# BRINNOVATION

A case study of an innovation contest's influence on interorganisational innovation network creation

Master's thesis in Innovation and Industrial Management

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# Abstract

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Innovation is at the very heart of most organisations' research and development, with the innovation process starting with creation of innovation opportunities. As brought forth by several previous researchers and authors, creation and selection of such innovation opportunities historically occurs within the boundaries of an organisation. However, a growing number of innovation processes rely on the external world to create opportunities, something commonly referred to as open innovation. Today's business reality is not based on pure open innovation or internal innovation but instead a combination of the two, and integration of interorganisational stakeholders participating in the creation of innovation. One such perspective is the outside-in perspective of open innovation which aspires to enrich an organisations knowledge base through integration of stakeholders external of an organisation, referred to as innovation networks. The purpose of this study is to investigate how an innovation contest, which gathers several interorganisational stakeholders around one issue, can contribute to creation of interorganisational innovation networks, specifically how a specific case of an innovation contest around fire safety facilitates creation of an interorganisational network for further collaboration between its stakeholders. To achieve this goal, a qualitative research strategy has been deployed including a systematic literature review, three unstructured and eleven semi-structured interviews with stakeholders, and thematic analysis of the findings.

Findings from this study suggest that an innovation contest can contribute to creation of interorganisational innovation networks primarily as a uniting factor where ideas can be sourced, developed and ideally moved into product development with support of the network. This uniting factor facilitates network creation through stakeholders being able to get interaction and access points to other stakeholders and contestants in two primary ways. First, an innovation contest can provide new contacts and refreshed contacts to organisations previously known, mainly concentrated to organisations showing high involvement in the innovation contest. Secondly, an innovation contest can reinforce a network as organisations with existing ties are collaborating by participating in this uniting factor. Reinforcement of the network is also achieved through increased density in the innovation network through stakeholders being more interlinked, primarily through decreasing proximity between stakeholders. Lastly, this case study also concludes that innovation contests can be used as a tool to realise open innovation, mainly by initiation the innovation process through idea sourcing and refining.

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# 1 Introduction

In this chapter, theoretical and practical background and purpose of this study is discussed. Initially, a theoretical background will be introduced to narrow theoretical scope and provide theoretical orientation. Secondly, the specific practical field in which this study is carried out is introduced to provide a brief contextual background. Lastly, the research purpose is discussed and narrowed down into a specific research question which this study addresses.

## 1.1 Background

Innovation is at the heart of every research and development process where the process starts with creation of many innovation opportunities (Terwiesch & Xu, 2008). Creation and selection of such opportunities typically happen inside the innovating firm, but a rapid growing number of innovation processes rely on the external world to create opportunities, a phenomenon often referred to as open innovation (Terwiesch & Xu, 2008; Chesbrough, 2006). Enkel, Gassmann & Chesbrough (2009) also emphasise this shift away from purely internal research and development activities and increasing advantages of cooperation between different stakeholders in the open innovation era, both by corporations and researchers. Furthermore, Huizingh (2011) brings forth open innovation as one of the more addressed topics within innovation management but also argues that neither using input of outsiders to improve internal innovation processes nor searching for outside commercialisation opportunities for what has been developed internally is new. The basic premise of open innovation is opening up the innovation process, i.e. not solely conducting innovation within the boundary of the organisation. One of its most used definition is: '*the use of purposive inflows and outflows of knowledge to accelerate internal innovation, and to expand the markets for external use of innovation, respectively*' (Huizingh, 2011; Chesbrough, 2006).

Today's business reality is however not based on pure open innovation or internal innovation but instead companies investing simultaneously in closed as well as open innovation activities (Enkel et al., 2009). On one side, openness can negatively impact companies' long-term innovation success, as it could lead to loss of control and core competences. On the other side, companies which do not cooperate, and exchange knowledge, reduce their long-term knowledge base implying that a closed innovation approach does not serve the increasing demands of shorter innovation cycles and reduced time to market (Enkel et al., 2009). Enkel et al. (2009) instead argue that the future of innovation lies in finding a balance between the open innovation approach, where the company or institution uses every available tool to create successful products and services faster than their competitor, and at the same time fosters creation of core competencies and protects their intellectual property. In finding this balance, there is an increased interest to identify the cause-and-effect relationship of open and closed innovation activities, finding the appropriate contributors and integration mechanisms, and exploring non-economic approaches to enrich companies' portfolios (Enkel et al., 2009).

Enkel et al. (2009) bring forth the perspective of classifying open innovation activities into three core processes: 1) The outside-in process; 2) The inside-out process; and 3) The coupled

process. The outside-in process aspires to enrich a company's own knowledge base through integration of suppliers, customers, and external knowledge sources to improve a firm's capability to innovate. Such knowledge tends to originate mostly from clients, suppliers and competitors, but also public and commercial research institutes. However, a large body of other sources are found as origin of knowledge, namely non-customers, non-suppliers and partners from other industries. Within this process, there is an increased awareness of the importance of innovation networks, new forms of customer integration, and use of innovation intermediaries (Enkel et al., 2009). The inside-out process instead refers to earning profits by bringing ideas to market, selling IP, and multiplying technology by transferring ideas to the outside environment. Companies which engage in this process focus on externalising their knowledge and innovation in order to bring ideas to market faster than they could through internal development, and increased awareness can be found in corporate venturing activities, new business models, and cross-industry innovation (Enkel et al., 2009). Lastly, the coupled process refers to a mix of the two previous processes, where co-creation with complementary partners through alliances, cooperation, and joint ventures during which give and take relationships are crucial for success.

One form of such outside-in process of open innovation as described by Enkel et al. (2009) is innovation contests as they are suitable tools for realising open innovation by integrating external partners into the innovation process, primarily by engaging users in the innovation process (Adamczyk et al., 2012; Piller & Walcher, 2006). Open innovation initiatives often rely on the altruism of its community members, their desire to compete for status within the community, or their self-interest reflecting their role as a user of the innovation. This makes innovation contests a remarkable exception to such non-financial motives and these innovation contests have expanded from "crazy" concepts to solid problem solving in recent years (Terwiesch & Xu, 2008). The main benefits of this form of innovation for the innovation seeking firm are as follows: 1) competition among solvers; 2) the seeker only pays for successful innovations, i.e. risks of failures are shifted to the solver; 3) the seeker gains access to a broad pool of solvers so problems are solved by those who have the most relevant expertise; 4) there exists an opportunity of wage rate arbitrage or, more generally, cost savings; 5) an increase in the capacity of idea generation and testing (Terwiesch & Xu, 2008)

Adamczyk et al. (2012) do however point out that there is a general lack of consistent theory revolving innovation contests. The perspective has been brought forth that innovation contests can serve as a tool for realising open innovation, by primarily engaging users in the innovation process, but poorly addresses the usefulness of innovations contests to integrate other sources of innovation such as suppliers, non-suppliers, partners from other industries etcetera as described in the outside-in process by Enkel et al. (2009). Existing theory revolving innovation contests therefore lack the scope of how innovation contests can create such innovation networks and could be of interest for organisations wanting to engage in open innovation, specifically in the outside-in process of open innovation by engaging more interorganisational actors.

One organisation currently exploring the area of realising open innovation, specifically through an innovation contest, to engage a wider base of innovators and stakeholders is the Swedish Fire Protection Association, SBF. By launching an innovation contest inviting 28 stakeholders to collectively address the issue of fire, SBF aspires to create new collaborations and networks beyond stakeholders usually involved in fire safety to stimulate innovation over time and promote such innovation. This creates an environment where existing theory revolving this type of innovation contests can be explored further and simultaneously provide SBF with complementary insights from their innovation contest to increase the likelihood of creating such networks.

# 1.2 Practical background

## 1.2.1 National initiative and research related to fire safety

Brandforsk, the Swedish Fire Protection Association's research department, declared in 2010 that the knowledge level in Sweden regarding fires in homes was low, as result of a conducted pilot study. The knowledge gap was mostly related to information and analysis about which kind of individuals were most likely to be affected and which kind of behaviour that causes fires with people being wounded or deceased as outcomes. As result, the Swedish Civil Contingencies Agency, MSB, announced in 2013 that 23 million SEK over the subsequent five years will be assigned to obtaining additional knowledge about why fires occur in Swedish homes. This initiative by MSB was also a result of the national strategy to increase fire protection for the individual inhabitants (MSB, 2014; SBF, 2018).

MSB estimates that 23,000 fires occur in Swedish homes on an annual basis and in 2013, 103 individuals were hurt with fatal outcome, of which a strong majority related to fire in homes. This trend has remained stable for the last twenty years even though technologies like fire detector, fire extinguisher and information campaigns have been introduced and adopted into homes. The national strategy goal of MSB is to minimise individual damage and mortality in combination with increasing fire protection in Swedish homes and increase public knowledge of fire in homes. As of 2014, a majority of the research conducted within fire protection has been focused at technical solutions and lack depth into the problem of fire in homes. As result, the 2013 national initiative made Brandforsk launch a new line of research into fires in homes, specifically to understand the previous knowledge gap of causes of fire and which individuals that are most likely to be affected (MSB, 2014; SBF, 2018).

## 1.2.2 The case company and specific case

The Swedish Fire Protection Association, SBF, is a public-interest, non-profit association working for greater fire safety in Sweden with knowledge as a foundation of its efforts. Every year, SBF's efforts to prevent and reduce human injury and material damage help to save lives, alleviate suffering and reduce costs to society. SBF endeavour to influence stakeholders such as politicians and decision-makers to raise fire safety issues in the public debate. For example, the organisation strives to improve fire safety standards in construction processes and wants elderly and vulnerable people to be offered fire safety tailored to the individual (SBF, 2018).

Based on research conducted by Brandforsk and implications of its result, SBF is interested in spreading newly acquired knowledge, finding new solutions to the identified problems and creating stronger collaboration between stakeholders with different interests in the issue of fire in homes. To spread knowledge and invite other stakeholders with social and/or economical interest related to damages by fires in Swedish home, SBF and the consultancy company First to Know Scandinavia launched an innovation contest in January 2019 called Brinnovation. Brinnovation invites the Swedish public to participate with ideas to source innovation from a wide base of idea-givers, innovators and entrepreneurs to contribute to better fire safety in homes, and to spread knowledge. With Brinnovation, SBF also has the goal to form a network of strong partners and stakeholders which can help each other in collaborations around fire safety in the future. The goal to form a network of partners and stakeholders for future collaboration will be the main focus for this study. The invited stakeholders such as insurance companies, security companies, housing agencies, MSB, and others are perceived to have similar goals in mind related to decreasing fire in homes, but historically act independently to achieve these goals. These invited stakeholders participate with funding, expertise and other resources to Brinnovation and are divided into two categories, Partners and Friends. In total, 28 stakeholders are involved in Brinnovation, of which 15 are Partners and 13 are Friends. Brinnovation has a duration of four months and an economic incentive of 500,000SEK which is divided among the winners of the contest to incentivise participation from the public.

## 1.3 Problem discussion

As pointed out by Adamczyk et al. (2012), there is a lack of consistent theory related to innovation contests and this study could contribute to additional knowledge through theoretical exploration of how this type of innovation contests can serve as a tool for realising open innovation. This exploration is primarily through addressing the usefulness of innovations contests that gather interorganisational stakeholders around an issue to integrate other sources of innovation such as suppliers, non-suppliers, partners from other industries etcetera as described in the outside-in process by Enkel et al. (2009). Such knowledge could prove useful for organisations similar to the case organisation, which are not used to engaging in open innovation activities such as integration of users and other stakeholders.

To orientate the research in terms of theoretical framework, how the research will be designed and carried out, which data is needed and how it is collected, a well formulated research questions is crucial (Bryman & Bell, 2015). As result of initial interviews, issues of individual stakeholders historically acting on their own and lack of collaboration, as well as wishes for Brinnovation to create a network for future collaboration, were found to be important topics to investigate (see *Appendix* 2). In addition to further exploring innovation contests and their potential impact on innovation network creation, knowledge of how Brinnovation engages stakeholders is valuable for the case organisation as they aspire to create a wider network for future collaboration to stimulate innovation and technological progression.

## 1.4 Purpose and Research Questions

The purpose of this study is to investigate how an innovation contest contributes to creation of interorganisational innovation networks through a single case study of Brinnovation. Namely, the primary purpose of this study is to investigate how Brinnovation is facilitating creation of an interorganisational network for further collaboration between its stakeholders. Lastly, as Brinnovation is ongoing at the point of this study being conducted, this study also aspires to provide valuable feedback to the case organisation in order to improve the concept of Brinnovation, identify potential pitfalls, and provide recommendations for improvement.

Keeping advice by Bryman & Bell (2015) in mind and adhering to the criteria for a good research question, the research question for this study is formulated as exploratory and reads:

- How can an innovation contest contribute to creation of interorganisational innovation networks?
    - How is Brinnovation facilitating creation of an interorganisational network for further collaboration between its stakeholders?

## 1.5 Delimitations

This study has several limitations in relation to scope and findings. To start with, this study is conducted as a single case study, which carries all the implications of this format. As a case study, the scope is limited to one case under the unique characteristics the case displays, and findings might not be generalisable to other cases than this one. Secondly, the data collection is only conducted within the boundaries of this case regarding expectations for future outcome which exclude multiple perspectives such as contestants, other industries and factual outcome of this contest in the future. Thirdly, the case organisation and several stakeholders involved display other motivations than commercial and are instead motivated by social impact regulated and/or funded by authorities. Such motivations imply less focus on issues regarding intellectual property rights etcetera, which might be a concern when this type of contest is driven by commercial incentives instead of primarily stimulating innovation and collaboration. Several characteristics and issues found and discussed might be generalised beyond the scope of this study, but this study does not claim such generalisation. Instead, this study gives suggestion to actions the case organisation could consider, and theoretical suggestions based on its findings, leaving it to other researchers and stakeholders to assess if these findings could be of interest under other circumstances. Lastly, this study is focused at an innovation contest involving stakeholder from different organisations and the general public with both digital and physical event taking place throughout the contest. Innovation contests which display other characteristics, such as hackathons, solely digital innovation contests, and contests only involving one organisation, fall outside the scope of innovation contests defined in this study.

## 1.6 Disposition

In the next chapter the methodology for this thesis is presented and discussed, followed by a systematic literature review of theoretical fields included in this thesis. In chapter four, empirical findings as result of the chosen methodology for analysis will be presented and in chapter five these findings will be analysed from a theoretical perspective. Lastly, conclusion will be presented as response to this study's research question, including recommendations for the case organisation and suggestion for future research.

# 2 Methodology

This chapter presents the methodology deployed when conducting this study, including argumentation and motivations for decisions related methodology. Initially, research strategy and design will be discussed to justify how to best obtain new and existing information related to the research question. Secondly, methodology for data collection and analysis is presented, including how these methods were deployed. Lastly, a discussion regarding research quality related to methodological choices will follow.

## 2.1 Research strategy

This study followed an inductive research strategy, as explained by Bryman & Bell (2015), due to the iterative and exploratory research method required to scrutinise the case of Brinnovation. This study's main focuses are to provide qualitative feedback to the case organisation regarding network creation and contribute to theory development by suggesting explanations to a current theory gap. As such, an inductive research strategy allowed iteration between data collection, theory searching and data analysis, which was crucial to this study as the case being studied was ongoing and its ramifications unknown for the duration of this study. Bryman & Bell (2015) broadly define inductive research strategy as basing research on positivism, i.e. knowledge can only be gained from what one can objectively observe, and observations are the basis for theory building. By deploying such an inductive research strategy and focusing on observations for theory building, exploration of theory could be achieved, and preconceptions could to a certain degree be avoided. Both inductive and deductive can, and often will, include fragments of the other approach and are thereby not mutually exclusive (Bryman & Bell, 2015). Even though an inductive research strategy was deployed, existing information and theory in related topics needed to be gathered to better orientate the research. Such orientation from existing literature increased the overall quality of this study and ensured that previously explored topics were not introduced as new phenomena. Therefore, a degree of deduction was used in this study, mainly related to question and topic formulation for the interview guide but also as part of the data analysis by drawing on existing theoretical explanations to assist in answering the research question. This deductive approach was primarily used due to the limited knowledge the researcher had within certain theoretical fields and with aspirations to increase the overall quality of the interview guide, and consequently the data collection and analysis.

For this study, a qualitative research strategy was used as it was perceived to be the most appropriate research strategy to fulfil this study's purpose and answer the research question of *how* Brinnovation is facilitating creation of an interorganisational network by enabling depth of data collection to understand different stakeholders and their engagement. A qualitative research design is also more commonly used when following an inductive approach (Bryman & Bell, 2015), which was appropriate for this study as it had a more exploratory approach to *how* an innovation contest can contribute to creation of interorganisational networks for current and future collaboration. The benefits of using a qualitative approach are to acknowledge that the case studied is a dynamic environment, take the study subjects' perspective into consideration, and provide the flexibility needed to explore specific context. A qualitative

research strategy also enables concept and theory exploration while acknowledging the world as dynamic and with degrees of subjectivism (Bryman & Bell, 2015). As the research question is focused at the meaning and implication of stakeholders' behaviour and perceptions, rather than observing their actual behaviour, a qualitative research strategy allowed for a more process-oriented approach focusing on meaning of behaviour and intentions.

### 2.1.1 Systematic literature review

In order to integrate existing information from the vast amount of available research, a systematic literature review similar to the one described by Okoli & Schabram (2010) was used. This served the purpose of integrating existing information, assist in explaining inconsistencies and conflicts in different research, and evaluate what has already been researched on the topic. Due to resource restrains and limited scope of this study, a simplified model of Okoli & Schabram's (2010) eight major steps for a systematic literature review was used, including: 1) Purpose of the literature review; 2) Protocol and training; 3) Searching for the literature; 4) Practical screen; 5) Quality appraisal; 6) Data extraction; 7) Synthesis of studies; 8) Writing the review.

In addition to the aforementioned purpose, this literature review also had the purpose of providing a major introductory section to this thesis and provide theoretical basis, such as described as one of the main purposes of a literature review by Okoli & Schabram (2010). The objective of this literature review was hence to find literature about models for engaging organisational external stakeholders in innovation, specifically through innovation contests, and literature about interorganisational innovation networks. These models had to be appropriate to get insight into how innovation contests create value and how they engage different organisational external stakeholders to collaborate. The protocol, or practical way of searching for relevant literature, includes where articles are to be found and which criteria they need to fulfil (Okoli & Schabram, 2010). Where articles were searched for, search words and keywords used, inclusion and exclusion criteria, and quality appraisal can be found in *Table 1 – Systematic literature review*. Initially, relevant articles based on abstract and key words were examined and as the search progressed, references in relevant articles were examined to find more precise and relevant models. Articles were selected based on relevance to the literature review purpose, specifically abstracts being related to innovation contest and/or innovation networks.

Quality appraisal was in this study simplified and limited to assessing relevant articles based on peer-review, citation per year since published as indication of acceptance, and reviewing the articles' sources. The peer-review criteria was to ensure academic acceptance and reviewing articles' sources provided additional depth to this academic acceptance criteria by including articles mainly referenced in well-established research journals. Citation per year since published-ratio was used instead of number of citations mainly because using the latter will create age bias towards older articles as they have had the possibility to be read and cited more times, thereby automatically excluding novel articles which may be relevant and have academic rigor. Some age bias might still exist as number of citations wes assumed to be

exponential, but this should rather be an indication of articles acceptance and thereby fulfil the purpose of filtering out less accepted articles. After selecting relevant and qualified articles, relevant information for this study was extracted and synthesised to make comprehensive sense out of a large number of studies. This extracted and synthesised information is mainly presented in the literature review and the introduction of this study.

| Databases | Google Scholar and University of Gothenburg Supersök which includes: JSTOR Business Collection, EBSCOhost Business Source Premier, Emerald, IMF eLibrary, OECD Library, and other |
|---|---|
| Search words and keywords | "innovation contest", "innovation competition", "innovation ecosystem", "innovation network", "innovation network creation", "building innovation ecosystem", "network creation", "interorganisational networks", "Interorganizational networks" |
| Inclusion criteria | Articles containing models inviting organisational external agents to participate in innovation<br>Articles containing models of how innovation networks are formed<br>Articles with models primarily concerning effects of organisational external involvement in innovation<br>Articles containing explanation to how innovation initiatives external of the organisation can build future innovation capabilities between involved parties |
| Exclusion criteria | Articles containing engagement of only specialised organisational external agents<br>Articles using models that are only virtual or internet based<br>Articles focusing on how the organisation's internal strategy is to be matched with the organisational external network they aspire to participate in and/or create<br>Articles focusing on how interorganisational networks are governed and managed |
| Quality appraisal | Peer-reviewed<br>Hight citation / Year<br>Relevance for research question |

*Table 1 - Systematic literature review*

## 2.2 Research design

Bryman & Bell (2015) mention five categories of research designs: experimental, cross-sectional, longitudinal, comparative, and case study, of which a case study design was perceived as most appropriate to fulfil the purpose of this study and answer the research question. The ground form of a case study is a detailed and in-depth study of one single case related to the complexity and specific nature which the case exhibits. The case should furthermore be an interesting study object in its own right and the researcher's goal is to thoroughly investigate the case, which is an important distinction to separate it from other forms of research design (Bryman & Bell, 2015).

As the purpose of this study is to investigate how an innovation contest can create networks between its stakeholders, specifically as result of SBF's initiative Brinnovation, a case study was the best fit. The case of Brinnovation and its impact is unique in its nature as a social problem had been identified which SBF wanted to solve as a social initiative by spreading knowledge and engaging a wider base of stakeholders. Secondly, the case is unique due to this initiative being the first to collaborate between these stakeholders to solve the same problems, even if their motives varied. According to the head of R&D at SBF, these organisations historically act independently, and intellectual property concerns sometimes hinder them from collaborating. Thirdly, Brinnovation is a unique case as the innovation contest was ongoing at the time of this study and access could be gained to both internal and external perspectives by

access to stakeholders. Furthermore, the case study design is appropriate as the scope of this research was based on depth of data collection, rather than breadth of data collection, to understand the implications of Brinnovation on relationships and collaboration between involved stakeholders. The format of a case study consequently impacted the generalisability of this study by not necessary being applicable to other cases. However, this case study's primary purpose was to critically evaluate the impact of Brinnovation to better understand the implications of the initiative and provide some support for theory building, making generalisability a minor concern.

## 2.3 Data collection

To conduct this case study and answer the research question, primary data from stakeholders involved in Brinnovation was needed. Bryman & Bell (2015) present three main categories of qualitative data collection techniques, namely ethnography and participant observations, focus groups, and qualitative interviews. To understand how well Brinnovation engages stakeholders, what motivates them and if this creates a base for future collaboration, the qualitative interviewing format was preferred. This option was most appropriate due to the control it provided over focusing discussions and therefore data collection on understanding individual respondents. The format of qualitative interviews also enabled in-depth discussion with respondents and enabled data extraction of their perception, motivations and intentions, as described by Bryman & Bell (2015). Furthermore, the qualitative interview format provided flexibility both to simple logistic and scheduling tasks related to resource constraints and to alter questions and sampling size throughout the process. Lastly, the interview format enabled separation of respondents to extract more accurate data, as many of the respondents were working for organisations that could be perceived as competitors, which could skew the data.

Within the category of qualitative interviews, three sub-categories can be chosen: unstructured, semi-structured, and structured (Bryman & Bell, 2015). Initially, unstructured interviews, as described by Bryman & Bell (2015) and Denzin (2008), were used to get an idea of which perspectives key stakeholders associate to Brinnovation to find general themes that could direct the scope of this study and the systematic literature review. This enabled the inductive approach of this study as findings from study subjects directed additional information gathering from existing sources, instead of deducting questions for interviews from theory already known to the researcher and thereby risk narrowing the scope. The flexibility unstructured interviews provided was also crucial to provide value for the case organisation as the first analysis focused on what they desire to achieve with Brinnovation. By conducting unstructured interviews to direct further literature review which could be basis for an interview guide and theoretical framework, iteration between data collection and analysis was enabled, following the inductive research strategy as described by Bryman & Bell (2015). These unstructured interviews and empirical findings derived from them were only used to direct this study and will not be presented in empirical findings but is instead attached in *Appendix 2*.

Based on the iterative approach of letting initial data direct the systematic literature review, a second phase of interviews were conducted with additional focus as result of the structured

literature review and unstructured interviews. These interviews were carried out following the semi-structured interview format described by Bryman & Bell (2015) and Barriball & While (1994) due to the possibility it provided to control respondents into certain topics which were of interest to answer the research question. To control the topic of conversation was crucial as respondents had different types of engagement in Brinnovation and their focus may differ when discussing the subject of Brinnovation. To deploy a semi-structured interview format ensured that questions related to network creation and collaboration were addressed. Furthermore, the semi-structured interview format is beneficial when extracting data from respondents with varied professional, educational and personal histories that precluded use of a standardised interview schedule (Barriball & While, 1994). In this study, respondents had different positions in their organisations, came from a variety of industries, and had different backgrounds, which favoured the more flexible data collection format of semi-structured interviews. Secondly, semi-structured interview format was preferred to remain flexible to development of individual interviews and to follow respondent into topics which may not have been anticipated when formulating the interview questions. As respondents had different motives and engagement in Brinnovation, the flexibility to follow unknown interview paths was crucial to explore such motives to understand why an innovation network is or is not in the making. As described by Barriball & While (1994), this flexibility can be achieved with a semi-structured interview format as it allows for exploration, clarification and freedom to probe when collecting data. Lastly, the semi-structured interview format enabled collection of somewhat comparable data (Bryman & Bell, 2015) which could be helpful when later coding the data and trying to find patterns. To have comparable data was of interest in this study to get an exhaustive view of the overall engagement by stakeholders and their motives to create further collaborations, both as feedback to the case organisation and for the purpose of the research question.

As appropriate for the semi-structured interview format, an interview guide was prepared before the interviews to collect comparable data and ensure that questions asked directed the interviews into areas necessary to answer the research question. The interview guide was audited by the external supervisor and pilot tested to ensure that the questions were clear, captures the necessary information, and was within the time available to respondents. The final version of the interview guide which was deployed during interviews with respondents can be found in *Appendix 1 – Interview Guide*. To increase transparency and dependability, the interviews were recorded and transcribed to create a transparent research process and increase the overall quality of this study by facilitating accuracy of data analysis, as is described by Bryman & Bell (2015). As interviews are conducted in Swedish, the interview guide has one Swedish and one English column.

### 2.3.1 Usage of telephone and internet medium

Due to resource constraints and respondents being geographically dispersed, all interviews were conducted by telephone or through Skype. Conducting interviews by telephone is a more practical option for geographically dispersed respondents and more resource efficient than regular face-to-face interviews (Holt, 2010; Bryman & Bell, 2015) as needed in this study due to resource restrains. Furthermore, telephone interviews have the benefit of mitigating risk of influencing the respondents by inherent bias, such as gender, age, ethnicity, and lowering the

risk of influencing respondents' responses (Bryman & Bell, 2015). Conducting interviews through telephone also mitigated bias from the researcher due to ethnographic information derived from environment and respondents' selves being excluded, and analysis could therefore be limited to the data provided by respondents verbally (Holt, 2010).

However, disadvantages such as being able to validate that the correct respondent is on the phone, not being able to see the respondent and therefore not reacting to uncertainty or unclarity expressed by non-verbal communication from the respondent, and being unable to use visual tools to clarify questions are associated to telephone interviews (Bryman & Bell, 2015). In this study, such disadvantages were mitigated by using respondents official contact information provided by their organisations, clarifying material being sent beforehand, and recording of interview to allow the researcher to be attentive during interviews regarding uncertainty expressed by respondents. To mitigate risk of uncertainty, the purpose of this study was explained when contacting respondents through mail and questions in the questionnaire were formulated to be as clear as possible.

In addition, textual transcripts obtained from telephone interviews provide a rich data source for various methods of qualitative analysis, such as qualitative analysis using textual transcripts where data is iteratively coded and compared to recognise connections and derive new theoretical contributions (Cachia & Millward, 2011). As can be noted later in this report, this kind of data analysis was deployed in this study and telephone interviews could therefore be perceived as feasible for the purpose of this study. Cachia & Millward (2011) also argue that telephone interviewing is both a valid and effective research methodology, namely through increasing privacy. When comparing face-to-face interviews and telephone interviews, the authors found no difference in the respondents' willingness to respond nor the quality of their responses (Cachia & Millward, 2011; Sturges & Hanrahan, 2004). Sturges & Hanrahan (2004) find that both face-to-face and telephone interviews yield similar information and that telephone interviews can maximise response rate. To conduct the interviews by telephone was therefore deemed a reliable method for this study. Lastly, when deploying the medium of Skype, Hanna (2012) argue that the argument of Holt (2010) can be expanded to this medium and provide the additional benefit of a visual, similar to a face-to-face interview. As Skype was used solely as a complement to increase comfort for respondents in this study, transcription of the interview was done without observing video to mitigate bias which might be derived from environment and respondents' selves.

### 2.3.2 Sampling

As this study is limited to one innovation contest and the participants involved in the innovation contest, the sampling space was limited as it would not be relevant to sample respondents without any connection to the specific case. The sampling method used in this study was therefore a combination of snow-ball sampling and theoretical sampling, both explained by Bryman & Bell (2015). The authors describe snow-ball sampling as sampling of respondent being determined by pilot interviews or initial interviews, such being the case with initial unstructured interviews in this study. Snow-ball sampling is based on criteria for sampling

being hard or impossible to determine and the idea that respondents have access to other respondents which could be valuable for the study. Bryman & Bell (2015) describe theoretical sampling as continuously conducting interviews until theoretical saturation is achieved in the researcher identified categories, as result of continuous analysis, hypothesis formulation and data collection. This form of sampling was preferred as this study follows an inductive approach with unknown relevance of different participants in Brinnovation and a desire to understand these participants. To use snow-ball sampling therefore directed the data collection towards relevant stakeholders and theoretical sampling ensured exhaustive data collection.

The initial interviews were held with the architects of Brinnovation to direct further sampling, resulting in nine out of 15 Partners and four out of 13 Friends being interviewed for this study. Partners were prioritised as they were described as having a closer relation to Brinnovation and being involved to a higher degree, thereby being able to give a fuller description of Brinnovation. To achieve sample saturation, semi-structured interviews were conducted with respondents until limited amount of new information could be revealed related to the research question. Initially, the information that could be extracted from interviews were extensive and of high relevance to understand the dynamic between different stakeholders involved in Brinnovation and their motives. From interview 10 and forward, limited amount of new information was revealed. However, complementary interviews were held with respondent 11, 12, 13 and 14 to bring additional certainty to having a saturated sample space. As later interviews mainly strengthened previously revealed motivations and expectations, and only contributed to new information related to the specific organisation the respondents represented, the sample was deemed saturated. Complementary to interviews held with Partners, a few Friends were interviewed but proved to have less insight into the initiative and little new information could be found in the last interview with Friends, resulting in the decision to not conduct any further interviews with this category of stakeholders. See *Table 2 – Sample space* for a full description of respondents.

| Interview format | Respondent | Position | Partner/Friend | Time (minutes) | Medium | Date (DD/MM/YYYY) |
|---|---|---|---|---|---|---|
| Unstructured | 1 | Consultant | Friend | 62 | Skype | 19/02/2019 |
| | 2 | Cheif of R&D | Partner | 58 | Skype | 21/02/2019 |
| | 3 | Consultant | Friend | 55 | Skype | 25/02/2019 |
| Semi-structured | 4 | Cheif of R&D | Partner | 45 | Telephone | 03/04/2019 |
| | 5 | Head of Security | Partner | 45 | Telephone | 03/04/2019 |
| | 6 | Strategic development manager | Partner | 70 | Skype | 04/04/2019 |
| | 7 | Project leader | Friend | 45 | Telephone | 04/04/2019 |
| | 8 | Damage prevention | Partner | 50 | Telephone | 09/04/2019 |
| | 9 | CEO | Friend | 51 | Telephone | 10/04/2019 |
| | 10 | Head of contests | Partner | 32 | Telephone | 10/04/2019 |
| | 11 | Applied research director | Partner | 42 | Telephone | 10/04/2019 |
| | 12 | R&D manager | Partner | 43 | Telephone | 11/04/2019 |
| | 13 | CEO | Friend | 33 | Telephone | 12/04/2019 |
| | 14 | Cheif of R&D | Partner | 33 | Telephone | 26/04/2019 |

*Table 2 - Sample space*

### 2.3.3 Recording and transcription

To increase the quality of analysis, increase transparency, and mitigate bias when collecting data, all interviews were recorded and transcribed. Recording and transcribing interviews will:

a) improve the researcher's memory and control intuitive and uncontrolled interpretations; b) make it easier to conduct a thorough analysis of what has been said; c) enables repetition of the interview and respondents' answers; d) increase the transparency by being able to show what the analysis is derived from (Bryman & Bell, 2015). Recording also hinders the interviewer from distraction and enables probing and relevant follow-up questions during interviews by maintaining focus on the interview rather than on taking notes to record data (Bryman & Bell, 2015), which is another main reason why recording was used in this study. Recording can however make respondents more restricted and more aware of what they say (Bryman & Bell, 2015). Such negative consequences were mitigated in this study by ensuring respondents anonymity and that recordings would be destroyed after transcription and analysis had been conducted. Respondents were also given the choice to not be recorded to mitigate such risks, even if all respondents gave consent to being recorded in this study. To transcribe interviews is a very time-consuming endeavour and interviews can therefore be partly transcribed, as everything that is said may not be relevant for the analysis (Bryman & Bell, 2015). Bryman & Bell (2015) suggest that the researcher listen to the interview one or two times and thereafter transcribe the most important parts. In this study, everything that was said throughout the interviews was transcribed except social small talk before and after the interview, thereby excluding conversations about personal matters, the researchers work and studies etcetera from the transcript. Such a method was used in this study to decrease resources needed, whilst capturing the main benefits of recording and transcribing, namely improving analysis and mitigating personal bias.

## 2.4 Method for analysis

To analyse collected data, thematic analysis with components from grounded theory was used. Thematic analysis is a method for identifying, analysing, and reporting patterns (themes) within data and it organises and describes data in rich detail but often goes further by interpreting various aspects of the research topic (Braun & Clarke, 2006). Grounded theory, as described by Bryman & Bell (2015), was considered as it would allow simultaneous data collection and analysis in a systematic way while conducting the research. Especially the iterative approach between data collection and analysis in grounded theory could have proven valuable in this study as data collection would need to be conducted in several stages and prior findings would guide further collection. However, the method of grounded theory is based on theory development (Bryman & Bell, 2015), has many pitfalls for unexperienced researchers, and relies heavily on data collection until theoretical saturation can be achieved (Suddaby, 2006). As the scope of this study was limited to one case, had time limitations, was conducted by a fairly unexperienced researcher, and included uncertainty regarding access to respondents, only the fragments of coding and analysing data while conducting interviews to direct further data collection was inspired by grounded theory to increase the quality of analysis. Thereby, thematic analysis was the main method for analysing data as it provided a more accessible form of analysis, particularly for those early in their research career as it does not require the detailed theoretical and technological knowledge of approaches such as grounded theory (Braun & Clarke, 2006). Braun & Clarke (2006) further argue that inductive, sort of a bottom-up approach, or theoretical, more deductive and top down approach, thematic analysis can be used. In this study, both approaches were used throughout the analysis as the main method of the study was to deploy an inductive approach but iteration between data collection and analysis

was used, bringing certain part of deduction into both data collection and analysis. This was especially the case when conducting the two forms of data collection addressed previously to narrow scope and draw on existing theories based on initial findings.

The thematic analysis was carried out as described by Braun & Clarke (2006) through six steps: 1) Familiarising with data; 2) Generating initial codes; 3) Searching for themes; 4) Review themes; 5) Defining and naming themes; and 6) Producing the report. The use of thematic analysis is not without critique, namely the perception that "anything goes" and that qualitative research overall does not constitute as "real research" (Braun & Clarke, 2006). Such criticism will be discussed and mitigated through efforts disclosed in section *2.5 Research quality*. This criticism is also mitigated by the thorough analysis described in the next paragraph.

In this study, interviews were listened to in full a minimum of two times, in addition to conducting the interviews, and transcribed as an exhaustive method to familiarise the researcher with the data. This familiarisation was partly carried out whilst data was still being collected to iterate questions to complement the data set and to use experience from previous interviews to increase quality of coming interviews. This familiarisation resulted in identifying additional respondents which could be of interest to interview, namely respondent 11, 12, 13 and 14. As part of familiarisation of the data, all transcript where read in full a minimum of three times and key sentences were highlighted, as the first step of condensing the data set and generating initial codes. Secondly, these sentences were transferred to a spreadsheet to be narrowed down to key words and compared with all respondents' answers, as an initial step of searching for themes. The sentences were then shortened to short phrases and finally to key words to capture the core of what the respondents said. This process was carried out in six steps before comparing answers across respondents and generating codes to ensure that the condensed information was representative for the data set. These codes were then compared across respondents and global patterns were identified for further analysis. In this step, the codes were also translated to English by the author. The main motivation to translate in this late stage was to mitigate risk of translation error within the analysis and only pose such risk in the presentation. Lastly, these codes were separated from the interview guide questions and organising into similar categories, thereby generating themes and review initial themes. After repeating this process of narrowing down key words and sentences from the transcribed interviews, themes were defined and named into seven first order themes and one overarching theme, which are presented in section *4 Empirical findings.* Extracts from interviews in the form of direct citations will also be found in section *4 Empirical findings* to give a richer and fuller description of data which is particularly interesting to answer the research question, and to provide the reader with a thick description of the data.

## 2.5 Research quality

Issues related to validity and reliability might arise as consequence of the chosen research strategy and design, and to improve the quality of research such issues should be considered. Bryman & Bell (2015) explain reliability as addressing whether the result of a study would be the same if it is repeated. As such, internal reliability represents to which degree the indicators being measured are related to each other and external reliability represents to which degree the study can be replicated. Bryman & Bell (2015) describe validity as addressing whether one or more indicators that have been formulated to measure a concept are measuring the intended concept. As such, internal validity addresses whether there is good coherence between the variable being observed and the underlying concept, and external validity addressed whether the results of a study can be generalised beyond the scope of the study. According to Bryman & Bell (2015), reliability and validity have their origin in quantitative research methods and may therefore be both hard to achieve and less relevant in qualitative studies.

As this study aspired to scrutinise a single case in detail, which took place in a dynamic and social environment, it will undoubtably impact the external reliability as there is a low chance this study can be replicated under the exact same conditions. Furthermore, the external validity was negatively influenced by the limited sample space of one case study and to which degree the results can be generalised to other social environments can be questioned. However, as the purpose of this study was not to create generalisable results, as the main purpose is to have practical implication for the specific case organisation and give suggestions for theory building, issues of replicability can lack relevance for the quality of this study. Bryman & Bell (2015) emphasise these issues by explaining that high external reliability and external validity are hard to achieve in qualitative studies and propose alternative criteria for assessment, namely credibility, transferability, dependability, and confirmability. To increase the quality of this study, these four criteria were therefore considered. To increase credibility, the research was conducted adhering to established rules related to qualitative research and include respondent validation that information from the interviews had been interpreted in a correct way. Such respondent validation was carried out by confirming interpretation of what was said throughout the interviews, as confirming with respondents after the interview had ended could be hard to achieve due to respondents' unavailability. To increase transferability, which is similar to external validity, a thorough description of details and context have been included to provide a *thick description* which serves as a data base for other researchers to conclude if the results could be generalised and transferred beyond the scope of this case. Such thick description is present throughout this written report by thoroughly describing background, methodology and empirical findings. Lastly, confirmability is related to making personal bias clear throughout the research to create transparency towards readers and ensure the researcher has acted in good faith. Such bias was considered throughout the research and mitigated by having one external supervisor and one university supervisor overseeing the process of investigating the research question. Such personal bias is also mitigated by excluding visual content when conducting interviews and transcribing them, to solely focus on data generated verbally by respondents.

# 3 Literature Review

This chapter focuses on reviewing state of the art research related to innovation contests and innovation networks. Initially, innovation contests are defined from a theoretical perspective and shortcomings of existing theory in relation to this specific study are emphasised. Secondly, a thorough description of innovation networks, their characteristics and implications, and how innovation networks emerge is presented. Lastly, a brief theoretical summary in relation to this study's research question is presented, followed by a section on operationalisation.

## 3.1 Innovation contests

The method of using a contest for research and development purposes by rewarding technological development is, to a certain degree, established and has historically led to important innovations emerging (Adamczyk et al., 2012). However, there are no mainstream theories or theoretical frameworks for exploring the research objective of innovation contests and the phenomenon is often attached to other existing theories in related areas, such as boundary spanning (Adamczyk et al., 2012). Adamczyk et al. (2012) do however provide some clarity to what innovation contests are by giving the following definition: "innovation contests could be generally defined as IT-based and time-limited competitions arranged by an organisation or individual calling on the general public or a specific target group to make use of their expertise, skills or creativity in order to submit a solution for a particular task previously defined by the organiser who strives for an innovative solution.".

As a result of many researchers from various fields studying innovation contests from diverse perspectives and having used different terms to describe the phenomenon, various standards have emerged and Adamczyk et al. (2012) systematically review these standards. The authors divide innovation contests research into two main perspectives, economic and management, and three minor focuses, education, innovation and sustainability. Adamczyk et al. (2012) describe both the economic perspective and the management perspective as meta-perspectives, overarching the research by dealing with economic models and management aspects for innovation contests respectively. The authors describe the education focus as entailing innovation contests that can be utilised as instruments to develop skills. The innovation focus comprises innovation contests to stimulate and foster innovation. Lastly, the sustainability focus contains innovation contests to promote sustainability.
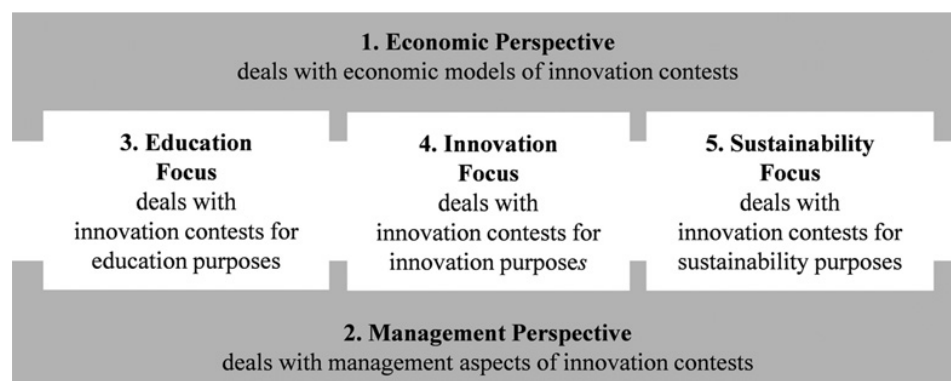


*Figure 1  - Overview of research categories (Adamczyk et al., 2012)*

Within the economic perspective, innovation contests are usually modelled as competitive games in which one or more players spend resources to win a price. The competition may be against time, a rival or both. This focus provides a deep understanding about the economic model behind innovation contests, which could be of importance for designing and setting up an innovation contest (Adamczyk et al., 2012). For example, Terwiesch & Xu (2008) takes such an economic perspective while exploring which kinds of problems innovation contests are most suited to solve and which kind of contest design is optimal under certain conditions. The management perspective deals with aspects related to management of innovation contests. Generally, research in this category aspires to create understanding for how innovation contests could be handled and conducted by focusing on various aspects. E.g. how to integrate participants, attracting and motivating users to participate, degrees of collaboration and communication between participants (Adamczyk et al., 2012).

Publications within the education focus displays innovation contests as a tool for encouraging and motivating, primarily students, and thereby developing technical, teamwork and communication skills. Publications within the innovation focus deal with usage of innovation contests to stimulate and foster development of new products or services in order to achieve innovation objectives, and primarily focus on early stages of the innovation process. From this focus, innovation contests can prove a powerful tool to advance technological development or to identify solutions for corporate problems, primarily by focusing on integrating users in the innovation process. Lastly, the sustainability focus, with significantly less theoretical development, suggests that innovation contests can be used to promote sustainability. Increasingly, companies recognise innovation contests as instruments for alerting attention towards today's most urgent sustainability issues and for mastering them (Adamczyk et al., 2012).

The publications reviewed by Adamczyk et al. (2012) within the innovation focus suggest that there is some consensus around innovation contests being a powerful alternative compared to traditional product or service development initiatives for generating new ideas (Adamczyk et al., 2012; Haller, Bullinger & Möslein, 2011). Furthermore, innovations contests are suitable tools for realising open innovation by integrating external partners into the innovation process, primarily by engaging users in the innovation process (Adamczyk et al., 2012; Piller & Walcher, 2006). However, little is known about the risks associated with innovation contests (Adamczyk et al., 2012).

In contrast, Haller et al. (2011) define the scope and objectives of innovation contests into two major strategic application areas: technological or societal development referred to as *greater good* and identification of solutions for *corporate challenges*. Both these application strategies use innovation contests to support R&D and innovation activities as well as enhancing communication about the organiser with three strategic objectives: stimulation, development, and promotion (Haller et al., 2011). See *Table 3* for a more elaborative description of scope and objectives of innovation contests.

| Objective | Scope | |
|---|---|---|
| | Greater good (A) | Corporate challenges (B) |
| Stimulation | 1. Research and knowledge creation | 1. User feedback and identification of trends |
| | 2. Investment in industry | 2. Idea generation |
| Development | 3. Skills | 3. Ideas/designs |
| | 4. Business | 4. Concepts/solutions |
| Promotion | 5. (Social) welfare | 5. Brand/image |
| | 6. Sustainability | 6. Organizational change |
| | 7. Environment protection | 7. Corporate social responsibility |
| | | 8. Recruiting/HR |

*Table 3 - Scope and objectives of innovation contests (Haller et al., 2011)*

# 3.2 Innovation networks

As brought forth by Enkel et al. (2009), the outside-in process of open innovation aspires to enrich a company's own knowledge base through integration of interorganisational actors, such as suppliers and competitors, to improve the firm's capability to innovate. Within this perspective, innovation networks have been presented as one area of importance for a firm's capability to innovate (Enkel et al., 2009). Such innovation networks are something Powell & Grodal (2005) thoroughly address by describing innovation networks, or interorganisational networks, as means by which organisations can pool or exchange resources, and jointly develop new ideas and skills. Powell & Grodal (2005) describe that such interorganisational networks have grown considerably in importance over recent decades and contribute significantly to the innovative capabilities of firms by exposing them to novel sources of ideas, enabling fast access to resources, and enhancing transfer of knowledge. Furthermore, Powell & Grodal (2005) conclude that much of existing research related to these networks across organisations focuses on the effects of networks on patenting, access to information, and generation of novel ideas.

### 3.2.1 Definition of innovation networks

In order to grasp the concept of interorganisational networks and their impact on innovation performance, some definition of what such networks are needs to be addressed. Literature on networks emphasise that networks are easiest understood by observing them from the perspective between the flexibility and autonomy of markets and the force and control of organisational authority (Powell, 2003; Powell & Grodal, 2005). Thereby, such networks combine some of the incentive structures of markets with the monitoring capabilities and administrative oversight associated with organisational hierarchies (Powell & Grodal, 2005).

To make the concept less abstract, networks can be based on formal contractual relations and informal ties between organisations, they can vary considering duration and stability, and their emergence can vary from accomplishing a specific task to evolving from previous relations. Some networks are hierarchical, monitored by a central authority, while others are more heterarchical, with distributed authority and strong self-organising features among the involved organisations in the network (Powell & Grodal, 2005).

Worth considering is the strengths of ties which link different firms in a network, where strong ties are formalised contracts and partnerships found in strategic alliances and supply chains whereas weak ties are more informal and found in research communities and professional communities. As introduced by Granovetter (1973), there is a difference between weak and strong ties that will impact the access to new information or reinforcing existing views (Powell & Grodal, 2005). Weak ties will have a longer reach and introduce novelty in the form of different ideas and preferences but will have a narrower bandwidth than strong ties. Strong ties are usually based on common interest and will consequently reinforce existing views rather than bring novel information but will however be more cohesive and often prove more effective at exchanging complex information (Powell & Grodal, 2005; Granovetter, 1973).

Another concept is seeing networks as bridges and structural holes where bridges are points of connection between parties that lack ties such as when A knows B, and C knows B but not A. B is the bridge between A and C, thus the gateway to a linkage between A and C (Burt, 1992; Powell & Grodal, 2005). Structural holes would instead represent a potential connection between clusters of organisations that are not connected but the possibility of making such a connection provides leverage, or opportunity for arbitrage (Powell & Grodal, 2005). Powell & Grodal (2005) do however mention that the debate whether strong or weak ties, or bridges or structural holes, offer greater opportunities for innovation, as studied by Ahuja (2000). Strong ties between two parties may restrict information gathering regarding breadth of search, but information exchanged is of higher quality. However, weak ties are thinner and less durable but provide better access to non-redundant information (Powell & Grodal, 2005).

Direct ties between organisations serve as source of resources and information, indirect ties instead serve primarily as sources of information, and structural holes between partners serve two contradictory roles - they expand diversity of information that a firm has access to but also increase a firm's exposure to potential malfeasance (Ahuja, 2000). Direct and indirect ties influence innovation output positively, but the impact of indirect ties is moderated by the firm's level of direct ties, and that increasing structural holes decreased the focal firm's innovation output (Ahuja, 2000). Findings that increased presence of structural holes in a firm's network of alliance relationships has a deleterious effect on its innovation output is coherent with the result of Schilling & Phelps (2007), studying eleven industries and thousands of firms over ten years.

*Network tie characteristics*

As brought forth by both Powell & Grodal (2005) and Ahuja (2000), among others, the characteristics of network ties between different organisations matters for the outcome of the relationship. Furthermore, Powell & Grodal (2005) bring forth that one line of research has investigated if position in the network matter, to which Powell, Koput, Smith-Doerr & Owen-Smith (1999) underline that experience with collaboration and centrality in the network derived from a diverse set of ties are important determinants of innovation. Powell et al. (1999) suggest that experience with collaboration and network centrality results in more patenting, where R&D partnership were the most consequential connection for patenting. The authors also found that diversity had a positive influence on the rates of patenting but that the positive influence of network experience had diminishing returns with additional experience. Powell & Grodal (2005) argue that the results found by Powell et al. (1999) suggested a "cycles of learning" process in which R&D collaborations generate attention that attracts other partners, who collaborate in developing novel ideas. Such diversity within the network increases a firm's experience of managing collaborations and transferring knowledge and increases their centrality in the industry network. Notably in this line of research is that firms with a central location within networks generate more innovative output (Powell & Grodal, 2005).

Focusing on formal ties in the form of alliances, Vinding (2002) finds that the impact of collaboration on innovation, measured as product development, is related to both the type of partner and the pattern of previous collaborative relationships. This finding points towards the significance of relationship building and that elements such as trust and cognitive understanding takes time to develop (Powell & Grodal, 2005). Similar results related to strong ties are found by Godoe (2000) who also suggests that radical innovation is more likely to emerge from close and prolonged interorganisational interactions (Powell & Grodal, 2005). Most empirical studies examine the relationship between networks and innovation focus on formal ties established among organisations, such as strategic alliance formation. Including studies from industries such as chemicals, biotechnology, telecommunications and semiconductors, there is a strong documentation of positive relationship between alliance formation and innovation. However, most of this research is focused on high technology industries and uses patents as a proxy for innovation, which may fall short in capturing other forms of innovation that spur from such networks (Powell & Grodal, 2005).

Regarding informal ties, less research and exploration have been conducted, leading to few studies linking informal ties to the innovation process and informal interorganisational relations. However, Powell & Grodal (2005) mention that sharing complex information is enhanced by embedded ties, suggesting that informal ties have the potential to make a significant contribution to innovation. Furthermore, these informal ties may be what initiates formal ties. Within the area of informal ties, concepts such as trust through social ties and relations between individuals are of importance, which can be found by individuals sharing professional ties or be part of a technical community (Powell & Grodal, 2005).

Rowley, Behrens & Krackhardt's (2000) study across different industries does however find divergent results when analysing weak and strong ties in a network. The authors recognise that weak ties are valuable and serves as channels for obtaining novel information and that strong ties are more affiliated with control and exchange of tacit knowledge, in line with previous authors. In the steel industry, strong ties are positively associated with performance while weak ties are more effective in the semiconductor industry (Rowley el al., 2000). This would indicate a difference between industries where search and product innovation may be more important in for instance the semiconductor industry, while improvement innovation is superior in industries such as the steel production industry (Rowley et al., 2000; Powell & Grodal, 2005).

### 3.2.2 Value of interorganisational networks

The advantage of engaging in interorganisational networks is closely linked to advantages of engaging in a heterogeneous group of contacts, namely related to resource and information advantages of having a broad and diverse network but also status (Powell & Grodal, 2005). In a field where scientific or technological progress is developing rapidly, and the source of knowledge is widely distributed, no single firm can have all the necessary skills to stay on top of all areas of progress and bring significant innovation to the market. In such a setting, networks can become the locus of innovation, as the creation of knowledge is crucial to improving competitive position (Powell & Grodal, 2005). Powell & Grodal (2005) further emphasise that formal collaborations may also enable division of innovative labour that makes it possible for firms to accomplish goals they could not pursue alone, with studies on investment in mutual learning and a portfolio of diverse collaborations display increased patenting. The authors conclude that networks provide access to more diverse sources of information and capabilities than are available to firms lacking such ties, and in turn these linkages increase the level of innovation inside firms. Regarding the characteristics of ties, both direct and indirect ties provide a positive contribution to innovation, as described by Ahuja (2000). However, the effect of indirect ties is moderated by the prevalence of direct ties. The density of the network, measured by structural holes, also has an impact on innovation, primarily through information search and knowledge transfer, even though the current research is not uniform. Evidence suggests that structural holes might be beneficial in search for new information but that the knowledge transfer process is better facilitated by a closer-knit network (Powell & Grodal, 2005). However, Powell & Grodal (2005) point out that long-term associations may run their course and create problems of stagnation where the same information only recirculates in too tightly knit networks. Such stagnation leads to the same information cycling back and forth among the same participants and therefore not fulfilling the positive effect affiliated with access to new information and knowledge transfer.

Collaboration networks have long been central to improving production processes and the growth of knowledge-intensive industries has highlighted the importance of networks in R&D as well as product development and distribution (Powell & Grodal, 2005). Internal R&D intensity and technological sophistication are positively correlated with both number and intensity of strategic alliances. By having access to a more varied set of activities, experiences, and collaborators, companies broaden the resource and knowledge base which they can draw on. By developing more multiplex ties with individual partners, either through pursuing

multiple collaborations or expanding an existing R&D partnership into downstream development, companies increase the points of contact between them. When relationships are deepened, greater commitment and more thorough knowledge sharing ensue (Powell & Grodal, 2005). Organisations which develop ties to different kinds of organisations and carry out multiple types of activities with these organisations are central players in industry networks. These centrally positioned organisations are both capable of pulling promising new entrants into the network and collaborating with a wide assortment of incumbents. Moreover, research shows that in biotechnology, organisations lacking such connections fail to keep pace and fall by the wayside (Powell, White, Koput & Owen-Smith, 2005; Powell & Grodal, 2005).

Schilling & Phelps (2007) find similar value of interorganisational networks, namely that clustering, measured as density of network equivalent to Ahuja's (2000) definition of structural holes, and reach, measured as number of firms an organisation can reach and their proximity, play important roles in network diffusion and search. The authors argue that clustering enables even a globally sparse network to achieve high information transmission capacity through locally dense pockets of closely connected firms. Reach increases quantity and diversity of information available to firms in the network by bringing information resources of more firms within relatively close range. These two network characteristics facilitate greater innovation by firms which are members of a network, by clustering enabling high information transmission capacity and reach enabling diversity and high quality of information (Schilling & Phelps, 2007). Schilling & Phelps (2007) also argue that interfirm networks may be an important mechanism for knowledge spill over, defined as knowledge produced by one firm being appropriated at little cost by other firms, and that these network relationships can have important positive consequences for firms' ability to innovate.

Knowledge transfer is one of the main area innovation networks create value according to Powell & Grodal (2005) and is a central part of the innovation process. The first perspective of the knowledge transfer process is exchange of information through networks, emphasising the importance of complementary assets in division of innovation labour. E.g. a small firm in biotechnology with close ties to scientists may excel at drug development but lack skill and resources to manage or fund costly clinical trials. The second perspective of knowledge transfer occurs when existing information within a network is recombined in novel ways. As result of such recombination of existing knowledge, firms can generate something they were unable to create on their own (Powell & Grodal, 2005). Such knowledge transfer does however require a productive transferring process in order for two or more organisations to be able to combine their different capabilities and create a product or service that they would not be able to construct on their own (Powell & Grodal, 2005).

### 3.2.3 Creation of interorganisational networks

Powell & Grodal (2005) highlight that the starting point of what created a network matters but that the evolution of the relationship is not fixed, due to the fluid nature of networks. The authors mainly contrast networks formed intentionally across a market interface to accomplish a task, such as a joint R&D venture, and emergent networks that grow out of ongoing

relationships, such as location or friendships. For instance, global vertical disaggregation in some manufacturing industries may in turn end up involving subcontractor in design issues, doing critical R&D, or becoming central to efforts to improve quality. Even if this vertical disaggregation is driven by a will to reduce cost, save time and enhance flexibility, there is no clear cut where the relationship ends and the relationship can evolve into mutually dependent collaboration (Helper, MacDuffie & Sabel, 2000; Powell & Grodal, 2005). Another example brought forth by Powell & Grodal (2005) is emergence of R&D partnerships out of ongoing intellectual relationships and informal personal relationships. Such informal relationships may come to involve significant intellectual property in form of patents and also become highly formalised agreements between organisations. The authors bring forth both theses perspectives to show that networks forged out of strategic purposes can take on strong relational elements and more personal ties can become contractual and highly specified.

Contractual and strong ties between organisations do however not emerge solely based on organisations having similar goals. All kinds of informal interactions taking place between organisations can facilitate such formalisation and strengthen ties in the network, such as executive education programs, conferences, trade association activities and similar (Powell & Grodal, 2005). Furthermore, personnel mobility and mutual educational backgrounds may also foster informal linkages across firms, which can be basis on which more formal alliances are forged (Powell & Grodal, 2005). Evidence from Rosenkopf, Metiu, & George (2001) suggest that the effect of informal ties is more facilitating when organisations do not already have established alliances and partnerships. The authors also found that membership in joint technical committees facilitated formal interfirm alliance formation, by analysing participation in joint technical committees in the cellular service industry (Rosenkopf et al., 2001; Powell & Grodal, 2005). The overall conclusion of Powell & Grodal (2005) is that interfirm networks extrapolate from interpersonal relations.

Chesbrough & Prencipe (2008) also suggest that firm networks progress through stages, mainly from exploration to exploitation, where each stage represents a unique strategic context for the firm with its external resources needs and associated resource acquisition challenges. The evolution of a network is therefore the process of firms adapting and aligning their networks to access the resources they need to ensure continued growth (Chesbrough & Prencipe, 2008). The authors argue that the nature of innovation network relationships a firm has must evolve according to the evolutionary dynamics of modularity in technological development and different types of development are to be matched with different kind of network requirements.

## 3.3 Theoretical summarisation
Current research related to innovation contests is dispersed and there is a general lack of consistent theoretical frameworks for exploring the research objective of innovation contests (Adamczyk et al., 2012). Adamczyk et al. (2012) instead bring forth several focus areas which have been explored revolving innovation contests, focusing on different perspectives of innovation contests. Primarily the innovation focus of innovation contests provides some

understanding to innovation contests being a useful tool to realise the outside-in process of open innovation, as described by Enkel et al. (2009), by integrating customers in the innovation process. However, the innovation focus specifically, and theory revolving innovation contests in general, does not address the usefulness of innovations contests to integrate other external parties in the open innovation process, such as suppliers, public and commercial research institutes, non-customers, non-suppliers and partners from other industries.

Engaging in interorganisational networks tend to contribute to a firm's innovation capabilities by exposure to novel sources of ideas, enhance transfer of knowledge, and enabling fast access to resources. By engaging in formal ties, such as strategic alliances and R&D collaboration, division of labour makes it possible for firms to accomplish goals they could not pursue alone and investments in mutual learning, and a portfolio of diverse collaborations is linked to increased patenting (Powell & Grodal, 2005). Most research conducted has been focused on strong ties, mainly formal alliances between firms, but both strong and weak ties have been shown to have a positive influence on innovation, as shown by Ahuja (2000) and Schilling & Phelps (2007). Lastly, innovation networks positive influence on innovation output has mainly been measured with patents or problem solving as proxies, leaving other measures of innovation less explored.

Due to lack of exhaustive theory revolving innovation contest, attention can be directed towards theoretical frameworks about interorganisational networks and how they emerge to understand if an innovation can facilitate creation of such. Powell & Grodal (2005) mainly contrast networks formed intentionally across a market interface to accomplish a task, such as a joint R&D venture, and emergent networks that grow out of ongoing relationships, such as location or friendships. The overall conclusion of Powell & Grodal (2005) is that interfirm networks extrapolates from interpersonal relations. Such interpersonal relations can be the result of informal interactions taking place between organisations such as executive education programs, conferences, trade association activities and similar. Bearing such informal interaction surfaces in mind, innovation contests could serve as an additional form of interaction surface between people from different organisations and thereby facilitate informal interaction and relationship building. However, considering Rosenkopf et al. (2001) suggestion that informal ties are more facilitating when organisations do not already have established alliances and partnerships, stakeholders involved in an innovation with an already established network can be resilient to invest resources in these informal ties. In addition, the perspective that firm networks progress through stages may lead to different stakeholders being in different stages and thereby looking for different forms of external resources and ways to acquire them (Chesbrough & Prencipe, 2008). Stakeholders in an innovation contest may therefore have joined the contest for different reasons and this could create a mismatch regarding how well the innovation contest create interorganisational networks between these.

# 3.4 Operationalisation

To investigate how an innovation contest can contribute to creation of interorganisational innovation networks, and specifically how Brinnovation is creating such a network between its stakeholders, theoretical concepts described previously in this chapter will be deployed. Current theory revolving innovation contests poorly addresses integration of other stakeholders than customers in the outside-in process of open innovation, which makes this line of theory inadequate to deploy when investigating the research question of this study. Instead, focus is directed towards theory revolving innovation networks and their creation to investigate if Brinnovation is an environment which facilitates such network creation. As Brinnovation is ongoing at the time of this study, it is not possible to measure amount of collaborations and relationships between organisations before and after the contest. It is however possible to identify previous weak, strong, direct and indirect ties, the current interaction surfaces between stakeholders, and intentions and expectations of stakeholders.

In order to understand the setting of Brinnovation and respondents' motivations for involvement, fragments from theory presented by Adamczyk et al. (2012) is used to formulate interview questions about what Brinnovation is and how respondents think Brinnovation can create value. Information from these questions will later be analysed from the theoretical perspective of innovation contests, mainly what they are and how they add value to investigate if this is coherent with Brinnovation. Some of the questions derived from theory revolving innovation contests cover intentions of involvement and value creation from Brinnovation, which will also be analysed from the perspective of innovation networks to bridge the gap between these two theoretical fields and as respondents might have several reasons for participation and perceive several values being created.

As the research question for this study is revolving interorganisational network creation, it is crucial to understand the respondents' motivations for involvement and their expectations on the outcome of Brinnovation in this regard. To identify weak, strong, direct and indirect ties, theory revolving innovation networks, the definition of what they are, and how they are created will be used as primary tools when collecting data and analysing the findings to enable answering the research question. Namely, the definition of interorganisational networks and network tie characteristics described by Powell & Grodal (2005), as well as Ahuja (2000) and Schilling & Phelps (2007), will be used to identify current networks and analyse the intentions of respondents as result of Brinnovation. Theory revolving creation of interorganisational networks brought forth by both Powell & Grodal (2005) and Chesbrough & Prencipe (2008) will also be used to analyse empirical findings to understand the part Brinnovation is playing in facilitating such network creation.

All questions that have been formulated to investigate the research question and to provide feedback to the case organisation can be found in *Appendix 1 – Interview Guide* with references to which theory they have been deducted from and the purpose of the question.

# 4 Empirical Findings

In this chapter, findings from the data collection will be presented as codes, global patterns and themes found after coding the data and conducting thematic analysis in line with the methodology presented in *2.4 Method for analysis.* In addition, direct quotations which are of particular interest from the data collection will be included in this section to give a fuller description of respondents' perceptions. These quotes have been translated from Swedish to English by the author.

## 4.1 Codes and global patterns

In the matrix presented in this section, results and connections from eleven semi-structured interviews carried out with individuals from different stakeholder organisations in Brinnovation is shown. As result of the thematic analysis, codes have been generated in sections of their respective question from the interview guide and responses in line with a code are marked by a blue filled cell in the column of the respondent. This form of presentation enables comparison between data and provides an overview of the aggregated data set from all semi-structured interviews to give a thick description and show connection between data and codes. Codes generated by less than two respondents are removed from this matrix, even if these findings might appear later as direct citation, if they are of particular interest to answer the research question or give valuable information to the case organisation.

From this set of codes, themes will be generated by separating codes from the interview question and aggregating them, followed by aggregating themes into core themes whenever possible. These findings are presented in the next section, *4.2 Themes*. To ensure anonymity of the respondents, their names are replaced with R plus a number and presented at the top row of the matrix to give a consistent view of what the individual respondent has mentioned during the interview. Questions and related codes are presented in the two columns to the left in the matrix with frequency of each code displayed to the right in the matrix, and codes generated by six respondents or more being displayed in bold. The respondents have been ordered from most to least amount of total generated codes, and those being part of the main jury appearing first, i.e. to the left, in the matrix. All respondents except two did not have information necessary to answer question 10 *Did you know any of the people involved in Brinnovation before?* or implicitly answered that they knew people from other organisations involved in Brinnovation due to previous collaborations, both formal and informal. This question was therefore removed from the matrix.

As the data set is excessive, the matrix serves as main presentation tool and a few codes are complemented with further discussion in this section. Focus will instead be directed at finding global areas of patterns interesting for further analysis in this aggregated data set. Such global patterns will be highlighted with a red circle in the matrix. Focus will also be directed towards codes generated by several respondents, i.e. codes displayed in bold. Due to the size of the matrix it has been divided into two parts.

| Question/Respondent | Code | R6 | R4 | R5 | R14 | R11 | R8 | R12 | R9 | R7 | R13 | R10 | Freq. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Member of jury | Yes | | | | | | | | | | | | 7 |
| | No | | | | | | | | | | | | 4 |
| Stakeholder position | Partner | | | | | | | | | | | | 8 |
| | Friend | | | | | | | | | | | | 3 |
| 1. What is Brinnovation to you? | Practical use of research | | | | | | | | | | | | 4 |
| | Mobilise resources | | | | | | | | | | | | 4 |
| | A practical idea | | | | | | | | | | | | 3 |
| | A way to find innovation | | | | | | | | | | | | 3 |
| | An innovation platform | | | | | | | | | | | | 2 |
| | Stimulate innovation | | | | | | | | | | | | 2 |
| 2. Why are you involved in Brinnovation? | **Initiate innovation process** | | | | | | | | | | | | **6** |
| | Facilitate product development | | | | | | | | | | | | 4 |
| | Intensify network | | | | | | | | | | | | 3 |
| | Support the initiative | | | | | | | | | | | | 3 |
| | Marketing | | | | | | | | | | | | 3 |
| | Give input | | | | | | | | | | | | 3 |
| | Find solutions | | | | | | | | | | | | 3 |
| | Create network | | | | | | | | | | | | 2 |
| | Create eco-system | | | | | | | | | | | | 2 |
| | Create relationships | | | | | | | | | | | | 2 |
| | Pragmatic | | | | | | | | | | | | 2 |
| Role of respondent's organisation | Direct product/solution development | | | | | | | | | | | | 3 |
| | Facilitate innovation process | | | | | | | | | | | | 3 |
| | Not product development | | | | | | | | | | | | 3 |
| | Implement/buy final produkt/solution | | | | | | | | | | | | 2 |
| | Platform to test/spread produkt/solution | | | | | | | | | | | | 2 |
| | Produkt development | | | | | | | | | | | | 2 |
| 3. How have you been involved Brinnovation so far? | Main jury | | | | | | | | | | | | 6 |
| | Financial | | | | | | | | | | | | 4 |
| | Read the proposals | | | | | | | | | | | | 2 |
| | Spread information | | | | | | | | | | | | 2 |
| | Feedback to Brinnovation | | | | | | | | | | | | 2 |
| | Could have done more | | | | | | | | | | | | 2 |
| 4. How do you think Brinnovation creates value? | **Inspire others** | | | | | | | | | | | | **8** |
| | **Platform to develop ideas** | | | | | | | | | | | | **7** |
| | **Marketing/employer-branding** | | | | | | | | | | | | **7** |
| | **Establish network** | | | | | | | | | | | | **6** |
| | Increased focus | | | | | | | | | | | | 5 |
| | Get new ideas | | | | | | | | | | | | 5 |
| | Intensify collaboration | | | | | | | | | | | | 4 |
| | Platform to bring forth innovation | | | | | | | | | | | | 4 |
| | Develop competencies / increased engagement | | | | | | | | | | | | 4 |
| | Product as result | | | | | | | | | | | | 3 |
| 5. How has the communication been revolving Brinnovation so far? | **Positive** | | | | | | | | | | | | **7** |
| | Detailed information about process | | | | | | | | | | | | 4 |
| | Provided packages of communication material | | | | | | | | | | | | 3 |
| | Negative | | | | | | | | | | | | 2 |
| | Neutral | | | | | | | | | | | | 2 |
| | Reminders of responsibilities | | | | | | | | | | | | 2 |
| 6. How do you feel Brinnovation is meeting your expectations? | Positive | | | | | | | | | | | | 3 |
| | Negative | | | | | | | | | | | | 2 |
| | Neutral | | | | | | | | | | | | 2 |
| | Dependent on product outcome | | | | | | | | | | | | 4 |
| | Dependent on media attention of outcome | | | | | | | | | | | | 3 |
| 7. What do you think Brinnovation could evolve into? | Platform to bring ideas forth | | | | | | | | | | | | 4 |
| | Platform to collaborate | | | | | | | | | | | | 4 |
| | Incubator, from idea to product | | | | | | | | | | | | 4 |
| | Frequency | | | | | | | | | | | | 4 |
| Frequency | | 25 | 15 | 23 | 24 | 18 | 22 | 18 | 21 | 17 | 16 | 10 | |

*Table 4 - Matrix, empirical findings*

As displayed in *Table 4 – Matrix, empirical findings* question two, a majority of the respondents are involved in Brinnovation to initiate an innovation process, from various perspectives. Such as getting input, finding new ideas and reaching people which are usually not engaged in these types of issues to increase innovation. This is exemplified by the following quote:

> *"We need new ideas and new ways to solve problems… If we want to get further, we need to think innovative and try to find solutions to known issues" – Respondent 9*

Many respondents think that Brinnovation can contribute to such initiation of the innovation process by inspiring other people to participate and increase the focus on problems they wish to solve with Brinnovation. As exemplified by the following respondents when discussing how Brinnovation can add value.

> *"I think it [Brinnovation] can inspire people whom have not yet been able to make their voice heard or simply have not thought about the issue and possible solutions" – Respondent 5*

> *"Brinnovation, as it is designed, is a way to put focus on one topic or issue" – Respondent 12*

As seen in the global patterns in question two, respondents which are part of the main jury and Partners in Brinnovation tend to focus more on finding solutions and creating network, relationships and eco-system than those who are not part of the main jury and primarily Friends to Brinnovation. Furthermore, the later put more emphasis on marketing aspects of Brinnovation to enhance their own organisation's brand and more passively supporting the event. During interviews, some of these stakeholders have however expressed that they could participate more, if they were asked, as displayed in the lowest row of question three. Also displayed in question three, those being part of the main jury have to a larger degree provided financial means to Brinnovation and show more engagement by actively going through proposals sent in by participants in the contest. Those not part of the main jury tend to focus more on spreading information about the event and taking a more passive role.

Regarding question number four, how Brinnovation creates value, there is a wide consensus across all respondents describing situations and outcomes that belong in at least two of the most mentioned codes, with exception of R6. Namely, Brinnovation as an initiative to inspire others to participate in activities that will eventually lead to more innovation within fire safety, which is relatively similar to the fifth most common code, increased focus, and closely linked to the sixth most common code, get new ideas into the innovation process. Within question number four, marketing for the own organisation, employer-branding and spreading information about the subject are recurring values mentioned by seven respondents, leading to the code marketing/employer-branding. Lastly, possibility to establish a network and intensify collaboration, mainly with other organisations but also with people competing with their ideas, are recurring codes for about half of the respondents. One respondent captures all of these with the following quote:

> *"On one side, it [Brinnovation] creates value for the contestants as they get a possibility to express their ideas and develop them, but also to build their network. Also, they gain knowledge about Partners, as some sort of employer-branding. On the other side, for us Partners, we are able to find innovative solutions, establish contacts to both Partners and contestants. Everyone benefits from it"* – Respondent 4

| Question | Item | Count |
|---|---|---|
| 8. Did your organisation collaborate with any of the other partners or friends before Brinnovation? | SBF | 9 |
| | Brandforsk | 7 |
| | MSB | 6 |
| | RISE | 6 |
| | Insurance companies | 4 |
| | WinGuard | 3 |
| | Hyresgärstföreningen | 2 |
| | Others | 2 |
| Characteristics of collaboration | Informal collaboration (seminars, etc.) | 8 |
| | Formalised collaboration (research projects, etc.) | 7 |
| | Customers being a primary collaborator | 2 |
| 12. How do you think collaborations can evolve as result of Brinnovation? | Brinnovation is a uniting event | 10 |
| | Platform to discuss and exchange experiences | 4 |
| | Platform to create future collaboration | 4 |
| | Meet-up after Brinnovation | 4 |
| | Meet-up during Brinnovation | 3 |
| | Reassembly | 3 |
| | Own responsibility | 3 |
| | Knowledge transfer | 3 |
| Characteristics of collaboration | New contacts/relations | 6 |
| | Intensified | 4 |
| 13. How would you like your relationship to evolve with involved partners and friends? | Create new arm-length relations | 6 |
| | Intensified with established | 6 |
| | Continue with innovation contest | 3 |
| | Enter product development | 3 |
| | Yes, in specific areas | 2 |
| 16. As part of the jury, how have you prepared so far? | According to instruction | 5 |
| | Appreaciate clear asks | 2 |
| | Would like more conversation within jury | 2 |
| 17. What has been good with Brinnovation so far? | Raise the question of fire safety | 6 |
| | Concept | 5 |
| | Structure | 5 |
| | Material and information | 5 |
| | Clear communication | 4 |
| | Easy to participate | 3 |
| | Digital platform | 2 |
| | Location for final | 2 |
| 18. What has been bad with Brinnovation so far? | Uncertainty about process and expectations | 4 |
| | Lack of ongoing dialogue/updates | 3 |
| | Quality of ideas in final round | 2 |
| | Short deadline/notice | 2 |
| 19. Interested in participating in innovation contest in the future? | Yes | 4 |
| | Maybe | 3 |
| | No | 0 |
| Why | Depending on outcome/result | 3 |
| Total Frequency | | 41 40 40 42 39 38 38 37 35 26 12 |

*Table 5 - Matrix, empirical findings continued*

As displayed in question eight, there is a density of collaboration around four organisations out of the 28 organisations participating in Brinnovation, and as displayed in question nine, these

take both informal and formal shape. Within the code of informal collaboration, personal relations, seminars, lectures, ad-hoc relation based on immediate needs, and being in the same branch are recurring reasons. Within the code of formal collaboration, research projects stand for a clear majority, with other projects and formal contracts also being found in this code.

On the topic of discussing how collaboration across organisations can evolve as result of Brinnovation, all respondents except one mention the code of Brinnovation being a uniting event that in some way bring organisations and people together, as exemplified by one respondent:

> *"There is a clear purpose, and everyone is pulling towards the same direction. If you have something in common, it becomes a bit fun and a bit easier to find different paths for contact that you would not have done otherwise. You get another type of network" – Respondent 10*

In this code, involvement in the jury is highlighted as one interaction surface of particular interest where some respondents have expectations of interacting with others and facilitating relationship building, as explained by one respondent:

> *"We will be meeting, the final jury, in Stockholm in May. I think there they [Brinnovation] provide the perfect opportunity for us to interact directly" – Respondent 11*

However, as Brinnovation has two juries, several respondents found the first screening jury less facilitating to discuss with others and to get to know each other as most of the work was done alone.

> *"There will be more discussions in the main jury, as there are fewer proposals to discuss. This is hard to achieve in the screening jury, maybe because it was too large, I don't know. Maybe it would have been better to have a smaller group with more discussions. The scenario now was that you sat at home and gave points and then someone put it all together. It became very unpersonal." – Respondent 12*

# 4.2 Themes

Themes emerging from additional analysis of codes introduced in the previous section are presented in *Figure 2 – Themes*. Codes and themes which are taken directly from the previous matrix are written in italic, and themes derived from additional analysis by aggregating codes are written in bold. To keep close relation to raw data generated from interviews and initially generated codes, the number of respondents generating a code or theme is displayed in brackets at the end of each code/theme where it applies.
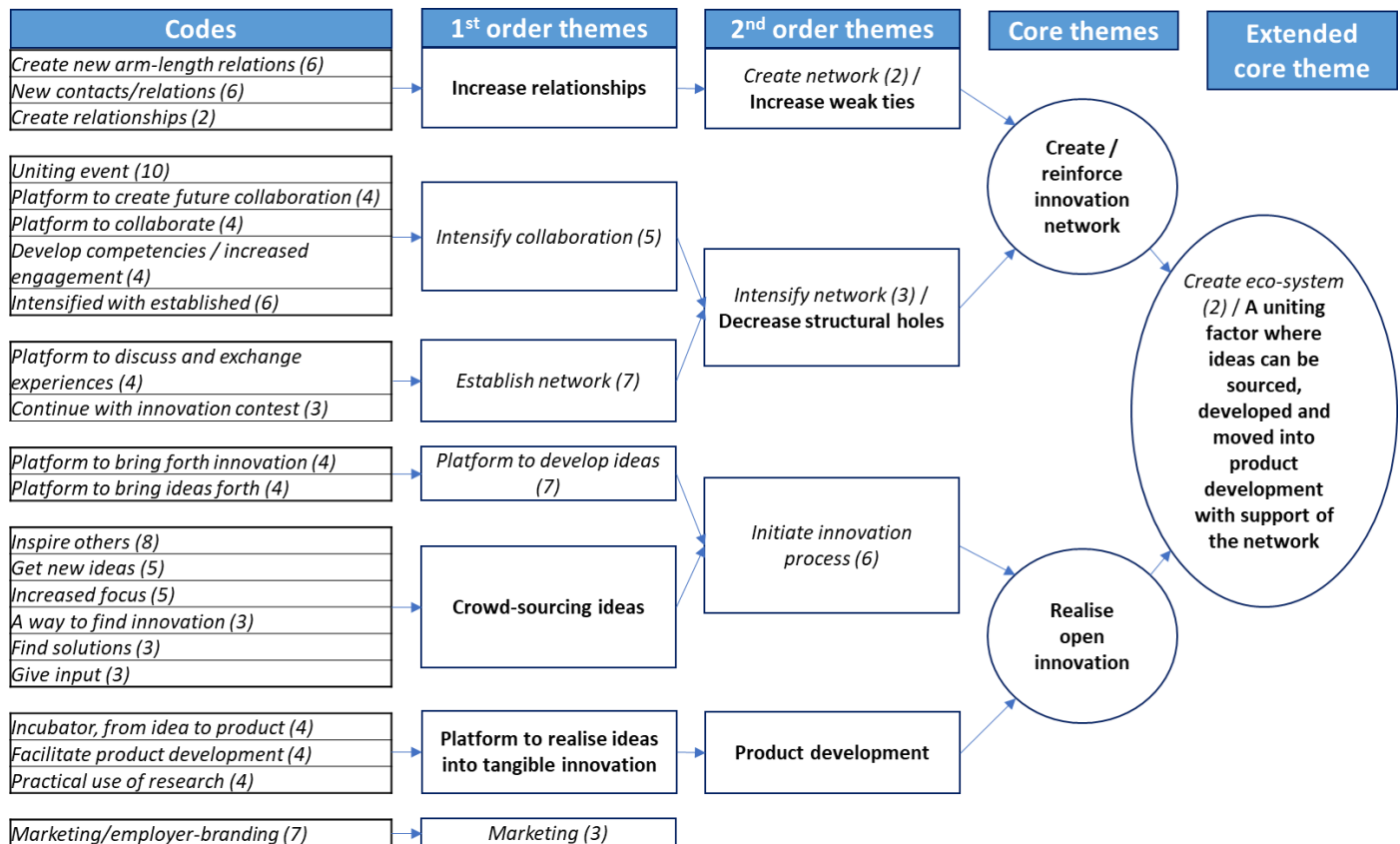


| Codes | 1st order themes | 2nd order themes | Core themes | Extended core theme |
|---|---|---|---|---|

*Create new arm-length relations (6)*
*New contacts/relations (6)*
*Create relationships (2)*
→ **Increase relationships** → *Create network (2) /* **Increase weak ties**

*Uniting event (10)*
*Platform to create future collaboration (4)*
*Platform to collaborate (4)*
*Develop competencies / increased engagement (4)*
*Intensified with established (6)*
→ *Intensify collaboration (5)*

*Platform to discuss and exchange experiences (4)*
*Continue with innovation contest (3)*
→ *Establish network (7)*

*Intensify network (3) /* **Decrease structural holes**

*Platform to bring forth innovation (4)*
*Platform to bring ideas forth (4)*
→ *Platform to develop ideas (7)*

*Inspire others (8)*
*Get new ideas (5)*
*Increased focus (5)*
*A way to find innovation (3)*
*Find solutions (3)*
*Give input (3)*
→ **Crowd-sourcing ideas**

*Initiate innovation process (6)*

*Incubator, from idea to product (4)*
*Facilitate product development (4)*
*Practical use of research (4)*
→ **Platform to realise ideas into tangible innovation** → **Product development**

*Marketing/employer-branding (7)* → *Marketing (3)*

**Create / reinforce innovation network**

**Realise open innovation**

*Create eco-system (2) /* **A uniting factor where ideas can be sourced, developed and moved into product development with support of the network**

*Figure 2 - Themes*

## 4.2.1 A uniting factor

The overarching theme emerging from the thematic analysis, as displayed in *Figure 2 - Themes*, is Brinnovation serving as a uniting factor where ideas can be sourced, developed and ideally moved into product development with support of the network. The components of this overarching theme will in the following sections be broken down into its subcomponents and *Figure 2 - Themes* serves as visual guidance of how this overarching theme emerged to best describe the aggregated result of this study's empirical findings. However, there are several quotes from respondents where this overarching theme can be found, such as the following:

> *"One does not always have to come up with new things, but instead focus on how to take something further. To facilitate that it gets taken further, not only to bring forth ideas as some sort of think-tank. Our focus and desire are to focus on how we take these ideas and realise them. Within that work, I see a network's purpose*

*to support with thoughts around how to take it the whole way [to tangible result] because otherwise it's hard to show the value" – Respondent 4*

*"To have it [Brinnovation] as a recurring platform to lift new ideas. With even gaps premiere really good ideas and through some sort of incubator effort try to lift them forward so they become reality... We do have some [Partners & Friends] that solely work with bringing forth innovation, and it's them that are needed to hone the ideas, or help with marketing or whatever they [contestants] need" – Respondent 5*

*"To get some sort of thickness in our joint innovation work, i.e. that enough competencies and ideas, enough number of players to make something happen somehow. On this theme, I believe Brinnovation to be an additional way to attract interest to these issues, both from innovators and the industry. That one sees that there is something going on. So partly to increase the interest for external parties through highlighting commercial possibilities, and partly to remind us that we also have to work and fight to question how we conduct our work. If we could possibly do things in new ways. Both to attract curiosity, new interests, new players in these questions but also remind that innovation and thinking new must be part of the development" – Respondent 6*

*"To combine a contest that is about sending in proposals with more activities and networking. Both between the contestants but also with Partners & Friends that are involved in the contest" – Respondent 13*

### 4.2.2 Create/reinforce innovation network

One part of the overarching theme is the core theme of creating / reinforcing innovation networks to be able to increase the own organisations' capability to follow the rate of development and increase their capacity to innovate, as illustrated by one respondent.

*"Brinnovation is a way for us to get access to a larger network. The possibility to create an eco-system or a wider network for R&D issues. We have historically been rather reactive in this area, but we are now trying to change this and instead build proactively. To establish contact with universities, students, researchers and start-ups because the rate of development is so high, and I am convinced that you cannot keep up on your own. Instead, you need to work a bit smarter together. So that's where I see the main advantages here, to establish contact, network and possibility for future development together" – Respondent 4*

Not all respondents are convinced about Brinnovation being a uniting event to primary increase collaboration, as exemplified by R7:

*"It [Brinnovation] sends signals that we need to think new. But from there to finding new collaborations, I don't think there are many that make those links." – Respondent 7*

The same respondent does however stretch the importance of collaboration and in particular that organisations need to collaborate with others which they might not find interesting at first sight.

> *"I don't think it's solely about finding new solutions, I also think that everyone needs to collaborate much more, even with those they do not see why they would at first sight. Because there are so many things constantly changing." – Respondent 7*

### Create network

Many respondents perceive Brinnovation as a way for them to get new contacts and refreshed contacts to some of the organisations involved, and that Brinnovation makes this easier as they are part of the same event. Brinnovation has also been mentioned to create awareness of other organisations and their interest in fire safety, which could facilitate a good starting point for further interactions and relations. When talking about awareness of others and creating such new contacts, the relations mentioned are usually of an arm-length and more informal character. This is exemplified by one respondent

> *"That [Brinnovation] would be opening some doors to be able to continue dialog with some of the people we have not yet had a close relationship to. Especially, I would like to get back into touch with the insurance companies. So I am hoping that through Brinnovation some doors will open to some contacts in those areas."*

> And *"We realised who wants to be Partners and Friends. So, there you see "oh well, there are other companies, other people working that are interested in the same as us". So, it makes it easier to say "Oh, I should reach out to them"." – Respondent 11*

Some respondents, even if they are in a minority, have a more set out strategy to find others to establish contact with to potentially collaborate, as highlighted by R4 and R14:

> *"We are trying to become more proactive by finding more collaborations that could be interesting and relevant. I think there is potential to collaborate with many of Partners that are not established today." – Respondent 4*

> *"For us, one value creation is of course to gain contact with other organisations and authorities" – Respondent 14*

With some respondents finding Brinnovation having potential to become a way to invite other groups and organisations to participate in the issue of fire safety and create further collaboration across different groups.

> *"You could also continue to invite other organisations that are deemed to have some influence or impact on where fires occur, and collaborate with them. You need to widen the issue beyond those few being affected and those already dedicated to the issue, but instead create wider connections." – Respondent 9*

*Intensify network*

In addition to increasing relationships across stakeholders involved in Brinnovation to create a network, a recurring theme across many respondents is to intensify collaborations with organisations they are already collaboration with. This theme is the result of the codes Brinnovation being a uniting event to gather around, it is a platform for collaboration and for future collaboration, and an expressed will to intensify established relations through continued collaboration. This theme is best illustrated by R5.

> *"I think, I hope, some collaborations will be intensified, as I think they can become even better in these issues. You get some refreshed contacts and a mutual question to discuss and unite around." – Respondent 5*

Other respondents, such as R9 and R12, are more opportunistic about such intensified collaborations emerging as result of Brinnovation and mention that their engagement in Brinnovation is not a strategy to intensify collaborations but do not exclude it as a result.

> *"I don't have a plan for it [further collaboration] but it is a little bit up to coincidence. One could think that if SBF would invite all [Partners], ideas could emerge that we could work more with. There is a large probability that this would happen if they invited to it, I think." – Respondent 9*

> *"Of course it would be fun if we could work with each other regarding other things, if we would have research projects together, but that's not why we are involved. That's networking and networking is good, so this is going to be good. To meet some other people and discuss issues of fire. We will have a live meeting which I think is good, where one can build network and lead the development in a direction one think is good." – Respondent 12*

Most apparent in this theme is Brinnovation being a uniting event where all except one respondent generated information in line with this code. In particular, the ability to unite around a single question shows that these organisations are motivated in these issues and it makes it easier to interact with each other. Many respondents mentioned purpose as central for collaboration when considering further collaboration, and that Brinnovation gather people around an issue as a starting point. One organisation involved also considered to launch a similar concept to Brinnovation but decided to join Brinnovation instead of launching a competing concept, resulting in intensified collaboration. One respondent illustrates how Brinnovation could intensify collaboration through being a uniting event with the following quote:

> *"We have, after all, gathered around one issue that we all find important. So of course there could be collaborations and thoughts and ideas emerging around these issues. We are already collaboration with SBF around certain issues and we could probably work more with each other. And of course, it's easier to initiate discussions when you have a topic or area to start with. But we will see which opportunities are created here [Brinnovation]." – Respondent 14*

### 4.2.3 Realise open innovation

The other part of the overarching theme emerging from the data analysis is Brinnovation as a tool to realise open innovation through sourcing ideas from people that are usually not engaged in R&D questions or innovation in the field of fire safety, facilitate development of ideas, and ideally bring these ideas into tangible innovation in form of products or services.

*Crowd-sourcing ideas*

The most apparent themes with largest amount of codes attached and highest frequency of respondents represented in those codes is the notion of getting access to ideas that are not available to the respondents at the time of the interview nor are developed within their organisations. Most respondents circulate around the topic of research being available and has been so for a long time but without major impact regarding solving issues of fire damage and the innovation rate stagnating. The respondents' answers have generated five codes leading up to the theme crowd-sourcing ideas, namely *Inspire others*, *Get new ideas, Increased focus, Find solutions*, and *Give input*, with one respondent mentioning crowd-sourcing during the interview.

> *"Shortly a competition to have people provide the best ideas for fire safety and how to solve the typical home fire problem, which is our biggest challenge out there. It is almost like crowd-sourcing of ideas of how to solve the fire problem!"*
> *– Respondent 11*

Another respondent highlights the importance of input into the innovation process and how Brinnovation provides an opportunity to reach people that are usually not engaged in these issues, with expectations to find some ideas that can provide valuable input.

> *"Input is needed, and the world is full of wise people so we thought this [Brinnovation] was a tasteful way to see if there is something that could be grown and taken forward" – Respondent 5*

With another respondent following in a similar track:

> *"To get new ideas. I'm thinking that other people who are not usually involved in these issues on a daily basis, when they come with new perspectives, I believe they can see entirely new solutions to the issue. I think that facilitates creation, that more are thinking about that idea. This is what I hope for [with Brinnovation]" – Respondent 14*

There is also recognition among respondents that input from other than their usual collaboration partners and research institutes is needed, and that Brinnovation serves as an opportunity to get this input into an area dominated by what is described as few or "usual suspects". One respondent in particular highlights this need of input and why it is of interest.

> *"Brinnovation, to us, presented a great opportunity of out-of-the-box thinking. So, asking people to come up with ideas to what can we do differently. Because*

*we do recognise that we who are working in the fire community probably tend to think in the same tracks as we have for many years. So, this was really an interesting opportunity to hear from all kinds of different people with ideas of how we could solve the problem with fire." – Respondent 11*

The format of Brinnovation to source ideas and make people participate is not only described as easily accessible or an opportunity for those usually engaged in these issues, but also presented as a format that makes it easy to participate for those outside this inner circle. This is emphasised by one respondent in particular.

*"It [Brinnovation] is formulated so one can participate. You feel that you don't have to be an expert and that you can participate with ideas anyway"*

and *"As the topic is so wide, I think it increases inspiration and engagement with people that have not though about these challenges before" – Respondent 13*

### Platform to develop ideas

As Brinnovation is a contest where contestants not only submit their idea but are also able to receive feedback from a jury and improve their initials ideas before the main jury makes their decision of winners, many respondents find Brinnovation to be a platform to develop ideas further. In addition to being a tool to source ideas from the public, Brinnovation acts as a mechanism to give contestants possibility to develop ideas but also to present ideas they might have thought about for some time, as brought forth by R5.

*"It [Brinnovation] shakes some life into innovators and engages people from specific tracks to have a look at the issue of fire. I believe it [Brinnovation] can also be a platform for those who have ideas but not access to a place to express them. It becomes a platform to present their ideas." Respondent 5*

Another respondent focuses on the value creation of Brinnovation as engaging people to realise their ideas and try them out, whilst developing their own competencies.

*"To engage people to actually do something with their ideas. That they get to try, it strengthens those who participate as it becomes knowledge enhancing and learning for them. There are always double values in these types of processes, both development of ideas and development of individuals." – Respondent 13*

### Platform to realise ideas into tangible innovation

Even if Brinnovation is perceived to both source ideas and a platform to develop such ideas on, as part of initiating an innovation process, a recurring theme that has been present throughout the data collection is most respondents perceiving Brinnovation's failure or success linked to not only ideas but to tangible solutions. Whether it has been expressed as prerequisite to continue participating in a concept like Brinnovation or simply what respondents would like to see as an outcome of the initiative, tangible solutions which could be presented as a result and be highlighted in media is desired by most respondents. This is illustrated in particular by R9.

*"The ideas must be so explicit or appropriate to turn into practical operations, so it doesn't just become a theoretical exercise. That is within the definition of innovation, that it is implemented and put on the market. If ideas are only ideas that doesn't lead to anything, then it would be hard to show value."*

And *"The ideal would be if some proposals result in launching a product or whatever the solution might be, and that it has been developed here [Brinnovation]. Then it would be a grain to loaf innovation"* – Respondent 9

Other respondents are more explicit about their desire to highlight a problem, find solutions in form of ideas, and initiate the innovation process by uniting the ones willing to solve it while abandoning previous presumptions of how to create innovation through solely researching different topics and presenting the results.

*"We have also realised that simply putting forward research results and see what others do isn't the right way. Sometimes it could be the right way to initiate an innovation process but in most cases the key is to unite the ones with concrete needs or problems that they're willing to pay for. We used to have some sort of sectional thinking that we presented research results and somewhere further ahead something exciting automatically occurred, but we do not believe that anymore."* – Respondent 6

### 4.2.4 Feedback to improve Brinnovation

*Network building*

Far from all respondent have a set out strategy to participate in Brinnovation to build their network through new relations and reinforcing existing ones, even if most respondents find some value in interacting with other stakeholders in Brinnovation. Those who aspire to extend their network through Brinnovation are however at two camps, those who find value in interacting with others as a positive additional effect of Brinnovation and those who have it as more of a core goal. Those who perceive it as a positive side effect tend to think that the interaction in the jury and their current engagement facilitate their need to create new relationships. Those who have a more set out strategy to build relationships and collaborations do however ask for some additional points of interaction, exemplified by R4.

*"It would have been very fun and interesting to meet the organisations that are Partners and Friends to Brinnovation because we obviously have a similar interest. I think it would have been interesting and educational to meet the people behind the logo."*

And *"To establish some more solid forms of interactions during Brinnovation with meetings and possibilities to exchange experiences, but also to just provide contact information for each and every one to take it upon themselves to take it further. To have a reassembly after Brinnovation. Just some more structured interaction forms that maybe SBF could arrange."* – Respondent 4

Another respondent follows a similar line of reasoning that the organisation arranging Brinnovation has the responsibility to initiate further interactions between stakeholders to intensify the network and consequently develop the network further.

> *"I think it's up to Brinnovation to take the initiative, to invite Partners and Friends to follow up on the result, a think tank or something similar. That wouldn't be a bad idea, Partners and Friends are probably rather motivated in these issues. To invite to inform and discuss how to continue the work. Maybe with more initiatives like Brinnovation and activities. For example, discuss how to reach new groups. Partners and Friends is a good group to start with I think"*
> *– Respondent 9*

However, not all respondents place this responsibility on Brinnovation, as expressed by R11, even though the main jury remains a primary interaction point to facilitate relationship building across organisations.

> *"I wasn't expecting Brinnovation to do more in this area. I mean, we will be meeting each other through the final jury meeting in Stockholm in May. I think there they provide the perfect opportunity for us to interact directly. And we are aware of who the other contacts are, so I think that Brinnovation have done what they can in that area to ensure that we can reach across to the other participants." – Respondent 11*

### Expectations on result

Most respondents find the outcome of Brinnovation dependent on tangible innovations as result of the contest. However, many respondents express reluctance to participate in product development or have no clear vision of how ideas will be realised at the end of Brinnovation, as displayed by the following quotes.

> *"In the end, it's output that is measured, what is actually coming out." – Respondent 9*

> *"We will not participate in development of any products. We are participating in the jury to give our perspective of the issue and assess the benefit of the proposals from our perspective" – Respondent 8*

> *"This [Brinnovation] is a pragmatic and concrete way of thinking to see which innovation forces are out there. But I think the real question is, if it hasn't been though of yet, what do we do with these ideas? How do we make these ideas travel through the innovation funnel to become more and more concrete? I think density with the right competencies to support that process needs to be created"*

> And *"I don't know if SBF have thought about what happens next, after we have named a winner. I don't know what has been though, more than that they get a bit of money" – Respondent 6*

Not all respondents show reluctance to being involved in product development or taking these ideas further, but R14 make it clear that it is not their area of strength.

> *"I am thinking that there should be others which are willing to bring these forward, so it shouldn't be a problem when it comes to development of products. I do not think we are strongest in this area. I am not saying that we are not willing though." – Respondent 14*

However, one respondent in particular express that their organisation could have contributed more in helping contestants realise their ideas while putting emphasis on extracting value out of these ideas as a main challenge.

> *"We could have coached the contestants, how to package and develop and formulate their ideas in a winning way. We could also have provided extra support for the winners of Brinnovation. We do have an entrepreneurship programme that could complement the contest, because the challenge is not always to come up with the ideas but to transform them into real values. That's where we could have helped, as it is our area of expertise. There we could have done more, hands on, both for the contestants but also for the winners" – Respondent 13*

# 5 Analysis

In this chapter, empirical findings are analysed from theoretical perspectives introduced in the literature review to answer the research question of this study. The analysis will follow the same structure as themes presented in the previous chapter, starting with Brinnovation as a way to realise open innovation followed by innovation networks being created and reinforced as result of Brinnovation. Section *4.2.4 Feedback to improve Brinnovation* will not be further analysed in this section as it only carries practical implications, and conclusions from this section will be directly moved to section *6.3 Practical implications*.

## 5.1 Realise open innovation

The themes included in the core theme *Realise open innovation* presented in the empirical findings share several characteristics with the innovation focus of innovation contests described by Adamczyk et al. (2012). The shared characteristics are most apparent regarding innovation contests' utility to stimulate and foster development of new products and services, primarily in early stages of the innovation process. The empirical findings suggest that Brinnovation is perceived as an initiative that both initiate the innovation process, through idea sourcing and refining, and could be further used to realise such ideas into tangible innovation, such as products and services, if complementary efforts are undertaken in the later stages and/or after Brinnovation. The empirical findings are therefore perceived as coherent with Adamczyk et al. (2012) explanation of innovation contests being a powerful tool to advance technological development and identify solutions to corporate problems. Adamczyk et al. (2012) suggest that this is primarily achieved through integrating users, where Brinnovation instead sources ideas from the general public, i.e. both direct and indirect users based on their ideas and skills rather than their relationship to the organisations involved. The empirical findings are therefore consistent with existing theory about innovation contests enabling the outside-in process of open innovation, as described by Enkel et al. (2009) through primarily integrating users/customers in innovation activities, as described by Adamczyk et al. (2012) and Piller & Walcher (2006). However, as contestants in Brinnovation are not per se customers or users, this integration of people external of the organisation could be extended to the general public and a sort of crowdsourcing to get input into the innovation process. This would bridge the gap between Enkel et al. (2009) suggestion that non-customers, non-suppliers and partners from other industries being important for realising the outside-in process of open innovation and existing theory on innovation contests, with current theory only naming innovation contests to be a good tool when integrating customers and users to initiate the innovation process.

Empirical findings also display coherence with theory suggested by Adamczyk et al. (2012) and Haller et al. (2011) that innovations contests are powerful alternatives for generating new ideas compared to traditional product or service development initiatives. A strong majority of the respondents in this study express expectations of Brinnovation to generate new ideas in comparison to how they have tried to stimulate development historically, which is best exemplified by R11.

> *"Brinnovation, to us, presented a great opportunity of out-of-the-box thinking. So, asking people to come up with ideas to what can we do differently. Because*

*we do recognise that we who are working in the fire community probably tend to think in the same tracks as we have for many years. So, this was really an interesting opportunity to hear from all kinds of different people with ideas of how we could solve the problem with fire." – Respondent 11, page 37*

The education focus of innovation contests presented by Adamczyk et al. (2012) explains innovation contests to be a great tool for encouraging and motivating participants, and thereby developing technical, teamwork and communication skills. Many respondents generated the codes *Raise the question of fire safety* and *Marketing*, which contain desires of educating the general public regarding fire safety and creating awareness, coherent with the educational focus. Furthermore, by engaging contestants in Brinnovation, many respondents express a desire to encourage and motivate participants to help with the issue of fire safety and inform them. However, no respondent expressed any depth of the educational focus nor how Brinnovation could lead to development of teamwork and technical skills, possibly because the contestants participate on their own and do now have a way to collaborate among each other during Brinnovation.

Lastly, the empirical findings are to a large degree coherent with theory presented by Haller et al. (2011), mainly in the aspect of innovation contests being a strategic tool to find solutions for corporate challenges. All scopes brought forth by the authors except organisational change and corporate social responsibility can be found in the empirical findings in this study. Haller et al. (2011) scope of innovation contests to receive user feedback, create idea generation, idea design and finding solutions are coherent with the crowd-sourcing theme presented as part of the realising open innovation theme. The scope of brand image and recruiting can also be found in this study, expressed as marketing/employer branding code presented in the empirical findings. However, empirical findings also display inconsistencies with theory presented by Haller et al. (2011), mainly related to scopes such as sustainability not being found in this study, even if the overall objectives of innovation contests from theory can be found in empirical findings. The scope of innovation networks or collaboration across organisations also falls outside of Haller et al. (2011) objective for innovation contests, which might be due to heterogeneity of different innovation contests.

## 5.2 Create/reinforce innovation network

The second part of the overarching theme, Brinnovation as a way to create / reinforce innovation networks consisting of the second order themes *Create network* and *Intensify network* will in this section be analysed from the theoretical perspectives primarily brought forth in the section *3.2 Innovation networks*.

### 5.2.1 Create network

Many respondents find Brinnovation to be a way for them to get new contacts and refreshed contacts to some of the organisations involved, and that Brinnovation makes this easier as they are part of the same event. Brinnovation has also been mentioned to create awareness of other

organisations and their interest in the fire safety issue, which could facilitate a good starting point for further interactions and relations. When talking about awareness of others and creating such new contacts, the relations mentioned are usually of an arm-length and more informal character. This, in combination with a few respondents finding Brinnovation to have potential to become a way to invite other groups and organisations to participate, show similar characteristics to Powell & Grodal (2005) description of weak ties. These weak ties could serve the purpose of increasing innovation output by increasing information search and access to diverse information, with diverse information having a positive effect on innovation output as described by Powell et al. (1999). In this aspect, Brinnovation is a way to generate such weak ties and thereby participate to innovation network creation for organisations involved. However, the perspective has been brought forth by several respondents that more interaction points and personal meetings involving Partners and Friends are needed. This would indicate that engagement in Brinnovation or the innovation contest by itself are not enough to create weak or informal ties, as displayed by one respondent mentioning the first screening jury as impersonal and another respondent mentioning that they so far only provided money and their logotype to Brinnovation.

Some respondent, presented in the empirical findings to have a more set out strategy to find others to establish contact with for potential collaboration, share more characteristics with the establishment of stronger ties, as presented by Powell & Grodal (2005) and others. However, even if the strategy of some respondents is more set out to find people to collaborate with, this is initiated through searching for others to collaborate with in a more informal way, such as meetings during Brinnovation, exchanging contact information and sharing experiences. Many respondents find Brinnovation to facilitate such meeting, exchange of contact information and sharing experiences, even though some respondents call for more possibilities to undertake such activities. Such search and initial contact share more characteristics with information search affiliated with weak ties and establishment of informal ties, as described by Powell & Grodal (2005). Brinnovation could therefore be perceived as a way to search for others to collaborate with and a way to establish contacts with other organisations, similar to theory presented by Powell & Grodal (2005) concluding informal interactions taking place between organisations through conferences and education programs facilitating creation and strengthening of ties between organisations. As suggested by Powell & Grodal (2005), informal and weak ties are initiators of more formalised ties expressed as projects and formalised collaborations, which make the weak ties initiated in Brinnovation a crucial first step for further collaboration. This could also be found in the empirical findings through respondents expressing potential for future collaboration and uniting around an event such as Brinnovation again. Brinnovation could therefore be perceived as an initiation point for creating social ties and relations, similar to Powell & Grodal (2005) and Rosenkopf et al. (2001) description of such ties being found in individuals sharing professional background or being part of a technical community.

However, even if Brinnovation can be perceived as a good starting point to initiate linkage across organisations, complementary efforts might be needed. Some respondents take a more passive role to creation of relations, and they tend to be satisfied with the interaction surfaces

provided, but respondents deliberately wanting to create new relations place high emphasis on interaction points affiliated to the main jury and ask for more in person meetings. If Brinnovation is the initiation point for creating weak and informal ties, engagement such as jury engagement and result presentation in form of an event where stakeholders meet in person could be perceived as the second step to creating a network. If such efforts are not undertaken, the case organisation stand the risk of ties created during Brinnovation slowly fading, due to lack of uniting factor and purpose.

### 5.2.2 Intensify network

In addition to increasing relationships across stakeholders involved in Brinnovation, a recurring theme is to intensify collaborations with organisations respondents have existing relations with. This theme is the result of the codes Brinnovation being a uniting event to gather around, it is a platform for collaboration and for future collaboration, and an expressed will to intensify established relations through continued collaboration. This theme shares similarities with theoretical perspectives on structural holes in a network and their impact on innovation output as discussed by Ahuja (2000) and Powell & Grodal (2005), equivalent to clustering defined by Schilling & Phelps (2007). Brinnovation does in this aspect display components decreasing such structural holes, or increasing clustering, by facilitating relationship building across nodes in the network, primarily in the main jury and organisations with high participation in Brinnovation. On this topic, it is worth highlighting the density of collaboration primarily existing around four organisations, implying that collaboration across stakeholders involved in Brinnovation is currently dispersed and mainly centralised around these four stakeholders, whether it is of informal or formal characteristics. Powell & Grodal (2005) show that density in a network impact innovation output with structural holes being beneficial for information search and a close-knit network better facilitates knowledge transfer. However, long term associations can create stagnation problems with the same information only recirculating in a too tightly knit network and thereby innovation output might be diminishing over time. This diminishing innovation output from existing collaboration could be a possible explanation for the concentration around mainly four organisations while respondents simultaneously express perceptions that they need to think in new ways, create collaborations with others and source ideas from new places. By including new organisations in the network, which is accomplished to a certain degree by Brinnovation and could be done more extensively if the event becomes a recurring platform to promote ideas and innovation or if winning contestants become a part of the network, new weak ties can be created and strengthened which provide access to non-redundant information, as displayed by Powell & Grodal (2005).

On the topic of structural holes and density of the network, the theme of Brinnovation being a uniting factor and some respondents expressing that Brinnovation creates awareness of other stakeholders devoted to the issue might play a role in decreasing structural holes. Such information deducted by respondent from others participation can in itself contribute to increasing the density of the network as organisations can create relations across nodes, which is expressed by one respondent.

*"We realised who wants to be Partners and Friends. So, there you see "oh well, there are other companies, other people working that are interested in the same as us". So, it makes it easier to say "Oh, I should reach out to them"."* – *Respondent 11, page 34*

By stakeholders being identified by the individual organisation and a common initiative is shared between them, the proximity between organisations can be perceived as decreased and thereby make these stakeholders more closely connect. By facilitating such decreased proximity between organisations, Brinnovation can increase clustering and thereby increase reach of the individual firm, beyond the concentration around mainly four organisations. As shown by Schilling & Phelps (2007), such reach increases the quantity and diversity of information available to firms in a network by bringing information resources of more firms within relatively close range. The argument could also be made that Brinnovation partly acts as a clustering effect of stakeholders most engaged in Brinnovation to enable a locally dense pocket within the initiative, which could be intensified if more such interaction points are put in place. However, such identification of other organisations devoted to the issue is merely a starting point for creation of new ties across organisations in the network, as respondents at the time of their interviews had not established such contact. Respondents express expectations of initiation of such contact, and consequently strengthening of the network and decreased proximity between stakeholders, during meetings associated to main jury meetings and the finale in Stockholm where all stakeholders will participate.

## 5.3 Bridging the gap between innovation contests and network creation

Brinnovation displays characteristics of both network creation and intensification of network, primarily through being a uniting factor which stakeholders can gather around and find a purpose for collaboration. Furthermore, Brinnovation creates an opportunity for several stakeholders to both deliberately and as a side-effect increase the amount of relationships they have with other organisations, primarily through high engagement activities in Brinnovation. Worth noting is that Brinnovation as an innovation contest only acts as a starting point for network creation, as complementary engagement affiliated to the main jury seems to be the reason relations between stakeholders can intensify beyond this starting point. Such relationships can be defined as weak and informal ties with potential to become strong ties if the stakeholders find purpose for collaboration, something respondents highlight as important. In addition, Brinnovation can serve as such a purpose for collaboration as it unites stakeholders and provides a concrete platform with clear purpose for collaboration, even if opinions diverge regarding ideal frequency of an event such as Brinnovation. Weak and informal tie creation which Brinnovation facilitates decreases structural holes in the highly centralised network found around Brinnovation, by stakeholders in Brinnovation obtaining awareness of others in the network and initiate some relations with them, thereby decreasing proximity between nodes in the network. Brinnovation also displays characteristics of creating new nodes in a network by facilitating creation of weak and informal ties through relationship building and stakeholders uniting in a specific issue, with potential to create more new nodes by lifting in new organisations in an initiative such as Brinnovation.

As brought forth in the empirical findings, several respondents see a possibility of having Brinnovation as a recurring platform to lift ideas and realise innovation, but also to use it as a platform to invite other stakeholders to contribute. As such a platform, Brinnovation displays characteristics described by Enkel et al. (2009) as part of the outside-in process of open innovation to integrate interorganisational actors to improve a firm's, and in this case the stakeholders in Brinnovation's, capability to innovate. Brinnovation is a way for its stakeholders to pool their resources and exchange knowledge, and jointly develop new ideas through the themes expressed in the empirical findings. This displays characteristics which Powell & Grodal (2005) assign to innovation networks, and Brinnovation facilitates such network creation both through the initiative itself but also the possibility for future collaboration around Brinnovation and between stakeholders involved as result of their weak and informal ties developed through Brinnovation. However, it might not be the innovation contest itself facilitating this network creation, as it acts primarily as a starting point. Instead, complementary interaction points between stakeholders for the duration of Brinnovation and possibly after Brinnovation seem to be what facilitates the network creation further. Also, as Brinnovation is the uniting factor which stakeholders can unite around, there is uncertainty to what happens after the contest ends. The novel network around Brinnovation therefore stands the risk of lacking relevance and becoming obsolete after the contest is concluded, and efforts might be necessary to reinforce the network to ensure its survival after Brinnovation's completion.

# 6 Conclusion

## 6.1 Revisiting the Research Question

The purpose of this study is, through a single case study, to investigate how an innovation contest can contribute to creation of interorganisational innovation networks whilst simultaneously providing feedback and insights for the case organisation. Findings from this study suggest that Brinnovation can contribute to creation of interorganisational innovation networks primarily as a uniting factor where ideas can be sourced, developed and ideally moved into product development with support of the network. This uniting factor facilitates network creation through stakeholders being able to get interaction and access points to other stakeholders and contestants in two primary ways. First, an innovation contest can provide new contacts and refreshed contacts to organisations previously known, mainly concentrated to organisations showing high involvement in the innovation contest which leads to more interaction points between stakeholders. In the case of Brinnovation, this high involvement is expressed as participation in the main jury evaluating contestants. Secondly, an innovation contest can reinforce the network as organisations with existing ties are collaborating by participating in this uniting factor. Reinforcement of the network is also achieved through increased density in the innovation network through stakeholders being more interlinked, primarily through decreasing proximity between stakeholders by increased awareness of each other and relations having the possibility to be initiated across nodes in the network.

The uniting factor of Brinnovation is closely linked to purpose of the contest and respondents' ability to project their self-interest and motivations on a defined area, yet broad enough to attract stakeholders with different interests. At its core, there needs to be a concept which organisations cluster around, which Brinnovation facilitates for the duration of the innovation contest as all stakeholders have interest in reducing fire in homes. However, many respondents place expectations on tangible results after Brinnovation and the lack of uniting factor after the contest's completion could make the novel innovation network dissolve. As the innovation contest itself acts as a starting point for displaying stakeholders with interest in the specific issue and complementary interaction points for the duration of Brinnovation reinforce network creation, something to unite around could be needed after Brinnovation's completion to ensure the network perseveres. As empirical findings suggest tangible results and product development being central to the success of Brinnovation, collaborations around such topics could be favourable.

The case of Brinnovation also displays several characteristics coherent with being a tool for realising open innovation by initiating the innovation process through crowdsourcing ideas and refining these ideas throughout the contest. However, empirical findings suggest that the innovation contest itself needs to be complemented with additional efforts to move these ideas into product development or similar through some sort of incubator activities where ownership of development is more defined. This is particularly crucial for Brinnovation as empirical findings suggest that the success or failure of the initiative is dependent on showing tangible innovations to a high degree.

## 6.2 Theoretical implications

This case study displays confirming evidence for this type of innovation contests being a useful tool for realising open innovation through sourcing ideas from users, suggesting theoretical extension that sourcing of ideas also applies to sourcing ideas from the general public. This case study also displays innovation contests as useful for marketing purposes and spreading information similar to educational perspectives of innovation contests, even though exact degree of how well this is achieved remains unexplored in this study.

This case study further displays an innovation contest inviting different stakeholders to solve a specific issue as contributing to creation of innovation networks, primarily as a uniting event for stakeholders involved to get access points to other stakeholders and contestants. This is achieved through refreshed relationships and new relations, mainly concentrated to high involvement in the innovation contest. In the case of Brinnovation, this high involvement is expressed as participation in the main jury evaluating contestants. Such innovation network creation is also achieved through reinforcement of the network as organisations can create new ties across nodes in the network, thereby decreasing structural holes and intensify collaboration as a result of engagement in the contest. This case therefore suggests that an innovation can contribute to interorganisational innovation network creation, bridging the gap between two separate theoretical fields. However, as the generalisability of this study is highly limited and possibly only apply to innovation contests displaying similar characteristics to Brinnovation, such theoretical bridging needs to be confirmed and will be further addressed in section *6.4 Future research*.

Empirical findings also suggest that a uniting event, such as Brinnovation, can be a recurring platform around which stakeholders collaborate to bring forth innovation. Brinnovation could therefore be perceived as creating and reinforcing an innovation network by recurrently gathering around one issue and invite other stakeholders into this collaboration, if the innovation contest can exhibit tangible results and find an appropriate timespan between each contest. Under these circumstances, an innovation contest can both be a tool to realise open innovation and create/reinforce innovation network by being a uniting factor where ideas can be sourced, developed and ideally moved into product development by support of the network.

## 6.3 Practical implications

Most respondents are positive or neutral towards participating in an event such as Brinnovation again, mainly dependent on the tangible outcome of Brinnovation. However, only a minority mention that an event such as Brinnovation should be done every one to three years, with respondents mentioning that it could be done in other geographical or technical areas. As addressed when revising the research question, the perceived outcome of Brinnovation by its stakeholders is primarily dependent on tangible results, i.e. products and services moved into development or finalised/launched, not merely ideas generated by winners or networks created. Regarding network creation, this is concentrated to the main jury and some respondents ask for additional efforts to increase the interaction point for the duration of Brinnovation and

particularly after the contest's completion, as some sort of reassembly or result follow-up. As result, the following pitfalls, to guide the case organisation through risks after Brinnovation's completion, and recommendations, to inspire further actions, have been formulated.

### 6.3.1 Pitfalls

The following pitfalls have been identified and are deemed to pose substantial risk to both the perceived outcome of Brinnovation and Brinnovation's ability to create collaboration between its stakeholders:

I.   No one takes ownership of result other than the winners of Brinnovation. These winners will receive financial means but if they are not supported by stakeholders in Brinnovation, they become separated from the initiative and its solely up to the winners to create tangible result. Significant portion of the outcome of Brinnovation will as result be outside of stakeholders control, which might not be desirable for the case organisations.

II.  Playing into the pitfall of not defining ownership, not being able to show tangible results will negatively impact the perceived outcome of Brinnovation by many of its stakeholders. If it is desired to create a similar initiative to Brinnovation again, or even to increase chances of future collaboration, the pitfall of not investing additional effort into creating tangible results should be addressed.

III. The main pitfall related to network creation is lack of purpose for stakeholders to collaborate after Brinnovation's completion. If new purpose to unite stakeholders around is not initiated, the novel network is not reinforced and pose the risk to become obsolete after Brinnovation. As the case organisation has expressed a desire for future collaboration between stakeholders, such risk should be addressed.

### 6.3.2 Recommendations to case organisation

Based on findings in this study, and identified pitfalls, the following recommendations have been formulated to mitigate risks and increase chances of a stronger network being created:

I.   Decrease uncertainty regarding next step after Brinnovation by setting the agenda and communicating a follow-up plan to increase probability of networks persevering and to successfully support the innovation process. Such agenda could constitute of the following:

   a. Meet-up/reassembly after Brinnovation to mobilise stakeholders into further collaboration and joint development to facilitate ideas going into development for tangible results. As many stakeholders are perceived as motivated in these issues and have access to different resources, they could prove valuable both by supporting further development and co-creating further action plan.

   b. Bridge gap between Partners, which are willing to contribute with data, expertise and support, and Friends, which have experience and expertise with developing start-ups and assisting entrepreneurs. Many Partners are unwilling to enter into product development but have key resources to direct and test new solutions, and many Friends have capabilities which could support winners to

create a viable business. However, these two categories of stakeholders are somewhat separated. To bring them together and draw on their diverse resources and capabilities could prove key when creating tangible results of Brinnovation.

II. Deploy communication plan after Brinnovation to achieve additional information spread and reach more potential stakeholders which can participate in solving the issue of fire. Some sort of additional communication effort has been mentioned as favourable by a few respondents to increase the marketing and knowledge spreading aspect of Brinnovation. Regardless of outcome, some respondents expect that Brinnovation will be mentioned in branch specific media sources to conclude the event and the outcome. However, as the perceived outcome of Brinnovation is linked to the tangible result, some respondents find it crucial to be able to display such result in media to legitimise the initiative of Brinnovation and attract additional stakeholders.

III. Finding purpose for future collaboration across stakeholders. Ideally, such purpose or uniting factor could be to support the winners of Brinnovation. If this is somehow deemed unfavourable, an alternative purpose would have to be identified to increase the chances of collaboration between stakeholders occurring after Brinnovation's completion. One way to achieve this is to increase interaction points between stakeholders, possibly through physical event with a defined agenda.

## 6.4 Future research

This study has scratched the surface of additional values spurring from an innovation contest, other than innovation contests as a tool for realising open innovation, with particular focus on interorganisational network creation. However, as this study's main focus has been to provide insights to a case organisation during the duration of an innovation contest, several theoretical fields have not been exhaustively explored. To exhaustively explore the effects of an innovation contest, a qualitative longitudinal study is proposed to follow the process of an innovation contests from its construction, through its execution, following up afterwards, and studying the implications of repeating the concept. The scope of this study has only been the execution part of an innovation contest, which calls for such a longitudinal study to fully explore additional effects and implications of an innovation contest on interorganisational network creation and being a uniting factor for its stakeholders.

Secondly, this study has taken the focus of stakeholders involved and bases its finding on their motivations and expectations to provide insights to a case organisation in order to undertake adequate actions to create such interorganisational networks. This study could therefore be argued to have influenced the process of an innovation contest's influence on interorganisational network creation. To fully understand the implications of an innovation contests, without this potential contamination, a more qualitative, longitudinal study is proposed to measure relations and/or collaborations before an innovation contest and a year or two after its completion. To create a more generalisable theoretical framework, this longitudinal study should ideally be conducted across several innovation contests of similar character.

Lastly, this study has not deployed theoretical frameworks found in topics such as innovation eco-systems, how to grow entrepreneurship from an incumbent point of view, or how to integrate entrepreneurship in existing incumbents. Such theoretical perspectives could bring insights into solutions needed after winners of an innovation contest have been selected to help them move into product development. How to move from ideas into product development and create tangible innovation remain an unaddressed issue found in this study, which could be a fruitful theoretical contribution to how organisations could maximise the value creation of an innovation contest. Current literature revolving innovation contests does not address this issue and research into bridging this theoretical and practical gap should be undertaken to create a roadmap for organisations wishing to deploy the tool of an innovation contest.

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# Appendix 1 – Interview guide

| Question (Swedish) | Question | Purpose | Source |
|---|---|---|---|
| Vad är Brinnovation, för dig? | What is Brinnovation to you? | Initial question to set the scope of the interview. Open question to let the respondent set focus and define innovation contest | Adamczyk, Bullinger & Möslein (2012) |
| Varför är du/ni involverade i Brinnovation? | Why are you involved in Brinnovation? | Understand the motivations of respondent; Understand if participation by others influenced their choice | Adamczyk, Bullinger & Möslein (2012);Powell & Grodal (2005);Powell, Koput, Smith-Doerr & Owen-Smith (1999); |
| Hur har du varit involverad i Brinnovation såhär långt? | How have you been involved in Brinnovation so far? | Understand respondents degree of involvement in Brinnovation | Own |
| Hur tror du att Brinnovation kan skapa värde? | How do you think Brinnovation creates value? | Understand what respondent's expectations are | Adamczyk, Bullinger & Möslein (2012) |
| Hur har kommunikationen kring Brinnovation varit såhär långt? | How has the communication been revolving Brinnovation so far? | Identify early stages of weak ties | Adamczyk, Bullinger & Möslein (2012) |
| Hur tycker du att Brinnovation möter dina förväntningar? | How do you feel Brinnovation is meeting your expectations? | Feedback to case organisation | Own |
| Vad tror du att Brinnovation kan utvecklas till? | What do you think Brinnovation could evolve into? | Probe for expectations and wishes; what value does an innovation contest provide | Adamczyk, Bullinger & Möslein (2012);Powell & Grodal (2005) |
| Samarbetade din organisation med någon av de andra parterna inblandade i Brinnovation sedan tidigare? | Did your organisation collaborate with any of the other partners or friends before Brinnovation? | | Schilling & Phelps (2007);Powell & Grodal (2005);Ahuja (2000) |
| Om ja, vilka och hur? | If so, which ones and how? | Identify formal ties | |
| Kände du några av personerna involverade i Brinnovation sedan innan? | Did you know any of the people involved in Brinnovation before? | Understand the dynamics of formal ties | |
| Om ja, vilka och hur? | If so, which ones and how? | Identify informal ties | Powell & Grodal (2005);Ahuja (2000) |
| Hur tror du att samarbeten kan utvecklas som resultat av Brinnovation? | How do you think collaborations can evolve as result of Brinnovation? | Understand the dynamics of informal ties | |
| Hur skulle du vilja att relationen mellan er involverade utvecklas? | How would you like your relationship to evolve with involved partners and friends? | Map expectation for future development of network | Powell & Grodal (2005) |
| Har du/ni några planer på att samarbeta med SBF eller andra parter efter Brinnovation? | Do you have any plans on collaborating with SBF or other partners and friends after Brinnovation? | Understand desired development of network ties, mainly weak ties | Schilling & Phelps (2007);Powell & Grodal (2005);Ahuja (2000) |
| Om ja, vilka och hur? | If so, which ones and how? | Create projection with combination between motivation and intention to see if Brinnovation facilitated an initial step to network creation | Own |
| Som del av juryn, hur har du förberett dig? | As part of the jury, how have you prepared so far? | OBS. Question for respondents being part of the final jury. Identify additional engagement from jury members | Own |
| Vad har varit bra med Brinnovation såhär långt? | What has been good with Brinnovation so far? | Feedback to case organisation | Own |
| Vad har varit dåligt med Brinnovation såhär långt? | What has been bad with Brinnovation so far? | Feedback to case organisation | Own |
| Är du intresserad av att delta i fler liknande innovationstävlingar i framtiden? | Would you be interested in participating in other innovation contests in the future? | Understand overall satisfaction of Brinnovation; Feedback to case organisation | Own |
| Har du några andra områden som du vill ta upp, kopplat till Brinnovation? | Do you have any other topics you would like to bring up, related to Brinnovation? | Open question to capture additional information | Own |

# Appendix 2 – Thematic analysis, unstructured interviews

| Respondent1 | Respondent2 | Respondent3 |
|---|---|---|
| nytta för dig personligen och mig personligen | sprida kunskap kring bränder i bostäder | Vi har en tanke om att upprepa konceptet |
| använder den till **nästa kund** | nyligen framtagen forskning och hur vi **sprider** denna för att skapa medvetenhet | plattform för de Partner vi bjuder in, att verka tillsammans |
| Lära oss | innovationsdrivet inom detta området är undermåligt | vara med och verka även i framtiden. Ett nätverk där alla dessa partners och kanske andra som kommer till kan vara delaktiga och dela på exempelvis data och kanske har fler andra typ av projekt tillsammans. |
| kund eller andra parter har **nytta av framåt i tiden** | intressera fler kategorier av aktörer utöver "the usual suspects" | första initiativ för att bringa olika organisationer eller intresseorganisationer gemensamt för att hitta lösningar. |
| SBF kan vilja göra det igen. Hjälpa andra, andra länder | Vi vill få in arkitekter och designers och liknande för att **bredda tänket och innovationskapaciteten.** | ofarliga mittpunkt |
| Detta funkar, detta funkar inte | skapa ett nätverk av goda partners | samarbeta mycket mer med tillit och ömsesidig nytta |
| De har lyckats få med folk som är med **av olika skäl** | **Min målbild är att kunskap sprids och allmänheten tar del av forskningsresultatet, Att problemet belyses, att vi engagerat aktörer utöver "the usual suspects", och att vi byggt upp ett partnernätverk som vi sedan kan fortsätta med.** | ofta låser sig utveckling- och innovationsprocesser när man börjar prata om att "du måste skriva på detta avtalet för att vi ska kunna ha möte överhuvudtaget". Och i min värld behövs **tillit** |
| utgångspunkt från arrangören men **vilken nytta kan det även ha haft för de så kallade parters eller vänner eller idégivare eller jury eller vilka ni nu pratar med.** | Vissa ser det nog som en **marknadsföringsgrej** där deras logga och namn finns med i något positivt sammanhang. Och några tänker nog att här kan vi **plocka upp en hel del goda idéer** | |
| **när vi ut till massor av svenskar utan att det kostar massor av pengar** | Ett annat perspektiv är de tävlandes perspektiv. Hur upplevde de upplägget | skapar ju något som är "pull" istället för "push". |
| resurssnålt | Kvalitativt för dessa låter bra för att förstå dem etc | "hänga" med lite Partners såhär löst |
| | De kan ju också **utvärdera om de fått in vad de önskar och så**. Men å andra sidan så är det ju så att tävlingens framgång eller misslyckande beror på bidragen vi får in. Dvs hur vi har lyckats attrahera tävlande, vad det är som har triggat dem, hur de har upplevt det | förstå på vilket sätt denna öppenheten och den öppna plattformen som är någon typ av open innovation setting |
| **Syftet var att dels sprida kunskap om brand, dels utöka intresse i näringslivet och engagerar andra.** | **juryn skulle hjälpa och stötta de tävlande för att skapa bättre idéer. Screeningjuryn ska komma med feedback och ge förslag på hur de tävlande kan förbättra sina idéer** | intressant att titta på den öppna plattform som detta skapar. Den kontext av öppen innovation som det skapar |
| intressant när du intervjuar att vi drivs av olika aspekter och kommer från olika bakgrunder | | öppen kanal där vi kan föra samtal |
| **SBF** behövde något för att **synas** lite mer **i media** | **hjälpa idégivarna att förfina sina idéer** | jag skulle ju vilja se någon slags **utvärdering av helheten** |
| **öka medvetenhet och engagemang om brand i bostäder** | du skulle som slutsats komma fram till att skulle vi göra om detta, vilket vi kanske har tänkt, så skulle vi kunna variera tävlingsupplägget. | byggs utveckling och innovation med tillit, och tillit byggs över tid med öppenhet. |
| forskat fram en hel del **kunskap** som de vill **sprida** | Du har ju valt denna tävling men man kan ju spegla den i dessa andra teorier | Detta (Brinnovation) blir ju en sådan kontaktyta |
| **innovativa lösningar på problem** med bränder i bostäder som ett **direkt resultat av tävlingen** | **webbenkät med fem frågor och skickar ut till de tävlande** | kan ju vara ett resultat av detta, **att det skapas ett innovationsråd** |
| **Nya kontakter mellan organisationer och allmänheten som inte finns idag med SBF och Brandforsk, skapa nya konstellationer** | **forskningen inte får genomslag i praktiken** | Vårt övergripande mål eller uppdrag för SBF är att **transformera SBF** |
| **Nya nätverk** | | **Att öppna upp för open innovation** |
| medvetenheten om arrangörer och de som är partners | | övergripande uppdrag är att transformera SBF till en **modern organisation** |
| Att SBF fyller 100 år | | **Att skapa denna innovationstävling genom att vara prestigelöst, ödmjukt och generöst bjudit in alla Partners och Vänner att delta i denna öppna innovationsprocess skapar i min värld ett mycket starkare varumärke** |
| se vad som står i vägen för tillväxt | | mycket starkare branding, ödmjukhet och prestigelöshet |
| se vad som **står i vägen för att tillväxt** ska kunna ske och att du kan hjälpa oss **identifiera** detta | | |
| hitta en **modell för att utveckla organisationer, människor och innovation** | | |
| **Denna tävling är ju en del av att sprida forskning som gör att den går ut brett. Denna tävling är ju ett test av denna spridning** | | |
| **Är detta en tävling vi kan kopiera och fortsätta med? Kan vi ta det med oss och fortsätta med?** | | |
| Vi har exempelvis olika målgrupper, är det någon som är mer intressant än någon annan? Är det någon målgrupp som är intressant att följa djupare? | | |
| Varför blev tävlingen av, hur blev den genomförd, vad var bra och vad var dåligt? | | |

*Table 6 - Analysis 1, Key phrases and words*

| | Respondent1 | Respondent2 | Respondent3 |
|---|---|---|---|
| **Informations spridning** | när vi ut till massor av svenskar utan att det kostar massor av pengar | sprida kunskap | starkare varumärke |
| | resurssnålt | skapa medvetenhet | starkare branding |
| | sprida kunskap om brand | kunskap sprids | |
| | synas mer i media | allmänheten tar del av forskningsresultatet | |
| | öka medvetenhet och engagemang om brand i bostäder | Att problemet belyses | |
| | sprida kunskap | marknadsföringsgrej | |
| | medvetenheten om arrangörer och de som är partners | forskningen inte får genomslag i praktiken | |
| | Denna tävling är ju en del av att sprida forskning som gör att den går ut brett. Denna tävling är ju ett test av denna spridning | | |
| | Att SBF fyller 100 år | | |
| **Stimulera innovation** | innovativa lösningar på problem | bredda tänket och innovationskapaciteten. | hitta lösningar. |
| | identifiera vad som står i vägen för att tillväxt | undermåligt innovationsdriv | skapar ju något som är "pull" istället för "push". |
| | se vad som står i vägen för tillväxt | goda idéer | |
| | | hjälpa idégivarna att förfina sina idéer | |
| | | fått in vad de önskar | |
| **Transformera SBF** | utgångspunkt från arrangören | variera tävlingsupplägget. | transformera SBF |
| | | | Att öppna upp för open innovation |
| | | | transformera SBF till en modern organisation |
| **Skapa en "road map"** | använder den till nästa kund | | upprepa konceptet |
| | Lära oss | | utvärdering av helheten |
| | nytta av framåt i tiden | | förstå på vilket sätt denna öppenheten och den öppna plattformen som är någon typ av open innovation setting |
| | göra det igen | | intressant att titta på den öppna plattform som detta skapar. Den kontext av öppen innovation som det skapar |
| | Detta funkar, detta funkar inte | | |
| | modell för att utveckla organisationer, människor och innovation | | |
| | Bra/dåligt med utförande | | |
| | Är detta en tävling vi kan kopiera och fortsätta med? | | |
| | Kan vi ta det med oss och fortsätta med? | | |
| **Skapa nätverk** | Utöka intresse i näringslivet | byggt upp ett partnernätverk som vi sedan kan fortsätta med | ofarliga mittpunkt |
| | Engagera andra | intressera fler kategorier av aktörer | samarbeta mycket mer med tillit och ömsesidig nytta |
| | Nya kontakter mellan organisationer och allmänheten | skapa ett nätverk | skapa tillit |
| | Skapa nya konstellationer | engagerat aktörer | plattform att verka tillsammans |
| | Nya nätverk | | Ett nätverk för framtiden |
| | | | bringa olika organisationer eller intresseorganisationer gemensamt |
| | | | "hänga" med Partners såhär löst |
| | | | tillit och öppenhet. |
| | | | kontaktyta |
| | | | skapas ett innovationsråd |
| | | | öppen kanal där vi kan föra samtal |
| **Förstå perspektiv (Tävlande & Partners)** | De har lyckats få med folk som är med av olika skäl | Ett annat perspektiv är de tävlandes perspektiv. Hur | |
| | intressant när du intervjuar att vi drivs av olika aspekter och kommer från olika bakgrunder | attrahera tävlande, vad det är som har triggat dem, hur de har upplevt det | |
| | Nytta för andra än arrangören | Feedback från tävlande | |
| | olika målgrupper | | |

*Table 7 - Analysis 1, Themes*