

## Abstract

Innovation is driven forward by entrepreneurs and is considered a critical dimension of economic change (Schumpeter, 1983), but innovating in isolation is getting increasingly difficult. Innovation requires cooperation (Perez and Fierro, 2018), and new knowledge creation can be achieved through increased collaboration and learning between suppliers and customers. Asymmetric strategic alliances are business partnerships where startups and large firms can exploit each other's resources. However, these alliances are not always straightforward and without difficulties and challenges. Trust is mentioned as one of the deciding factors of overcoming these hurdles, leading to a successful partnership (Blomqvist, 2002). Because of the limited research on the topic of trust development in such collaborations, this thesis aims to fill the gaps by providing an in-depth understanding of trust development in these asymmetric strategic alliances. Hence, the purpose of this study is to examine trust development in asymmetric strategic alliances. To fulfil this purpose, the authors have answered two research questions:

***RQ1:** How is trust developed through incidents in asymmetric strategic alliances?*

***RQ2:** How does trust development affect asymmetric strategic alliances?*

To answer the research questions, a multiple case study research design with a qualitative approach have been chosen. A case is described as a collaboration between a startup and a large firm. The method consists of a triangulation between three respondents from each case, with a total of three cases. The data was acquired through semi-structured interviews the individuals closest to collaboration. In our findings, the incidents in the collaborations that had the highest impact on trust was discovered. These incidents affect the trust between the partners through different mechanisms of trust development, such as face-to-face communication and a committed champion. The trust development is affecting the asymmetric collaborations by impacting risk, uncertainty and efficiency.

This study has contributed to the discussion on asymmetric strategic alliances by giving an in-depth understanding of how trust is developed through incidents and the respective outcomes of this developed trust. Finally, we have provided practical measures on trust development for managers of these collaborations.

## Sammendrag

Innovasjon ledes av entreprenører og er sett på som en kritisk dimensjon for økonomisk fremgang (Schumpeter, 1983), men innovasjon i isolasjon blir stadig vanskeligere. Innovasjon krever samarbeid (Perez and Fierro, 2018), og ny kunnskap kan oppdages gjennom økt samarbeid og læring mellom leverandører og kunder. Asymmetriske strategiske allianser er forretningssamarbeid hvor oppstartsbedrifter og større selskaper kan utnytte hverandres ressurser. Disse samarbeidene er ikke alltid smidige eller uten utfordringer. Tillit er nevnt som en avgjørende faktor for å takle utfordringer og kan dermed føre til suksessfulle samarbeid (Blomqvist, 2002). Grunnet den begrensede litteraturen på tillit i samarbeid mellom oppstartsbedrifter og store selskaper, ønsker denne oppgaven å fylle gap gjennom dyp forståelse for tillitsbygging i disse asymmetriske strategiske samarbeidene. Derfor er formålet med dette studiet å undersøke tillitsbygging i asymmetriske strategiske samarbeid. For å oppfylle dette formålet har forfatterne svart på to forskningsspørsmål:

*FS1: Hvordan bygges tillit gjennom hendelser i asymmetriske strategiske samarbeid?*

*FS2: Hvordan påvirker tillitsbygging asymmetriske strategiske forhold?*

En multiple-case studie med et kvalitativt forskningsdesign har blitt valgt for å svare på forskningsspørsmålene. Et case er definert som et samarbeid mellom en oppstartsbedrift og et stort selskap. Metoden består av triangulering mellom tre respondenter fra hver case, med totalt tre caser. Dataen ble hentet gjennom semi-strukturerte intervjuer med individene nærmest knyttet til samarbeidet. I våre funn har hendelsene som har hatt størst påvirkning på tillit mellom partnerne blitt beskrevet. Disse hendelsene påvirket tillit mellom partnerbedriftene gjennom ulike tillitsbyggende mekanismer som ansikt-til-ansikt kommunikasjon og dedikerte ansatte. Tillitsbyggingen påvirker samarbeidene gjennom å endre risiko, usikkerhet og effektivitet.

Dette studiet har bidratt til diskusjonen om asymmetriske strategiske allianser ved å gi en dyp forståelse av hvordan tillit utvikles gjennom hendelser og de respektive utfallene av denne utviklingen. Til slutt har vi bidratt med praktiske tiltak rundt tillitsbygging for aktører involvert i disse samarbeidene.

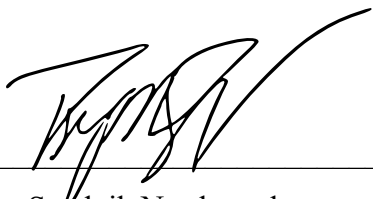
## Acknowledgement

This master's thesis has been written by three master students from NTNU School of Entrepreneurship, at the Norwegian University of Science and Technology. The thesis hopes to give new insights and understanding of trust development in asymmetric strategic alliances between startups and large firm. We hope managers from both parties benefit from our findings in their day-to-day operations. This thesis builds on the specialisation courses TIØ4530 and TIØ4535, which took place during the fall of 2018.

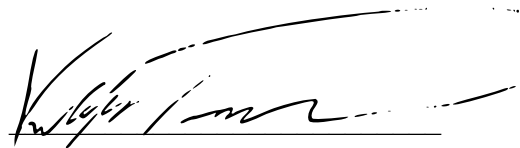
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It has been an exciting and educational period for all of us, and we hope it will give some educational inputs for the reader.

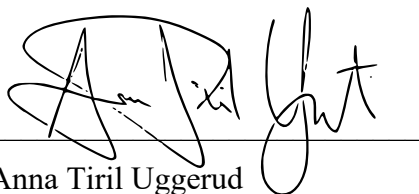
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Trym Sandvik Nordgaard



Kristoffer H. Tvinnereim



Anna Tiril Uggerud



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## Abbreviations

<b>ASA</b>	Asymmetric Strategic Alliances
<b>NSE</b>	NTNU School of Entrepreneurship
<b>CIT</b>	Critical Incident Technique
<b>SU[x]</b>	Startup in case [x]
<b>BF[x]</b>	Big firm in case [x]
<b>IF</b>	Independent firm
<b>CEO</b>	Chief Executive Officer
<b>CTO</b>	Chief Technology Officer
<b>CCO</b>	Chief Commercial Officer





# 1 INTRODUCTION

## 1.1 Importance of study

An increasing number of large organisations work with start-ups (Freytag, 2019). By bringing together these two profoundly different types of organisations, both can benefit in different ways (Minshall et al., 2010). As technology companies must respond much faster to the challenging market conditions to stay competitive, cooperating with start-ups, have become a vital source of technology innovation (Grochowski et al., 2016). While established firms often are superior at bringing incremental innovation, startups, more often than big firms, bring radical innovation to the market. Both large and smaller firms attempt to take advantage of external knowledge by collaborating with companies with complementary knowledge and resources.

Successful launch and growth of many tech ventures hinge on the ability to nurture mutually beneficial alliances with industry players (Yli-Renko et al., 2001). Allying is a way of compensating for the different weaknesses of the organisations and developing new opportunities and values together (Hurmelinna et al., 2005). Significant changes are happening in the way entrepreneurs work, and new possibilities arise quickly for big firms to take advantage of the value creation in start-ups. Initiatives like corporate accelerators are emerging to link established firms closer to start-ups (Richter et al., 2018). Unfortunately, many of these collaborations fail or do not even start due to the different organisational structures, e.g. different working mentalities, communication barriers and hidden interests (Grochowski et al., 2016). Understanding these risks and uncertainties is therefore, vital for a successful collaboration.

### 1.1.1 Startups and large firms

There exist many definitions of the term startup. Startups are typically small companies with fewer than 50 employees (Hogenhuis et al., 2016). In this thesis, a startup is explained as "a new temporary organisation in search of a scalable, repeatable, profitable business model" (Blank, 2012). Startups are, per definition, unstable. As such, the current situation of a startup is going to change one way or another and this situation is what creates the uncertainty and risk

that are typical for start-ups. According to the definition, a startup is no longer a startup once it has found a stable business model, which can typically take 2-5 years.

A large firm is structured differently and can almost be defined as the opposite as the definition of a startup. A large firm is a well-established organisation that has developed profits over long periods. According to the European Commission, a company goes from being a medium-sized firm to a large firm once it has more than 250 employees and higher turnover than € 50 million (European Commission, 2018). Accordingly, large firms can be seen as the “dinosaurs” of the industry, and they can benefit from new young ventures which have a lot to offer regarding new ideas and technology.

### 1.1.2 Asymmetric strategic alliances

A strategic alliance is a collaborative relationship between two or more firms where this relationship can create higher value than each of the participating firms would have created on its own (Ybarra and Turk, 2009). Examples of these alliances include corporate venturing, buyer-supplier relationships, R&D alliances or learning-efforts (Aalbers, 2010, Perez et al., 2013, Villena and Craighead, 2017). Collaborative efforts are the cooperation between the organisations, where the goal is that both firms get to exploit resources that the other organisation is missing, achieving synergies between the firms. Strategic asymmetric alliances come in many forms and can produce different benefits and synergies depending on the motivations and situations of the participating firms, e.g. a large firm wants to learn more about a novel technology or a startup that aims to be a supplier of an innovative new product for a large firm. Large firms often have distribution, manufacturing, marketing, and other organisational resources that start-ups need and can utilise in order to commercialise their technology (Alvarez and Barney, 2001). Some new ventures are only looking for a financial partner willing to invest in the company, while other startups are initiating collaborative efforts to secure a big company as their first customer. New ventures are mainly looking to leverage collaboration efforts in innovation projects during the commercialisation process (Hogenhuis et al., 2016).

However, these alliances are not always straightforward and without difficulties and challenges. As a result of different organisational cultures, priorities and strategies collaborations between startups and large firms can be fraught with tensions and barriers (Perez

and Fierro, 2018). These challenges are especially prevalent in technology collaborations with a higher risk of opportunistic behaviour, where distrust between the firms has been a contributing factor to failure (Ybarra and Turk, 2009).

Research has brought attention to the importance of trust in collaborative efforts (Daellenbach and Davenport, 2004, Krishnan et al., 2006, Pérez et al., 2012) and there is generally an agreement that trust is one of the most critical aspects of a successful strategic alliance. Trust is also considered as a necessary ingredient to facilitate the exchange of knowledge and information (Perez et al., 2013). While some research is done on the topic of trust development in alliances (Ybarra and Turk, 2009), there is a lack of research on how trust between startups and large firms is developed. Due to the asymmetry between the two firms with different attitudes and needs, it is important to understand the underlying causes of why trust developed the way it did.

## **1.2 Purpose of study**

Because of the limited research on the topic of trust development in collaborations between startups and large firms, this study aims to fill the gaps in previous research by providing an in-depth understanding of trust development in these asymmetric strategic alliances. Therefore, the authors have outlined the following purpose for this thesis:

*“To examine trust development in asymmetric strategic alliances.”*

This purpose focuses on the collaboration between a start-up and a large firm, a partnership where uncertainty and risk are prevalent and creates significant challenges (Ybarra and Turk, 2009). However, if one succeeds, the outcome of the process can be of extremely high value for both partners.

While behavioural change often happens over a period, and change in trust is continuously evolving, trust and trustworthiness also change in short periods or single episodes or incidents. A relationship can be built both incrementally and episodically, and the analysis of relationships must be separated between the overall relationship itself and the individual incidents which comprise it (Ford, 1980). Development of trust plays a critical role in the evolution of a long-term relationship (Blomqvist et al., 2005), and these important incidents

are specific situations that led to trust development. An example of such incidents can, e.g. be social exchanges, happening either intended or unintended. These important incidents can be detrimental for the relationship (Ford, 1980). Hence, understanding the mechanisms behind trust development through incidents will give a better understanding of these unique collaborations. To fulfil the purpose of the study, the authors will aim to answer the research questions by gathering and analysing data using the conceptual framework developed.

### **1.3 Research questions**

Trust is an ingredient in asymmetric strategic alliances that can reduce risk and uncertainty. As the authors of this thesis aim to examine trust development in these alliances, the purpose needs to be split into two research questions: The first one relates to the incidents developing trust. The second relates to the understanding of how trust development affects these collaborations.

**RQ1:** *How is trust developed through incidents in asymmetric strategic alliances?*

As trust often happens sudden or during specific episodes or incidents, identifying and discovering how these incidents affected trust-development will give an in-depth understanding of trust development in asymmetric alliances. Secondly, the authors seek to understand how trust-developing incidents affect asymmetric collaborations. This is why the following research question has been defined:

**RQ2:** *How does trust development affect asymmetric strategic alliances?*

The second research question aims to reach an understanding of how collaborations have been impacted by the trust development happening in these critical incidents. Answering these research questions will bring a more profound understanding of when and how trust is built by asymmetric alliance partners. These two research questions will together contribute to fulfilling the purpose.

## **1.4 Contribution**

With the increasing need for understanding asymmetric strategic alliances, the authors aim to contribute to the knowledge on trust development in these alliances by filling the gap in the literature on trust development through critical incidents. Since trust is an essential contributor for reducing risk and uncertainty (Ybarra and Turk, 2009), getting a better understanding of the mechanisms of trust between partners can help start-ups and big firms to make important decisions in collaboration efforts in the future. This understanding will be useful for both start-ups that are entering a collaboration, but also for big firms who are looking to use external resources to build their innovation competence through start-ups. We aim to help the industry recognise and understand the concept of trust and to use the knowledge to build successful collaborations that foster innovation. There is a lack of research regarding this topic (Viitaharju and Lähdesmäki, 2012), and the result of this thesis aim to contribute to the understanding of asymmetric collaborations, by connecting the perspective of trust development and the unique features of asymmetric collaboration.

## **2 THEORETICAL FRAMEWORK**

The following section will present the theoretical framework that was used as a foundation for the data collection and analysis in the master thesis. First, the literature on asymmetrical strategic alliances between startups and large firms will be presented, following an introduction of the concept of trust, trust-development and its effects in asymmetric relationships. Finally, a conceptual framework connecting this theory and critical incidents will be presented. This section builds on the theoretical framework developed as part of the specialisation course (TIØ4530) during the fall of 2018.

### **2.1 Asymmetric relationships**

Minshall et al. (2010) defined asymmetric partnerships as “those in which the partners differ significantly in size, resources, or commercial experience”. These types of partnerships bring together the needs of tech-based startups, as well as large firms seeking to benefit from an open innovation strategy (Minshall et al., 2008). There are numerous different benefits such collaboration efforts can bring, i.e. for startups, it is to leverage the larger firms’ experience and reach in branding, production and marketing. For the bigger companies, getting a hold on the most advanced and innovative new technology can aid in the quest of improving their innovation capabilities (Perez et al., 2013, Alvarez and Barney, 2001, Hogenhuis et al., 2016).

Asymmetric partnerships between businesses have existed for a long time, yet it is only during the last decade that this term has gotten greater attention in research. Previous studies argued that in these collaborations, startups need to offer innovation that is interfaced with products that are already in use and have a developed supply, marked and sales channel (Perna et al., 2015). With this in mind, it is particularly important for start-ups to understand the connection between the development of business relationships and the interaction between resource entities, as the product idea is often transformed into the first product through the first customer relationships (Aaboen and Aarikka-Stenroos, 2017).

According to Lee and Johnsen (2012), an asymmetric relationship can include the characteristics of mutuality, particularity, cooperation, conflict, intensity, interpersonal inconsistency, power/dependence and trust. The unequal distribution of power is highlighted as one of the most critical issues, though it should not be perceived as a hindrance in achieving

effective interaction in asymmetric relationships (Munksgaard et al., 2015). It is estimated that in almost 80 percent of partnerships between large and entrepreneurial firms, the managers of the entrepreneurial firms felt unfairly exploited by the large firms they were collaborating with (Alvarez and Barney, 2001). It is findings like these that have created a fear in the startup communities for entering a partnership with a large corporation. When the only resource a startup can bring into a collaboration is new technology, research shows that startups are the part of the relationship that is at most at risk of taking the consequences of a failed attempt of collaboration (Prashantham and Birkinshaw, 2008).

Nevertheless, creating such strategic alliances have the power to become an important weapon to achieve competitive advantage for both firms, as it allows for new products, generating more revenue and creating more value (Chan et al., 1997).

### 2.1.1 Challenges in asymmetric relationships

Asymmetric relationships between large firms and startups are prone to tension and barriers, as they come from different organisational structures, strategies and priorities (Prashantham and Birkinshaw, 2008), which ultimately may cause power distance, the reluctance of knowledge sharing (Lusch and Brown, 1996). One of the most common sources of tension in a strategic relationship is the concerns related to the partner's behaviour (Park and Ungson, 2001). These concerns are mainly due to behavioural uncertainty: The challenge of anticipating and understanding actions. Specifically, the inability to anticipate and understand such actions is higher in partnership with the following two types of relationships: 1) High interdependence, where the partners' contributions are highly intertwined, and 2) in which each partner can further private interests at the expense of collaborative interests often prevalent in partnerships between potential competitors (Park and Ungson, 2001).

In strategic partnerships where the partners have high interdependence, they are often required to share valuable knowledge-intensive resources (Kumar and Seth, 1998, Park and Ungson, 2001). Since these resources are harder to observe, value, and protect, the potential for misunderstandings regarding each partner's intents and contributions to the alliance increases (Oxley, 1999).



## 2.1.2 The need for trust in asymmetric relationships

Trust can be defined in many different forms and in the context of alliance research, most of the definitions are referring to a combination of expectations and vulnerability (Daellenbach and Davenport, 2004). In this thesis, inter-organisational trust is defined as “an individual’s belief or a common belief among a group of individuals that another individual or group (a) makes good-faith efforts to behave in accordance with any commitments both explicit or implicit, (b) is honest in whatever negotiations pervaded such commitments, and (c) does not take excessive advantage of another even when the opportunity is available” (Cummings, 1996). The rationale for this definition of trust rests on the socially embedded, subjective, and optimistic nature of most interactions within and between organisations that involve trust. This definition implies that trust is based on the use of goodwill trust when individuals interact with is partnering firm.

In the context of asymmetric technology partnerships trust has been defined as "an actor's expectation of the other party's competence and goodwill" (Blomqvist, 1997). This definition both includes the dimensions of competence (i.e. technological capabilities, skills and tacit knowledge), and goodwill that implies moral responsibility and positive intentions toward the other. When selecting a technology partner, the dimension of competence is thought to be the main priority. However, the dimension of goodwill is necessary for a partner to be able to accept the risk and the vulnerable position that will arise. Blomqvist (2002) later argues that a businessperson would not enter an asymmetric relationship without a reasonable understanding of the other’s goodwill. This definition of trust will be used in this thesis.

It is evident from the literature that the presence of risk is a necessary precondition for trust (Arrow, 1974, Perez and Fierro, 2018). There is no business relationship without risk as a simultaneous exchange is not possible. This vulnerability can be viewed as either social (e.g. reputation) or economic (e.g. loss of money) in nature. Simultaneously, there is also a general understanding that trust is seen as a prerequisite for building a successful strategic alliance (Inkpen and Currall, 2004, Dwyer et al., 1987, Krishnan et al., 2006), this also includes strategic alliances where the partners in the alliance differ significantly in size (Chen et al., 2017, Alvarez and Barney, 2001). In fact, trust is seen as especially crucial in these asymmetric relationships, as these relationships often involve higher risk and uncertainty (Aalbers, 2010, Blomqvist, 2002). By being the one who is trusting, one accepts the uncertainty, vulnerability

and the related risk involved. However, if executed well, trust reduces the complexity, uncertainty and transaction cost, in addition to increasing the flexibility scope and transaction benefits (Dibben, 2000). Also, Blomqvist (2002) found that high levels of trust were found to result in higher levels of dependence, partner learning, and performance.

The authors have identified four general topics in relation to the role of trust in the literature of asymmetric strategic alliances: 1) Organizational and individual trust, 2) the paradox of trust and control, 3) the role of trust in the context of power imbalance, and 4) the role of trust in knowledge and learning. These topics are, to the best of the author's knowledge, the most relevant research on the role of trust in asymmetric strategic alliances and will be further elaborated in the following subsection.

#### **2.1.2.1 Organizational and individual trust**

To be able to provide a better understanding of the role of trust, the authors have chosen to emphasise the difference between individual and organisational trust as it is evident from the literature that they have clear distinctiveness and create different outcomes.

Trust was initially viewed as an interpersonal phenomenon (Blau, 1964) until management scholars found trust on an inter-organisational level (Gulati, 1995, Sako and Helper, 1998, Arrow, 1974). Just like individuals, organisations are also objects of trust; they have a reputation, develop routines, processes and culture, which unify the employees' behaviour to external contacts. Blomqvist (2002) describes the role and nature of trust in asymmetric technology partnerships and explains how an organisation cannot trust. Instead, it is the employees of an organisation that can trust another organisation either individually or collectively. This is similar to the study of trust in interfirm exchange by Zaheer et al. (1998). Here, a clear distinction was made that interpersonal trust is the extent of a boundary-spanning agent's trust in the counterpart in the partner organisation, while inter-organisational trust is differentiated as the extent of trust placed in the partner organisation by the members of an organisation.

As illustrated in figure 1, trust can be experienced on an individual level, by knowing that a person's competence, values and disposition. Trust can be experienced between teams based on competence, but trust can also be experienced as an individual's trust in the organisation,

such as the reputation of the large firm as a competent and fair player. In a small firm, only a few key players decide the trustworthiness of the firm, while in the larger firm, multiple people can affect the trustworthiness of the firm. Another vital aspect that Blomqvist (2002) draws is that employees in a large firm can be switched to new positions. Hence there exists a risk of losing a trusting contact point in the relationship.

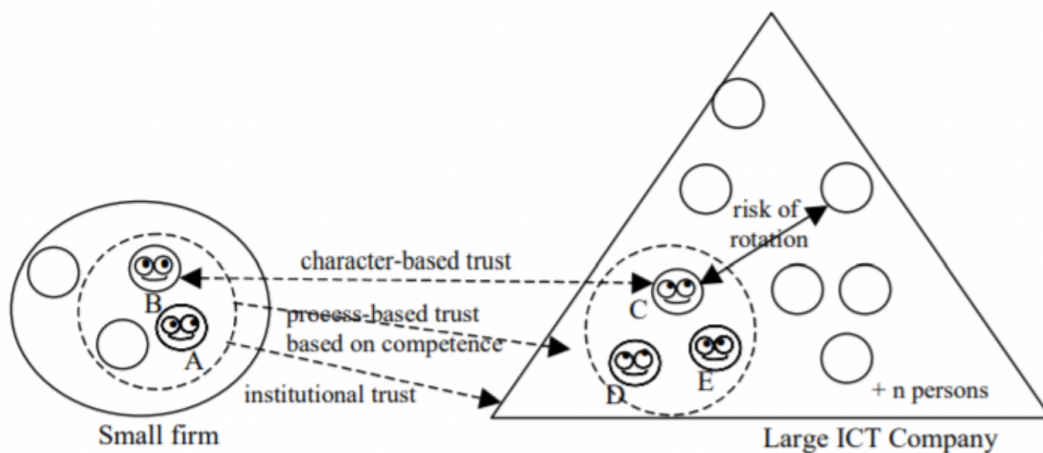


Figure 1: Individual and organisational trust in asymmetric alliances (Blomqvist, 2002).

As illustrated, individual trust and inter-organisational trust is closely linked. These two types of trust may develop and affect each other simultaneously, or one type of trust can be developed, which then impacts the other form of trust. Sako and Helper (1998) examined the determinants of inter-organisational trust in suppliers in the automotive industry and found that for individual trust to evolve to organisational trust, various channels of communication need to be established at different organisational levels. Also, as pointed out in a theoretical study by Barney and Hansen (1994), the developed trustworthiness of the other firm by an individual (from the trusting firm) must be in line with the perceived trustworthiness by the other individual of the trusting firm. Hence, the development of inter-organisational trust is based on both organisational and individual trust as exchanges between firms are exchanges between individuals or small groups of individuals (Barney and Hansen, 1994).

The interaction between inter-personal and inter-organisational trust is dynamic. E.g. An employee of an organisation with a good reputation may typically also be trusted as a representative of that organisation. Consequently, if either one deteriorates, this will have a

negative impact on the other (Barney and Hansen, 1994). Even though these different types of trust are related, institutional-based trust was found to be relatively weaker than individual-based trust, as an individual may overlook an institutional breach of trust as long as the trusted individuals in the other organisation maintain personal integrity (Blomqvist, 2002).

Interestingly, in large firms, it is often the organisational trust that is experienced first. This trust may be perceived as weak, but just enough to initiate a relationship. Individual trust is also viewed to be particularly important in the early phases of asymmetric development (Blomqvist, 2002). This is in line with Anderson and Narus (1990) who, through research on distributor and manufacturer firms, notes the effectiveness of personal relationships within an organisation, as the individual-based trust may result in more intense and personal commitment than organisational relationships.

Blomqvist (2002) further suggest that the small firm needs to consider trust more than the large firm. Entrepreneurs often lack the necessary track record needed to prove their worth to customers, investors and other stakeholders. Thus, entrepreneurs have to learn to make use of individual trust as a source of power. This accompanies Aldrich (1999), who claims that trust is a crucial high-level factor of founding entrepreneurs' success. It may be that large firm employees put less emphasis on trust as they may not need to consider trust due to having authority through asymmetric power. When dealing with, e.g. an external partner, they utilise the intermediary and institutional-based trust from acquired by being an employee of the large firm (Blomqvist, 2002). In summary, trust in large firms may be more based on organisational trust than what is found in small firms. On the other hand, trust in the small firm is strongly individual-based.

#### **2.1.2.2 The paradox of trust and control**

It is argued whether trust can be developed with contracts or not. As noted earlier, trust is dependent on risk being present. Hence, gaining control of risk by contractual agreements might only control risk, and in fact, not develop trust. Depending on the context, there is conflicting evidence for the use of formal contracts ranging from being a contributor to trust development, to being redundant and even counterproductive in the development of trust.

In R&D, collaborations Blomqvist et al. (2005) examined the balancing of trust and contracting between a small firm and a large global machinery and equipment supplier. Here, it is argued that it is critical to understand how the role and dynamics of trust and contracts affect the relationship. Collaboration cannot be guaranteed to be successful only by using a contract, but the process of making the contract may be used purposefully to increase mutual understanding and learning, ultimately to build trust over time. Companies that are part of dynamic and fast-moving markets often use trust as an informal coordination mechanism for R&D alliances, but in these situations, there is still a need for contracts (Aalbers, 2010). The uncertainties between alliances get reduced if there is a presence of trust. Thereby, the need for frequent contact can be reduced. However, it does not increase asset-specific investments. Blois (1999) finds that contracts and promises, known respectively as formal and informal agreements, are a way of creating assurance in the reliability of another player. Further, it is stated that through informal agreements, the promisor is subjecting themselves to the penalty of never being trusted again, if the promise was to be broken. Fukuyama (1995) build on this view, commenting that contracts allow strangers without any basis for trust to work with one another.

Contributing to this research, Jiang et al. (2013) introduced two competing views on the effect of combining trust and formal contracts in alliance success. One view explains the claim that high levels of complex formal contracts and high levels of trust can achieve the best exchange outcomes (Woolthuis et al., 2005, Li et al., 2010, Poppo and Zenger, 2002). The other view shows that formal contracts can be redundant and even counterproductive in the presence of high trust (Faulkner, 2000, Nooteboom, 1996). Depending on the type of trust that exists in the relationship, trust either complement or substitute contracts. In line with the definition of trust in asymmetric relationships, Jiang et al. (2013) divide the concept into competence and goodwill. Goodwill trust was found to be the most efficient guard against knowledge leakage and that formal contracts are not an advantage mechanism. Meanwhile, competence trust and formal contracts are complementary, while goodwill trust and formal contracts are substitutes in knowledge leakage counteraction.

In asymmetric technology partnership, the role of a formal contract is less important than trust. In many cases, the partners had already invested in the cooperation before a contract was signed. The partners were continuously re-evaluated, and the contracts were short-term,

reflecting the temporal nature of the relationships and environmental uncertainty (Blomqvist, 2002).

Adding to the knowledge on trust during contracting, Minshall et al. (2010) notes that during the deal-making process of the collaboration, both asymmetric parties need to be as open as possible with each other concerning potential legal and commercial challenges. One common challenge presented was the inability to reach an agreement over IP ownership. This openness helps bridge the gap between the organisations and acts as a safeguard to avoid situations that could lead to the erosion of trust later in the relationship. It is suggested that the benefits of trust can be leveraged to overcome the challenges of formal contracts, and vice versa (Woolthuis et al., 2005, Li et al., 2010, Poppo and Zenger, 2002). E.g. Opportunistic behaviour in a partner could abuse the firm's trust to acquire proprietary knowledge, while formal contracts would counter the breach of trust (Li et al., 2010).

### **2.1.2.3 Power in asymmetric alliances**

The governance of asymmetric strategic alliances is different from other strategic alliances, as the two partners are vastly different in many aspects. Munksgaard et al. (2015) argue that the power of the large customer, linked to the differences in size and imbalance in influence in asymmetric strategic alliances is not perceived as a constraint or hindrance to achieving effective interactions in the collaboration. There was only found small degrees of conflict in the relationships researched, where generally asymmetric alliances showed consistency in the trusting interpersonal relationships and overall a mutual dedication for the collaboration. These findings can be contradicting to the findings of Fischer and Reuber (2004), where a more confrontational approach was taken. Factors such as power could significantly affect the trust of an alliance, and the way value is appropriated, as opposed to the harmonic findings of Munksgaard et al. (2015).

According to Oukes et al. (2017), start-ups often perceived themselves as more powerful than they were. The start-ups did not realise that they were in a power disadvantage as opposed to the large firm.

#### **2.1.2.4 The role of trust in value creation and appropriation**

When creating value in collaborations, both firms naturally aim to appropriate as much of the created value as possible to maximise the output of the effort. In the context of asymmetric alliances, where there often exists power and resource imbalance, the issue of who appropriates the value has been debated, and a trusting relationship have the potential of affecting this process. Another important aspect of value appropriation is that small firms and large firms can seek unique, different values from the alliance. Hence, the value that the large firm captures does not necessarily affect the value captured by the smaller firm (Perez and Fierro, 2018).

Alvarez and Barney (2001) argue that the large firm appropriates a large part of the value created in an asymmetric strategic alliance. However, there are tactics that start-ups can take to mitigate the misappropriation between the firms. One of these tactics, building trust, is seen as a challenging and ineffective measure of getting value out of a collaboration. It is argued that an overreliance on trust in the relationship can put a start-up at significant risk. Using measures to build trust is seen as potentially wasteful, as employees from the large firm rotate positions and new alliance managers may not be part of the trusting relationship. This win-lose idea is supported by Katila et al. (2008), who argues that the smaller partner in an asymmetric collaboration is assumed to have a disadvantage and must resort to efforts to balance out the value appropriation.

The concept of dual value appropriation presents an opposing view, one that shows that both firms in a collaboration can obtain value without compromising the value appropriated by the other firm. The development of trust between alliance partners is an essential prerequisite for dual value appropriation. Small firms must expect and embrace the responsibility for managing the relationship and making efforts to build trust, in order to take full advantage of the potential for value appropriation (Pérez et al., 2012).

#### **2.1.3 Trust development in asymmetric relationships**

Trust is seen as a critical success factor in asymmetric collaborations (Inkpen and Currall, 2004, Dwyer et al., 1987, Krishnan et al., 2006, Chen et al., 2017, Alvarez and Barney, 2001). Asymmetric collaborations are in many ways unique, as these collaborations are plagued with hurdles that defy the conventional wisdom regarding trust-building in strategic alliances (Perez and Fierro, 2018). The topic of development of trust can be separated into subcategories: 1)

Responsibility of trust development, 2) Antecedents of trust development, 3) phases of trust development, and the 4) speed of trust development. These subcategories will be further elaborated in the following section.

### **2.1.3.1 Responsibility for trust development**

Trust reduces the potential for conflict and encourages smooth information flow between partners (Sako, 1991), hence taking the time to learn about the partner's organisational processes, and the industries they operate is fundamental in any asymmetrical relationships, as it develops shared sensemaking (Knight and Pye, 2005). Consequently, partners act more tolerant in the face of delays and setbacks in meeting the project goal, and to persist in the relationship (Patzelt and Shepherd, 2008), thereby increasing the chances of achieving better results as they are more willing to try new approaches.

In an asymmetric strategic alliance, as in other alliances, both partners are responsible for developing the trust needed (Perez and Fierro, 2018). According to Viitaharju and Lähdesmäki (2012), who identified perceptions of antecedents of trust, found that the less dominant partner had to adopt more than the dominant partner. It is argued that in an asymmetrical relationship, the significance of the large partner on the development and maintenance of trust is minor, while the characteristics of the smaller firm have a more significant impact on trust development. This shows the essential role of the smaller firm in developing and maintaining trust in the relationship. Supporting this view is the findings by Chen and Chen (2002). They note that the smaller firms may need to take the lead in forging an alliance by voluntarily investing in relation-specific assets. These findings are in contrast to the empirical findings of Minshall et al. (2010). In this study, challenges experienced by entrepreneurs and managers are explored to draw management lessons. It was found that the large alliance partners devoted resources to all phases of the partnering process and especially at the early phases, to help the smaller firm, understand the needs, culture and the internal processes of the larger firm in order to develop a trusting relationship.

Goal development of the firms is an integral part of the initiation of asymmetric alliances. Munksgaard et al. (2015) investigate how self- and collective interests are manifested in asymmetric alliance formation. By analysing how goal development takes place in collaborations, they find that trust is perceived as a necessity for the development of collective



interests in the relationship. Trust was seen as an implicit condition for the initiation of the alliance. Further, taking responsibility by opening up and sharing, trust was built, and the other part also opened up to the partner. Consequently, this led to a higher performing relationship and both partners could utilise the resources of the other collaborator. By using openness to develop trust, one part must take the responsibility and the risk of sharing and opening up, in order for the partner to respond and return the sharing by also being open and vulnerable.

### **2.1.3.2 Antecedents of trust development**

Ford et al. (1998) state that “many relationships fail to develop at all after the initial contact, others are short-lived either because their usefulness disappears or because either party is unable or unwilling to develop them.” Moreover, he states that in the early exploratory phase of a business relationship: “the two companies need to learn about each other as people to reduce the considerable distance between them”. Ford’s view is supported by findings in asymmetric technology partnership formation, where the need for individual-based trust is argued to be significant (Blomqvist, 2002).

The goal of research on antecedents of trust development in the context of asymmetry is often to find the success factors, the most important mechanisms that build trust in asymmetric relationships and to make asymmetric alliances work (Minshall et al., 2010). Kelly and Schaan (2000) discuss the fundamental design and management challenges of asymmetric collaborations to outline actions start-ups can take to respond to these issues. The small firm is argued to be more vulnerable due to the large percentage of resources the small firm invests in the collaboration. The large firm invests a smaller percentage of resources and generally has more options, should the collaboration fail.

Building a well-designed interface between asymmetric partners can foster trust and commitment and create links between managers of small companies to senior executives of large firms. The commitment from senior management of the large firm was found to be the most crucial factor in successful alliance implementation (Kelly and Schaan, 2000). Open communication and information sharing were also crucial factors for creating the trust needed for the general day-to-day operations of the alliance. Establishing open communication helped overcome alliance problems and preventing them from becoming destabilising. Strong feelings, e.g. trust or distrust, are often formed in first face-to-face interaction of a relationship

(Eccles et al., 1992). In face-to-face interaction, trust and mutual respect were found to be essential to making alliances work. Moreover, research shows that the lack of trust between partners led to misinterpretation in electronic communication, e.g. in text messages.

Viitaharju and Lähdesmäki (2012) have continued the research of identifying the different antecedents of trust in asymmetric business relationships. Here, it was found that in asymmetric alliances, the role played by “committed champions” is key to building trust and foster joint action. “Committed champions” are individuals who bridge both firms by facilitating learning at cognitive and behavioural levels. These individuals help the companies overcome difficulties that are implied by the asymmetries and facilitate organisational complementarity (Perez and Fierro, 2018). It is recommended to identify highly respected top managers in the small firm and middle managers in large corporations who can help bridge the gap between the two organisations as a means to understand both sides of the collaboration when potential problems arise.

Trust can also be developed as a consequence of the perceived abilities of the partnering firm during the alliance formation. Viitaharju and Lähdesmäki (2012) also discuss how these perceived capabilities of the smaller firm affect the trust the large firm has in the smaller firm. They find that the faith in the product offered, often by the smaller firm, is a way of developing trust between partners. This leads to confidence in the capabilities of the other firm, which will, in turn, help to build trust. However, while confidence in the product offered may initially develop trust, the research finds that this type of trust related to the product offering can lead to fragile trust between the partners. This fragile trust that is developed from product-related features can damage the interpersonal trust development and can reinforce the perceived asymmetry between the firms. The offering of start-ups is a natural place for employees of large firms to start developing trust in the capabilities of an alliance partner.

Ybarra and Turk (2009) aimed to examine the antecedents and outcomes of trust creation between strategic alliance partners to develop a model of the factors that affect the increase or decline of organisational trust in strategic alliances. Even though asymmetry was not an attribute of this research, the alliances researched were categorised by high levels of uncertainty and dependence, which also is the case in alliances between start-up and large firms (Perez and Fierro, 2018). The researcher notes that trust has become one of the most critical success factors

in business alliances, but states that very little is known about how trust is created or demolished in strategic alliances. Findings from the research contrast the view of transaction cost theorists, who deem it necessary to have formal incentive systems in order to develop dependence. Instead, factors from social exchange theory such as communicating shared values and relationship equity better explain what develops inter-organisational trust. This is in line with Blomqvist (2002), who argues that shared values lead to a trusting atmosphere. High levels of trust were found to result in higher levels of dependence, partner learning, and performance.

### **2.1.3.3 Phases of relationship development**

Ford (1980) uses the interaction approach to separate buyer-seller relationships into different phases, depending on the maturity and progress of the partnership. The first three phases are described as the: 1) Pre-relationship phase, 2) early phase, and 3) development phase. In each phase, the *social, geographical, cultural, technological* and *time* distance will differ. The social distance describes the degree of which the parties are unfamiliar with each other's way of thinking; the cultural distance describes the degree to which the norms, values or working methods between two firms differ, the technological distance describes the differences between the two firm's product and process technologies.

The pre-relationship phase is described as the phase prior to the initiation of the collaboration. The different distances which are perceived to exist between buyer and seller: The social distance is apparent, as the firms are unaware of each other's way of thinking. The cultural distance differs, as the companies differ in norms, values or working methods. Technological distance differs, especially in evaluations of the purchase of innovative products, which is typically present in new ventures.

The early phase is defined as the phase when potential suppliers are in contact with purchasers to negotiate and develop the partnership. This is typically between the first contact until the contract signing. During this phase, the firms are likely to have little experience with each other, and no routine procedures will have been established to deal with various issues. Due to a lack of knowledge between buyer and seller, many judgements will be based on the reputation of the opposing firm, as a substitute for experience. The lack of social relationships makes the reduction of geographical and cultural distance difficult. This can, in turn, result in a lack of

trust between parties. A supplier can, for instance, believe that a purchaser only uses them as a source of information without any intention of building a relationship. As both firms are aware of the risks involved while having little evidence on which to base the partner's commitment, the commitment of both firms is likely low at this time. Factors outside the relationship will affect the perceived commitment, such as numbers and importance of the customers and suppliers of the potential partner. Finally, the importance of the relationship as one of the multiple relationships in the firm's portfolio of suppliers or clients will be important when judging the partner.

The development phase, after contract signing for major capital purchases, is marked by increasing experience between the firms. The social distance between the firms is lowered as the employees increase their knowledge of each other, and personal relations help establish trust between individuals. Due to lower social distance, the effects of geographical and cultural distance is lowered. As adaptations made by the firms to suit each other, the technological distance is reduced. Commitment between firms can be shown in different ways. First, it can be indicated by the way a firm adapt to meet the needs of the partnering firm. This can be done either by incurring costs or by management involvement. These adaptations are separated into *formal* adaptations, which are contractually agreed upon, and *informal* adaptations, which may be arranged to cope with challenges that arise as the partnership develops. A supplier's informal adaptation that goes outside the terms of the contract is often an important indicator of commitment. As a way of emphasising the commitment to a relationship, a relationship partner can organise the contract to include the status of personnel and the frequency of contact between the firms.

Many of the challenges that exist during the early phases of a relationship are removed through the processes described above. During the development phase, the relationship can be discontinued based on the assessment of the potential, performance of the partnering firm or based on actions of outsiders. While these phases and the dimensions of the different phases are based on buyer-seller relationships in general, many of the descriptions, are shared with the definition of asymmetric strategic alliances.

#### **2.1.3.4 Incremental and fast trust development**

The speed of which trust is developed in asymmetric alliances can help to increase the performance and efficiency of collaborations (Weber et al., 2004, Gulati et al., 1994). Trusting actions in inter-organisational relations depend on the perceptions, cognitions and behaviours of individuals that take part in the relation, yet additional factors can also influence the trust development between organisations. Gulati et al. (1994) found that big commitments made by one of the parties of an inter-organisational alliance were among the best predictors of success. An example of such acts of trust includes; 1) a company signing a contract with a supplier in an upcoming alliance, 2) a manufacturer sharing its design specifications to an alliance partner, or 3) a company promising exclusivity when it could have engaged in other partnerships. These actions signalled that the intentions of the organisations were sincere, based on the size of the commitments and risks taken. There were no examples in the empirical findings where the partner in the alliance exploited the big trusting act, and in all the cases, the other firm answered by cooperating.

Weber et al. (2004) build on the research of Gulati et al. (1994) by presenting a new, motivated attributions model of trust development. This model, which is contrary to the rational choice approach to trust development, explains why actors engage in big, seemingly irrational acts of trust and when and why these acts, being tremendously risk, can be crucial to trust development. Trusting actions can at times be sudden and dramatic, rather than incremental, to the point where they appear unwise and potentially dangerous. Both Weber et al. (2004) and Gulati et al. (1994) see large acts of trust as a potent tool for quickly developing trust, but agree that there are certain risks to this approach.

Another example of fast development of trust is noted by Blomqvist (2002), who found that trust is built and evaluated very quickly in intense interactions of managers negotiating during the formation of R&D partnerships. Blomqvist (2002) defines this type of fast trust as “an actor’s expectation of the other party’s capability, goodwill and self-reference in future situations involving risk and vulnerability” (Blomqvist, 2002). Hurmelinna et al. (2005) builds on this definition and states that “this fast and analytic trust enable asymmetric alliance formation which results in a willingness of the actors to adapt and invest in the relationship”. Findings from Hurmelinna et al. (2005) on fast trust development in asymmetric collaborations suggest that if managers can build fast trust, their orientation towards the importance of

contracting between the partners is lowered. This indicates that in a trusting relationship, contracting is seen as more of a formality and requires less attention than in a relationship without trust. The better an employee knows the capabilities and values of a partner the more certain he or she will be that he or she will act in good faith and according to the agreement. A paradox on the topic of trust development and contracts is that signing a contract is often one of the first things start-ups and big firms do in collaboration, hence, the trust needs to be developed as quickly as possible, to optimize the contract between the firm to the specific situation that the firms are in.

Blomqvist (2002) further argues that due to high uncertainty, partnering firms have a hard time knowing where their partner is going to be in the future. Trust seems to be a prerequisite for high-risk cooperation leveraging diverse knowledge bases and intense cooperation. While trust is needed in the formation of collaborations, a paradox in highly uncertain industries was found: A highly dynamic environment does not enhance the natural evolution of trust, creating an even higher need for trust in the partnership formation. This is displayed in figure 2. As the uncertainty and complexity of the industry increases, the need for trust is also increasing, leading to a reduction of incremental trust development. These findings arguments for the need for fast trust development in collaborations between startups and large firms, where uncertainty is always present.

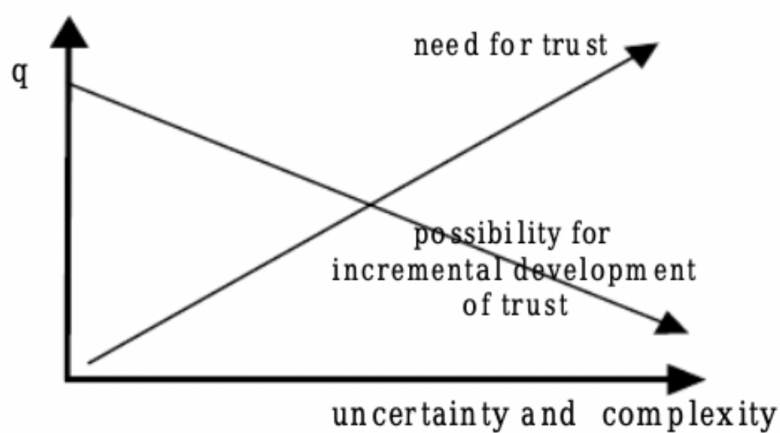


Figure 2: The paradox of trust in high-tech asymmetrical partnership (Blomqvist, 2002)

#### 2.1.4 Critical incidents in the development of trust

According to Ford (1980), companies in buyer-supplier relationships have to invest in major adaptations by tailoring their resources to fit the relationship. These adaptations marks as commitments to the relationship from the parties involved. Because of the complexity of such relationships, and the importance of mutual adaptations, the analysis of such relationships must be separated between; 1) the overall relationship itself, where each negotiation, delivery, and the social meeting takes place within the context of the relationship, and 2) the individual incidents which comprise it. Each incident is affected by previously established norms, atmospheres or conflicts, and these incidents again affect the overall relationship. Interestingly, a single incident can change the relationship radically (e.g. breach of informal agreements) and might be the deciding factor for a declining relationship (Ford, 1980). Therefore, by narrowing down the scope of interest to single incidents in asymmetric strategic relationships, the authors can better understand the important trust developing mechanisms. This might give a further understanding of how we can achieve successful strategic asymmetric alliances.

In this thesis, these events, incidents or occurrences that had an impact on the development of trust in an asymmetric collaboration will be described as critical incidents. These incidents are situations or incidents that significantly affected trust in a relationship, either positively or negatively. Trust is a complex aspect of human interaction (Weber et al., 2004) and trusting actions can at times be sudden rather than incremental (E.g. managers who delegate important duties to a new colleague).

## 2.2 Conceptual framework

The conceptual framework connects the theory presented by looking at how critical incidents can be used as an analytical tool for assessing the development of trust in asymmetric strategic alliances.

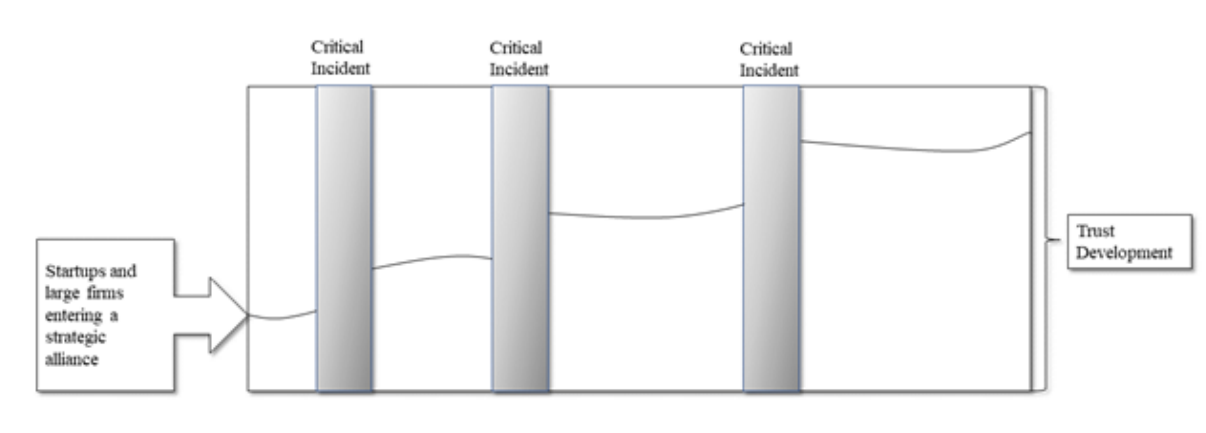


Figure 3: Conceptual framework: Incidents affecting trust development in asymmetric strategic alliances.

Our framework illustrates the connection in the literature between the process of collaboration in asymmetric alliances, critical incidents and trust development. The process of a collaborative effort is “dotted” with critical incidents that have had an impact on the trust felt by the actors. As the figure shows, trust is a factor that is continuously changing and often become more prevalent in situations of high uncertainty. The framework illustrates that there may exist some trust, e.g. reputation, in the partnership before the initiation of the relationship (Schurr, 2007).

To fully understand how critical incidents relate to trust, the authors wanted to study critical incidents from two different perspectives. First, the relationship between trust and critical incidents in isolation. Secondly, the relationship between trust development and its effect in a holistic view, discovering the role that this change in trust played throughout the relationship. This framework served as the foundation for the data collection and analysis during the thesis. By using the critical incidents technique, we analysed how trust is developed by looking at incidents that had a significant impact on the relationship. Hence, the framework aided the answers to the research questions on how critical incidents affect trust and the results of these changes in trust in asymmetric business relationships.



## **3 METHOD**

In the following section, the chosen research methodology to address the purpose of the study will be elaborated. Further, the reasoning behind the data collection method and the chosen data analysis will be explained. Lastly, the strength and limitations of the chosen research methodology will be discussed. This section builds on the method developed during the fall of 2018 as part of the course Classic Entrepreneurship (TIØ4535).

### **3.1 Research design**

In empirical studies, the concept of trust is regarded as challenging to operationalise (Schurr, 2007), partly due to being a context-dependent and tacit phenomenon that manifests itself in different ways according to contexts (McEvily and Tortoriello, 2011). Trust is a challenging topic because of the different theoretical perspectives that are applied to the phenomenon (Kramer, 1999). As the purpose of the study is to examine trust development in asymmetric strategic alliances, a qualitative research method was used. This method allows for the interpretation of experiences that are difficult to measure (Dalland, 2012) such as trust. As this research is interpreted as inductive, the theoretical framework presented earlier has provided guidelines on the formulation of the questions in the interview guide, as well as what kind of mechanisms we are concerned with during the analysis. To conduct this research, the authors decided on a multiple case study design (Yin, 2014) with semi-structured interviews. The analysis consisted of critical incident technique (CIT) (Flanagan, 1954) and a within and cross-case analysis. As opposed to a quantitative research design, a qualitative method may introduce more diversity and nuances into the data (Flick, 2015), allowing the respondents to describe trust developing incidents into details. As such, increasing the chances for the underlying mechanisms to emerge.

#### **3.1.1 Multiple-case study**

The selection of research design is typically based on the nature of the research problem (Creswell, 2014). Case studies allow for holistic and meaningful characteristics of real-life incidents as it enables us to understand complex situations (Yin, 2014). Multiple case design is chosen as the evidence from multiple datasets is considered to be more compelling, therefore regarded as being more robust (Herriott and Firestone, 1983). By using a multiple-case design, replication logic was followed, where it was aimed to predict similar results with literal

replication (Yin, 2014). The conceptual framework presented earlier had set the conditions where the results were likely to be found. A case was defined as an asymmetrical collaboration, involving one start-up and one large firm.

### 3.1.2 Selection of case firms

As this thesis aims at following a replication, the selection of cases is not random. Hence, the different cases were selected based on the information they potentially could deliver to the research (Seale, 2004). This approach allowed the authors to choose which cases were relevant to include, based on the characteristics of the asymmetrical collaboration in which they participated. Therefore, establishing a list of selection criteria is essential to increase the likelihood of similar results. The authors have consequently constructed a set of criteria that must be met by the cases:

- New venture/start-up and a large firm, who
- Have recently been in a formal asymmetric relationship, where they
- Co-developed a technical product/service.
- The collaboration is perceived as successful by both parties.
- The collaboration/project is finished, and
- Lasted more than 1.5 years.

By studying cases where the collaboration had finished, rather than looking at cases where the process is ongoing, there will be more reflections of the different aspects of the collaboration, with a more holistic view of the entire project. This can help the participants to see the critical incidents in a broader view and compare the outcomes of the different incidents. In order to get sufficient data on the development of trust in each collaboration, the required duration was set to a minimum of 1.5 years.

The cases were discovered using the snowball effect through contacts in the alumni network of NSE. As a result, all collaborations included a Norwegian start-up, as they were part of the professional network of the authors. By looking at successful collaboration, it is believed that they have made some important choices that are interesting to investigate. It is important to note that the degree of availability was also one of the contributing factors to choosing the three cases in this thesis. By having three cases, which is the maximum recommended in literal replication (Yin, 2014), the authors were able to gather data with a higher degree of nuances,

facilitating the detection of patterns that can exist in asymmetric alliances. With the three chosen cases, we were able to look at trust development across different industries, with different technologies, with different degrees of involvement in the collaboration. However, they all share many similar attributes, as mentioned in the selection criteria, which will help reveal valuable insights for the research questions at hand.

Table 1: Characteristics of cases.

CASE	1	2	3
<i>Description of startup competence</i>	Software	Hardware	Software
<i>Description of large firm</i>	State-owned organisation	International firm (only non-Norwegian)	Partly state-owned firm
<i>Technology co-developed</i>	Multi-user software	Industrial hardware	Software integration

These differences in context between the cases contribute to highlighting how somewhat different cases still could predict similar outcomes. Hence, potentially increasing the relevance of our findings to a broader range of asymmetric relations.

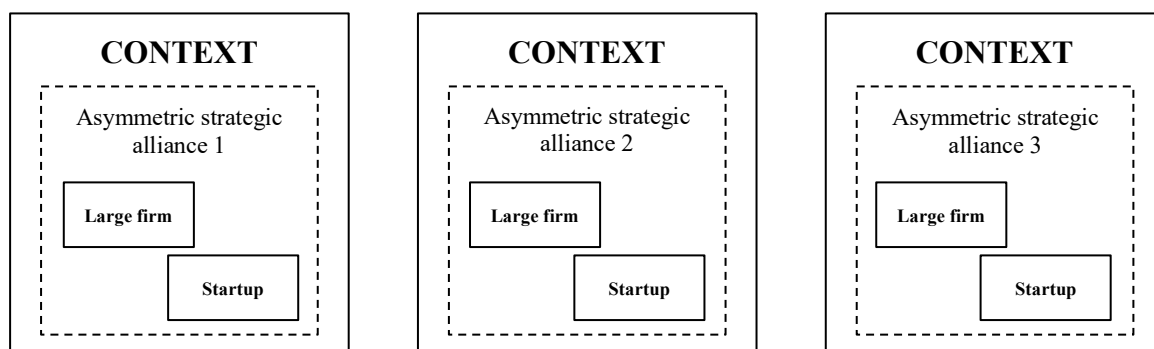


Figure 4: The multiple-case design applied (Yin, 2014).

### 3.1.3 Respondents

Potential respondents were contacted from early January throughout February 2019 by either emails or phone calls. They were asked the questions from the selection criteria were all had to be answered “yes” to qualify as suitable respondents. If qualified they were sent a request for interviews in March 2019 (as one case onboard quite late, interviews took place early April). The suitable respondents were characterised by being the one who had been in direct contact

with its partner during the collaboration. From the start-up firm, this was the CEO/CCO and the CTO, depending on the type of relationship the partners had. In the large firm, the respondents are those who are responsible for the collaborative project, typically a project manager. Eventually, three cases were landed, and three respondents from each case were interviewed (see table 2), totalling nine respondents. This number of respondents seemed necessary to help strengthen the data collected for the thesis, as it will be more convincing and accurate if it is based on several sources of information (Yin, 2014). To ensure confidentiality, all names are fictional.

*Table 2: Summary of the background information of the respondents.*

<b>Case</b>	<b>Name</b>	<b>Age</b>	<b>Position/Role</b>	<b>Large firm/start-up</b>
1	Martin	30-34	CEO	Startup
	Peder	30-34	CTO	Startup
	Astrid	50-54	Project manager	Large firm
2	Simen	30-34	CCO	Startup
	James	35-39	Technical leader	Large firm
	Ole	35-39	Mediator	Large firm
3	Vetle	40-44	CEO	Startup
	Jon	40-44	CTO	Startup
	Christian	50-54	Project manager	Large firm

## 3.2 Data acquisition

The primary source of data was accumulated through semi-structured interviews combined with relevant literature needed for the analysis (Dalland, 2012). The critical incident technique (CIT) guided the interviews and data analysis, as it is a well-trying and a sound way to collect and analyse rich data on phenomena such as trust (Münscher and Kühlmann, 2011). CIT is defined by Flanagan (1954) as “a set of procedures for collecting direct observations of human behaviour in such a way as to facilitate their potential usefulness in solving practical problems”.

CIT generate salient qualitative data by recording relevant incidents and behaviours in an effective manner (Haussner et al., 2018). The emphasis is put on the actual incidents and focuses on incident research and less on the general understanding of a process. Moreover, the focus is on the respondent's description of the specific incidents and the interviewees will attempt to enrich the initial summary provided by seeking further information and detail (Flanagan, 1954). In this thesis, CIT was used in the data acquisition phase of the research to gather data on critical incidents related to trust development. These incidents, rather than the respondents, are the units of analysis. By looking at the attributes of the incidents that had a significant positive or negative impact, we were able to figure out the requirements of such a successful or unsuccessful event (Urquhart et al., 2003).

### 3.2.1 Conducting the interviews

An interview guide was created following a semi-structured setup with open-ended questions, as it allowed the participants to give a holistic, meaningful answer using their knowledge, attitudes, and feelings of the collaboration (Lakshman et al., 2000). As proposed by Kvale and Brinkmann (2009), questions were formulated based on elements from the framework but presented in an informal way using everyday language. To identify and prevent weak, irrelevant, and overlapping questions, the interview guide was tested on two people from the start-up community from another similar collaboration beforehand. Accordingly, the final interview guide was improved by adding, removing or changing questions (see appendix 1).

There are four stages to conducting a CIT interview: 1) The selection of an appropriate incident; 2) developing a detailed description of the specific incidents using probing questions to understand the rationale; 3) exploring cues and reasoning for the actions taken by the

employees; and 4) identifying the causes of the incident using probing questions (O'Connor et al., 2007).

As a visual aid, the respondents were first asked to set up an overall timeline of the collaboration with the partnering company while they explained their thought process throughout the relationship. This method supports the recollection process of the respondent and facilitates the structure of the data afterwards. Additionally, this method may also counteract interview bias, such as social desirability (Crowne and Marlowe, 1964). Further, respondents were asked to outline multiple examples of incidents that were particularly good and challenging for the collaboration, where probing questions were asked in order to give further details to the context of the incident. It is advisable to look for both positive and negative critical incidents, as a joint look will help to get a better understanding of the nature of trust development (Butler Jr, 1991). Considering that trust is an abstract and value-laden concept (Welter and Smallbone, 2006), we did not encourage respondents to discuss it explicitly. Instead, we tried to observe the respondent's explanations of the activities or incidents which lead to trust development. During the interviews, depending on the information given by the respondents, some questions were weighted more than others due to limited pre-knowledge on the different incidents relevant to the specific cases.

As suggested by Eisenhardt (1989), a minimum of two authors were present during the interviews to complement each other. Before each interview, specific roles were divided amongst the authors. One led the interview, introducing and asking the questions, while the other(s) took notes, and came with follow-up questions when necessary. This division of roles led us to be more observant of the respondents. As none of the firms was located in Trondheim, and due to limited financial resources, only the three interviews within case 1 could be executed face-to-face. These interviews were located in Oslo at the respondent's workplace. The rest were conducted through *Appear.in* or *Google Meet* on a computer. Due to the open-ended questions, the respondents were more or less able to speak freely, causing variation in time length of the interviews ranging from 60 - 100 minutes.

### 3.2.2 Documentation

During the face-to-face interviews, an audio-recorder on the phone was used to collect data, alongside with notes taken by the authors. When a computer was used to conduct the

interviews, a built-in audio recorder was used. The raw material in the form of audio tapes and notes from the interviews was then later transcribed into text documents using oTranscribe.com. These documents were then sorted into different case-specific folders in order to get a better overview of the material and create better prerequisites for the data analysis, which is considered to be the most challenging aspects of doing case research (Yin, 2014).

### **3.3 Data analysis**

The next step of the process of our research was to use the raw materials from the interviews to extract useful data that would be analysed. By using the CIT in the data acquisition, the gathered data was structured in the form of a timeline to facilitate the analysis described in this section. In other words, the CIT brings a framework of what will be analysed within the data collected (see figure 3). Each incident is selected based on the respondents explicitly describing the incidents that affected the relationship. The program NVivo 12 was used to code and theme the data content.

#### **3.3.1 Within-case analysis**

The data was first sorted and coded by each case into the critical incidents that affected trust development during the relationship (e.g., contract signing, launch). Further, the sorted data was coded into first order codes (e.g., worried about potential competitor, overwhelmed by the first negotiation meeting), staying as close as possible to the empirical data to keep the respondent's perceptions detailed. Thematic categories were further subcategorised were we examined and recorded patterns (Guest, 2012) regarding trust development and the role of trust in the data acquired (e.g., informal agreement, keeps his promise). Finally, the categories were further sorted into the matching mechanisms of trust development found in the theory (e.g., committed champion, shared values). This theory was used as a guide to code the material, however, the findings were not forced into themes and categories if the data set could not adequately justify it. Due to space limits, all the quotes underpinning the different themes could not be a part of this thesis, but the ones that are chosen are the most prominent from the analysis.

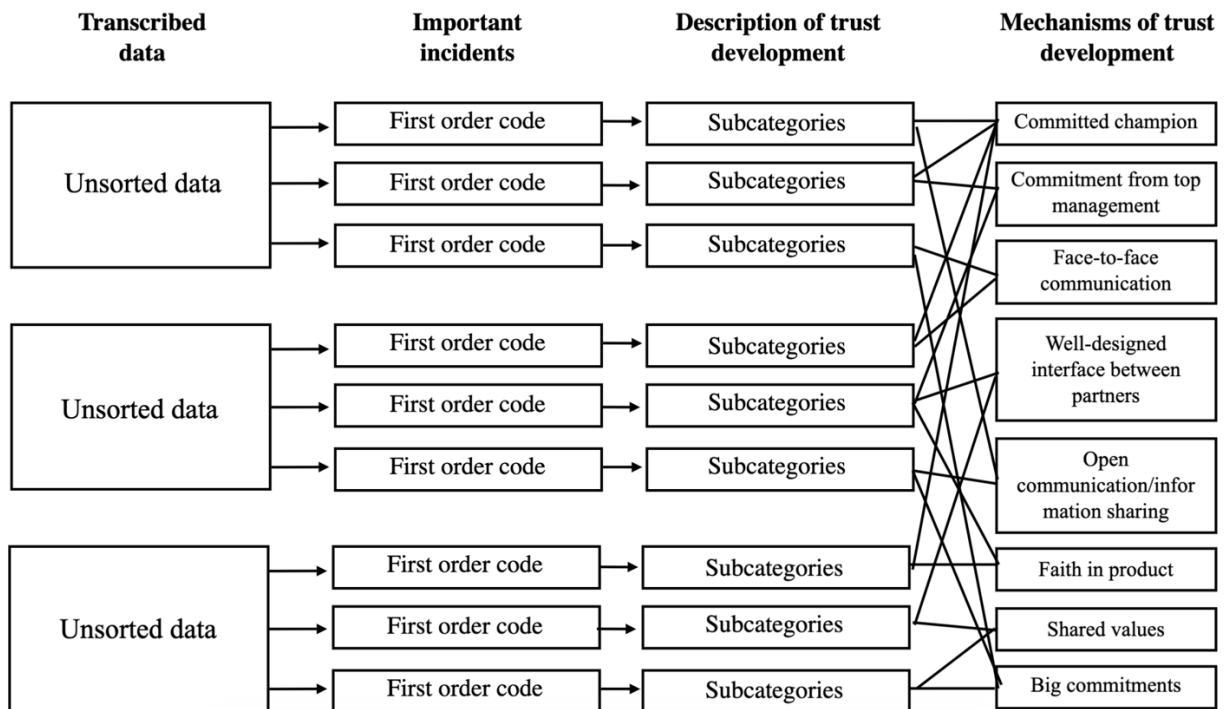


Figure 5: The process of data analysis.

### 3.3.2 Cross-case analysis

After the within-case analysis, a cross-case analysis was conducted to inspect the cases from a holistic view. This analysis was used to compare the critical incidents described in the collaborations pointing to differences and similarities between the three cases (e.g. the use of committed champions). The coded phrases from the within-case analysis were used to help draw links or themes between the cases and brought new understanding in the comparison between the cases.



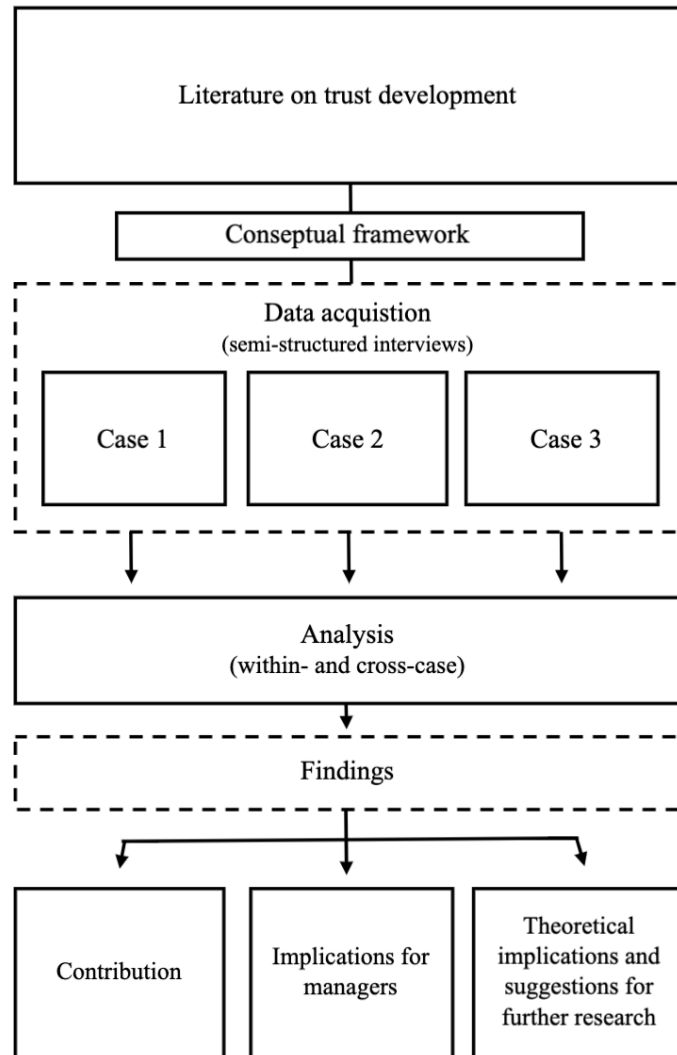


Figure 6: Illustration of the research conducted

### 3.4 Trustworthiness of research

According to Lincoln (1985), trustworthiness is of high importance when evaluating the worth of a qualitative research study. The qualitative method for obtaining data is a method that brings the possibility to look deeper into how trust development affects a collaboration, using tools such as asking follow-up questions and doing a continuous analysis of the data while it is presented. While this method has excellent strengths, it can also lead to biases based on a multitude of different factors that are difficult, if not impossible, to hinder. In order to determine the trustworthiness in our research, four criteria need to be considered: Credibility, transferability, dependability and confirmability (Lincoln, 1985). Techniques have been applied to meet the standards of the criteria.

### 3.4.1 Credibility

The degree of credibility depends on whether readers have the confidence that the findings in this thesis are correct. The authors conducted one interview with each respondent during the spring of 2019. This short interaction can lead to a lack of prolonged engagement, which is one of the techniques to increase credibility (Lincoln, 1985). The authors used a multiple case study design that enables several data sources in the investigation. These multiple sources will help produce a greater understanding and affect the credibility of the research. The reality of the respondents only exists in the minds of the respondents (Halldórsson and Aastrup, 2003). Therefore, a viable question is whether the data from the respondents is trustworthy. Factors such as fear of negative publicity can have affected the answers given by the respondents. Collecting data from interviews after the end, the collaborations can lead to cognitive biases that can challenge the data validity of the research.

By interviewing three respondents from each case, the data was triangulated, and the findings are likely to be more accurate, which will increase credibility. One of the criteria in our selection of cases was that the respondents from both firms perceived the collaboration as successful. Announcing the topic of research to our participants can result in the collection of pre-reflective thoughts rather than new thoughts. These pre-reflective thoughts can have influenced and changed reality before conducting the interviews.

### 3.4.2 Transferability

The transferability of the research is based on the ability to show that the findings apply to other contexts. Both time and space will bring a significant constraint in the ability to generalise findings (Halldórsson and Aastrup, 2003). Due to a small sample of asymmetric alliances, the authors have given a rich and detailed description of the context of the data collection, to provide a greater understanding of the research settings to increase the transferability.

### 3.4.3 Dependability

The dependability of research depends on showing that the findings are consistent and could be repeated if replicated. The authors were all students at NSE. As a result of this, the authors have a pre-understanding of the process of starting a company and the risks involved. None of the authors has any experience working *with* startups as employees of a large firm. This

knowledge or lack of knowledge will have affected our interpretation of the findings. Hence, it will be impossible to repeat the exact results. Taken into consideration, we have in the best of our manner described the methods applied, and the supervisors of this thesis have given valuable feedback and followed our process, especially during data acquisition and analysis. These actions have hopefully increased the dependability of the study.

#### 3.4.4 Confirmability

The degree of confirmability implies that there exists a degree of neutrality. In other words, “the extent to which the respondents shape the findings of a study and not researcher bias, motivation, or interest” (Lincoln, 1985). The use of CIT brings some critical aspects in this regard. As the respondents were asked to tell about their experiences without being asked directly on the concept of trust, the authors had to partly interpret the answers from the respondents and categorise the incidents on trust where it was not explicitly mentioned. These interpretations are based on the authors pre-knowledge on the concept of trust and its development, which might differ from the actual reality of the cases. However, by doing test interviews and creating an interview guide, the authors brought a higher level of confirmability to the research.

As all the authors attended the NSE, this indicates that the authors can have personal interests in the findings and results of the research. Hence, setting the start-ups in a favourable position in the findings can lead to motivational bias.

### 3.5 Limitations of the method

The limitations and weaknesses of the method designed, and its execution process will be further elaborated. To the best of our ability, all limitations have been considered as a potential influence of the outcome of this thesis.

- This thesis aims at reaching literal replication in order to find and compare incidents that led to a successful collaboration. As we are trying to reach literal replication, the selection criterion could be stricter, forcing the cases to be more similar. The authors had some issues with recruiting respondents/cases, as some respondents were afraid of bad publicity, or that business strategies would be revealed. Additionally, in some cases, recruiting respondents from both sides of the collaboration were troublesome and

not possible. Due to these issues, the selection criterions had to be to fit the cases that were willing to be a part of this study.

- One of the criterions regarded the length of the collaboration/project. It had to have ended, to ensure that the respondents were not biased to report only positive incidents, as the results of this study might affect the collaboration afterwards. On the other hand, most co-development collaborations often end up having a customer-supplier relationship after the product is launched, and this was also true for our cases. Therefore, the relationship has not ended, even though the project has. Due to the continuous relationship, they might still be reluctant to tell the whole truth. Therefore, creating informed consent provided them with the security of confidentiality, making it easier to trust the prevention of information leakage.
- In CIT, the most promising data collection technique is face-to-face interviews (Lyon et al., 2015). As only 3/9 were conducted this way, it can be assumed that some of the respondents were reluctant to share all of the information about the collaborations. Conducting face-to-face interviews enables the respondents to establish some trust in the interviewees, which in turn may allow them to open up more (Lyon et al., 2015). This is especially important due to the sensitive nature of the topic, as we were trying to find successful, but also challenging incidents. As a consequence, the authors worked particularly hard to establish trust, through warming up the respondents with small-talk in the beginning. Moreover, as informed consent ensured confidentiality, we established contractual-based trust (Lee and Johnsen, 2012).
- Since most of the interviews were conducted in Norwegian (7/9), it was necessary to translate the quotes used from the transcriptions to English. Consequently, some of the wording may have been lost in translation. However, to ensure the validity of the translated quotes, they were emailed to the corresponding respondents, allowing them to cross-check the translation.
- The participants in the research were interviewed about collaborations happening up to four years before the interview. This can have affected the results of the study as respondents can have forgotten important parts of the collaborations. By asking the

respondents to draw a timeline of the collaboration at the beginning of the interviews, they got the opportunity to refresh their memory and prepare for questions about the incidents presented.

### **3.5 Ethics**

To ensure good scientific practice and to safeguard human dignity, the ethical and legislative guidelines proposed by the Norwegian National Research Ethics Committees (Etikkom, 2014) was followed throughout this research. One of the steps included in these guidelines is the informed consent of the respondents. Informed consent is the process of getting permission to conduct research on and from the individuals that will be interviewed. This consent should be informed, explicit, voluntary and documentable, and are often presented alongside the purpose of the research (Yin, 2014, Etikkom, 2014). Conforming to this guideline, the respondents of this research was contacted individually through an email, where the purpose of the study was presented, with other practical information.

Efforts were made to ensure the confidentiality of those who are made the respondents of the study, as they are entitled to have their personal information treated with care (Etikkom, 2014). As information about trust development and the inter-personal relationship between the firms is of sensitive character, the respondents wanted to be anonymous. Accordingly, the industries will not be mentioned as it will increase the respondent's possibility of being identified. Even due to these precautions, there will be some possibilities for those with industry knowledge to recognise the respondents as they might, to some degree, be identifiable.

## 4 FINDINGS & ANALYSIS

This section presents the analysis of the data collected through the qualitative method presented in section 3. It will consist of a within-case analysis of the three cases presented, followed by a cross-case analysis, linking the cases together. During the cross-case analysis, similarities and differences across all cases will be highlighted. The three cases will first be summarised individually to give context about the collaboration. Secondly, the critical incidents linked to trust development in each case will be presented and later analysed.

*Table 3: Incidents that was critical to the development of trust in the collaborations.*

Case	Incident 1	Incident 2	Incident 3	Incident 4	Incident 5
1	Initial contact	Presentation	Workshops	Beta tests	Sales to high schools
2	Initial contact	Workshops	Signing of contract	Sending employee	Challenges during development
3	Due diligence	Negotiation challenges	Beta tests	Change in organisational structure	

### 4.1 Within-case analysis of Case 1

#### 4.1.1 Introduction to collaboration

Representing the startup in case 1 (SU1) are the co-founders Martin and Peder. Martin is the CEO of SU1, responsible for business inquiries. Peder is the lead software developer. Representing the big firm in case 1 (BF1) is Astrid. Astrid is an employee at BF1. She brought her expertise into the collaboration, helping SU1 build a product that suited the needs of BF1. In this collaboration, they co-developed software where users can learn about a specific topic using an interactive platform.

The startup and the large organisation initiated the communication in June 2015, and the product was launched in January of 2018. Previous to the collaboration, SU1 had developed a

program for a different large organisation, which they had sold to a few customers in Norway. Astrid used another program previous to the collaboration with SU1. She stated that she was not satisfied with this program and wanted a new and better one tailormade for the Norwegian market, with different segmentations and in Norwegian. During the initiation of the collaboration, Astrid discovered a possibility to fund the development of the program using financial resources from the national department. In June of 2016, Martin and Astrid, together, presented a plan for how they were going to spend these resources. This was presented to the administration of BF1, who decided which projects should get the funding from the department. After the funding was secured and the contract was signed, the development phase started. SU1 was responsible for the technical development of the program. Astrid had requirements and specifications on the content of the program, in addition to bringing advise and knowledge about topic in the program when needed, at the request of Martin.

During the development phase, they had several beta tests of the product, where Astrid was present and gave feedback about the progress of the development of the software. After the third beta test, SU1 developed the software for four more months and finally launched the program in January of 2018.

Two incidents stick out as being the incidents that affected the competence-based trust between BF1 and SU1: 1) The initial contact, and 2) the beta tests. As for the goodwill trust, there were mainly three incidents: 1) The initial conversation, 2) the presentation of the project, and 3) the sales strategy used by SU1.

#### 4.1.1 Incident 1: Initial contact

Before the initial contact of the collaboration, Martin thought that Astrid knew about SU1, stating that they borrowed credibility from earlier customers. Peder further elaborated that he thought that having a product out in the market for three years brought credibility to the start-up. This was supported by Astrid: “We used SU1s product in another discipline, and there it was pretty good, and the users liked it, so I thought this was interesting”. As stated, it was clear that they had gained credibility from previous work, making the initial conversations fairly straightforward as Astrid already knew their competence. Before talking to Astrid, Martin had a conversation with another employee at BF1. The employee referred Martin to Astrid and told him that she was currently using a software and would probably have some experience with

software that Martin could learn from. Astrid asked SU1 to contact her, as she knew that SU1 already made a program.

Astrid explained that she was the driving force behind the collaboration and that she initiated it. She had previously developed software herself. In order for SU1 to create an improved program, Astrid mentioned that she wanted a Norwegian program that used a more modern setting in the software. The initial conversation lasted for over 30 minutes and ended by Martin asking to try the software that Astrid was currently using. Martin noted that Astrid's reaction to the initial phone call was almost surprisingly positive. During that time, Martin's motivation for calling Astrid was first and foremost marked research, not sales. When asked to summarise the first phone call, Martin replied:

It was very informal on the phone, and I just said: *Hi, I'm Martin, I was referred to you by Mia, who said you had done these [software]. Can you tell me about it?* For me, it was first and foremost market research. Also, I actually think it was somewhere during that conversation that she hinted that it was fine what they had, but she wished she had something other than what they had. Firstly, in Norwegian, and secondly, a program that had a more modern use case.

Martin stated that the decision to work together was a synchronised one. Once Astrid knew that SU1 could create a new, more specialised program, and once Martin heard that Astrid wanted a better program, they agreed that this was something both parts were interested in taking further.

The agreements during the early phases of the collaboration were mainly informal. Martin explained: "The relationship was typical Norwegian and relaxed. No formal demeanour, just talking about what we should do, but we had a list of things we should get clarified." Martin further explains that he intended to focus away from contracts: "We had the most to gain from this, so it was my idea to lower that barrier in order to collaborate. One thing that helps to lower barriers is to avoid talking about boring things like contracts and rather talk about the cool product we could make."



In the informal agreement, they talked about product specifications, clarifying roles, and the commercial release of the software. It should fit Norwegian conditions and a Norwegian model and have better graphics than the current program. As SU1 were the ones with the technical know-how being the engineers behind the program, they needed to acquire the expertise from Astrid. Clear instructions were given from Astrid that the product should be made exclusively for one user group, but she had no problem with SU1 selling it to other similar users: “We [BF1] also said that since we sponsor you with so many millions, we wanted this to be a program for similar users, not for this other user group, as this would lower the value of the program”.

Talking about the contract, Astrid explained that her only motivation for making and signing the contract was just as a formality, in order to obtain the funding for the project. This was also true for Martin, as the contract only appeared as a consequence of the funding from BF1 and opening up for soft funding.

#### **4.1.1.1 Analysis of initial contact**

Before the initial conversation with Astrid, Martin had heard from one of her colleagues that she was already using programs in her classes. Astrid is well experienced in her field, and SU1 had expectations of the skill set of Astrid that would be valuable in the making of the content of the program. This led to increased levels of competence-based trust in Astrid even before the initial conversations. Furthermore, her previous knowledge in software development also strengthened competence-trust during the initiation phase.

Astrid had heard about SU1 before the initial conversation with the startup and knew that their previous programs were satisfactory and enjoyed by the users. Astrid and SU1 already trusted the competence of each other before they had initiated contact. This trust was already solidified during their first conversations, as they both articulated that they were capable and ready to go ahead and co-develop their program. This supports the findings of Viitaharju and Lähdesmäki (2012), who argues that when a big firm shows faith in the product offered by the smaller firm, trust between partners can be developed. While competence trust has been developed, the social distance between the firms is still apparent, as the partners were not fully unaware of each other’s way of thinking (Ford, 1980).

While a substantial degree of competence trust was already established previous to the initial contact, the goodwill trust was also quickly developed in the first conversation. Martin and Astrid made informal agreements, so-called gentlemen's agreements instead of a contractual agreement. They both agreed that they were going to work together to develop the product and that SU1 was not going to sell the product to a different user group after they had launched the program. The use of informal agreements instead of contracts shows that goodwill trust was present in the initial phase of the collaboration. This builds on the research of Jiang et al. (2013), who found that goodwill trust can be a substitute for formal contracts.

The development of fast trust between the actors during the initial contact seems to have had an impact on the perceived risk of the collaboration. According to the findings of Hurmelinna et al. (2005), when managers build fast trust, their orientation towards the importance of a contract in an asymmetrical alliance is lowered. This indicates that in this trusting relationship, the contract is perceived more as a formality and is given less attention than a relationship without trust. Martin and Astrid both explicitly stated that the contract was only a formality, indicating that high levels of trust were present before signing the contract.

Astrid was the driving force behind the collaboration, which seemed to generate trust between SU1 and BF1. Astrid was the one initiating the relationship and attempting to find a solution that would enable the firms to work as partners. This fits the findings of Viitaharju and Lähdesmäki (2012), who explains that these committed champions are key to building trust.

#### 4.1.2 Incident 2: Presentation

The presentation was brought up by Martin and Astrid as an important point in the collaboration. In order to get funding from the department of education, the project had to be presented and get accepted by a jury. In June of 2016, Martin and Astrid had a presentation in front of the upper management of BF1 in which they presented the idea to create a needed program along with a plan of how the project was going to be executed. Martin was responsible for most of the presentation, including outlining how the project was going to be carried out and describing the product they had planned. Astrid followed up by presenting why there was a need for this type of product in her classes. When Martin talked about the presentation, he said:

I was excited and nervous about the presentation since we had invested time and effort in the collaboration, in other words, put all the bets on one horse. If the presentation failed, SU1 would have had to find another partner to collaborate with. [...] What was cool about it was that it was an arena where we stood together before those who would contribute to the funding. We were pretty coordinated, and it turned out that even if there were no [formal] agreement there, we managed to show them that we were gathered around an idea and a plan which was quite concrete, where we know what the results will be.

As a result of the presentation, the project got founded. Astrid mentioned that: “As long as I was reassured that they had good programmers, and one of the things that they got for the funding was the ability to hire. And they did. They have really pushed on. They didn't spend the resources unnecessarily.”

#### **4.1.2.1 Analysis of Presentation**

The presentation of the project plan to the management of BF1 in June of 2016 was a crucial milestone in the collaboration. Astrid and Martin presented together, demonstrating their shared values and commitment to each other to the management of BF1. Martin presented a clear idea of the project, while Astrid presented the need she had as a user of the program. At this stage, SU1 had invested heavily in the project and risked having to start over with another collaboration partner if this was to fail. This event strengthened the goodwill trust between the partners, especially the goodwill trust that Martin had in Astrid, as they displayed a commitment to each other and invested time and effort into the presentation without any formal agreement in place. It was clear that Astrid acted as a committed champion, spending extra time and effort in presenting the idea to the management, increasing the goodwill trust that SU1 had in her. As found by Viitaharju and Lähdesmäki (2012), these committed champions are key to building trust.

Getting the project accepted by BF1 showed that the large organisation was willing to commit to the collaboration, in essence putting their faith in SU1. This presentation increased the trust that BF1 had in SU1 enough for BF1 to fund the project. Martin also increased his goodwill trust in BF1 due to the big commitment that BF1 demonstrated, as big commitments can have an impact on alliance success and trust development (Weber et al., 2004).

### 4.1.3 Incident 3: Workshops

During the development phase of the project Peder, Astrid, Martin and a person representing the user group of the software attended several workshops. They met every month, either face-to-face or by video chats, and the workshops had mainly positive results. Martin commented; “There were quite a few of the workshops which ended up with: *AHA, that's how we should do it!*” Peder pointed out that Astrid was very easy to work with, and they got answers quickly. She came with specific requirements, and SU1 replied that they intended to meet the requirements. Martin elaborates further about cooperating with Astrid during the workshops:

It was quite informal, and we were quite informal, so it was very easy to be entrepreneurial with her, in the sense that if I made a suggestion, it was never like, *oh, that was a little weird*, or *oh, that's not how we do it here*, but always like, *yes, okay, let's do it!* If I asked for a workshop in the middle of summer, everyone turned around and joined in. It was always like that when we asked for anything.

When asked about the importance of the workshops Peder commented: “The fact that we had the close partnership with the customer, where we could ask questions along the way, and have these follow-up meetings, has been absolutely critical for the development of the product”. The workshops seemed to be especially important to SU1, as the meetings gave them clear directions on the next milestones and critical issues.

#### 4.1.3.1 Analysis of workshop

The workshop that took place during the development phase of the software had an impact on the trust between Astrid and SU1. First, face-to-face communication can foster strong feelings, such as trust (Eccles et al., 1992). Workshops where the parties met face to face, seem to have had an impact on the trust between the parties, as they expressed a good environment in which to collaborate as a result of these workshops. Seemingly, the goodwill trust between the partners increased as a consequence.

While this was a buyer-seller relationship, the employees of SU1 felt that Astrid went far in contributing to the solution and assisting SU1 in the development of the software. Astrid demonstrated that she was a committed champion in the collaboration by being there for SU1 when this was requested from her. As such, showing the importance of a committed champion

(Viitaharju and Lähdesmäki, 2012). Astrid was important for the trust between SU1 and BF1, and the communication between the parties contributed to easier communication. Research also finds that this well-designed interface can foster trust and commitment (Kelly and Schaan, 2000), which seem to have been the case during the workshops.

#### 4.1.4 Incident 4: Beta Tests

During the development phase of the project, SU1 and BF1 conducted beta tests of the product in Astrid's classes to uncover critical issues before releasing the software commercially. The first test took place in April 2017 with 30 users that were connected to the large firm. This was a very early prototype that lacked most of the features that SU1 had planned with Astrid, and what she was expecting the beta to have. Martin acknowledged that; "The basic function was in place. But we did not know if the system could withstand 30 users at once. And all the assistance functionality that a commercial program should have, wasn't there". However, after the first test, Martin seemed satisfied with the result:

It went well so we said *okay, now we know what needs to be improved until next time*, which would be the full-scale protest test. We got a to-do list and a list of improvements. We got a reality check and realized that we had a lot of work to do before the next test. It was ambitious but realistic. But we did not share these kinds of worries with Astrid.

SU1 greatly appreciated the behaviours and participation of Astrid. When asked about her participation, Martin commented:

Astrid was happy and that was great, so we were very happy. We had, after all, collaborated with people before that only was present for 10 minutes during the entire test. This type of behaviour didn't show any particular interest in what we did.

The second beta test took place in September 2017. This time 190 users from BF1 participated. Two weeks later, the final beta test took place, but this time with 150 users. During the second beta test, the program crashed, and Astrid had to step in and have a 15-minute presentation while Peder tried to fix the program. After the 15 minutes, the program worked again, and the test was finally conducted. Peder felt that this incident affected the relationship in a positive

direction: “It was positive because we felt she was on our side and helped us to get over the obstacle.” On the other hand, Astrid was disappointed, as her expectations was not met:

Perhaps I lost a little of the illusion of how good they were. They said that they were very good, and they were maybe a little more like, just ok, and I was quite straightforward and said *I don't think this is so nice, can it get any better?* And then they replied, *Yes, we're working on it.* And I must give them some credit for trying. Although I was disappointed with the graphics, I think the program works well anyway. Would love to see better graphics, but okay. I'm not quitting the contract based on that.

#### **4.1.4.1 Analysis of beta tests**

During the beta tests, it was evident that the competence trust that was developed previously decreased (Viitaharju and Lähdesmäki, 2012). This is due to the disappointment that Astrid felt, as she had higher expectations of the product. These expectations or trust in the product was built before the collaboration. This type of trust in the product can be fragile (Viitaharju and Lähdesmäki, 2012). SU1 was aware that they tested an unfinished product but did not know that Astrid was disappointed in their competence. There had been a lack of communication and openness during the initiation. This lack of openness comes into play during the beta test, when the expectations that Astrid had was not met. Openness towards an asymmetric alliance partner carries certain risks (Enkel et al., 2009, Dahlander and Gann, 2010). This was displayed when Martin decided not risk being fully open about the challenges during the beta tests. After this incident, Astrid lowered her expectations of the product, but the issue at hand was not significant enough for her to quit the contract. The beta test gave Astrid insight into the product, and this resulted in disappointment.

Interestingly, even though Astrid felt that the beta tests were a disappointment, Martin and Peder were happy with the way that Astrid acted during the same incident. Her behaviour went beyond the expectations of SU1, and they felt that she made a special effort for the collaboration. This behaviour resembles that of a committed champion (Viitaharju and Lähdesmäki, 2012).

#### 4.1.5 Incident 4: Sales to organisation with different users

Astrid mentioned multiple times that she had told Martin only to sell the product to one specific user group, but Martin did not follow through on this informal agreement. Astrid explicitly stated that this action was a breach of trust:

I communicated it directly in the meeting that it should only be for [specific user group], and possibly for [similar user group]. [...] And that they can sell it to the rest of this country or outside, but not to [specific user group]. And they agreed. So, at some point, they changed their minds. But I don't think we had any written contract for this, perhaps we should. [...] Because now we may experience that the product loses its value for the users.

When Astrid approached SU1 to express her disappointment about this issue, Martin seemed bothered, but laughed it off. SU1 later asked if Astrid was interested in co-developing a software for a similar topic, Astrid rejected the offer. When asked for the reason Astrid explained:

Because I didn't trust Martin. If I said *okay, let's develop this but I want it only to be used by [specific user group] and not for [other user group]*, I would not trust what he said was true. I would need to have it in a contract written down, with two lines under the answer, and I do not know if it would work in a start-up phase.

The rejection was a result of the breach in the informal agreement that Martin had displayed. Astrid expressed that developing a new simulation in a different topic would be interesting, but she did not trust him. Again, referring to when Martin sold the final product to [other user group] and broke the oral agreement: “Martin is a salesman, and he knew that there was potential there, and I guess that counted more for him”.

##### 4.1.5.1 Analysis of sales to high schools

The most critical change in trust during the relationship happened after the product was launched and put to use by BF1. During the initial phase of the collaboration, Astrid and Martin had an agreement that the finished product was only to be sold to the agreed user group, not to the other user group. This informal agreement was built on the goodwill trust that Astrid had

put in Martin. SU1, on the other hand, had decided to sell their program to the other user group after the launch. According to Astrid, this was a breach of the goodwill trust that she had put in Martin through the informal agreement, as this was outside the realms of a contractual agreement. When Martin later proposed a new collaboration with BF1 on a new software with a different topic, Astrid rejected the offer, stating that the reason was that she could not trust that Martin would keep his promises, displaying a lack of goodwill trust from Astrid. This descending goodwill trust in Martin impacted not only him personally, but also SU1 as a company.

If SU1 had been more open to BF1 concerning the expectations of capabilities and the future sales strategy of SU1, might not have eroded the way it did. These findings are in line with Blomqvist (1997), showing that the dimension of goodwill trust is necessary for a partner to be able to accept the risk and vulnerable position that will arise. In this case, the dimension of goodwill trust was too low for Astrid to accept the risk and vulnerable position in a potential future collaboration. Thereby, showing that trust is especially crucial in building a successful asymmetric strategic alliance (Chen et al., 2017, Alvarez and Barney, 2001), and in this case, the trust was not sufficient for the continuation of the collaboration.



Table 4: The mechanisms that had an impact on trust development in case 1. [+] indicates positive outcomes, [-] indicates negative outcomes

Mechanisms	Incident 1	Incident 2	Incident 3	Incident 4	Incident 5
<i>Committed Champion</i> (Perez and Fierro, 2018, Viitaharju and Lähdesmäki, 2012)	+	+	+	+	
<i>Commitment from top management</i> (Ford, 1980, Kelly and Schaan, 2000)		+			
<i>Face-to-face communication</i> (Eccles et al., 1992)			+		
<i>Well-designed interface between partners</i> (Kelly and Schaan, 2000)			+		
<i>Open communication/information sharing</i> (Munksgaard et al., 2015, Kelly and Schaan, 2000, Gulati et al., 1994)			+	÷	÷
<i>Faith in product</i> (Viitaharju and Lähdesmäki, 2012)	+			÷	
<i>Shared values</i> (Ybarra and Turk, 2009, Perez and Fierro, 2018, Blomqvist, 2002)					
<i>Big commitments</i> (Gulati et al., 1994). (Weber et al., 2004)		+			

#### 4.1.6 Summary of analysis

The environment of the collaboration between SU1 and BF1 is perceived as low-risk. Astrid was not dependant on this collaboration in her work as this opportunity presented itself, without any real consequences in case of failure. She also did not invest personal financial resources or significant abundant working hours into the collaboration. The financial resources invested in the project from BF1 would not have been used if SU1 and Astrid had not applied for it. SU1,

as a startup, had a higher risk during the collaboration. They needed a source of income in order to stay afloat financially. They also invested substantially more time into the collaboration, taking responsibility for the project presentation in June and the actual development of the program. This shows the asymmetry in risk that often is present in asymmetric alliances (Blomqvist et al., 2005).

Notably, due to the low-risk environment, the trust required was relatively low. This can be due to that BF1 is an organisation that is not dependant on shareholder value in the same way corporations are. This reduced the level of trust needed to continue the project. Astrid, as the committed champion, did not experience high risk during the collaboration, making it easier to put trust in SU1. One might argue that she might have had too much goodwill trust in Martin. Astrid did not put the informal agreement into the contract. This overreliance of trust has been a substitute for a more complex formal agreement. (Aalbers, 2010).

When looking at the incidents at a relational level, the different types of trust have had a significantly different impact on the actions and decisions in the collaboration. First, the way the beta tests affected the competence trust that Astrid had in SU1 did not affect the collaboration enough for Astrid to cancel the contract. Meanwhile, when the goodwill trust that Astrid gained in Martin was reduced enough, the impact was tremendous. This indicates the importance of goodwill trust, especially in collaborations with informal agreements. In line with Minshall et al. (2010), it is vital to be as open as possible with each other, as this openness acts as a safeguard to avoid situations that could lead to the erosion of trust at a later phase in the relationship. This lack of openness turned out to be a hindrance during the later phases of the relationship.

## 4.2 Within-case analysis of Case 2

### 4.2.1 Introduction to collaboration

Representing SU2 was Simen, who is the co-founder and Chief Commercial Officer of SU2. Simen was the central communication point from SU2 and contributed to the cooperation with technical and managerial competence. Representing BF2 was Ole and James. Ole had worked in different cases in BF2 over the last five years, but he did not have any experience working with the type of technology used by SU2. He moved to Norway and became a part of the SU2 team during the development of the product. James was the primary communication link between SU2 and the top management in BF2. He held technical responsibility from BF2.

The collaboration between SU2 and BF2 started in September of 2016. Previous to the collaboration, BF2 was searching for innovations that could help them expand their business to new markets. BF2 contacted SU2, and with the help of a consulting firm specialising in collaborations with startups, they suggested a collaboration with SU2. Starting at the first conversation, BF2 conducted due diligence with SU2 to make sure they had the right capabilities and motivations for a joint project. From September to February, SU2 and BF2 had several workshops where they discussed commercialisation, technical aspects and contract specific aspects.

In February 2017, they signed the project contract. Shortly after, BF2 sent Ole to Oslo to work with SU2 during the development of the product. The development phase of the floatable platform lasted from February until October 2017. On October 12th, the product was launched in Norway and was successfully presented to the management of BF2.

Following, we will shed light on the trust developing incidents that were discussed during the interviews. These incidents were the initial conversations, the workshops in Madrid and London, signing the contract, Ole joins the team in Norway, and challenges during the development phase. Two incidents highlighted the change in competence trust between SU2 and BF2. 1) The initial conversations between the partners and 2) the workshops did previous to the contract being signed. The most notable incidents that affected the goodwill trust between BF2 and SU2 was 1) knowledge before the collaboration, 2) the workshops prior to the

contract, 3) the signing of the contract, and 4) the development phase of the project. These incidents leading to a change in competence trust and goodwill trust will be elaborated below.

#### 4.2.1 Incident 1: Initial contact

BF2 had little information about SU2 before the initial conversations, but they had been in a business relationship with a different Norwegian company. Simen explained that this might have been a contributing factor for their trustworthiness prior to the first contact.

BF2 contacted SU2, and the first conversations were made through conference calls. The purpose of these conversations was for BF2 to ensure that SU2 was legitimate and a right fit as a partnering firm. James explained that he could tell from the initial conversation that SU2 had substantial knowledge and was passionate about their work. As a result, James had confidence in their product, but more due diligence was needed:

The essential part was that we felt that they were passionate about what they were doing. And they really trust in the product, so that was the first sensation, but after months obviously, we need to have proofs, technical proofs.

Simen confirms the great starting point, emphasising the excellent communication. He explained that SU2 did not know much about BF2 before the initial conversations, but more experienced members of the board told him to take them seriously as they were forward-thinking players. BF2 got help from a consulting house to structure how they worked with startups. These actions seemed to make the communication more comfortable and help them to show that they were serious. Simen said:

They seemed very interested, and they also got help from this consulting house to structure how to work with startups. [...] They didn't have a top-down approach to us. They pitched themselves to us. We pitched ourselves to them. Both had something the other part wanted. So, it was surprisingly balanced.

When asked about who the main driver for the collaboration was, Simen answered:

I think it was very mutual! This was a serious opportunity. This was an opportunity to commercialize the technology, really get it out into the market. And they wanted to do something, quite obviously, it was very balanced throughout the negotiations and we noticed that. Because if you are in a meeting and it is very unbalanced, and one party sells itself much more than the other, it can take time to get serious. But they had checked us out online. They had thought of the same themselves. It was quite obvious, so it was really just trying to get a structure that worked. So, I would say it was 50/50.

SU2 had initially planned to develop a “dummy” prototype, but BF2 wanted to develop a fully functional system. From the perspective of BF2, having the sea launch in October was crucial. Especially for James and his team, as he was the one pushing and believing in this project, going into this project without the standard requirements usually necessary for an innovation project:

Because from the top management in BF2, it's also very important to ensure return on equity and as we start an innovation project here in BF2. The first thing is, *ok, this is a new technology, perfect, but do you have a client already? Do you have an end-user that will use the technology? Now, if you don't have that end-user, it's impossible to start the innovation project*, but SU2 wasn't like that. We thought it was a really good technology and we convinced our board to finally start the project without the end-user signed.

#### **4.2.1.1 Analysis of initial contact**

Before the collaboration, SU2 viewed BF2 as a forward-thinking player and a company whose inquiry needed to be taken seriously. This displays that the startup had already built trust in the values and processes of their potential partner. In other words, SU2 had already increased the levels of organisational-based trust in BF2 before establishing individual-based trust. This finding is in line with Barney and Hansen (1994) who points out that in large firms, it is often the organisational-based trust that is experienced first. BF2 had also established some levels of competence trust in SU2, before the first contact. They searched the web, found SU2 and developed high enough levels of competence trust through their reputation to make a phone call asking for more details.

From the first contact, BF2 conducted due diligence on SU2, in order to ensure that they had the knowledge needed to be part of the collaboration project. As mentioned by Simen, SU2 did not have any track record and needed to prove their competence to BF2 prior to the relationship. They compensated for this lack of experience by bringing seniors who had been involved in similar types of industrial collaboration into the initial meetings. Additionally, they followed up with thorough documentation and used the reputation from other well-established Norwegian LNG companies. Due to the lack of knowledge during the early phase, many judgements will be based on the reputation of the opposing firm (Ford, 1980). These actions can have affected the perceived reputation of SU2, increasing the trustworthiness of SU2 as a serious and competent player. As a result of these actions, BF2 realised how serious and passionate SU2 was, and that they had faith in their product. This impacted BF2, who also developed faith in the product of SU2. Thereby affecting the competence trust (Viitaharju and Lähdesmäki, 2012).

It was unusual for BF2 to start a big project like this without a customer and an end-user. When the top management in BF2 expressed their worries about the collaboration, James stepped in. He convinced the top management that they would find the end customer in time. This action demonstrated his role as a committed champion (Viitaharju and Lähdesmäki, 2012).

#### 4.2.2 Incident 2: Workshops

Before the contract was signed, the companies had several workshops together. The workshops were placed in three big European cities, one being Oslo. They used the workshops to get to know the project and the people involved. James expressed that the technical workshop in one of these cities helped them understand and trust the technical capabilities of SU2:

At that moment we realized we could go ahead; we could sign a contract with these guys because with their ideas and obviously. With the engineering capabilities in SU2 that BF2 can put on the table, this would be a success for sure. Yes, that workshop in [city of BF2], that technical workshop in [city of BF2] was, from my point of view to ensure that, technically speaking this is a good company to go with, facing a project and a challenge like this.

Simen commented that the workshops helped them to understand the seriousness of the people involved. When asked about how the workshop in London affected the relationship with BF2, Simen explained his perspective:

It seemed like they were serious before we signed the contract, so we went to London. We met BF2, with this consulting company and they were 20 people in the meeting room! And then we felt that, *Ok, they are blowing a lot of money on management consultants and they are putting in a lot of time, they are serious!* So, we realized that they were very serious. The same was with the people too, we called, and we had a great match with the people. And they also had a passionate... a champion, who believed in the project. [...] So, there were many things that matched. We had no guarantees that we would get a contract, but we felt we were a good match. We communicated well together. I think it's about people who meet and see each other in the eyes and talk together. [...] We didn't have a track record, so they didn't know, but we had people with us in the negotiations that had done things like this earlier. And we had talked together for 2-3 months. And we had followed up on documentation all the way. So I think that's important. [...] You just have to mean what you say. If we had done some tests or had any documentation, we sent it over right afterwards. Maybe we developed some trust there... I think it's all about people really! [...]

James expressed the same experience about the workshop in London, commenting:

In November in London, we had the first face-to-face meeting. And I think that was a milestone in our collaboration because that face-to-face meeting helped us to ensure that SU2 was a good company with clear ideas, with robust and with really interesting technical arguments. It was at that point we realised that SU2, together with the power of BF2 as a global leader in the [specific] market, and also with the engineering department of BF2, this was a great match. They had invested a lot of time, but they didn't have the engineering part developed. There was so much to do, still many things to do, but by collaborating together, we thought together, and finally, it was a reality.

#### **4.2.2.1 Analysis of workshops**

During the first workshop of the collaboration, in London, BF2 entered the meeting with 20 employees in the meeting room. This workshop was the first time the employees from SU2 and BF2 met face-to-face. James noted that during one of these workshops, he was confident that BF2 could go ahead and enter into a collaboration with SU2. This finding is in line with research that finds that strong feelings such as trust or distrust are often formed in face-to-face interactions (Eccles et al., 1992).

The workshop made Simen realise that BF2 was serious about the collaboration. This is an example of the big commitments, that is among the best predictors of alliance success and high levels of trust. This is considered a potent tool for quickly developing trust (Gulati et al., 1994, Weber et al., 2004). In this situation, BF2 took the risk of investing many work-hours into the collaboration early, which both help BF2 to find out if they have competence trust in SU2, but also developed fast trust between the companies. This commitment from the top management was noted by Kelly and Schaan (2000) to be the most crucial factor in successful alliance implementation and can be shown to have had an impact on this case as well. Resonating with the findings of Blomqvist (2002), these intense interactions in the negotiation helped the partners quickly develop high levels of trust.

From the initial conversation with SU2, BF2 was lowering the financial risk they faced in the collaboration by making sure that they were confident in the competence of SU2 as early as possible. As the product that was being co-developed needed to be extremely reliable and well-functioning, essentially being full of risk, they needed to establish high levels of trust in their competence before agreeing to a contract. When discussing the workshops, Simen mentioned how he got excited by the champions in BF2. This emphasises the clear and important role that these employees have had for SU2 during the early phase of this collaboration (Viitaharju and Lähdesmäki, 2012).

#### **4.2.3 Incident 3: Signing the contract**

After four months of getting to know the people and the project, the contract was signed in Oslo in February 2017. The contract was tailor-made and included incentives if the other company succeeded. It also gave BF2 exclusivity to the technology. James further elaborated on these aspects of the contract:



It was actually a tailor-made contract. Normally, contracts with BF2 are not as deep as this contract, but we needed to agree on point by point. We obviously had a standard clause if something happens, the court of that country decides, etc, but we needed to go point by point to agree. Finally, we had a document that both parties could sign. [...] We now have exclusivity with SU2, and this is very important for us [...] because, for example, if some of the other players come to SU2 and also wants to use that technology, they will compete with us and everything could become bad.

Both companies knew that this was a high-risk project and that they needed to work together in order to reach the goals set in the contract. The contract was made to give incentives that required the firms to work together as partners. The result of this contract was that the firms sat on the same side of the table with a shared interest. Simen elaborated:

What was really good about the relationship was that we sat on the same side of the table. It was a contract that made us partners. We had the same interests all the way. Instead of looking from above and down where we were somehow puppets running around and doing what they said, we instead discussed the problems together. We tried to find solutions together. [...] So there were many benefits to having them on the team and we didn't really notice the asymmetry. Both parties wanted to make this happen. [...] We had a very good relationship, being able to present problems to them and looking for solutions with us instead of giving us a hard time or point fingers at us!

After the negotiations, both parties showed enthusiasm and relief about signing the contract. Simen commented:

It was a very good experience when we signed the contract! It was a huge milestone! After 4 months of negotiation, we signed, and it was a nice event, for both parties, I think. I think everyone was happy with that deal. It was like they said, *it is balanced*, and we thought of the deal on the way home, *yes this is a good deal!* It's a good deal for them and it's a good deal for us.

James explained how the relationship had evolved from professional to a more personal relationship as a result of signing the contract:

I think that the workshop helped us to have a good personal relation, but the point where we finally achieved a personal relation, was caused by the really close development that we had, starting with the signature of the contract in February. [...] We also had personal meetings, without the professional setting, had a cup of coffee. Eventually, we started to have that personal relation, but the starting point of that personal relation, in deep, was the contract signature.

#### **4.2.3.1 Analysis of contract signing**

The contract included clauses that created incentives for the companies to make sure the partnership was successful. This can have contributed to the collaborative nature of the development phase and can explain why high levels of goodwill trust were reached. Blomqvist et al. (2005) found that the process of making the contract may be used purposefully to build trust over time. In this collaboration, the clauses in the contract not only increased the trust during the contracting process but also during later phases of the collaboration, where the companies needed each other's help. Additionally, the big commitment of giving BF2 exclusivity of the product increased the trust of SU2 (Gulati et al., 1994, Weber et al., 2004). By letting SU2 be responsible for the technical part of the product, BF2 demonstrated to SU2 that they had high levels of competence trust in the startup. This deliberate act of showing how they trusted SU2, increased the goodwill trust that SU2 had in BF2 by increasing openness between the firms (Kelly and Schaan, 2000).

SU2 and BF2 developed a highly complicated and intricate contract. The two companies had also established high levels of competence- and goodwill trust before the signing of the contract. As noted by Aalbers (2010), even when collaboration partners that are parts of fast-moving markets use trust as an informal coordination mechanism, there is still a need for a contract. The completeness of the contract can have contributed to the alliance success, as they did not only rely on informal coordination mechanisms in order to make the companies work together as one team. Here, they used incentives that were supposed to help develop collective interests for both firms, enabling the firms to sit on the same side of the table. Munksgaard et al. (2015) found that trust is perceived as a necessity for the development of collective interests

in asymmetric relationships. As such, the levels of trust prior to the negotiation of the contract was relatively high. BF2 focused on establishing high levels of competence trust early, making sure that SU2 was a sufficiently competent partner as early as possible. The goodwill trust that was developed before the contract was a result of good communication and shared values between the employees of SU2 and BF2. BF2 organised the contract to include sending an employee to Norway and exclusive rights. This can be seen as an attempt of emphasising the commitment that BF2 had to the relationship, which builds on (Ford, 1980), who finds that relationship partners can organise the contract to include the status of personnel and frequency of contact between the firms.

James felt that the deeply personal relationship started after the contract was signed. This demonstrates the effect that a balanced and mutual agreed upon contract can have on the independent goodwill trust of a collaboration. High levels of complex formal contracts and high levels of trust can achieve the best exchange outcomes (Woolthuis et al., 2005, Li et al., 2010, Poppo and Zenger, 2002). The big commitment and faith that the companies put in each other were shown to have affected the mutual trust between the companies. SU2 expressed that signing a contract like this was a huge milestone. Signing a contract is a sign of a big commitment, which again is found to be among the best predictors of success (Gulati et al., 1994).

#### 4.2.4 Incident 4: Ole joins the team in Norway

Shortly after the contract was signed, Ole moved from Spain to Norway as a way of improving the communication between the partnering firms. Ole commented further on his reasons to move to Norway:

So, I went to Norway in 2017, in about February, because the idea was to have someone close with the team, SU2, in their office, to make sure the collaboration and communication were better than by Skype or by email. The idea was to collaborate with them in their office during the whole project. [...] I think it's much easier if you talk to a guy that you have in front of you than trying to skype with 5 people or 6 people or 10 people in a skype meeting.[...] I remember my boss saying *Ole, you are not there to change anything and go into the details! You are there to analyse, to understand the whole idea. Try to explain to us, to the technical department what they are doing, and*

*try to improve the project if it is possible. [...] What we did there was just to say: Ok, we suggested to change this [...] We didn't go into the details because SU2 had the whole knowledge and it was their design.*

On his first time of arrival to Norway, Ole had some communication issues with SU2, as it seemed like SU2 had a hard time trusting Ole's intention. Ole explains:

*In the beginning, I thought Ok, these guys don't want to talk to me! Maybe they are thinking that I am like a spy or something like that? That is what I thought at the beginning, and I felt that many times during the project, and it's normal, it's normal. [...] I tried many times to explain ok, I'm here to collaborate because I was there to help them! I wanted to explain to them that it was not easier to do a Skype meeting every day for two hours, because it's not the same, and what I tried to explain it, I'm here, and... to help you! So, after a month, I got to know Jacob [employee of SU2], Simen and every guy there in Norway better than my colleagues here in [city of BF2]. So, for me, I was part of SU2! Not part of my company! And I tried to explain Ok, we have the same goal! We have to do this platform here at this moment. It's good for me, it's good for you, so I'm here to help, and this is what I'm saying to you right now. I had this conversation with the team in SU2, I think, every week I had to explain, Ok, I'm not a spy, I'm not going to check everything you do. I'm not going to discuss every detail, I'm here to help if I can.*

They seemingly started to be more comfortable around each other after a few months, which in turn motivated Ole to put in the extra work needed, even working during holidays:

*I was doing the work, and they were doing the work, but I think when you have a good environment... that's very important in order to achieve your goals. I think when you are motivated, when you go to the office happy every day, when you feel comfortable with the people you work with every day, you feel that you can do everything you want. That is what I think! Here in Norway and everywhere, it's basic. [...] I think the relationship was perfect during the whole project.*

Even though they might have had friction during the first weeks of the development phase, Simen commented on the positive outcome of having Ole in Norway:

Ole was in Norway for half a year, and he worked with us and did the communication with Spain. It really helped. I think he eventually became a SU2 person. He helped us as a mediator between the parties and could present information, report a little, be a bridge builder. I think that was important.

#### **4.2.4.1 Analysis of Ole joins the team in Norway**

BF2 decided to send a local employee up to Norway to be the eyes on the ground and to make sure that the communication between the teams was better than online communication. The decision to send an employee to another country for seven months in order to help the collaboration partner succeed can be viewed as a big commitment, which in turn contribute to the success of the alliance (Gulati et al., 1994, Weber et al., 2004). Additionally, as found by Ybarra and Turk (2009), increasing the quality of communication is one of the essential mechanisms for successful collaborations.

During the first weeks of his time in Norway, Ole felt that SU2 had low levels of trust in him. By spending time and effort on face-to-face interaction with the employees of SU2, he felt that the trust increased. In one month, high levels of individual trust were created between him and the team in SU2. This shows how face-to-face communication is effective in strengthening the trust (Eccles et al., 1992). By having a person as part of the team of the collaboration partner, face-to-face communication helped build goodwill trust, lower the barrier for information-sharing and opened up the communication between the firms. This building of a well-designed interface between asymmetric partners can foster trust and commitment (Kelly and Schaan, 2000). Also, sending Ole to Norway reduced the geographical, cultural and social distance between the firms, increasing trust in the relationship (Ford, 1980).

Ole quickly established high levels of goodwill trust in the employees of SU2. After one month, he knew the staff of SU2 better than his colleagues in BF2 and looked at himself as part of SU2, not as part of BF2. The working environment helped him achieve his goals. He was happy and motivated to go to work every day and felt comfortable with the people he worked with, even stating that the relationship was perfect. This further demonstrates the high levels of

individual trust that was built between the individuals of the SU2 team and Ole. Individual-based trust results in more intense and personal commitment than organisational relationships, and personal relationships can have a high impact on the effectiveness of an organisation (Anderson and Narus, 1990). Ole was highly motivated for work during his time in Norway, even going as far as to spend his holiday helping the team during a crisis.

Ole demonstrates the competence trust that BF2 had in SU2 by not discussing the technical details of the project. BF2 put their faith in the knowledge of SU2 and let them develop the product. This action shows that due to the high levels of competence trust, BF2 was able to “let go” of the control of the project and allow SU2 to work as independently as they wanted.

#### 4.2.5 Incident 5: Challenges during the development phase

After the contract was signed, the development of the product started. The development had both smooth and challenging phases. One situation was brought up multiple times. James explained:

We had very important design problems with that manufacturer. That manufacturer was a French company, and we realized that with the design fabrication, the design and fabrication process, it was impossible to have that we needed for the launch. I remember that company, also with SU2, because SU2 thought, *Ok, maybe we need more time or we need to delay that launch etc*, but for us, for BF2, we also had an agreement with our top management to have that launch in October.

Simen acknowledged and appreciated James's risk-taking behaviour by commenting; “It was James who I think was one of those who stuck out his neck and had to take a pretty big hit if this did not go well”. He further explained how they collaborated to resolve this issue:

We collaborated really close, in a technical and also a commercial perspective. I remember meetings with SU2 and BF2 at one part of the table and that French company on the other part and the really tense meetings. We were very aligned, and we reached the correct design.

When asked about how this had changed the relationship between him and SU2, James replied:

I think that event reinforced the relationship between SU2 and BF2 because you know, as we were funding the project, the relation between the company who promotes the project with different contractors... Normally, we would say *ok, it's your problem! Find a solution, try to fix it. And if not, we have some clauses in the contract that we could apply and if you don't finish at that moment, you will pay me that amount of money*, but with SU2, it wasn't like this. [...] We were two companies, as one team, at one level. It wasn't a project with the promoter who is funding the project and a contractor, subcontractors etc. No, both companies co-developed the project. [...] We put everything we had on the table and I think our collaboration became better after that very important problem.

The collaboration had another challenge during the development. SU2 had chosen a supplier who had some faults during the development. SU2 took on the responsibility to solve the issue. Simen commented on the situation:

Challenge 2 was quite serious and could potentially affect the entire schedule. Because they had done some error, we had to do a lot of work again. It was fixed, but it was serious, we knew the time is important to them. We asked ourselves *How do we handle that situation? How much do you say? How open are we?* But the strategy from the start has been to be completely open on everything, positive and negative, together and share it, so we did. It really worked really well. They handled it in the right way. And looking for solutions instead to point your finger at someone.

Both parties were deeply invested in trying to find a solution to the problem. James stated that they worked together to solve the issue and that SU2 was proactive in finding a solution. Ole even spent most of his holiday to help fix the problem: "I spent the whole week attending meetings via Wi-Fi, talking to some of the guys, talking to Simen, talking to my company, talking to inspectors, talking to everybody. And I think I spent 300 euros by phone, maybe because I was worried."

#### **4.2.5.1 Analysis of challenges during the development phase**

During the wielding challenges, SU2 was uncertain about what to share with BF2. Simen points out that the strategy from the start was to have openness towards each other, both positive and negative challenges. This openness towards the alliance partner carries certain risks (Enkel et al., 2009, Dahlander and Gann, 2010). Minshall et al. (2010) stress the need to be as open as possible during the deal-making process with each other concerning potential challenges one might face. Establishing open communication, such as BF2 and SU2 did help them to overcome alliance problems and prevent alliances from becoming destabilising (Kelly and Schaan, 2000). In this situation, SU2 took a perceived risk by opening up to BF2, but BF2 handled the news well and did not point any fingers. This shows the effect of the trust built during the deal-making process of the collaboration. As a result of the agreement, the parties were to be open about all the challenges that the companies faced in the development of the product. Simen quickly noted BF2 when they had challenges, putting all the necessary information on the table, being vulnerable, and hoping that BF2 would respond by working together, rather than point any fingers. Not only does this show that the competence trust was high, but also that BF2 responded in such a way that the trust further increased during the development.



Table 5: The mechanisms that had an impact on trust development in case 2. [+] indicates positive outcomes, [-] indicates negative outcomes [+].

Mechanisms	Incident 1	Incident 2	Incident 3	Incident 4	Incident 5
<i>Committed Champion</i> (Perez and Fierro, 2018, Viitaharju and Lähdesmäki, 2012)	+	+			
<i>Commitment from top management</i> (Ford, 1980, Kelly and Schaan, 2000)		+			
<i>Face-to-face communication</i> (Eccles et al., 1992)		+		+	
<i>Well-designed interface between partners</i> (Kelly and Schaan, 2000)				+	
<i>Open communication/information sharing</i> (Munksgaard et al., 2015, Kelly and Schaan, 2000, Gulati et al., 1994)					+
<i>Faith in product</i> (Viitaharju and Lähdesmäki, 2012)	+				
<i>Shared values</i> (Ybarra and Turk, 2009, Perez and Fierro, 2018, Blomqvist, 2002)	+		+		
<i>Big commitments</i> (Gulati et al., 1994). (Weber et al., 2004)		+	+	+	

#### 4.2.6 Summary of analysis

Fast trust was developed between the companies thanks to big commitments such as sending substantial people to a face-to-face workshop, in addition to sending Ole to Norway for several months. Fast trust requires high risk and vulnerability. SU2 took these signs of trust seriously and repaid the trust by committing to the project. As SU2 had initially planned to develop a

“dummy” prototype and BF2 wanted to develop a fully functional product, showing that they were extremely committed to the collaboration.

While the risk for BF2 was high in the collaboration, the personal risk put on James might have been even higher. He persuaded the top management of BF2 to go ahead with the collaboration even when without a customer ready. Simen also knew that James “stuck out his neck” for SU2 and had to take quite a big hit if the project were to be unsuccessful. These actions demonstrate the dynamics between organisational and individual trust (Blomqvist, 2002). These two types of trust may be developed simultaneously, or individually, which then impacts the other form of trust. The “champions” of BF2 were able to spread the organisational trust they had in SU2 to the top management of BF2. Trust proved to have a massive impact on the result of the collaboration. The partners were willing to take high risks by being vulnerable, both economically and socially. While it is difficult to conclude what could have happened without the amount of trust that the partners built, the high levels of goodwill- and competence trust positively impacted the collaboration positively.

Another example of how the trust affected the result of the collaboration can be seen in how BF2 used their reputation in the negotiations that SU2 had with their sub-suppliers. SU2, as a startup company, had no reputation from previous customers that they could use, and could not pay the deposit that the sub-contractors initially required. After being open and communicating this, BF2 vouched for SU2 and used their influence and reputation to make sure that the deals were made, and that the project could continue.

Looking at the incidents at a relational level, the different types of trust present in the relationship had different impacts on the collaboration. The impact that the workshop had on the competence trust in SU2 was detrimental for the continuation of the collaboration, as the startup was able to demonstrate their competence sufficiently for BF2. Goodwill trust developed through shared values during the initial contact had an impact on the workshops. Meanwhile, face-to-face communication during the workshops led to high levels of goodwill trust, which impacted the contract signing. Further, the openness displayed in the contract later impacted the challenges during the development phase. This demonstrates the linkage of the impact that the incidents had on the goodwill trust in the relationship.

## 4.3 Within-case analysis of Case 3

### 4.3.1 Introduction of the collaboration

The CEO and CTO are both co-founders of SU3. Vetle was responsible for the financial aspects of the startup and was the one initiating the collaboration. Jon was responsible for the technical competence contributed by SU3 in the collaboration. Christian, who was the project manager from BF3, was the one in charge of the collaboration. Together with the already existing technology of SU3, they integrated and further developed a solution that was specially designed for one of the platforms of BF3.

SU3 contacted BF3 in November of 2015 and started the contract negotiations promptly. Before this initial contact, BF3 was already looking at the possibility of developing a similar product to what SU3 already was delivering to the market. Prior to the collaboration, Vetle had mixed thoughts about BF3. While viewing them as a potential partner for collaboration, he also viewed them as a threat who could potentially steal their technology.

During the months after the first call, the companies discussed market segments and commercialisation strategies together, with BF3 even sending a substantial number of people to the negotiations with SU3. Early in the collaboration, buying stocks in the company was discussed. However, BF3 and SU3 could never agree on a price. In June of 2016, SU3 developed a prototype to be used in the cafeteria of BF3. This was paid for by BF3 and done without a formal contract signed. The contract negotiation continued for several months and had many challenges, such as disagreements concerning the business model. After months of negotiations, the companies signed a contract in January of 2017.

From February until May of 2017, the companies worked closely together on developing a product that would be used by BF3. In May 2017, the product was launched. After the launch, SU3 continued to maintain and develop the product. In September of 2018, the department of BF3 that was responsible for the product that was co-developed with SU3 became a separate independent company (IF). At the same time, Christian, the project leader from BF3, who also was the contact person that SU3 had in BF3, started working in a different department in BF3, cutting his formal ties with SU3. After IF became independent, the resources used for the collaboration with SU3 shrunk greatly. SU3 went from 10 to 2 hired developers, which BF3

initially paid for. SU3 ended up only maintaining the product and focusing on other tasks instead of the collaboration.

Four incidents had the biggest impact on the goodwill- and competence trust between BF3 and SU3: 1) Due to diligence, 2) contract negotiations/negotiations breach, 3) pilot tests, and 4) change in the organisational structure.

#### 4.3.1 Incident 1: Due diligence

During the initiation phase, Jon, the CTO of SU3, met with several of the experts at BF3 to exchange ideas about the potential of the technology they were going to develop. These conversations also served as due diligence of Jon's competence, in addition to their technology. During these workshops, the technical experts at BF3 told Christian that they were impressed by the talent Jon demonstrated:

I learned after a while, and when he talked to experts in the firm and stuff... they understood that he was very competent. [...] He knows what he is doing, right. He met with many architects and technicians from our side and all of them thought that what he was putting forward was very good. So, I think he was top of the line!

Christian answered "absolutely!" when asked if he felt that having Jon around gave them a sense of security. Vetle also mentioned that BF3 was impressed by Jon. Jon understood that they were testing him and why, but also said: "Poor Jon. He was brought into many different meetings and every time we were evaluating their tech, there were new people who just sat and listened and opinionised". This was a somewhat demanding experience for Jon. He explained:

It was before signing the contract that they were testing me to see if we had control. For them, it was probably very strange to cooperate with a small company like us. [...] For me, it was an experience of being a person, who constantly meet new people to whom I needed to give an answer. I met with the security officers and talk about security, and how we would handle that. Then I met with the man that works with emergency preparedness and customer support and how we should provide support and how we could ensure that the solution works. [...] I really felt that I had to cover all these different roles. And I can't be as much of an expert as all of those that I meet.

#### 4.3.1.1 Analysis of due diligence

Through the conversations that Jon had with employees of BF3, BF3 and Christian established enough competence trust in SU3 to invest more resources into the collaboration. Hence, BF3 was confident that SU3 had the skills necessary to co-develop the solution with them. This shows that BF3 had built individual competence trust in Jon as a result of these face-to-face conversations Eccles et al. (1992).

BF3 established trust in the competence of Jon, but he was also pointed out by Christian and Vetle as being the “victim” of intense meetings with too many experts in BF3. This was something that Jon did in order to establish high enough levels of trust, demonstrating the effect of the power asymmetry between the firms during the due diligence. While Munksgaard et al. (2015) state that the power of the large firm is not perceived as a hindrance to achieving effective interactions, this case demonstrates how power imbalance also can contribute to ineffective interactions complicating the trust-building process between asymmetric firms.

#### 4.3.2 Incident 2: Negotiation difficulties

SU3 was the first startup company that BF3 had collaborated with, and it was clear that setting up a contract and requirements that a startup could comply with was cumbersome. Christian comments: “If you look at the agreements we have with big companies, they are as long as a painful year. Lots of forms that need to be filled out which is very exhausting for a small tech company.” Christian continues discussing how making it easier for the start-up during the negotiations was a priority of his: “It has been very important to prioritise making the partnership as uncomplicated as possible, but at the same time we had to be tough against each other too, to prevent getting fooled!”

It was clear from Vetle’s perspective that BF3 did not have a standard contract for startups: “There was a lot of ambiguity about the contract. We could see that they copy-pasted, and there were things that just didn’t hang completely together. They would like to use a template, but they couldn’t. Forming it required a lot from both parties.” Christian explained that he could understand that the negotiation was tough for SU3. He said:

What was maybe a bit frustrating [for SU3] was that during that period we did not have crystal clear negotiating framework. We did not have a *go* from the management that this is the maximum price we could pay. We also did not agree on which business model to use. And that dragged out the time! Also, we had many meetings where both parties shared viewpoints, and afterwards we had to go back and discuss that with BF3 [management]. And then, we might have other signals and other things to negotiate during the next meeting. So, it must surely have been a little frustrating for him [Vetle]. We didn't have a crystal-clear business model! This made it very difficult entering the negotiations.

As Christian mentions, one of the central discussions during the meetings was the disagreements concerning the way SU3 was getting paid. As BF3 had difficulties regarding the uncertainties of the usage of the product, finding the right way to monetise it was challenging. SU3 asked for a cut of the transactions made through the product. Vetle explained that they wanted to take the risk and was not satisfied with a fixed price. Christian expressed that he understood their wishes and said that he would have wanted the same if he was a founder. However, he did not feel that this deal was fair as BF3 did all the marketing for the product. Despite their disagreements, Vetle still understood where BF3 was coming from:

They mentioned that they didn't quite know how to use the product. So it was a bit difficult to define. Because we didn't quite know how the technology was going to be used, and what business model to use. For them it was important that we survived as a supplier, so they had a point there. I still believe that we could have agreed on a transaction-based revenue model.

Vetle and Christian were at one point so unaligned about the transaction model that they quit the collaboration. Christian mentioned: "I was pretty prepared for us to find another partner, but they came back [...] I think they really wanted this deal." Vetle elaborated on their disagreement:

At one point, where we had a breach, where we were completely in disagreement. We said we needed a model where we would get a cut of every transaction and they did not want to agree on that. [...] And they were tough, and we felt it was unreasonable that

we couldn't get a cut of every transaction. [...] I was determined about that, so we stopped. I remember riding my boat while talking to Christian and said *fine, so there's no point in us meeting anymore*, and that was it. [...] It was kind of *fuck...* on one side we have to do this. We can't let them push us around, we felt that they kicked us around. And that is a little difficult when the power in the relationship is so out of balance. I had an experience of them kicking us around, and I thought that it is just something that we just can't let them do, so we have to be really tough ourselves.

After a while, Vetle called Christian back trying to find a solution that could work for both parties. SU3 gave up on the transaction-based model and settled on a fixed price.

#### **4.3.2.1 Analysis of negotiation difficulties**

The reasoning behind the prolonged negotiation time was due to BF3 being in negotiations with another big player about which startup company were going to develop the solution with BF3. Responding to this incident, Vetle felt that there was a lack of openness to SU3 about these negotiations, which reduced the goodwill trust that Vetle had in Christian. This lack of openness from Christian came as a result of the lack of commitment from the top management in BF3. This incident shows that when the top management is not committed, it is a hindrance for successful alliance implementation (Kelly and Schaan, 2000), which can be shown to have had an impact on this case as well.

BF3 was not open with SU3, which made it difficult for SU3 to interpret what they wanted. They were not willing to share information about the situation they were in with the other big player. This lack of openness had a negative effect on the perceived goodwill trust that SU3 had in BF3. This complies with Minshall et al. (2010) who notes that during the deal-making process of the collaboration, both parties need to be as open as possible with each other concerning potential legal and commercial challenges. As a result of this lack of openness, the startup used more power tactics.

#### **4.3.3 Incident 3: Beta tests**

From the initial conversations, SU3 did not want to give away too much information to BF3, as they were afraid of being copied. Vetle explained that he felt like they had to give away information that could hurt the company and how this was a dilemma for them:

And we have to consider that they are a potential competitor. At the same time, we have to give them enough security so that they want to buy. So on one side, we felt that ok, *here we can risk giving too much* and if they are... if they choose... well, for us at that time, we could not completely be sure if they had developed a lot of what we had. So we thought that it's also a possibility that they were developing it.

Vetle also expressed that the slow progress in the negotiations added a second degree of uncertainty. He continued:

We had talked together for a very long time. A lot of information had been given and in June we felt that it went slowly. It's difficult to just keep giving information, information, information, to a potential competitor. It's kind of a lot of uncertainty in such a long negotiation process, as one year.

A lot of this uncertainty was due to that BF3 did not have a clear vision about the project. Christian explained that they had a lot of different areas BF3 could move into, and it was hard to decide which one to choose. The fear that SU3 experienced giving away too much information changed in June of 2016 when BF3 and SU3 conducted beta tests in the cafeteria of BF3. Here, BF3 compensated SU3 hourly for developing the software to be tested, without a formal contract. Vetle described the reason for having the beta tests: "So we decide that to run a pilot test where they actually get access to our technology in the cafeteria at BF3, that will help them to better understand, to see what we have and how robust it is." Vetle described the way BF3 compensated for the work they had done during the testing:

But Christian, he did not have strict leashes, as far as I've understood. And, he has his own budget that he can take from, and just paid us. So, we just send invoices without any agreement in place. In other words, just a gentlemen's agreement. Then he pays for the hours we use to develop for them. Without knowing for sure if they can integrate it into the app or not. It's a risk they have chosen to take. But I felt that that was a little unnecessary because we used too much time, or we used a lot of time doing it. Ehhm... and we could not allow ourselves, to go for such a project without getting any income. Cause, it's almost one year. We are working here during the pilot test, and that's a lot



of work. And some time before perhaps. [...] But to the point, it's a lot of work over a long time. Without a contract. So, yes. Technical development is paid through invoice. Without contract.

When asked about whether they had a letter of intent, Vetle answered: "I don't think so. I wonder if it was something they... I know we talked about it. We had a lot of contract suggestions".

#### **4.3.3.1 Analysis of beta tests**

The beta tests were a chance for BF3 to examine the competence of SU3 in a real environment. This act further increased the trust that BF3 had in the competence of SU3 by demonstrating that they were able to develop a solution specified to the needs of BF3. This action helped decrease the technological distance between the firms, as BF3 got a better understanding of the technology through a better way of evaluating

The development of the prototype was paid hourly by BF3 without a contract in place. This effort shows the big commitment from BF3 to invest financial resources into the collaboration and affected the goodwill trust that SU3 had in Christian (Gulati et al., 1994). Rewarding SU3 to develop a prototype also contributed to SU3 opening up about their technology. Previous to the pilot, SU3 considered it highly risky to share too much of their code to BF3, as BF3 had a reputation for exploiting startups and was considered a potential competitor. Vetle pointed out that opening up to BF3 was the most significant challenge in the collaboration. As Christian also threatened SU3 by saying that BF3 easily could develop something similar during the time previous to the beta test, they experienced increased the risk of sharing. These findings support the work of Prashantham and Birkinshaw (2008) and Lusch and Brown (1996), who notes that the different strategies and priorities of asymmetric partners can cause reluctance of knowledge sharing. Reluctance behaviour can come as a result of uncertainty when it comes to the partner's behaviour, especially prevalent in partnerships between potential competitors, such as this one (Park and Ungson, 2001). Once SU3 knew that BF3 was willing to pay for their services, this behavioural uncertainty was drastically lowered, as SU3 became safer that BF3 was not going to use their vulnerability to further their interests. Christian made an informal agreement with SU3 by paying SU3 for developing the beta test software. This is an example

of an incident where Christian acted as a committed champion (Viitaharju and Lähdesmäki, 2012).

#### 4.3.4 Incident 4: Change in organisational structure

In 2017, a digital application part of BF3 became a separate independent firm (IF). Christian, whom SU3 had worked closely with for a long time, decided to continue working for BF3 instead of joining IF. During this time, SU3 and IF faced multiple challenges and discussions concerning the future of the collaboration. When Christian exited the project, SU3 had to establish trust with the new managers. The limited trust between the new parties quickly came to show when there was a clause in the contract that fell away for unclear reasons. Christian and Jon both commented that they did not know how this could happen. Christian took the lead and talked to the marketing manager, saying that *we really have an agreement about it*. Jon commented that he thought it was a cool move by Christian, showing that he kept the informal agreement they made.

Another similar situation occurred, when the new people without the previous knowledge of the relationship came into the cooperation and started to look into the contract. Vetle expressed that everything became critical as soon as employees started looking into the agreements and got lawyers involved. Christian commented:

This had never happened if I had continued to work there because I would have told the management, *hello, this is a deal that Vetle and I have made, so we have to deal with it!* So, that's one of the challenges of working with a company where people change crew all the time!

Jon shared the view of Christian concerning the difficulties with the new ownership. He commented:

When IF became its own company, it became very different. [...] It became very clear that the owners had to start cutting the costs, and then they became very focused on us [...] They became much more demanding. Everything was fun until now. We were just supposed to get a product out and take it step by step. But now they were like. *There*

*are bugs! When can you fix it? And they were like, no this is yours, this is your platform, you have to fix it and deal with the expenses.*

Jon ended up with a different mindset after the change in the organisational structure. From being motivated, he lost interest and became unmotivated for working for IF:

I remember the system went down much of May 17th. And the person responsible performance in IF, he called me several times during May 17th, and I was alone with 2 kids and just like *fuck it is May 17th. Fuck this.* And he is an outsider, he represents the other side of a big company. Per is his name. I think Christian is a wonderful person. He is a very positive nice guy, but Per, his job is to make this work. He is very rigid and old school guy, so he was just like *no this does not work, what are you going to do about it.*

Jon explains that this affected the chemistry between the parties, “I became a bit like *fuck you guys back.* [...] they suddenly started demanding, and the mood just got so much worse. I also remember getting really provoked that everything came at the same time.” Jon expressed that he thought it was incredibly fun to work and easy to prioritise the project when they first started. After the change, the project was not pleasurable and became a lower priority for him. The relationship between SU3 and IF was at this point critical. Jon elaborated:

We’ve had relatively bad mood from October to January, and it was even so bad that it was brought up in the board meeting of SU3 [...] We had to spend a lot of resources now, at our own expense. This has never been a very important project for us compared to the product we make, this is just like a collaboration on the side, that gives us lots of money. Very nice, but really, we wanted to make something else. Continue to build SU3 products.

#### **4.3.4.1 Analysis of change in organisational structure**

Blomqvist (2002) points out that when employees from large firms rotate to a new position, there is a certain risk of losing a trusting contact point in the relationship. Therefore, using measures to build trust is potentially wasteful, as management rotation can occur (Alvarez and Barney, 2001). In this case, overreliance of trust put the start-up at significant risk, but luckily,

the committed champion still had some impact. This was evident when a problem related to the informal agreement occurred, where Christian had to step in and tell the new project manager in IF that SU3 had acted according to their agreement, even though it was not in the formal contract. Hence, there was little goodwill trust developed between the new manager in IF and SU3, as they had to rely on Christian in order to solve the conflict. This fits the findings of (Perez and Fierro, 2018), who explains that committed champions help the companies overcome difficulties that are implied by the asymmetries.

This incident yet again shows the importance of having a committed champion from the big firm in asymmetric strategic alliances. The individual trust was unchanged, but the person who trusted SU3 was gone. During the same time, Vetle also ended his involvement in SU3. Suddenly, the individual trust that the people had built over multiple years was not as useful in continuing building the collaboration. This shows that trust is not something that can be part of contracts but needs to be built over time between the people involved.

The goodwill trust that SU3 had in Christian was no longer of importance. Jon no longer had motivation for working with IF. SU3 and IF had gone from being collaborative partners to a regular customer-supplier relationship, with Jon doing no more than necessary. From using “carrots” in the shape of milestones, IF was now using punishments to make sure that SU3 delivered according to the contract. This incident implies that SU3 relied too much on the goodwill trust of Christian, in this case, ending up with a much more challenging relationship. This supports the suggestions by Alvarez and Barney (2001), who states that an overreliance on trust can put a startup at significant risk.

For companies that are part of dynamic and fast-moving markets trust is often used as an informal coordination mechanism for R&D alliances (Aalbers, 2010). These findings are correct in this case, as the industry in which they are operating is fast-moving, and trust was used as a substitute for a more formal contract. In these situations, there is still a need for contracts Aalbers (2010). As this case demonstrates, using trust as an informal coordination mechanism through informal agreements can be risky. These informal decisions are often oral and are only valid between the people that initiated the agreement. Therefore, losing an individual that is a part of such an arrangement, where all the information is internalised and implicit, has a significant impact on the dynamics of the collaboration.

Table 6: The mechanisms that had an impact on trust development in case 3. [+] indicates positive outcomes, [-] indicates negative outcomes.

Mechanisms	Incident 1	Incident 2	Incident 3	Incident 4
<i>Committed Champion</i> (Perez and Fierro, 2018, Viitaharju and Lähdesmäki, 2012)			+	÷
<i>Commitment from top management</i> (Ford, 1980, Kelly and Schaan, 2000)		÷		
<i>Face-to-face communication</i> (Eccles et al., 1992)	+			
<i>Well-designed interface between partners</i> (Kelly and Schaan, 2000)				
<i>Open communication/information sharing</i> (Munksgaard et al., 2015, Kelly and Schaan, 2000, Gulati et al., 1994)		÷		
<i>Faith in product</i> (Viitaharju and Lähdesmäki, 2012)				
<i>Shared values</i> (Ybarra and Turk, 2009, Perez and Fierro, 2018, Blomqvist, 2002)				
<i>Big commitments</i> (Gulati et al., 1994). (Weber et al., 2004)			+	

#### 4.3.5 Summary of analysis

Both companies are experiencing high levels of risk in this collaboration. The risk that BF3 experienced in the collaboration was due to a vulnerability that is social (e.g. reputation) in nature. This distrust in the large firm came as a result of a bad reputation due to previous collaborations causing bad PR, where startups were being exploited as a result of their openness which led to the large firm stealing the idea from the startup. Therefore, BF3 was responsible for increasing this low initial organisational trust, but this did not happen until SU3 got compensated for developing a pilot test for BF3. Even though this collaboration presented great opportunities for SU3, they still perceived it as risky to be open about their technology during

the early phase of the collaboration. BF3 did not make it easy for SU3 to open up to them as they explicitly stated that they could develop the solution, with or without SU3. The startup perceived this as threats, which made it even more difficult for SU3 to show the architecture of the technology to BF3.

Munksgaard et al. (2015) found that when one of the parties of an asymmetric collaboration opened up, this behaviour was reciprocated. This openness could potentially lead to a higher performing relationship. While SU3 could potentially have opened up, causing BF3 to reciprocate this behaviour, this was perceived as too risky for SU3. Christian was aware of the bad reputation of BF3 and had to go far in order to create goodwill trust between the parties. This was evident regarding the informal agreement.

When looking at the collaboration in a holistic view, it is clear that the incidents are linked to each other. After IF had become an independent company, all the trust that was built between Christian and SU3 was no longer of equal importance. Still, SU3 used the influence that Christian had to make sure that the informal agreements that they had made were honoured. The new management of IF started to look into the contract signed between SU3 and BF3, making sure that they were given what was agreed in the contract. This demonstrated how trust was used as a substitute for a tailor-made contract, and when the trust was dissolved, they were left with a lacklustre contract, where many informal agreements filled the massive holes. The reason for this was that Christian wanted the contract negotiations to move quickly, and understood that SU3, as a startup company, could not comply with the rigid legal requirements of the standard contract. Thankfully for SU3, Christian was still part of the same business network after he had left IF and could communicate to IF about the informal agreements they had made. This contributes to the findings of Aalbers (2010), as the risk in a collaboration can, in fact, increase by relying too heavily on trust as an informal coordination mechanism. An overreliance on trust in relationships can put a startup at significant risk, Alvarez and Barney (2001) which also was the case in this collaboration.

## **4.4 Cross-case analysis**

In this next section, the authors have analysed and compared the different collaborations to get a better understanding of how startups collaborate with different large actors. The trust-building mechanisms that were present in all of the cases will be analysed across the different cases and the outcomes of trust development will be compared between the different cases.

### **4.4.1 Mechanisms of trust development**

Similarities and differences in trust development will be analysed. How trust development occurred will be compared and analysed.

#### **4.4.1.1 Committed champion**

The committed champion from the large firm seemed to have a high impact on the individual trust in all the collaborations, supporting previous research (Perez and Fierro, 2018, Viitaharju and Lähdesmäki, 2012). In all the cases, the individuals, to different extents, challenged the norms of how the big firms collaborated or went beyond their expected effort in order to make the collaboration more effective. Thus, exceeding the expectations of the startup. These actions put risks on the committed champion, as the consequence of a failed collaboration could have put the individual in poor light, or even getting fired if it failed. Building trust in this committed champion also includes risks for the startup, e.g. the committed champion can change position or employer, in line with Alvarez and Barney (2001), who sees trust development as potentially wasteful if this happens. Hence, the risk is far greater for a startup company. The potential negative outcomes of this risk were not particularly evident during the development phases in the cases but affected the phase afterwards.

#### **4.4.1.2 Commitment from top managers**

Commitment from top managers is also implied to have an impact on the trust development in relationships, both negatively and positively. In case 1 and 2, the top management showed enthusiasm for the projects. This supports the findings by Kelly and Schaan (2000), who suggest that that the commitment from senior management of large firms is the most crucial factor in successful alliance implementation. Meanwhile, due to the uncertainty in the top management in case 3, lack of commitment resulted in challenges regarding trust development.

#### **4.4.1.3 Face-to-face**

Employees meeting face-to-face early in the collaboration seemed to play an important role in the development of trust in all cases. Trust is often formed in the first face-to-face interaction on a relationship (Eccles et al., 1992). Face-to-face interactions during the initiation phase of the collaborations seemed to have contributed to developing both competence- and goodwill trust. This builds on Ybarra and Turk (2009), who finds that the greater the quality of communication between asymmetric strategic alliance partners, the greater the increase of trust.

#### **4.4.1.4 Open communication**

In case 2, SU2 had issued a patent on their planned product. This enabled the startup to be open towards their counterpart, hence making it easier for the large firm to get a thorough understanding of the competence of the startup. There are risks associated with openness towards an alliance partner (Enkel et al., 2009, Dahlander and Gann, 2010), but having a patent lowered these perceived risks. However, the startup in case 3, a software company, was not able to issue a patent to protect their IP. This issue, in addition to the explicit threats and the bad reputation of the large firm made it difficult for the SU3 to be open as the startup felt that BF3 could be a potential competitor. Understanding the competence of the startup turned out to be a challenging process for the large firm. Hence, competence trust seems to have been developed slower than it potentially could have. Case 1 had a more of a customer-supplier relationship, in addition to vastly different areas of expertise. These circumstances made sharing and openness easier for the startup as they could not have been competitors. Hence, reducing the perceived risk.

#### **4.4.1.5 Big commitments**

In the three cases presented, goodwill trust was always relatively high during the development phase, the phase after the contract was signed. In case 2 and 3, this display of trust is in big contrast to the trust present during the negotiation phase, the phase prior. This demonstrates the power of the contract signing, as this is a big commitment, a big act of trust. One might argue that signing a contract with a business partner is one of the most significant acts companies can do to solidify their commitments. Hence, this incident increased trust between the startup and the large firm in all the collaborations. This incident seems to be independent of the previous challenging negotiations leading up to the contract signing. After the contract was signed, the companies in all cases ended up on the same side of the table, mostly working



together as one team with one mission. Big commitments, with the risk and vulnerability involved, increased the trust in all collaborations, in line with Weber et al. (2004). In case 1, the partners seemed to have already established high enough levels of trust previous to the contract negotiations, so that the role of the contract as a risk-reducing measure was low. Thus, all the cases displayed their commitment to the collaboration by signing the contract, which further developed the trust, leading to high levels of trust during the development phase.

Both of the startups in case 2 and 3 felt that they were both surprised when a substantial number of employees from the collaborating company were present during negotiation sessions. Nevertheless, this action was perceived differently by the startups in the two cases. The startup in case 2 perceived the action as a big commitment in a positive direction as they felt like they were taken as a serious actor. The large firm put in more resources than the startup expected, which seemed to have resulted in the strengthening of the goodwill trust between the firms Weber et al. (2004). On the other hand, the startup in case 3 perceived the substantial number of employees as a power move to intimidate. This action increased their perceived risks, which did not contribute to trust development. Instead, it seemed to further increase the power asymmetry.

#### **4.4.1.6 A well-designed interface between partners**

In both case 1 and 2, a well-designed interface between the partnering firms in the collaborations had an impact on the trust development. The improved communication that came as a result of this well-designed interface helped both collaboration partners to improve goodwill trust and efficiency. While shared values played a role in case 1, this mechanism will not be elaborated in the cross-case analysis, as these mechanisms were not found in the other collaborations.

Table 7: The mechanisms that had an impact on trust development across all cases. [+] indicates positive outcomes, [÷] indicates negative outcomes

Mechanisms	Case 1	Case 2	Case 3
<i>Committed Champion</i> (Perez and Fierro, 2018, Viitaharju and Lähdesmäki, 2012)	++++	++	+/-
<i>Commitment from top management</i> (Ford, 1980, Kelly and Schaan, 2000)	+	+	÷
<i>Face-to-face communication</i> (Eccles et al., 1992)	+	++	+
<i>Well-designed interface between partners</i> (Kelly and Schaan, 2000)	+	+	
<i>Open communication/information sharing</i> (Munksgaard et al., 2015, Kelly and Schaan, 2000, Gulati et al., 1994)	+/-	+	÷
<i>Faith in product</i> (Viitaharju and Lähdesmäki, 2012)	+/-	+	
<i>Shared values</i> (Ybarra and Turk, 2009, Perez and Fierro, 2018, Blomqvist, 2002)		++	
<i>Big commitments</i> (Gulati et al., 1994, Weber et al., 2004).	+	+++	+

#### 4.4.2 Effects of trust development

In this section, the effect that trust developing incidents had on the relationships will be analysed across the collaborations, comparing the different cases.

##### 4.4.2.1 Importance of trust

The need for trust was different for the startup and the large firm. While the startup required some goodwill trust in order to commit to the collaboration, the large firm required some competence trust. As the large firm had the authority to decide the fate of the collaboration, it was increasingly important that the large company trusted the startup. Startups have a lot more to prove as they do not have much of a track record to speak of and less experience overall. They have to demonstrate to the large firm that they are trustworthy. They also have to demonstrate that they are willing and capable of delivering according to the agreements. The startups in the cases presented are also more dependent on the collaboration than the large

firms. As a result of this asymmetry, it is a lot more important for the large firm to trust the competence of the startup. The competence trust that a startup has in the large firms is of less importance. This finding resonates with Aldrich (1999) in that employees of the large firm might put less emphasis on trust.

#### **4.4.2.2 Trust and control**

As noted by Blomqvist et al. (2005) and Ring and Ven (1992), the amount of risk correlates with the trust needed in a collaboration. Two collaborations can be characterised as high-risk collaborations, while one case can be characterised as relatively low risk. These characteristics set the baseline for the trust needed in the collaboration, as a higher risk collaboration can require higher levels of trust (Blomqvist, 2002). In all the cases, the trust acted as a mechanism for lowering the risk. One specific risk present in case 2 and 3 was the fear that the startup did not have the competence needed to co-develop the products planned. Early on, the representatives from all the large firms found that the startups indeed had the skills and experience needed to be able to execute according to plan (E.g. through due diligence), consequently lowering the risk. On the other hand, the large firm in case 1 had already established sufficient levels of competence trust in the pre-phase of the initiation, already lowering the perceived risk.

The use of formal contracts can either complement or substitute trust between collaboration partners (Jiang et al., 2013). In all cases, trust was in different degrees, substitutes of contracts between the partners. Creating a highly specified contract with a startup is a meticulous and demanding process as startups usually are not compliant to the strict regulations usually demanded by the bigger firm. If high enough levels of trust are present, this trust acts as a safeguard for the gaps in the contract. As stated by Oukes et al. (2017), a contract cannot or does not fully specify the nature of a relationship between two parties. Therefore, some trust will be necessary in order to make the collaboration workable and is recognised as essential in commercial transactions that are not adequately controlled by legal constraints. As mentioned, trust can be a substitute for formal contracts. Our findings indicate that a less formal and simpler contract can be highly risky. In two of the collaborations presented, the partners were later faced with great challenges when challenges arose which the contract did specify. In case 2, the companies developed a tailor-made contract. While this was a resource-intensive task, the companies were able to use the contract as a backup if the trust were to be diminished.

Working together to create a tailor-made contract meant that the firms in case 2 had to be open towards each other. This helped develop the relationship and acted as a safeguard for complications at a later stage Minshall et al. (2010). Even though this was resource-intensive, the firm gained from it both during the negotiation process and later in the collaboration. The contract negotiations were not used as a way of developing the relationship in other cases. This can have been a contributing factor to the challenges they faced at a later stage of the collaboration.

#### 4.4.3 Summary of cross-case analysis

The authors find that the mechanisms for trust development in a greater degree are important for the development of goodwill trust than competence trust. This can be due to the complexity and nuance of goodwill trust in comparison with competence trust. Competence trust looks at the understanding of the knowledge that individuals possess, while goodwill trust looks at the development of interpersonal relationships. Both types of trust defined in this thesis have a crucial role in the relationships. In summary, the authors found that the incidents in each case are related to each other and that in all the cases, the outcome of one incident affected the incidents later in the relationship (e.g. resulting in the rejection of further cooperation, the firms helping each other out in challenging situations and better communication overall).

Table 8: The effects each aspect of trust had on the relationships.

Cases	Goodwill trust	Competence trust	Individual trust	Organisational trust
1	Low risk meant low requirements for goodwill trust. A breach in goodwill trust had a big impact on collaboration	High levels of competence trust prior to collaboration. Lowered competence trust did not affect relationship significantly	Astrid had enough trust in Martin to initiate collaboration, but no particular high trust was built	Only viable prior to collaboration. No particular change during collaboration
2	Goodwill trust affected the relationship, increasing openness and facilitated contract negotiation	High risk required exhaustive due diligence and high levels of competence trust, which lowered perceived risk and	The individual trust in Ole affected the relationship as he played an important role in the communication between the firms  The individual trust in James facilitated the relationship	The organisational trust was needed to initiate the relationship, but was not particularly important during the collaboration as individual trust was quickly developed
3	Extremely high levels of perceived risk required high levels of goodwill trust	Competence trust build in Jon affected the relationship	The individual trust in Christian facilitated the relationship, even after he had left the collaboration	Levels of organisational trust in BF3 made openness difficult

## 4.5 Answers to research questions

This subsection will provide answers to the research questions presented in section 1.3, concluding the analysis of the data provided in section 4.

**RQ1:** *How is trust developed through incidents in asymmetric strategic alliances?*

The findings suggest that specific incidents have had an impact on the trust developed between the collaborating partners. Similarities between these incidents are that the relationships went through changes. As trust was developed in these incidents, risk and uncertainty were also changed. The authors have found that initial contact, workshops, due diligence, pilot tests, negotiation difficulties, presentations and signing of contracts, challenges during development, change of committed champion and a decision regarding the sales strategy were all incidents that had an impact on the trust development in the collaborations. In these incidents, either the development of goodwill- or competence trust between the firms were affected to different extents.

Certain mechanisms were found to develop trust as a control tool towards the uncertainties to solve challenges in the collaborations. These incidents are linked to trust development through different relational mechanisms (e.g. committed champion, openness, faith in the product). These relational mechanisms are crucial for trust development. However, different mechanisms affect trust development differently. One incident can be a result of multiple mechanisms, which can strengthen the significance of the trust developing incident. By bridging the gap between important incidents and trust development the authors have contributed to fulfilling the purpose.

**RQ2:** *How do trust-development affect asymmetric strategic alliances?*

The findings imply that trust-development permeates asymmetric relationships in different ways. Trust development plays a role in lowering risk and increasing efficiency in the relationships. Trust is used as a way of lowering the perceived risk in these highly uncertain collaborations. Both higher competence trust and goodwill trust contributed to lowering this uncertainty. It is important to note that this perceived lowered uncertainty did lead to challenges

later, as trust was used as a substitute for a well-developed contract. Trust also affected the relationship by increasing the effectiveness of the collaboration. This was particularly important as the pace of the collaboration was one of the crucial motivations behind the collaborations.

Different types of trust affected the relationship in different aspects. On the topic of competence trust, our findings suggest that the due diligence conducted by the large firm had the highest impact on trust in the collaboration. Once sufficient due diligence was conducted, the employees of the large firms felt the risk was low enough for them to commit fully to the collaboration. This paper suggests that startups already have high organisational trust in large firms, practically eliminating the need to build competence trust in large firms. At the same time, the competence trust that the large firm has in a startup has a crucial role in order for big firms to enter a collaboration. Another aspect contributing to these different roles is the power asymmetry in these collaborations, where the large firm has the authority to decide the shape and form of the collaborations. On the topic of goodwill trust, the results in this thesis indicate that the single largest contributor to trust between firms were actions described as big commitments. Under this umbrella term, different types of these big commitments affected trust. E.g., committed champions, employees of large firms who were highly invested in the collaboration impacted the trust between the firms, acted as a “bridge” between the firms, facilitating the communication. Within the term big commitments, multiple actions such as sending a substantial amount of people to meetings and sending an employee across the globe were also found to strengthen the goodwill trust between firms.

## **5 DISCUSSION**

### **5.1 The contribution to the literature**

In this section, the key findings and the way these findings build on existing literature will be discussed. In order to better shed light on the purpose, the way the findings contributed to the purpose will first be seen in the specified context of each contribution, and secondly, be discussed in a broader picture. With a qualitative research design, the authors were able to get in-depth on mechanisms of trust development. While there exists a possibility to examine relations in other ways, we have narrowed our focus to episodic trust development. This has contributed to filling some of the existing gaps in the literature regarding trust development as a tool for more successful collaborations by reducing risk.

Our findings indicate that one of the most prominent ways of increasing efficiency and speed is through fast trust. E.g: Big commitments, in the form of contract signing or irrational acts of trust from champions, were present in all the cases investigated and significantly impacted the levels of trust early on. Such actions were present and had a high impact on trust development. This builds on previous research where it is argued that fast trust is important in collaborations (Gulati et al., 1994, Weber et al., 2004, Blomqvist, 2002, Hurmelinna et al., 2005). Especially asymmetric collaborations in fast-paced markets. As such, the findings in this thesis will further stress the importance of fast trust already existing in the literature. Big commitments are found in the literature to build fast trust and is a contributor to the success of the strategic alliances (Gulati et al., 1994, Weber et al., 2004). There is no existing literature on the effect of big commitment in an asymmetric relationship. Our findings show that the effect of big commitments in an asymmetrical partnership is important for the development of trust and therefore provides a deeper understanding of the subject.

Next, the literature on the responsibility of trust development in asymmetric alliances suggests that the less dominant part needs to adopt more and take higher responsibility in forging the alliance (Viitaharju and Lähdesmäki, 2012, Chen and Chen, 2002). Our findings suggest that while it is important for the smaller firm to take responsibility for trust development, the large firm also has a great responsibility and can impact both the development and maintenance of trust. The large firm can have a significant impact on the development of trust in the



collaboration if they invest in conducting due diligence and relation-specific assets. This is especially important in developing competence trust in the small firm, as this can lower the risk of delivery failure. According to Kelly and Schaan (2000), the small firm is argued to be more vulnerable due to the large percentage of resources the small firm invests in the collaboration. The large firm invests a smaller percentage of resources and generally has more options, should the collaboration fail. The authors argue that this difference in investments of resources can affect the mechanisms of trust development. Our findings build on this research as we have found that the smaller firm is more dependent on the collaboration. Hence, they are more willing to adapt to changes put forth by the large firm. While the different firms invest relatively different amounts of resources in the relationship, it is expected that the large firm contributes to more of the overall resources than the smaller firm, hence also making the large firm more responsible for trust development between the firms.

On the paradox of trust and control, the literature debates the effects of contracts on trust development, and how the reduction of risk by contracts contribute to the development of trust. Blomqvist et al. (2005) and Jiang et al. (2013) states that high levels of trust and high levels of complex contracts give the best outcomes. They continue by stating that the process of making the contract may be used purposefully to increase mutual understanding and learning, eventually building trust over time. Contributing to these findings, our insights suggests that while contract negotiations often led to “harsh” environments, it still seemed to contribute to trust development between the firms. When the parties used trust building mechanisms such as; openness, face-to-face communication, and information sharing during the negotiations, this allowed the parties to feel more confident in the components of the agreement, laying the foundation for the success of the collaboration. Thus, the mechanisms seemed to be contributing positively to the outcome of the negotiations. Additionally, as the act of signing the contracts was seen as a big commitment between the firms and increased the trust (Gulati et al., 1994). Our findings bring a more holistic understanding of the need for trust developing mechanisms during contracts negotiations, as they can potentially have a high impact on the success of asymmetric relationships by fostering mutual understanding, reducing risk.

In line with the findings of Jiang et al. (2013), our study found that in collaborations where there were established high levels of trust early on, formal agreements were seen as a formality. Here, complex contracts were substituted with goodwill trust. While one can argue that

contracts can be avoided if there are high levels of goodwill trust, our findings show that this could lead to difficulties later in the relationship, as goodwill trust is fragile and formal contracts counter the breach of trust (Li et al., 2010). Thus, complex formal contracts should not be substituted with goodwill trust. No evidence was found supporting the other view presented by Jiang et al. (2013), stating that trust and contracting can be redundant or counterproductive in the presence of high levels of trust. Previous research state that “fast trust” built by managers can lower the orientation towards the importance of contracting (Aalbers, 2010, Blomqvist et al., 2005). Our research is indecisive to this idea, as our research suggests that while some managers of collaborations see contracting as a formality, other managers spend a lot of resources on creating a bulletproof contract. A relationship that is trusting previous to the contracting phase can both emphasise the contract and not emphasise a contract, hence disregarding the importance of contracting in building trust.

In the discussion on value appropriation in asymmetric strategic alliances, two opposing views are present. One is stating that a large part of the value created in asymmetric alliances is going to the large firm (Alvarez and Barney, 2001, Katila et al., 2008), while the other view states that both companies can obtain value without compromising the value appropriated by the other firm through dual value appropriation (Pérez et al., 2012). Our research finds that while contract negotiations can be tough, relatively high levels of trust has made it possible for dual value appropriation in all the cases, supporting the view of Pérez et al. (2012). Another factor that can have impacted the dual value appropriation is the resource synergies present in the cases. The startups and the large firms often had different motivations for entering the collaborations, and both firms can obtain what they were aiming to get out of the collaboration, without compromising the value appropriated by the partnering firm.

Further, on the topic of organisational and individual trust, Blomqvist (2002) and Anderson and Narus (1990) suggested that individual trust is more important to collaborations, stating that individual-based trust may result in more intense and personal commitment than organisational relationships. The findings in this thesis build on this view, as the trust between the individuals had a more significant impact on the relationship than the organisational-based trust. This is especially evident when examining “committed champions” in the collaborations. As such, this thesis gives valuable insight into the discussion between organisational and individual trust in asymmetric strategic collaboration.

## 6 CONCLUSIONS

By building on the limited existing research in the field of asymmetric strategic collaborations, the authors have provided a more in-depth understanding of trust development in asymmetric strategic alliances between startups and large firms. Through our qualitative research, incidents that have affected trust development have been identified. These incidents vary in time and scale, but they all share evidence of being important in the development of both goodwill- and competence trust. Hence, decreasing or increasing risk and eventually impacting the outcome of the relationship. To conclude our research, brief answers to the research question will be presented, followed by an explanation of how these have helped fulfil the purpose of this study.

*RQ1: How is trust developed through incidents in asymmetric strategic alliances?* In answering the question, the authors have found and inspected incidents throughout the collaborations. Several mechanisms were present or absent during these incidents. These mechanisms are thought to be some of the most important causes of trust development. Most of these mechanisms are social exchanges, e.g. openness, big commitments, and face-to-face communication. Not all mechanisms of trust development are prevalent in all of the collaborative cases, but all mechanisms are present in some of the cases.

*RQ2: How do trust development affect asymmetric strategic alliances?* In answering RQ2, the authors have found different outcomes of trust development. First, the *risk* in the collaborations was affected as a result of trust developed. Secondly, the *uncertainty* of the collaborations was also affected. Third, the *effectiveness* of collaborations has been impacted by trust development. Our findings indicate that trust development has both increased (e.g. through better communication) and decreased (e.g. through rotations of management) the effectiveness of the collaborations. As the cases presented are all described as successful, positive outcomes of trust development are prevalent. The findings indicate that different types of trust affect the relationship in different aspects. The research questions, in addition to the research design, have aided us to fulfil the purpose of the study, which was to examine trust development in asymmetric strategic alliances.

The need for research on asymmetric strategic alliances is important to be able to facilitate better collaboration, increasing the efficiency and quality of the value created. The insight

gained from this thesis has shed light on how startups and large firms develop trust through incidents, and how it can affect the outcomes of the collaboration.

## **7 IMPLICATIONS AND FURTHER RESEARCH**

### **7.1 Implications for managers involved in asymmetric strategic alliances**

The purpose of this study is to examine trust development in successful asymmetric strategic alliances. Through this examination, this thesis has provided insight into how trust has developed in three different collaborations. This thesis can hopefully provide a foundation for managers of startups looking to use the capabilities and resources of a large firm or managers of large firms looking to reduce development time and cost for a quicker and cheaper time to market. First, by presenting actions that have led to increased trust in collaborations, managers from both sides can use this to address other similar situations, being aware that that trust can greatly alter the effectiveness of a collaboration. The mechanisms for trust development seem to be important independent on the industry and technology. Hence, the findings can potentially be transferred to other industries and technology partnerships.

It is important to note that prior to the data acquisition, the authors asked the respondents if they considered the collaboration as successful. While all the respondents answered ‘yes’, our data showed that one of the cases did not further continue their relationship due to challenges after the launch of the product. The success of a collaboration is a subjective meaning that can differ between involved actors. One common description of the collaborative cases in this study is that they were all able to successfully develop and launch a product within the time frame. As such, a collaboration can be viewed as successful even though some partners did not continue to work together after the development. Following, the measures to facilitate the development of trust between asymmetric alliance partners will be described.

#### **7.1.3 Measures for managers of both startups and large firms**

Specific measures can be made to facilitate trust development to reduce risk and uncertainty in asymmetric strategic alliances:

- It is important to not underestimate the importance or power of contracts in asymmetric alliances. Contracts should not only be used to set up clauses if something goes wrong but work as a tool for clarifying the expectations that the two firms have of the

collaboration. This is achieved through shared goals and increased sensemaking. Focusing on developing a contract where the success of one firm contributes to the success of the other can motivate the parties to work closer together and contribute to trust development.

- Face-to-face communication contributes to trust development. By meeting in person, trust has the potential of developing more rapidly increasing efficiency. This is important in the early phase the collaboration, as this is a critical phase can affect the following stages of the collaboration.
- Big commitments have shown to build trust in asymmetric partnerships. If one seeks to reach a successful asymmetric alliance, big acts of trust can play an important role. Big commitments in the collaboration can be a highly effective way of displaying trust in the partnering firm. This measure can potentially result in similar big commitments from the alliance partner, which further strengthens the trust between the firms. An example of such a big commitment is giving the partner exclusivity of the product.
- A well-designed interface can greatly improve communication, thereby reducing the friction between the partners and contribute to trust development. As such, focusing on developing this mechanism can be of high value for the trust between the partners.

### 7.1.1 Measures for managers of startups

Following, the measures that managers of startups in asymmetric strategic alliances can use will be presented:

- Search for a committed champion, an individual who seems highly motivated for the collaboration. If found, establishing trust in this individual will greatly affect the effectiveness of the collaboration, lowering the asymmetry.
- When faced with difficulties and challenges, being open and honest about these can be helpful, as the big firm can allocate resources and contribute to solving these challenges. Our findings indicate that being open will more often be useful than not.

- Take the time to build a tailor-made contract where it is a win-win situation for both firms to enter the collaboration, creating the foundation for dual value appropriation. This enables openness easier when faced with challenges as it benefits both to find a solution quickly.
- Demonstrating the competence of the startup. E.g., showing documentation or process early. This can lead to higher levels of competence trust in the startup early, which in turn can contribute to higher levels of effectiveness. While this strategy can be risky, the rewards can mean that the large firm can decide on collaborating quicker.

### 7.1.2 Measures for managers of large firms

Following, the measures that managers of large firms in asymmetric strategic alliances can use will be presented:

- By giving one or multiple employees the responsibility to manage the project during the collaboration, the communication between the firms will be substantially easier, and the perceived asymmetry can decrease. This person or this team should be highly motivated and have a profound understanding of how startups function. Giving this employee or team a mandate to make quick changes with new input in agreement with the startup can potentially speed up the collaboration process greatly. As such, this employee or the team should be able to work independently with its own set of rules. This will reduce complexity and asymmetry between the firms. It might be tempting to reduce the complexity of tailor-made contracts, but this is highly risky as the informal agreements will be gone if the employees rotate positions.
- Negotiating contractual agreements is an intricate and challenging process, especially as startups can face challenges in complying with an agreement that regular companies take for granted. Startups are often resource-strained and are not able to invest in external lawyers. To maximise the positive effects of the contract and increase the potential for a successful partnership, paying for the resources needed to develop a tailor-made contract that fits the requirements of the collaboration can be useful.

## 7.2 Suggestions for further research

The research on collaborations between startups and large firms are still in its infancy. While this thesis gives some insight into how trust is developed between asymmetrical companies, one has to be careful as to generalise the findings. Due to this being the first study focusing on trust development through incidents in asymmetric strategic alliances, the conclusions drawn might not be of relevance for other similar situations. With this in mind, by building on the findings in this thesis, one can continue contributing to the literature, further strengthening the understanding of asymmetrical strategic alliances:

- The findings in this study are based on collaborations with Norwegian startups. Important factors such as culture, financial stability and geography can greatly affect the findings, were this study conducted with startups from another region. Investigating startups from other regions would be interesting. Obtaining a better understanding of how culture shape the way startups and large firms work together can help understand asymmetric collaborations in a more international context.
- Conducting a longitudinal study design seeing how the collaboration evolves over time could potentially lead to even stronger evidence of how players develop trust.
- While the importance of trust-changing incidents is an essential part of the trust development between firms in asymmetric relationships, incremental trust also plays a role in strategic relationships (Ford, 1980). Building on this study, the role and importance of incremental trust development would enable to capture the whole picture of trust development in asymmetric strategic alliances.
- The actions of committed champions are an interesting subject for further investigation, as they can be the keys to a successful collaboration. How committed champions are found, attributes of committed champions, and how they work in day-to-day operations are all essential questions that can build on the findings presented in this thesis.
- Much like the work of Ybarra and Turk (2009), quantifying the outcomes of trust building mechanisms in asymmetric strategic alliances can contribute to useful results.



By measuring the effects of the underlying mechanisms for trust development, we can further underpin the mechanisms and to which degree they impacted the relationship.

- Our findings suggest that big commitments resulted in fast development of trust. This is the first study to find this result in an asymmetrical collaboration and further research on trust development in asymmetrical collaboration in different contexts should be conducted to support the findings further.
- As the authors have found the contract negotiations to be particularly crucial for the collaboration, diving deeper into the nuances and particularities of this phase would strengthen the understanding of how to reach successful collaborations. Especially, the formulation of the contracts and the requirements of the startups as they are in a fragile position.

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# Appendix 1

## Forespørsel om deltakelse i forskningsprosjekt

*“To examine the important activities/factors that relate to the success of asymmetric relationships between startups and big firms.”*

### **Bakgrunn og formål**

Formålet med dette forskningsprosjektet er å forstå hvilke faktorer og/eller hvilke aktiviteter som bidrar til at asymmetriske (stor etablert bedrift vs. start-up) strategiske samarbeid blir suksessfulle. Vi rekruttere informanter ved bedrifter der et slikt samarbeid har funnet sted. Krav til samarbeidene er at det skal være 1) ferdig gjennomført, gjennom prosjektperiode, pilotprosjekt e.l., 2) samarbeidene skal ha vært av teknisk natur, gjerne i en form for utviklingsprosjekt, og 3) ansett å være suksessfullt fra begge parter. Forskningsprosjektet er en masteroppgave ved NTNUs Entreprenørskole, institutt for økonomi. Hovedveileder for prosjektet er Lise Aaboen.

### **Hva innebærer deltakelse i studien?**

Studien vil omfatte enkeltintervjuer med to ansatte fra begge samarbeidende bedrifter. Det er i all hovedsak de i direkte tilknytning (kontaktpunkt) til samarbeidet som er av interesse. Intervjuet vil vare i ca. en time. Det vil være to eller tre studenter tilstede ved hvert intervju, i tillegg til informanten. Hvert individ vil bli stilt de samme spørsmålene fra intervjuguiden som har en semistrukturert form, og spørsmålene vil omhandle individets opplevelse av samarbeidet. Intervjuet vil bli tatt opp på bånd, og blir deretter transkribert og kodet.

Alle personopplysninger vil bli behandlet konfidensielt. Det er kun de tre studentene, i tillegg til deres to veiledere som vil ha tilgang til de personopplysningene som oppgis. Prosjektet skal etter planen avsluttes i juni 2019. Datamaterialet vil bli anonymisert ved prosjektslutt. Deltakere vil ikke kunne gjenkjennes i masteroppgaven eller i andre publikasjoner.

### **Frivillig deltakelse**

Det er frivillig å delta i studien, og du kan når som helst trekke ditt samtykke uten å oppgi noen grunn inntil 2 uker etter intervjuet. Dersom du trekker deg, vil alle opplysninger om deg bli slettet. Skulle dette være tilfelle, bes du ta kontakt med Anna Tiril Uggerud enten på mail: [annatiril.uggerud@gmail.com](mailto:annatiril.uggerud@gmail.com) eller ved tlf: 98818741. Studien er meldt til Personvernombudet for forskning, NSD - Norsk senter for forskningsdata AS.

### **Samtykke til deltakelse i studien**

Jeg har mottatt informasjon om studiet, og er villig til å delta

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(Signert av prosjektdeltaker, dato)

## Appendix 2

### Interview guide

*NTNU School of Entrepreneurship, spring 2019*

*By Kristoffer Tvinnereim, Trym Nordgård og Anna Tiril Uggerud.*

- Individual, semi-structured interview
- Duration: approx. 1 hour
- Theme: Development of trust in asymmetric strategic collaborations.

**Problem:** "To examine the important activities related to trust development in asymmetric relationships between start-ups and big firms."

Form: Two/three students meet the respondent. One is responsible for asking questions, the other(s) take notes and responsible for audio and time recording. The interviewer listens actively and notes any key words with regard to follow-up questions during the interview. Both can ask follow-up questions along the way. The interview concludes with an oral summary and clarification.

#### 1. FRAMING: Staging of the interview (approx. 10 min)

- **Informal conversation**
- **Information about the project**
  - "We are three students at NTNU School of Entrepreneurship who want to research how asymmetric collaborations become successful, and what kinds of activities/factors that contribute to this success".
  - "To find out what makes asymmetric collaborations successful, we talk to various companies about their experiences of the relationship. We talk to people who have been in direct contact with the other party in the relationship and who are in contact with the cooperating company often. That's why we're here to talk to you."
- **Inform about the ethical aspects**
  - Ensure anonymity: information will not be traced back to the informant.
  - Confidentiality: All students and researchers involved in the study have a duty of confidentiality.
  - The data will only be stored in an anonymous form.
  - The informant can cancel the interview at any time.

- Can contact us afterwards to retrieve the data if you wish.
- Informed consent. Ask them to say their name, date and that they consent to be a part of this research project.

- **Explain what we will do with the data collected**

- The interview will be transcribed.
- The data will form the basis for the master's thesis for the students at NTNU School of Entrepreneurship in the spring of 2019. The results can be used in research articles.
- Inform about audio recording and ask for consent to audio record.
- Ask if the respondent has questions or if something is unclear.
- After all the questions are answered; start audio recording.

## 2. MIDDLE SECTION:

- **General timeline (About 15 min)**

- Start by asking the informant to set up an overall timeline of the partnership with the partner company and let them explain the process.
- “We want you to tell us about your experience working with this company. You do not need to use names if this is not desirable on your part, we are only interested in what happened. Take us through the collaboration from start to finish.”
- *Probing questions*
  - How did you get in touch?
  - Who initiated?
  - What was the collaboration about?
  - Why would you collaborate with your partner company?
  - Why would the counterpart enter into a collaboration with you?
  - How did the collaboration begin?
  - How often did you have contact?
  - What did you discuss?
  - What did you think before you started the collaboration?
  - How did you prepare?
  - What kind of contract/agreement did you have?
  - What was it about?
  - What did you feel about the collaboration?
  - Who was the driving force for the collaboration?

- **Identification of critical incidents**

- “We want to hear about specific events that you have personally been involved in. Events that you think turned out to be particularly good and/or especially bad for the relationship between you and the collaborating partner”

// if they find it difficult to remember events//

- “These are events that have or may have influenced the success or failure of the collaboration.”
- It is important that they focus the discussion on the event and what led to it.

- **Explain each critical event (3-5)**

- *General:*

- Why did you mention this as a critical event?
- What made this event crucial?
- What happened?
- How did it happen?
- Who was involved?
- When did it happen?
- Where did it happen?
- Why do you think this is important?
- How did you resolve this issue?
- What was the result?

- *Relations:*

- What did you think before/after the incident?
- How did the incident affect the relationship with the collaborating company?
- How did the incident affect the personal relationship with employees in the collaborating company?
- How did you feel before/after this incident?
- In what direction did the collaboration go after the event?
- How did the incident affect the trustworthiness of the partner in the collaboration?
- How did the incident affect how you trusted your partner in the collaboration?
- How did the event affect trust in the collaboration?

//each critical event is *elaborated* before the interview goes to the final phase//

### **3. CLOSING: (ca.10-15 min)**

- **Round off the interview to summarize and mention the main incidents**
  - Ask for feedback.
  - Clarify misunderstandings.
- **Inform that there is no more to ask, and ask the informant if there is anything else they want to say.**
  - Is there something we have not asked you about that you want to add?
  - Do you have any questions?
- **Stop audio recording**
- **Thanks for the chat and the contribution to our research**

- Inform that the respondent can reach out if they have any questions. Make sure they have contact information
- Ask if we can contact the respondents by e-mail if there is something we want to clarify in the future (for example if there is something you want the informant to elaborate on).