Constant Selling Approach was seen to be threefold. First, this approach was seen to increase the interest and thus the shared understanding for radical innovation projects, among the company employees.

“they were doing this lobby I talked about before that they were talking to the people. So the subject became something general and common. Everybody will talk a little bit about this over coffee, and then everybody even, if we won't be there, they will talk to each other about it.” (F)

“They start hearing it like often, from their own people in their own words and then when they get interest, they book time or they make time to actually understand it. And the attitude is a little bit different in that case, it's not me pushing something is them being curious about something.” (C)

Second, this approach showed how the trust towards the radical innovation team increased through constantly communicating in a transparent way.

[referring to transparency and communication]. *“I think that'd be a good source of trust as well.” (F)*

Third, the findings showed that this approach caused some concerns since the reactions in the company were seen to happen very slow. This clashed with some of the intrapreneurs hope for a faster change in understanding and trust building among company employees.

“But just to say this, within in the case of ‘project B’, we develop the platform already a year ago, nine month ago. Maybe nine month ago we could have gone live. And just now they starting to understand it and starting to get excited with it and starting to think that we maybe should do it.” (C)

4.3. The Multilevel Approach

4.3.1. Illustration

The multilevel approach is an aggregate dimension that refers to how the intrapreneur engages with both the grassroots level as well as the upper management. Consequently, two 2nd-order themes were observed in this aggregate dimension: **Involve grassroots level** and **Invest in relationships with management**.

Involve grassroots level: This theme takes into consideration how the intrapreneurs were seen to, during their radical innovation projects, engage with frontline employees in order to gain

increased customer centric knowledge as well as to among these employees rise attention towards the innovation idea.

“I did a lot of research there sitting down and you know co-listening to the call so that I could understand more where the customer come from and the situation and so in that case they really helped me get me in touch with yeah in touch with the workers.” (D)

“The latest is like co-creating. We start analyzing okay who are the closest to this product, it can be an {???) in customer services. So we start working with those, rolling up into team leads, coordinators, and so on.” (C)

“We actually shifted towards and looked at, okay, let's work together with the ‘market A’s’ operation. So customer service team, which had a totally other impact, because they actually said ‘it's actually cool to get some attention on us. We've never had that attention before’.” (B)

Invest in relationships with management: This theme revolves around the intrapreneurs desire to achieve awareness for the radical innovation project at a higher management level. This is attempted through invested time in building relationships with these people.

“My boss had discussions with, with her boss, who was not, of course, directly involved, but, like, on a more high level strategy” (A)

“In the case of the bank, it has to be the president of the Bank or one of the senior management, that has to be convinced” (F)

“Going to my manager's manager, which was the chief Commercial Officer.” (B)

1st-order Concepts	2nd-order Themes	Aggregate Dimension
Collaborated together with the customer agents	Involve grassroots level	The multilevel relationship approach
Co-creating together with, customer service, the people affected by the idea		
Involve the ones that are closest connected to the customer		
Worked with operations in market 'A'.		
Discussions with higher management level	Invest in relationships with management	
Convince authorities to support project		
Crucial managing to onboard the senior management		
Approaching manager's manager (CCO) to get approval		

Table 9: Data Structure for The Multilevel Relationship Approach

4.3.2. Outcome of the Approach

The impact of the Multilevel Relationship Approach was seen to very clearly result in that the intrapreneurs created a more diverse intra organizational network. This was furthermore seen to, at the grassroots level at least, lead to a willingness to collaborate. For the upper management the establishment of a personal relationship was seen to be crucial. However, the findings showed that the attempts to relationship building was challenged by employee and especially manager discontinuity.

“First of all trying to get together with the people [grassroot level] closest to the problem basically. [...] If the idea ends up being a good idea, and it makes sense for those people [grassroot level] they would want to use it.” (C)

“And they [the customer service team] were willing to work together and make it happen.” (B)

“I think it has to do with them in the upper management needs to get to know you personally and just get to trust you on a personal level basically. If that doesn't happen I think that it is hard for them to accept anything that you will do” (C)

“I mean, it doesn't matter that you align with people if they're removed and then someone new comes in. You can't align with everybody.” (E)

4.4. The Network Help Exchanging Approach

4.4.1 Illustration

This aggregate dimension deals with how the exchange of help between the intrapreneur and people in the company relates to the establishment of relationships. One 2nd-order theme was identified to build this aggregate dimension, namely: **Exchanging help to improve relationships.**

Exchanging help to improve relationships: This theme focuses on how the intrapreneurs engaged in help exchanging activities to both gain new knowledge as well as spread and share knowledge and simultaneously establish relationships.

“I thought they were very, very welcome of us helping them in any kind of way.” (D)

“I was very humble from the beginning because I know this is not my area. So I approached them all the time asking them please explain me, please show me these please. And then they have been so so friendly and so nice.” (F)

“When people feel heard, to know all the problems that you have, ‘I want you to tell all the problems and we will work to help you solve one or all of them’ and we want your opinion’. That's usually a trigger for people to come and help.” (G)

1st-order Concepts	2nd-order Themes	Aggregate Dimension
Was appreciated when helping others	Exchanging help	The Network Help Exchanging Approach
Approaching other people for help with a willingness to learn		
Exchanging help to develop the relationship		
When people feel heard that's usually a trigger for people to come and help		

Table 10: Data Structure for The Network Help Exchanging Approach

4.4.2. Outcome of the Approach

For this approach the intrapreneurs observed that by exchanging help with people outside the radical innovation team this was seen to strengthen relationships in terms of increased respect and trust level towards the intrapreneurs.

“We developed kind of a friendship (...) when you work with people, you actually develop the kind of relation, so they were helping me and I was all the time very thankful” (F)

[previously talking about exchanging help] *“I think I grow into them, they have a lot of respect for what I have to say and they have respect about my knowledge. So, even if we have different backgrounds and different approach, we respect each other and consider a lot of what we say. (...) Even if I come with radical ideas, they are willing to listen to me, which is very positive.” (F)*

4.5. The Teaching Approach

4.5.1. Illustration

The teaching approach is an aggregate dimension that brings attention to the activities intrapreneurs undertake in order to spread new knowledge to colleagues that works outside the radical innovation department. This aggregate dimension was created upon two underlying 2nd-order dimensions: **Spread the innovative working style** and **Educating activities**.

Spread the innovative working style: This theme highlights how the intrapreneurs aims to connect with people in order to make them aware of the radical innovation department’s way of working. Through this the intrapreneurs hope to foster a source of inspiration, on how to conduct work, among other colleagues in the company.

“Really just being out there trying to connect with people (...) on how we work and focusing a lot about that we actually are solving problems for the customer and that's how we need to get together to solve this kind of problem.” (G)

“one of the goals is to spread a new way of working in the company as well” (D)

“So then in risk and operations, there are some people who are fans of this way of working. Around ‘project C’, you involve some people. People at ‘partner company’, some people in insurance or product management. And then all of a sudden you have you have fans of this way of working in these organizations. And then the idea was that

as these things went on, and there were people who worked in this setup, and they would like it and they would adopt it as a way of working.” (E)

Educating activities: This theme illustrates how the intrapreneurs were seen to undertake educating activities by engaging with colleagues externally located from the radical innovation department to enable them to learn more about the radical innovation topic.

“I try to invite people into, for example, design sprints. I'm trying to educate like, for example, like businesses sketching process and stuff like that, where I have invited the people in the organization.” (G)

“I even gave a Python courses. Because I realized that by talking to them and trying to work with them and understanding how they work and what they do, I realized they are stuck.” (F)

“I think it's teaching because seeing the reactions is what makes us believe that they didn't know a lot. They've heard about it, but what we've been trying to do is more teaching.” (D)

“So educating them and in term of them getting to know us and in terms of involving them, because that's the only way that you get people onboard. Inviting myself to the team meetings, telling them what we're doing. Educate them. Mostly that.” (G)

1st-order Concepts	2nd-order Themes	Aggregate Dimension
Connect with people on how the radical innovation team works	Spread the innovative working style	The Teaching Approach
Spread a new way of working in the company		
Through working with people get fans for the innovative way of working that will spread it		
Two days of educating people of how to work with radical innovation	Educating activities	
Involve people by inviting them into design sprints and educate them		
Gave Python courses to increase their knowledge on the innovation topic		
Teach people about the new technology since they are not adopting fast enough		
Involve and invite people through educating activities		

Table 11: Data Structure for The Network Help Exchanging Approach

4.5.2. Outcome of the Approach

The findings illustrates how the intrpreneurs, through the teaching approach were able to establish a trusting relationship as well as establishing a common understanding for how the radical innovation department works which thus resulted in a willingness to adapt.

“When you are teaching, or when you are in a course and you're sitting and there is a teaching or teacher or facilitator, there is something that is developed this kind of magic. I don't know exactly what it is, but it is a trust between the one that is sitting, listen, and the teacher.” (F)

“I think that [educating people] has worked out really well because the market ‘A’ organization is the one that have actually adapted more of the activities than the rest of the markets.” (G)

4.6. The Closed Approach

4.6.1. Illustration

This aggregate dimension outlines the approach under which the intrapreneur goes into silence and works in a close to secret way by only involving the most crucial stakeholders. For this aggregate dimension two 2nd-order themes were identified namely: **Working under the counter** and **Solely involve key stakeholders**.

Working under the counter: This theme illustrates how the intrapreneurs purposefully worked secretly on the radical innovation project until that point where they felt they had something to show their colleagues and decision makers externally to the innovation department. This implied as well to not always stick to the set processes in the company.

“kept it secret until it was built. Keeping it totally secret that nobody should know anything before we had an actual platform to show.” (B)

“I mean, we were an innovation team and ‘manager A’, we had to go into this pirate mode to get things moving and to do that we kind of just needed to show them instead of telling” (D)

“Sometimes just do stuff even if we're not allowed to. No, not allowed in terms of regulation, but maybe not following the process as they should just do it anyway and show them [management] afterwards. Because sometimes that's what was needed for them to understand because if they don't get it, then it's kind of hard. They don't really

know what they're saying no to. For example, that we had very much support from 'manager A', to 'do what you need to do and then we will say sorry after'". (G)

Solely involve key stakeholders: This theme highlights the intrapreneurs strategy to only involve people that was seen to be crucial for the continuation of the radical innovation project, in order to avoid having the innovation idea killed. As a result, communication regarding the project was restricted to only involve the ones being considered key stakeholders.

"They [the risk team] know about finance and about banking and risk is such a necessary part to be involved in anything that will happen to the bank. I thought, okay, I need input from them just to see if it's even possible to have an MVP on this." (F)

"And then the strategy wasn't a communicate with everybody strategy. It was we do things and we only involve people that have hands on either authority to approve the hands on involvement or when people who are hands on involved, and then we were counting on them being ambassadors for that way of working." (E)

"Yeah, but we don't like involving too many like, being really careful not involving the ones that can stop you from the beginning basically." (C)

1st-order Concepts	2nd-order Themes	Aggregate Dimension
Secretly working on the project until having something to show	Working under the counter	The Closed Approach
Convince by doing		
Pirate flag in the office to challenge the status quo		
Focus on working and let the end result speak for itself		
Not always following the set processes		
Followed an under the counter strategy		
We had to go into this 'pirate' mode to get things moving	Solely involve key stakeholders	
Approaching the risk team to onboard them [important stakeholder in the project]		
Promote the project in a rather information restrictive way		
Went from communicating with everybody to only communicate to the essential ones		
Being cautious not involving the ones that can stop you		
Stakeholder mapping		

Table 12: Data Structure for The Closed Approach

4.6.2. Outcome of the Approach

The findings revealed that this approach's lack of relationship building was seen to decrease the trust level people had towards the radical innovation department. Consequently, the shared understanding was seen to turn out low. What, however, did turn out well was the efficiency in working flow inside the radical innovation department.

“And then we fired the branding team in the back. So I took it for granted that the process would align itself but I should have aligned that with group more practically.”

(E)

“So we were working on this platform and maybe that was not communicated enough. Maybe everybody didn't know exactly what it did and how we can use it so I thought that was maybe that was one that was one stupid barrier maybe.” (D)

“In terms of the process inside the lab, that was great.” (E)

5. Discussion

To answer the research question “How do intrapreneurs build social capital to overcome barriers for radical innovation?” in this chapter, first, the approaches described in chapter 4 will be debated. Next, the elements of social capital, found as an outcome of the approaches, will be analyzed before their effect on barriers for radical innovation through different channels will be discussed. Last, the complete grounded theory model will be presented and examined.

5.1. Approaches for social capital

In this part of the work the outcome of the different defined approaches in the aggregate dimensions will be discussed. Each section will show the connection literature and how the approach impacted the social capital of the intrapreneurs.

5.1.1. The proof approach

The proof approach, as presented in chapter four, is about convincing people by showing concrete results instead of trying to explain the idea. This is similar to what Griffin et al. (2014) proposed, when talking about focusing on data to make a more objective case. Both ideas have in common, that the idea is presented in a way that is accepted in the company and the attempt to make it as concrete as possible. This had two consequences according to the participants of this study. First, the idea of the presented innovation became a common narrative in the relevant team: *“So from the reactions, I would say that I think we planted the seeds in everybody's mind of how we can do this”* (D). This points towards an improved cognitive dimension (Nahapiet & Ghoshal, 1998). Second, the way the intrapreneurial team proved their skills helped them to be trusted more by their colleagues, which can be seen as a plus in relational social capital (Tsai & Ghoshal, 1998): *“So we actually brought the platform up on the on the screen for everybody. [...] We have a lot more trust I think in our team.”* (D)

5.1.2. The constant selling approach

The idea of the *constant selling approach* as described by the interviewees, is to talk about a project and the way of working on as many occasions as possible. This approach is also found by Dutton & Ashford (2001) as well as Griffin et al. (2014). In line with these authors, who see the main purpose of this strategy to make people familiar with the idea, participants reported that the main result of the strategy was that people started talking about it and the idea got commonly accepted. *“So all of the sudden, everybody's talking about it. They actually don't*

know. But it is already a familiar term.” (F) It therefore changed the cognitive social capital in favor of the intrapreneurs (Tsai & Ghoshal, 1998). As one part of the strategy is to be very transparent in the communication, it was also reported that this increased the trust and relationship with the co-workers (Camps & Marques, 2014). *“I’m very open to transparency and communication. I think that’d be a good source of trust as well.”* (G)

5.1.3. The multilevel approach

The idea of the multilevel approach is to involve both low and high level management early on the process. It can therefore be seen in light of the structural dimension of social capital taking into consideration that it is important to include people from different levels of the company (Nahapiet & Ghoshal, 1998). That this is important is also highlighted by Dutton & Ashford (2001). These authors describe that involving front-line employees enables the intrapreneur to build solutions that are closer to the needs of the user. This was also described by participants of this study. *“First of all trying to get together with the closest to the problem basically. [...] If the idea ends up being a good idea, and it makes sense for those people they would want to use it.”* (C) . However, the same participant also talked about the importance of building a trusted relationship with top-management. *“I think it has to do with them in the upper management needs to get to know you personally and just get to trust you on a personal level basically. If that doesn't happen I think that it is hard for them to accept anything that you will do”* (C) . This shows that the radical intrapreneurs had to build a diverse network in order to be successful.

5.1.4. The network help exchanging approach

The basic idea of this approach is to exchange favors with others. This was also suggested by Geertshuis, Cooper-Thomas and Price (2013). Where these authors see it in the first place in the direction of the intrapreneur helping someone else to later be able to ask for a favor in exchange, the respondents in this study see it as beneficial to ask for help as much as giving help. The result of this approach was an overall improved relationship between the intrapreneur and the colleagues giving or receiving help, as described by one participant.

“So I approached them all the time asking them please explain me, please show me these please. [...] They just, ‘now it’s your turn to teach us.’ And it has been very nice.” (F)

This improved relationship points towards an increased relational social capital (Tsai & Ghoshal, 1998).

5.1.5. The teaching approach

The idea behind the teaching approach, as defined in chapter 4, is to teach people the concept behind a project or the way of working with radical innovation processes. Kuratko, Morris and Covin (2011) describe that intrapreneurs build social capital by sharing knowledge with their co-workers. Furthermore, Bessant, Öberg and Trifilova (2014) suggest that for radical innovation to be successful, common knowledge and beliefs in the company are crucial. The answers in this study support this view.

“And then I offered this course and they give them something that maybe it's not useful right away, they will understand more or less what the python code says, even if they don't them develop themselves.” (F). As this eases communication about these technologies in the future, this finding can be seen as a contribution to the cognitive dimension of social capital (Haas & Mortensen, 2016). Next to the creation of knowledge, also the establishment of trust through this channel was found. *“When you are teaching, or when you are in a course, [...] there is something that is developed. [...] I don't know exactly what it is, but it is a trust between the one that is sitting [...] and the teacher.”* (F) This can be related to the strategy of Kuratko, Morris and Covin (2011), that intrapreneurs should first develop trust outside the main innovation field before going to more complex projects.

5.1.6. The closed approach

Next to the five presented approaches that aim to increase the social capital of the intrapreneur, participants also talked about the conscious decision to invest less in connections within the intra-firm network. This approach is in the literature known as “bootlegging” (Augsdorfer, 2005). As suggested by Augsdorfer, some intrapreneurs in this study decided to keep *“it totally secret that nobody should know anything before we had an actual platform to show.”* (A) The reason to follow a bootlegging strategy is postulated by Krueger & Buchwald (2019) as the attempt to protect the development of the project of external influences. This advantage is also found in this study as one participant states that *“the process inside the [...] [team] was great”*. (B) At the same time, the social capital perspective of this study also shows major problems with this strategy. The strategy to communicate less, led to a lack of relationships with people outside the innovation team. *“So I took it for granted that the process would align itself but I should have aligned that with group more practically.”* (E) Furthermore, also the cognitive dimension of social capital was not developed, as one participant stated, *“maybe everybody didn't know exactly what it did and how we can use it.”* (D).

5.2. Elements of social capital

5.2.1. Description

The first part of the analysis has shown that five out of six approaches achieved their goal to improve the social capital of the intrapreneur. Only the closed approach purposely did not lead to improved social capital. Across the other approaches three major trends can be observed.

First, in four approaches, a more trusting relationship was the result of the activities. That intrapreneurs aim to increase the trust in themselves and their projects is in line with the expectations from the literature review where it was shown that trust is crucial for radical innovation projects (Hart et al. 2008). The literature further suggests that trust for radical innovation can be fostered with the help of the intrapreneur's social capital (O'Connor & McDermott, 2004). This assumption is supported by the results of this work as most approaches targeted an improved trusting relationship.

Second, three of the found approaches created a better common understanding for the working style and the content of the radical innovation projects. In the literature a common understanding, of the way of working, and a shared vision, are connected to the cognitive dimension of social capital (Tsai & Ghoshal, 1998). The earlier literature review has not found the creation of a common understanding in the company as an explicit way of social capital to overcome barriers for radical innovation. However, as Haas and Mortensen (2016) have shown, a shared vision and perception can ease the work in a group as the basic assumptions underlying the work are shared. In this context also the found *common understanding* in this study can be expected to overcome barriers for radical innovation.

Last, the multilevel approach was found to contribute to the intrapreneurs social capital by widening the intrapreneurs network. This can be connected to the structural dimension of social capital, as this is about the reach and the structure of the network. The literature on social networks suggests that intrapreneurs should have a wide network in the company to be able to access more resources and knowledge (Burt, 2000). This is further enriched by Granovetter (1973) who states that it is important to have connections into different parts of the company. This is also found in the descriptions of the participants who widened their network into different levels of the organization.

Approach	Outcome	Social Capital Elements
The Proof Approach	Showing concrete results increases trust	Trust
The Constant-Selling Approach	Constantly selling the project and way of working leads to trust	
The Network Help Exchanging Approach	Exchanging help establishes a trusting relationship	
Teaching Approach	Teaching establishes trust between teacher and student	
The Proof Approach	Showing concrete results increases understanding	Common understanding
The Constant-Selling Approach	Constantly selling the project and way of working leads to shared understanding	
Teaching Approach	Teaching creates understanding for the way of work and the subject	
The Multilevel Approach	Involving stakeholder from different levels leads to a diverse network	Diverse Network

Table 13: Approach, Outcome and Social Capital Elements

5.2.2. Discussion

In the following section the relevance of the three social capital forms are discussed. Based on the introduction on radical innovation *trust* can be expected to be the most important dimension for intrapreneurs (O'Connor & McDermott, 2004). This was further supported by the findings of the literature review where most strategies were aiming to increase the trust in the project or the actor (Kuratko, Morris & Covin, 2011; Griffin et al. 2014; Dutton & Ashford, 2001). Even though Griffin et al. (2014) propose to convince with data also, in this study there is strong evidence for the importance of trust. One participant explained how it was impossible to convince people to support a project with facts, if there was no personal relationship established.

“I haven't been able to actually convince people just with numbers. I can have all the facts in the world, but it would not matter. In my experience it ends up being an emotional decision. It's just like, do I like you or not.” (C)

On the other hand, being dependent on personal relationships was also seen as a risk for the intrapreneur. In companies with a high turnover in management and employees the reliance on interpersonal trust might cause a lot of work.

“I mean, it doesn't matter that you align with people if they're removed and then someone new comes in. You can't align with everybody.” (E)

From this arises the idea to try to establish a common understanding in the company.

“And then if we go through enough people going through the process, then you have critical mass. So that was a strategy.” (E) According to the literature this can make the initial collaboration easier and reduces the risk of personal dependencies as the idea is getting anchored in the culture of the company (Camps & Marques, 2014; Haas & Mortensen, 2016).

However, the literature also hints what the challenge with this strategy is. Burchardt, Knudsen and Søndergaard (2014) stress that attitudes are difficult to change. This was also experienced by the intrapreneurs in this study. *“Maybe nine month ago we could have gone live. And just now they [are] starting to understand it and starting to get excited with it”* (C) This appears to be logical as one part of the risk-averse mindset is the *fear of change* (Sandberg & Aarikka-Stenroos, 2014). Nevertheless, according to the participants, the idea might be interesting when there is enough time to evolve the mindset. *“So, you know, I think that's still the right strategy, but we didn't have enough time and a critical mass of people yet”* (E)

However, not only creating a common understanding in the company can be a way to overcome the lack of trust in a relationship. Another way can be a *diverse network*. The study has highlighted the relevance of being promoted through others (Anderson & Park, 2007). On the other hand, not taking into account this part of social capital can also bring great risks for the intrapreneur. One participant described how not taking into consideration the power structures in the company enough lead to the final rejection of the idea. *“What I think was the mistake is, one, to not align better with the most powerful country.”* (E). This is in line with Burt (2000) who directs the attention to the benefits of a wide network.

Overall, the section started off with expecting *trust* to be the most important of the three social capital factors. Despite being mentioned most often as the outcome of approaches presented in chapter 5.1. the discussion has shown that there are also great risks relying too much only on

the direct relationships. This leads to an equal display of the three factors in the final model. This finding also shows that the approaches identified in this study should not be seen as separate approaches but should be combined to ensure that all forms of social capital are established.

Along the discussion three challenges for social capital in general were found. First, building social capital requires *great effort*. This is especially problematic when it is combined with a *discontinuity* in employees and management in the company. Last, influencing the mindset of people does not just take a lot of effort, but is also very *slow*.

5.3. Channels for radical innovation

Through the interviews, two channels through which social capital helps to overcome barriers for radical innovation were found: First, the access to resources and second, and increased openness to new ideas. Both channels will be explained in the following part and the connection to barriers for radical innovation will be reasoned.

5.3.1. Access to resources

In the literature review the access to resources was identified as a way how intrapreneurs can benefit from their internal company network (Yang, Chou and Chiu, 2014). This was not only related to financial and physical resources but also to human resources (Anderson & Park, 2007). The access to resources in this study was proven to happen in two ways. First, through an established, trusted relationship intrapreneurs got direct access to new resources. *“They really helped me get me in touch with the workers.”* (D)

Furthermore, interviewees also described that the lack of access to resources that a department had, made them more open to receive help from the innovation department than other departments. *“So customer service team, which had a totally other impact, because they said it's actually cool to get some attention on us. We've never had that attention before. And they were willing to work together and make it happen.”* (B). This strategy can be connected to the structural hole theory of Burt (2000), who states that it can be beneficial for an intrapreneur to be the connection between people in the network to gain a position of power.

Third, colleagues, who got in touch with the innovation department, liked the idea of working and started talking to others about it. As one participant described it they turned into *“ambassadors for that way of working”* (E). This, on the one hand leads to invitations and opportunities to spread the word even further. *“Oh I heard you were in that team. Can you*

come and talk with us?'" (G) On the other hand, it also enabled the intrapreneurs to be introduced to top management by other employees. "So we start working with those, rolling up into team leads, coordinators, and so on, until everyone in your organization kind of aligns in something and then we end up into the CCO. So we don't need to do so much convincing and explain." (C)

This shows that an increased trust, a common understanding and a diverse network in the company are helpful to get access to resources. This mechanism is well established in the literature (Burt, 2000; Yang, Chou & Chiu, 2014). However, the results in this section furthermore show that improved social capital not only makes it easier for intrapreneurs when *actively* looking for resources but that they also *passively* get offered contacts from outside their established network.

In the first case, the improved social capital helped the intrapreneurs to move around the normal structures in the organization (Yang, Chou & Chiu, 2014). The last quote shows that they took advantage of the existing structures to get promoted from within to get to their goal. This allowed them to overcome the restrictive mindset without having to build a relationship with everyone as they and their idea got promoted by others (Anderson & Park, 2007).

5.3.2. Increased openness to new ideas

Burcharth, Knudsen and Søndergaard (2014) describe how having a trusting relationship decreases the likelihood of an idea being rejected. The same connection was found in this study as described by one participant. *"So, even if we have different backgrounds and different approaches, we respect each other and consider a lot of what we say. (...) Even if I come with radical ideas, they are willing to listen to me, which is very positive."* (F) Additionally, an increased openness to new ideas was also reported because of a better common understanding that spread around the company. *"All of this becomes a part of the conversation, and then the people start to not be afraid of something new"* (F) This fulfills the expectations of Cohen and Levinthal (1990) that employees are more open to new ideas when they can connect it to something they are familiar with (Cohen & Levinthal, 1990).

One of the barriers under observation in this thesis is the not-invented-here syndrome. To overcome this challenge the literature suggests that employees need to change their attitude towards unknown and external ideas (Antons & Piller, 2015). The previously cited quotes prove that the intrapreneurs managed to reduce this fear of the unknown and managed to mitigate the feeling of something being external. It can, therefore, be assumed that an increased

openness to new ideas will help to overcome the not-invented-here syndrome. Furthermore, it also helped to get supported by decision-makers and therefore overcome the problem of widespread decision-making structures in the company. *“And I think, to be honest, it’s the informal talks where you see the decisions are made and then the formal presentation formalizes it.”* (B)

How important the investment in social capital is for the intrapreneur becomes even clearer when comparing it to the results of the intrapreneurs, who decided to avoid contacts. When they finally decided to attempt to re-integrate the idea into the company, they realized that they are still running into barriers, just later than before. *“Keeping it totally secret that nobody should know anything before we had an actual platform to show. And when we had a platform to show. ‘market A’ just said, I don’t like it. We don’t like it.”* (B)

5.4. Grounded theory model

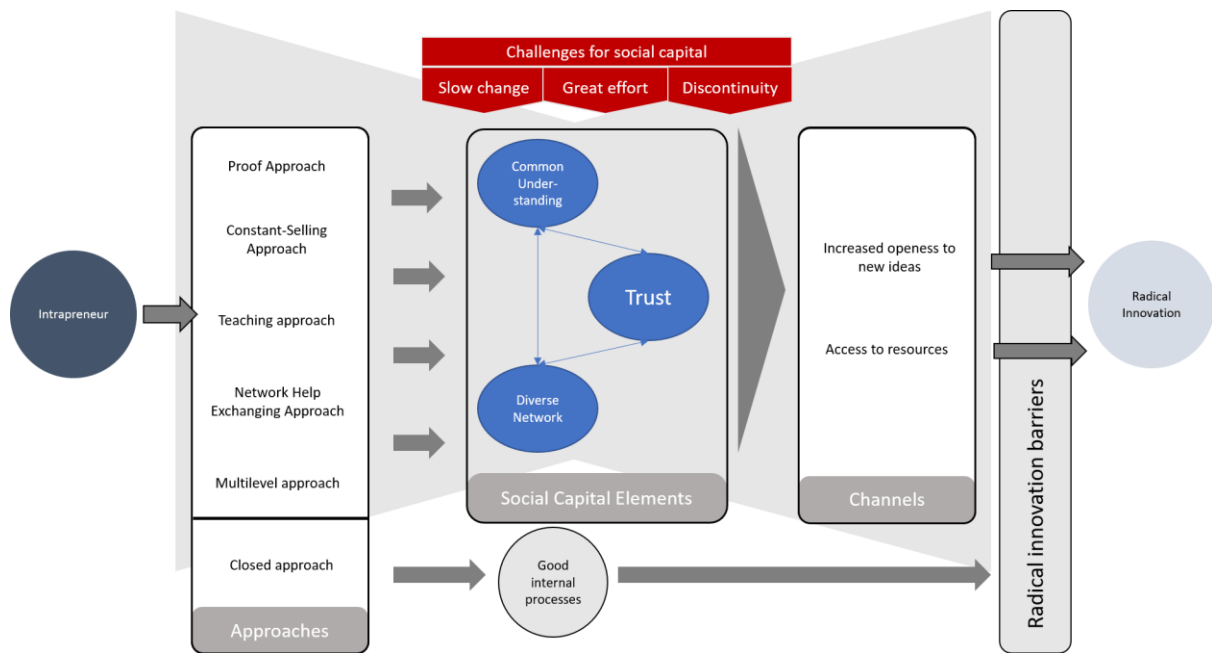


Figure 2: Grounded theory model

The grounded theory model presented above is read from left to right and consists of the elements previously discussed. The goal of the model is to explain how intrapreneurs can build social capital that helps them to overcome barriers for radical innovation. In the following section the model will be explained, and its elements further discussed.

The model starts with the approaches an intrapreneur can choose to build social capital. As the dimensions of social capital are highly interrelated and a clear connection from one approach to a specific dimension is not drawn the model simply shows that all these actions lead to the creation of social capital, which has been proven in the discussion above (Tsai & Ghoshal, 1998). The center of the model presents three elements of social capital that have been identified in this study. This social capital allows intrapreneurs to access resources they did not possess before and leads to an increased openness for new ideas, which is displayed through the box with the channels. These channels then have been argued to overcome barriers for radical innovation. However, as the connection to the previously presented three main barriers for radical innovation was not established explicitly through the interviews in this study, the barriers are not further specified in the model.

On the bottom of the model the *closed approach* is shown. It was frequently mentioned as an important strategy for radical intrapreneurs. At the same time, it also shows what happens, when intrapreneurs decide to leave social capital aside. The arrows show that the closed approach initially led to good internal processes but eventually led to the intrapreneur running into barriers again. However, it should not be forgotten that there are challenges, that intrapreneurs have to expect when attempting to build social capital. This is shown by the red arrows on top of the model.

6. Conclusions and Implications

6.1. Theoretical implications

There has been a wide consensus, about the importance of social capital for radical innovation (O'Connor & McDermott, 2004). However, previous research on strategies to build social capital to overcome barriers for radical innovation has been fragmented. The goal of this thesis was to close this gap by explicitly investigating how intrapreneurs can build social capital that helps them to overcome barriers of radical innovation.

Through the inductive approach of this study five approaches to build social capital were identified: First, the proof approach, that aims to build trust and a common understanding for a problem through showing concrete results. Second, the constant selling approach, that ensures the success of a project through talking about an idea at every possible occasion. Third, the teaching approach spreads the word through educating co-workers about innovations. Fourth, the network helping approach emphasizing the value of not only giving help to build social capital but also receiving help. Last, the multilevel approach that suggests involving stakeholders from different levels of the organization to widen the network.

The approaches identified add knowledge about the strategies previously identified in the literature view. The work draws its special strength from proving that the actions found build specific social capital that helps for radical innovation. A special focus should be put on the *teaching approach* in the grounded model, as being the only one that has no direct twin in the literature. That social capital is built through teaching activities has so far only been mentioned as a strategy for managers but not for intrapreneurs. Turning to dimensions of social capital, this research enriches the existing literature by not only showing that all three dimensions of social capital are relevant, but by specifying that it is the trust between employees, a common understanding around innovation and a diverse network of the intrapreneur, that are established through the previous actions. In contrast to the literature, this research finds that despite its frequent appearance, trust should not be more important than the other parts of social capital.

The work then draws its strength from making the previously theoretical connection between social capital and the channels towards radical innovation explicit. The research has confirmed that social capital helps to increase the openness for new ideas and enables the intrapreneurs to get access to new resources. The *knowledge creation* that was identified in the literature review, could not be confirmed in the thesis. This is probably due to the design of this work. As the

purpose of this work was targeted on mitigating barriers of existing projects, the creation of new knowledge for new projects was before the scope of this work. Furthermore, the participants of the study all came from the innovation department, responsible for creation of new ideas. Therefore, in this specific setting, knowledge creation was by the participants not expected to happen outside the team.

Like in the literature model, additionally to the social capital approaches, also the effect of a non-social-capital based approach was investigated. The results have proven the advantage of bootlegging approach, as allowing for more efficient work processes. However, also the disadvantages of this approach became apparent, as the intrapreneurs reported facing the same barriers as before, later in the process. This strengthens the findings that social capital is important for mitigating the barriers for radical innovation.

Additional to the previous research this work also identified challenges that intrapreneurs face when building social capital. The need to put *great effort* into the creation of a network, the *slow change* of culture and mindsets and manager *discontinuity* have not been mentioned that condensed in the literature.

6.2. Practical implications

This work gives practical advice to intrapreneurs working on radical innovation projects. Intrapreneurs can take learning on three different levels. First, the model gives hand-on advice on which actions to take to build social capital, that helps to overcome barriers in radical innovation projects. Second, users can look at the social capital part and come up with their own strategies on how to build it. Last, the intrapreneurs can also decide to only look at the channels and aim to achieve these to overcome the barriers. The modular style of the model allows users to take out the part that is most relevant for them and adapt it to their own realities.

When engaging in social capital building activities the intrapreneur should furthermore take into consideration the challenges that can occur along the way. These can also give guidance what approach to focus on. If the intrapreneur aims to achieve quick results, it is important to consider that building a common understanding throughout the company happens very slowly. At the same time, when the company experiences a great deal of discontinuity, a broader, less specific network is important. Last, for all approaches the research has shown that great effort is required. Intrapreneurs should therefore take into consideration the social capital aspect of radical innovation early enough on in the process.

This work is focused on the perspective of the intrapreneur and builds on the premise that no support can be expected pro-actively from managers. Nevertheless, this work can also be useful for managers that are interested in getting their company ready for radical innovation. The focus in this case should be to establish a common agreement in the company about how to deal with innovation. Furthermore, a trusting company culture should be supported to enable quick access to resources for potential innovation projects.

6.3. Research limitation

Despite a thoughtful design of the research, this study also entails some limitations, which will be shown in the following section.

First, the reliance on qualitative, inductive interviews allows the researcher to generate original, in-depth knowledge but also includes challenges for the external validity of this study (Bryman & Bell, 2015). This difficulty is further strengthened by the usage of a single-case study approach which reduces the options to control for case specific particularities (Bryman & Bell, 2015). This study has attempted to control for these risks by proving that the challenges identified in the case are representative for the literature in general. Furthermore, as the discussions have shown the results are similar to previous research which shows increased trust in the results. However, the established connections between the approaches, social capital and the channels towards barriers for radical innovation could look different in other contexts. The volatility is especially important to consider when dealing with a topic like social capital which, in its pure nature, is concerned with the subjective perspective of the individual.

Another challenge that arises from the individual perspective of the participants is related to the outcome of the projects. None of the investigated radical projects was finally approved and implemented by the time of the study. This led to the adoption of a descriptive, self-reported dependent variable, rather than a concrete, objective outcome.

This limitation is also caused by the small sample size in this study. The sample size is due to the lack of further suitable interviewees in the case company which did not allow the researchers to continue with these interviews until the data collection was fully saturated (Bryman & Bell, 2015).

Last, as the researchers have been working alongside the team at some touchpoints, the risk of going native is present in this study (Bryman & Bell, 2015). However, the risk in this case is quite low as due to the Covid-19-pandemic crisis the personal touch points were quite limited.

Furthermore, this risk was mitigated by strictly relying on the given statements and presenting them in a transparent way to the reader.

6.4. Future research

To conclude this work suggestions on future research are given. In line with the just presented limitations of a qualitative study the results of this study should be tested empirically with a broader number of cases and participants. A number of research areas are interesting for this work. First, to deepen the connection between the approaches and social capital. Second, to tie the social capital factors more concrete to the different barriers of radical innovation. Third, to investigate the challenges for social capital building that were found in this study.

This work has used the social capital theory to explain how the approaches help to overcome the barriers for radical innovation. The discussion has shown that this involves a lot of psychological factors as well that influence the effect of the approaches. Investigating the connections from a psychological point of view promises to bring interesting results.

Last, the intrapreneurs in this study have paid less attention to the structural dimension of social capital. However, in chapter 5 it has been proven that a diverse network is equally important to overcoming barriers for radical innovation. Therefore, an explicit research on why this dimension is less considered by intrapreneurs and to gain more insight into how this dimension functions can be interesting.

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Appendix

Appendix I: Interview Guide

Interview Guide
<p>Welcome to this interview for the Master Thesis in the program Entrepreneurship and Innovation at Lund University. In the following 60 minutes, we will talk with you about how you built intercompany relationships to overcome barriers that you have faced during working on radical innovation projects.</p> <p>In order to follow European data protection laws and give you full transparency on how we will use your statements in our further work, we would like you to read the GDPR form carefully and then acknowledge this over the attached form: https://forms.gle/opwiNCHyDSNJchFH7</p> <p>Thank you very much for your support.</p>
(1) Introduction
<p>Could you, shortly, tell us about your background in the 'Case Company'?</p> <p>What is your position?</p> <p>How long have you been working here?</p>
(2) Radical Innovation
<p>In which radical innovation projects have you been involved in within Ikano Bank?</p> <p><i>If the projects have been already explained and confirmed as radical by other participants jump to the end of this section. Otherwise use the following questions to verify that the projects were radical.</i></p> <p>Which impact does the project have on the workflows in the company?</p> <p>Which impact does the project have on the value offering of the company for the customer?</p> <p><i>After confirming that the mentioned projects are radical innovation projects, tell the participant to <u>only</u> consider experiences from these projects.</i></p> <p><i>Before moving on to the next sections in the interview, the interviewee was informed to either explain how he/she reactively or proactively acted in order to overcome each of the following barriers.</i></p>

(3) Barrier A: Unsupportive organizational structure

Barrier related questions:

What is your experience of unsupportive organizational structures that have been a barrier to your radical innovation projects?

How has this caused problems for you in your work to conduct radical innovation projects?

Ask follow up questions to dive deeper into how the intrapreneur used the network.

What have you done to overcome this barrier?

- Why did you do this?
- What was the outcome?

Social capital related questions:

Structural

What is your experience of using your intercompany relationships to overcome this challenge?

- Who have you approached/involved? Why?
- Through what channels/settings have you approached your intra-firm network?

Relational

How would you describe your relationship with this person/people you have involved?

- Did you have previous collaboration experience together?
- How was your relationship established? How has it evolved?
- How have your relationships with these people affected your radical innovation projects?

Cognitive

What did you do to get people's understanding for the radical innovation projects?

- What were the outcomes of this?

What do you think interested people to join/support the project?

(4) Barrier B: Not-invented-here syndrome

Barrier related questions:

What is your experience of the 'not-invented-here' syndrome in regard to your radical innovation projects?

- How did this take place?
- Why did this cause problems?

Ask follow up questions to dive deeper into how the intrapreneur used the network.

What have you done to overcome this barrier?

- Why did you do this?
- What was the outcome?

Social capital related questions:

Structural

What is your experience of using your intercompany relationships to overcome this challenge?

- Who have you approached/involved? Why?
- Through what channels/settings have you approached your intra-firm network?

Relational

How would you describe your relationship with this person/people you have involved?

- Did you have previous collaboration experience together?
- How was your relationship established? How has it evolved?
- How have your relationships with these people affected your radical innovation projects?

Cognitive

What did you do to get people's understanding for the radical innovation projects?

- What were the outcomes of this?

What do you think interested people to join/support the project?

(5) Barrier C:

Restrictive Mindset

Barrier related questions:

What is your experience of a restrictive mindset when it comes to your radical innovation projects?

- Can you illustrate how this restrictive mindset took place?
- What was the consequence?

Ask follow up questions to dive deeper into how the intrapreneur used the network.

What have you done to overcome this barrier?

- Why did you do this?
- What was the outcome?

Social capital related questions:

Structural

What is your experience of using your intercompany relationships to overcome this challenge?

- Who have you approached/involved? Why?

- Through what channels/settings have you approached your intra-firm network?

Relational

How would you describe your relationship with this person/people you have involved?

- Did you have previous collaboration experience together?
- How was your relationship established? How has it evolved?
- How have your relationships with these people affected your radical innovation projects?

Cognitive

What did you do to get people's understanding for the radical innovation projects?

- What were the outcomes of this?

What do you think interested people to join/support the project?

(6) Concluding

Would you like to add any further comments to the topics we have discussed today that we have not mentioned/highlighted so far?

Any more final comments or questions?

Then, Thank you for your time and support in this research.

Appendix II: 2nd-order concepts and representative quotes

Inter- viewee	Representative Quote	2nd-order themes	Aggregate Dimensions
A	"I felt really a lot that the team that was creating the new website, they had to be like, a bit working in secret."	Under the counter approach	The closed approach
B	"I wanted to try the totally other way to actually be kept together and kept secret until we actually have something and we actually could go in and just release a platform."		
B	"kept it secret until it was built. Keeping it totally secret that nobody should know anything before we had an actual platform to show."		
E	"We then moved into let's show by doing"		
G	"my manager had a big pirate flag. I guess just trying to push the boundaries all the time."		
E	"So consciously I have decided to focus on doing things and then let the prototype and let the end product speak for itself. That has been my strategy right or wrong."		
G	"sometimes just do stuff even if we're not allowed to. No, not allowed in terms of regulation, but maybe not following the process as they should just do it anyway and show them afterwards. Because sometimes that's what was needed for them to understand because if they don't get it, then it's kind of hard. They don't really know what they're saying no to. For example, that we had very much support from 'manager A', to "do what you need to do and then we will say sorry after".		
A	"he told me about this possibility that, if you're interested in being a pilot country for having website in the new platform, then we are able to help you and that was kind of like under the counter approach that this is not the strategy that everybody is having"		
D	"I mean, we were an innovation team and 'manager A', we had to go into this pirate mode to get things moving and to do that we kind of just needed to show them instead of telling"		
F	"They [the risk team] know about finance and about banking and risk is such a necessary part to be involved in anything that will happen to the bank. I thought, okay, I need input from them just to see if it's even possible to have an MVP on this."	Involve key stakeholders	
A	"they tried to like, promote the thing, but not telling too much because they felt that somebody would be saying that, hey, you need to stop this. I don't like this idea."		
E	"And then the strategy wasn't a communicate with everybody strategy. It was we do things and we only involve people that have hands on either authority to approve the hands on involvement or when people who are hands on involved, and then we were counting on them being ambassadors for that way of working."		
C	"Yeah, but we don't like involving too many like, being really careful not involving the ones that can stop you from the beginning basically."		
C	"Usually we do a stakeholder mapping strategy."		
E	"That's very hard because we purposefully narrowed the stakeholder map. So we only involve the people who were relevant, and they were happy."		

A	“they wanted to like have the pilot and then show that ‘hey, this [radical innovation idea] is much faster and better working’ and like build a case and then show through it that ‘hey, this is better’.”	Convince by showing concrete results	The proof approach
F	“I am the backend part of the team. So I was more interested in actually producing the figures for the business case that they were talking to people explain it to people and this is a change management thing.”		
F	“we created a business case”		
D	“used prototype to convince colleagues of ideas”		
E	“The best way to do things is to have a working prototype. There's nothing better than that. The process of getting to the prototype, some people will disagree with you or not.”		
C	“We do talks in, like every Friday we have a 'Prata'. So we have done a lot of talks to the whole company. Or, yeah, I'm with teams and 'manager A' have been involved a lot in that and 'manager C' has been talking to teams.”	‘Talks’ to broad company audience	The constant selling approach
C	“What we try to do is that we have done a few like ‘talks’. We have done like some hackathons, some partnerships with innovation hubs and bring in people there and from different areas, have some videos content in the web, in the intranet. Yeah. And basically just trying to talk to people and trying to influence.”		
E	“And then if we go through enough people going through the process, then you have critical mass leader. So that was a strategy.”		
D	“I mean, we're talking about this and we have traveled to a couple of countries and talking about ‘project B’ and how we can utilize that in different areas.”		
F	“I always have the theory of being completely transparent.”	Transparent communicating approach	
G	“I'm very open to transparency and communication. I'm not a person that likes to put stuff under the carpet. I rather prefer they come and tell me about their problem. So we can solve it. It doesn't matter if I'm the problem or if whatever the problem is.”		
A	“When I was discussing, for example, in the phone with a market ‘D’ or market ‘C’ (...) I told that I'm really happy about it [project A] and feel that we are able to do a lot of development in the new platform and so on.”	Convince through showing enthusiasm	
B	“Use your personal enthusiasm. To say this is actually something I will put my job on the line to do this. This is how much I believe in it. Because if all of a sudden if you can't discuss either the metrics or the KPIs and anything with this type of stakeholders because it's simply out of reach of their understanding. Then you have to go into the emotional part and that is really putting your job on the line saying yeah, this is it. If you don't believe me fire me.”		
C	“I have tried a lot to do like indirect approach and make them excited from other sources that is not me from more trusted sources, and from people that actually understand the problem and deal with that issue every day.”	Lobbying to increase people's	
F	“we have to do a lot of lobby.”		
A	“I was basically trying to lobbying it for other colleagues (...) And our country manager was lobbying it for the other country managers and her boss. So like, basically everybody on their role and level, I would say, were lobbying it.”		

F	"most of the lobbying is trying to connect to the network"	awareness	
F	"the biggest challenge of the whole team has been change management to actually start with very, very tiny steps, talking to people, making the people aware of the real difficulties of this, the real advantage of these things."		
G	"Sometimes during Fika, someone could sit down 'Oh,I went past your room with all the post-its and pictures and it looks fun. What was that? Then I tell him about it. And then it could be me inviting myself to team meetings. And then also others are like "Oh I heard you were in that team. Can you come and talk with us?"	Small talks	
B	"So there is the formal presentations of course that goes through my manager. But then there is the informal talk by the coffee machine and hallways and all that."		
B	"you do politics around the coffee machine because nobody wants to look stupid in the meeting room."		
F	"Each time you find someone in the elevator or here or there or you go to their desk and talk to them and tell them what are you working with, what is interesting and what the possibilities are."		
D	"I did a lot of research there sitting down and you know co-listening to the call so that I could understand more where the customer come from and the situation and so in that case they really helped me get me in touch with yeah in touch with the workers."	Involve grassroots level	The multilevel relationship approach
C	"The latest is like co-creating. We start analyzing okay who are the closest to this product, it can be an {??} in customer services. So we start working with those, rolling up into team leads, coordinators, and so on."		
C	"Usually go for like the one that is closest to the problem. Like one, let's say if it is for collections, for example, instead of going to the chief operation officer that is the boss, {??} for that business area and goes directly to the customer agent that works in collections."		
B	"we actually shifted towards and looked at, okay, let's work together with the 'market A's' operation. So customer service team, which had a totally other impact, because they actually said 'it's actually cool to get some attention on us. We've never had that attention before'."		
A	"my boss had discussions with, with her boss, who was not, of course, directly involved, but, like, on a more high level strategy"	Invest in relationships with management	
F	"So you have to convince the authorities to say, okay, it's mandatory that you implement that. Now, if it's happen, the technical guys won't have any trouble implementing it, because you will have demand from us and the responsibility will be from someone else, but they won't drive the change. Usually they wait for someone to force them."		
F	"In the case of the bank, it has to be the president of the Bank or one of the senior management, that has to be convinced"		
B	"going to my manager's manager, which was the chief Commercial Officer."		
D	"I thought they were very, very welcome of us helping them in any kind of way."		
F	"I was very humble from the beginning because I know this is not my area. So I approached them all the time asking them please explain me, please show me these please. And then they have been so so friendly and so nice."		

F	“They were helping me and I was all the time very thankful for the knowledge they have given me. So it was very nice and then all of a sudden, I could give something back and then were very open to receive it.”	Exchanging help to improve relationship	The network help exchanging approach
C	“And also like with the IT department we have been involved a lot in helping them building their strategy.”		
G	“When people feel heard, to know all the problems that you have, I want you to tell all the problems and we will work to help you solve one or all of them and we want your opinion. That's usually a trigger for people to come and help.”		
G	“Really just being out there trying to connect with people (...) on how we work and focusing a lot about that we actually are solving problems for the customer and that's how we need to get together to solve this kind of problem.”	Spread the working style	The Teaching Approach
D	“one of the goals is to spread a new way of working in the company as well”		
E	“So then in risk and operations, there are some people who are fans of this way of working. Around 'project C', you involve some people. People at 'partner company', some people in insurance or product management. And then all of a sudden you have you have fans of this way of working in these organizations. And then the idea was that as these things went on, and there were people who worked in this setup, and they would like it and they would adopt it as a way of working.”		
G	“I got invited to marketing managers, global team to speak about these things and how we do that. [...] For example, when the new marketing manager came, she invited me for two whole days with the 'market A' marketing team to educate them and the process on how to work with these kinds of things. To teaching them different activities we have within the process so that they can use it themselves.”	Education	
G	“I try to invite people into, for example, design sprints. I'm trying to educate like, for example, like businesses sketching process and stuff like that, where I have invited the people in the organization.”		
F	“I even gave a Python courses. Because I realized that by talking to them and trying to work with them and understanding how they work and what they do, I realized they are stuck.”		
D	“I think it's teaching because seeing the reactions is what makes us believe that they didn't know a lot. They've heard about it, but what we've been trying to do is more teaching.”		
D	“We've actually had to teach them this is a new technology and I think people are very comfortable in the situation and are not adapting fast enough.”		
G	“So educating them and in term of them getting to know us and in terms of involving them, because that's the only way that you get people onboard. Inviting myself to the team meetings, telling them what we're doing. Educate them. Mostly that.”		
G	“And usually the projects that we're doing are fun, it's not the legacy or you know, OCR that has been laying there for years with Oracle programmers and stuff. So usually it's a welcoming break for the people to join a design sprint and have work in different ways in a more creative way.”		

Appendix III: Data Structure - Outcomes

Data Structure - Outcomes			
Inter-viewee	Representative Quote	1st-order Concept	The aggregate dimension being connected to
D	“So from the reactions, I would say that I think we planted the seeds in everybody's mind of how we can do this and how ready it is.”	Planted a seed in everybody's mind by showing a prototype platform	The Proof Approach
D	“We have gotten the company aware of that ‘project B’ is the future.”	The company came to the understanding that the innovation idea is the future	
D	“So we actually brought the platform up on the on the screen for everybody. In the meeting before everybody was talking about how hard it is for the customer to go through this and how limited our information is and all off that stuff. And then the next day, we just brought up the platform. We told "is anybody brave enough to give the consent?" And so we had two persons giving it and just within a minute we had all the data in the platform where we could see all the transactions and everything and everybody like gasps. Jaw dropping, how easy it was and that our platform was actually working.”	Building and presenting a prototype platform showed great success in getting people's understanding	
E	“But once you get there people say, "Oh shit, this is really good." So that has been my strategy, as painful as it can be in the meantime until you get to the prototype. Once you have the prototype things are easy peasy.”	Showing a prototype helps to onboard people	
E	“So our focus when you're doing things, hoping that doing good things and going out, that would be the success. And that creates, I wouldn't say enemies but skeptics in the short term until the thing goes up. And then when it goes up it's "Oh, yeah, that's good." Usually today that's my experience.”	Doing things creates skepticism in the short term. And then it goes up "Oh, yeah that's good"	
D	[Illustrates the effect from showing a prototype] “Now we see a lot more movements and we have got a lot more trust I think in our team.”	Trust is increased by proving that the idea is working through a prototype platform	
F	“they were doing this lobby I talked about before that they were talking to the people. So the subject became something general and common. Everybody will talk a little bit about this over coffee, and then everybody even, if we won't be there, they will talk to each other about it.”	By lobbying and talking to the people the subject becomes something common which is spread over coffee through word of mouth.	
C	“They start hearing it like often, from their own people in their own words and then when they get interest, they book time or they make time to actually understand it. And the attitude is a little bit different in that case, it's not me pushing something is them being curious about something.”	A spreading word of mouth increases people's curiosity and willingness to understand	
F	“So all of the sudden, everybody's talking about it. They actually don't know. But it is already a familiar term.”	People get familiar with the innovation idea since everyone is talking about it	
F	“All of a sudden, it's something that everybody knows and t there is no change, fear of change anymore because it's something that everybody knows about.”	People become less afraid of change when everybody talks and knows about it	
B	“And I think, to be honest, is the informal talks where you see the decisions are made and then the formal presentation formalizes it.”	Small talks impacts	

F	“They [E & C] actually sold this ideas and project so much, when we come to the approval of the MVP everybody was happy, saying yes.”	Constantly selling idea lead to final approval	The constant selling approach
C	“And that's why I think that the other approach of like, including our people, and make it like more a constant feedback thing, has worked better for me at least, because I don't need to go and explain someone in 30 minutes what I'm trying to do.”	Involvement of people increase understanding and creates possibility for feedback loops	
F	[referring to transparency and communication]. “I think that'd be a good source of trust as well.”	Transparent communication acts as a source for trust	
F	[referring to small talks] “and then you start kind of put in this seed of the idea in everybody's mind.”	Small talks increase people's understanding	
C	“But just to say this, within in the case of ‘project B’, we develop the platform already a year ago, nine month ago. Maybe nine month ago we could have gone live. And just now they starting to understand it and starting to get excited with it and starting to think that we maybe should do it.”	the organizational understanding is too slow	
C	[Talking about giving speeches] “Not successful at all. I mean, it it has happened but way too slow, I would like it to happen much quicker.”	Giving speeches to the company has not been as successful as hoped for due to slow reaction.	
E	“So, you know, I think that's still the right strategy, but we didn't have enough time and a critical mass of people yet”	To onboard the critical mass seems to be the right strategy but it takes time	
C	“I haven't seen a big change in that sense [referring to hackathons, talks to people] (...)I don't think that's really effective.”	The have not been big enough	
F	“It was a very hard work for putting this idea into the people's minds because as I said, the first time I talked to anyone about it, they said ‘You're crazy’.”	Hard work to plant an idea into the people's minds	
C	“First of all trying to get together with the people [grassroot level] closest to the problem basically. [...] If the idea ends up being a good idea, and it makes sense for those people they would want to use it.”	Involving grassroot level is seen to be working	The multilevel relationship approach
G	“I think in the grassroot level, I still think it's good. Now they're coming to me asking me questions when they need help with these kind of like customer experience oriented questions and planning projects for it and stuff. But I still think that for my manager, it's been more difficult because then it's like on a higher level.”	High involvement: successful on the grassroot level but more difficult on the management level.	
C	“Until everyone in your organization kind of aligns in something and then we end up into the CCO. So we don't need to do so much convincing and explain.”	Involving the grassroot level seems to positively affect the impact on the management level.	
B	“And they [the customer service team] were willing to work together and make it happen.”	The grassroot level was willing to collaborate and make it happen	
C	“I think it has to do with them in the upper management needs to get to know you personally and just get to trust you on a personal level basically. If that doesn't happen I think that it is hard for them to accept anything that you will do”	Create a personal trusting relationship between the upper management and the innovation team	
C	“It's going {???) to happen with most of them. But a way to overcome that is to start from the bottom and then create excitement and they understand and then they start hearing. I mean, it takes time.”	Bottom up approach to create excitement and understanding	

E	Manager and employee discontinuity challenges the process of relationship building	Manager and employee discontinuity challenges the process of relationship building	
F	“So I approached them all the time asking them please explain me, please show me these please. [...] They just, ‘now it's your turn to teach us’. And it has been very nice.”	After building a relationship through getting help colleagues are open to learn new things themselves	The network help exchanging approach
F	[previously talking about exchanging help]“I think I grow into them, they have a lot of respect for what I have to say and they have respect about my knowledge. So, even if we have different backgrounds and different approach, we respect each other and consider a lot of what we say. (...) Even if I come with radical ideas, they are willing to listen to me, which is very positive.”	Working together leads to trust which increases willingness to listen even to radical ideas	
F	“We developed kind of a friendship (...) when you work with people, you actually develop the kind of relation, so they were helping me and I was all the time very thankful”	Work related to help exchanging enables relation building	
D	“they really helped me get me in touch with the workers.”	Positive towards exchanging help	
F	[Outcome of teaching activity]“When this person comes with an idea that is completely new or disruptive, but you trust this person, maybe you are able to actually listen to what this person will say, even if they say or think it is maybe crazy, they look at it and say ‘it's not that crazy, because I usually trust this person.’”	Disruptive ideas presented by trusted people tend to be received in a more convincing way.	
G	“I think that [educating people] has worked out really well because the market ‘A’ organization is the one that have actually adapted more of the activities than the rest of the markets.”	Educating strategy was successful since it lead to more adoption of activities	The Teaching Approach
C	“I haven't been able to actually convince people just with numbers. I can have all the facts in the world but it would not matter. In my experience it ends up being an emotional decision. It's just like, do I like you or not.”	Convincing only through numbers is not enough, it ends up being an emotional decision and if I like you or not	
F	“I offered this course and they give them something that maybe it's not useful right away, but they are not afraid anymore of seeing a python code. They will understand more or less what the python code says, even if they don't them develop themselves. So it helps a lot to develop this trust.”	Education decreased fear of new unknown things and increased trust	
F	“When you are teaching, or when you are in a course and you're sitting and there is a teaching or teacher or facilitator, there is something that is developed this kind of magic. I don't know exactly what it is, but it is a trust between the one that is sitting, listen, and the teacher.”	Trust is developed between the one that is sitting, listening and the teacher	
E	“The traditional way to do things is actually you build a relationship. And then the relationship voice says "hey, he's a good guy. He's not attacking you. Just talk it out." And then you just talk it through.”	Build a relationship. Then the relationship voice says "hey, he's a good guy. Just talk it through"	
G	“The first time we had it, it was a bit difficult, but then the word spread: "Oh, you're doing some fun stuff. Can we come?" You get stuff out there so quickly? I think that's why they want to join.”	The first time we had it [design sprints] it was a bit difficult but then the word spread	
G	“Really just being out there trying to connect with people and trying to get them to get an understanding on how we work”	Educate to increase understanding	
E	“What I think was the mistake is, one, to not align better with the most powerful country. We on purpose said, you know, 'market A' is difficult to	What I think was the mistake is to not align better with the most	

	work with. They are hard on the budget. We don't have time to convince them.”	powerful markets	The Closed Approach
E	“And then we fired the branding team in the back. So I took it for granted that the process would align itself but I should have aligned that with group more practically.”	Lack of communication and understanding with people external to the radical innovation department	
D	“We didn't have a lot of internal barriers [inside project team] while performing our work and our project.”	Few barriers inside the radical innovation department	
E	“In terms of the process inside the lab, that was great.”	Process inside the lab was good	
D	“The market ‘A’, if they were reporting to someone that was in the middle of everything, and then we will say, yeah, we're working on this thing ‘project B’ and then ‘market A’ is saying we're also working on that, we can kind of take that decision there and then and not secretly working on something that is overlapping that is so inefficient.	Working secretly on something leads to inefficient overlapping that is so inefficient	
D	“So we were working on this platform and maybe that was not communicated enough. Maybe everybody didn't know exactly what it did and how we can use it so I thought that was maybe that was one that was one stupid barrier maybe.”	Maybe everybody didn't know enough about what we did and the usefulness of it	
B	“Kept it secret until it was built. (...) And when we had a platform to show ‘market A’ just said, ‘We don't like it’.”	By keeping it secret until having an actual platform to show still lead to the not-invented-here syndrome	
E	“So consciously I have decided to focus on doing things and then let the prototype and let the end product speak for itself. That has been my strategy right or wrong. There has been a lot of downsides.”		