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Closeness and inter-organizational learning
- Collaboration, interaction and learning between organizations

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Abstract

This thesis explores the importance of closeness for the learning and collaboration across organizational borders, aiming to examine how organizations in a co-located context learn together and learn from each other. More specifically, it studies how structural mechanisms, mutual trust and the use of learning tools affect inter-organizational learning in a co-located context. The data is based on semi-structured research interviews with team leaders from the emergency coordination centres (ECCs) in Bodø and the project leader for Samlok nord, which at the time of writing is the only place in Norway to co-locate the ECCs of the fire and rescue services, the police operational central and the emergency medical coordination centre.

The data material indicates that closeness through co-location has a positive effect on inter-organizational learning: There is closer interaction and trust across organizations in the co-located context. Inter-organizational procedures promote situational understanding, trust and inter-organizational learning. Moreover, the use of learning tools has increased in the co-located context, which contributes to interaction and inter-organizational learning.

Sammendrag

Denne oppgaven studerer sammenhengen mellom nærhet og interorganisatorisk læring i organisasjoner, og har som mål å undersøke hvordan samlokaliserte organisasjoner lærer sammen og hvordan de lærer fra hverandre. Oppgaven ser nærmere på hvordan organisasjonsstrukturer, gjensidig tillit og bruk av læringsverktøy påvirker interorganisatorisk læring. Datamaterialet tar utgangspunkt i semi-strukturerte intervjuer med operasjonsledere/vaktkommandører/operatører fra nødmeldesentralene i Bodø, samt med prosjektlederen for Samlok nord, som er den eneste samlokaliserte nødmeldesentralen for brann, politi og helse i Norge på tidspunktet da denne oppgaven skrives.

Datamaterialet indikerer at nærhet i form av å være samlokalisert har en positiv effekt på interorganisatorisk læring: Det er tettere samhandling og bedre tillit på tvers av organisasjoner i en samlokalisert kontekst. Felles prosedyrer utarbeidet i samspill mellom organisasjoner bidrar til bedre situasjonsforståelse, tillit og interorganisatorisk læring. Det er økt bruk av læringsverktøy i den samlokaliserte konteksten, noe som bidrar til økt samhandling og interorganisatorisk læring.

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The work with this thesis concludes three years of studying. It has been an interesting, challenging, rewarding, meaningful and fun journey, which has also given new knowledge and competence.

Professor Odd Jarl Borch has been my supervisor on this project. Thank you for all the input, advice and critical reflections in this process. Your contributions have been valuable in the process of working with thesis, and I look forward to further cooperation.

I would like to extend my gratitude to the informants who willingly answered all my questions and let me get insight into the world of Samlok nord. Thank you for sharing your thoughts and stories on inter-organizational learning and working in a co-located context. I would also like to thank the Samlok nord project, the ECCs and their organizations for opening up to this study.

Last, but not least, a thousand thank you's to Karstein for sharing the "student bubble" with me. We've had countless afternoons and weekends in the office, and late-night walks to clear our heads. Now I really look forward to sharing post-student life with you!

Any remaining weaknesses in this thesis, factual or interpretative, are my own.

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Bodø, 29.05.2020
Line Djernæs Sandbakken
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Glossary, abbreviations and definitions

ABBREVIATION	EXPLANATION	NORWEGIAN TERMINOLOGY
110	Emergency coordination centre for fire- and rescue services	110-sentralen
112	Emergency coordination centre for the Police district	OPS, Operasjonssentralen
ECC	Emergency coordination centre	Nødmeldesentral
EMCC/113	Emergency medical communication centre	AMK, akuttmedisinsk kommunikasjonssentral
Samlok	Organizational model for co-located ECCs of the fire- and rescue service, police and health services	Samlok
-	Dispatcher's alarm call check list	Nasjonale startkort
-	Tetra mobile radio system for emergency services	Nødnett

1 Introduction

"The learning environment we create by being co-located is magical."

(Project leader of Samlok nord)

1.1 Background

There has been an increasing focus on the cooperation between emergency preparedness organizations in Norway since 2011. The official investigation following the events on 22nd of July sparked a public debate about the preparedness and public safety in the country, flowed by several reforms and White Papers aiming to prepare the society for unexpected events in the future (NOU 2012: 14). The emphasis has been on how the professional emergency preparedness organizations can improve their collaboration in daily work and in crisis situations. Through the White Paper "Public safety" (Ministry of Justice and Public Security, 2011-2012) the government introduced collaboration[1] as a fourth principle for work on public security and civil protection in Norwegian society, in addition to already existing principles of responsibility, similarity and proximity[2]. The main purpose of adding a fourth principle was to increase focus on collaboration and cooperation between central and responsible actors within the area of emergency preparedness and public safety in Norway (Ministry of Justice and Public Security, 2011-2012, pp. 9, 39).

The White Paper no. 10 (2016-2017a) named «Risk in a Safe and Secure Society» introduced a public security strategy in a four-year perspective, naming eight focus areas of high importance for further work. Learning from exercises, incidents and crisis was one of the focus areas highlighted by the Government as an area that can improve cross-organizational collaboration. However, this is not easy to achieve in practice:

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[1] Samvirke in Norwegian. There is no accurate translation of this word, meaning the collaboration, cooperation and coordination between emergency preparedness organizations.

[2] Ansvar, likhet og nærhet in Norwegian. Translation of terms from the English executive summary of the White Paper 10 (2016-2017) (Ministry of Justice and Public Security, 2016-2017b, pp. 8-9)

"There has been conducted a large number of evaluations from exercises and incidents over the last couple of years, and many learning points keep recurring. This can indicate that one has not managed to follow up and learn from these incidents and exercises in a sufficient manner. Furthermore, it has been pointed out that it is demanding to ensure that learning takes place both at individual and organizational levels after exercises and incidents."
(Ministry of Justice and Public Security, 2016-2017a, p. 138).

Learning is one of six points included in the chain of public safety, and therefore also an aspect that influences emergency preparedness organization's ability to collaborate. This was also highlighted in the report of the 22nd July Commission, which stated that collaboration and coordination between the emergency preparedness organizations had been poor up to 2011, and the ability to acknowledge risk and learn from exercises had been overlooked (NOU 2012: 14, 2012, pp. 14, 459). The importance of learning is also highlighted in research on police

Figure 1: The chain of public safety (Meld. St. 10 (2016-2017), figure 3.1)

work in Norway. An evaluation of the Staff and Leadership Development Programme offered by the Norwegian Police University College argues that there is a need for further focus on the processes of learning in order to be more effective in crisis handling and crisis management. The authors found that sharing experiences often happens at random, and they state that there is a need to formalise these processes (Hoel, Barland, & Lillevik, 2019, pp. 14-17). These findings support the fact that there is a need for increased focus on learning and sharing competence in emergency management organizations.

To ensure even better emergency preparedness and safety in society after 2011, the Government started a restructuring process of many public organizations and conducted studies exploring how to further develop collaboration between preparedness organizations. "The Possibility study"3 explored the status and future needs of common training and competence within and among emergency preparedness organizations (The Norwegian Directorate for Civil Protection, 2015). It points to official reports stating that the responsibility in emergency

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3 "Mulighetsstudien". English term used by the working group discussing the documentation from the public hearing from the report. An executive summary is available in English:
https://www.regjeringen.no/contentassets/67d5bf89fbce4bdd8dddb12e4011f97e/rapport-fra-samvirkekompetansegruppen.pdf

preparedness has been fragmented and the collaboration and coordination has been weak in the past. Therefore, it is necessary to work with both structural- and organizational measures to strengthen learning and collaboration. In particular it is necessary to focus on attitudes, culture and management in organizations, seeing that these organizational measures have a big impact on the ability to collaborate (The Norwegian Directorate for Civil Protection, 2015, p. 14). Regarding structural measures, the number of actors at national, regional and local level as well as the variety of actors with responsibilities within specific sectors can make collaboration challenging. The fact that each sector within emergency preparedness have their own educational systems and use different terminology supports this notion, and the report states that there is a lack of cross-organizational courses focusing on collaboration and coordination (The Norwegian Directorate for Civil Protection, 2015, pp. 14-16, 19-22, 27). Other studies have also stated that structural and organizational factors impact on the ability to learn, and argue that it is important to have further knowledge of these factors and how they impact on the organization in order to be able to facilitate for learning (Broekema, Daphne, & Steen, 2017; Lai, 2013, pp. 131-132).

In a follow-up of the Possibility study, a group evaluated the report itself and the responses and inputs from various organizations. They point out that there is a particular need for exercises that aim to enhance collaboration across organizations and geographical borders. Learning from experiences is important, but the learning across organizations has to be systematic and based on knowledge in order to have value. Moreover, there should be regional training- and exercise facilities available rather than national centres in order to ensure that such activities are prioritized and not too time- and cost consuming. This means that competence and collaboration should be developed with the local and regional perspective in focus (Braut et al., 2016). Thus, according to this evaluation, the focus should be on the local and regional levels in order to explore further how centres for collaboration and common exercises can be developed.

The management level is important to ensure that organizations focus on collaboration and learning (Meld. St. 10 (2016-2017)). Trust, understanding, culture, and knowledge of the structure, resources and competence within and across organizational borders are important aspects in this matter. Furthermore, the management level is responsible for providing the training and competence necessary for solving the tasks at hand (NOU 2012:14: 455). The Possibility study argues that a more systematic approach to learning from experiences can help managers and their employees to integrate the learned experiences into the practical work. This approach focuses on reflection of common experiences, which will lead to new knowledge,

and in turn to new competence taking form of changed practice. According to the Possibility study (2015, p. 35), there are varieties among the organizations' attitudes towards systematic reflection and learning from experiences, and the focus is to a large extent based on individual's interests and abilities. In the end it often comes down to the organizational culture and the willingness to change, but also having available the proper tools to assist those managers and organizations willing to learn but not knowing exactly how to proceed. One of the conclusions of the study is that national and regional centres of competence should be established to ensure that emergency preparedness organizations have the tools, focus and assistance to effectuate a systematic approach to learning (The Norwegian Directorate for Civil Protection, 2015, pp. 34-35, 56).

In 2015 the Government decided that the emergency coordination centres (ECCs) of the police and fire- and rescue service were to be co-localized, which was part of a major reform of the Norwegian police (Ministry of Justice and Public Security, 2015-2016). One of the main arguments for making this decision was to ensure better collaboration between the organizations when handling incidents, as well as the possibility to exercise and develop competence together. Moreover, larger centres would be more robust and flexible in order to meet the society's challenges. Particularly the experiences from Samlok Drammen was discussed in the proposition for the new law. It argued that being co-located had strengthened the collaborative coordination on the operative and strategic levels and the common use of resources, as well as leading to the operators getting to know each other's competence. The decision did not say anything about the location of the emergency medical coordination centre (EMCC)[4] due to an ongoing examination on the topic within the health department at the time. (Ministry of Justice and Public Security, 2015-2016, p. 11; Prop.61 LS, 2015, pp. 93-96). Today, at the beginning of 2020, Bodø is the only place in Norway where the ECCs of fire (110), police (112) and health (113) are co-located in the same building, in the organizational model called "Samlok"[5]. It was officially opened during June 2017. In general, the health sector has been sceptical of co-localization, and the working group exploring the topic of the EMCCs were divided on the question on co-localization with the other centres (Minstry of Health and Care Services, 2016, p. 15). The scepticism has particularly related to the strong confidentiality-rules abiding for everyone working within health care. The fact that the EMCC operates within other geographical areas than the fire- and police ECCs have also been part of

[4] EMCC is the abbreviation for AMK, akuttmedisinisk nødmeldesentral
[5] The second Samlok in Norway will be established in Kirkenes, Finnmark in June 2020.

the debate. The advice from the working group was that every regional health authority had to decide on the best organizational model for their area (Flage, 2019a; Minstry of Health and Care Services, 2016, pp. 12, 15). Thus, the organization of the ECCs are different in the whole country.

Ellingsen and Antonsen (2017) have studied the issue of trust in different organizational models of ECCs and conclude that the Samlok-model, where the ECCs of health, fire and police are located in the same building, provide the best foundation for building trust and collaboration among the organizations. They have compared the Samlok-model to the organizational models of "Scattered", where operators are spread in different counties, and "Nær"[6], where operators are located in the same city but in different buildings. The authors argue that co-location provides better foundation for establishing relations across organizations because the operators in the ECCs achieve better understanding of each other's work, and the operators learn from each other and create new ways of working, interacting and exchanging competence. Furthermore, Antonsen and Ellingsen (2019) argue in a recent study that the Samlok-model provides an arena for a technical and organizational learning environment making interaction between operators in ECCs easier, as sharing information and competence in everyday work is improved. The researchers state that this form of learning is informal, and they see a potential for establishing more formal arenas for exchanging experiences across organizations.

1.2   Rationale for the study

The introduction shows that there is a need for further focus on learning and collaboration in emergency preparedness organizations, as there has been increased focus on these factors in society since 2011. However, recent research shows that there is still potential to achieve a more systematic approach to learning, which can lead to shared competence and even better collaboration than today. The Possibility study (2015) points out that there is often willingness to learn and change, but a lack of both experience and tools of how to do this in practice. It also points out that organizational measures impact on the ability to learn from each other and learn together. The management level is important in facilitating for learning and interaction to take place. The evaluation of Antonsen and Ellingsen (2019, pp. 61-62) shows that learning and sharing of competence in emergency coordination centres to a large extent happens in informal settings, even when all three organizations are co-located. They call for further studies exploring how closeness through co-location can contribute to better collaboration. This thesis

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[6] «Nær» can be translated to «close».

aims to explore these questions further. Thus, the aim of the thesis is to examine how co-located organizations work to improve learning and shared competence, and furthermore how organizational factors affect the learning between organizations.

1.3   Research questions

This thesis examines how co-located emergency preparedness organizations learn together and learn from each other. As previously stated in the introduction, inter-organizational learning is a central factor in emergency preparedness work (Antonsen & Ellingsen, 2019; Ministry of Justice and Public Security, 2016-2017a; NOU 2012: 14, 2012; The Norwegian Directorate for Civil Protection, 2015). It is appreciated for its importance by most actors, but still it proves difficult to achieve in practice. Closeness through co-location is an attempt to create a better foundation for organizations to collaborate. Furthermore, each organization in a co-located context has competence, experiences and procedures that create the foundation for the organizations to learn from each other. At the same time, developing new routines and new ways of working together in a co-located environment makes the foundation for organizations to learn together. Thus, co-located organizations can explore the possibilities for collaboration and inter-organizational learning. With this background in mind, this thesis will explore the following research question:

How does organizational factors and the use of learning tools impact on how emergency preparedness organizations learn together and learn from each other in a co-located context?

In this thesis, closeness through co-location is seen as the context factor. The idea behind co-location and closeness is to make it easier to interact, collaborate and get to know each other across organizational borders (Bradner & Mark, 2002), which in turn can influence the way the organizations learn together and learn from each other. According to prior studies, establishing close relations between partners should be an advantage for learning purposes (Filstad, 2010; Pee, Kankanhalli, & Kim, 2010; Tynjälä, 2008). Co-location includes a competence partnership that may include formal agreements, joint funding, joint management group and a reciprocal relationship. In this sense, the co-located organizations can be seen as network organizations (Jacobsen & Thorsvik, 2013; Jung, Song, & Park, 2019). In general, management is important for the way organizations interact, because it lays the foundation for

how the organizations prioritize, cooperate, learn together and learn from each other (Antonsen & Ellingsen, 2019; Ministry of Justice and Public Security, 2016-2017a; NOU 2012: 14, 2012; Sienkiewicz-Malyjurek, Kozuch, & Szczyglowski, 2019; The Norwegian Directorate for Civil Protection, 2015). In order for network organizations to function successfully, the management should be based on social relations. However, the interplay between the hierarchical leadership and the network management is important (Gil-Garcia, Pardo, & Sayogo, 2016). Thus, closeness and co-location constitute the context for this research question.

Inter-organizational learning is regarded as the process where two or more organizations learn together and learn from each other. Inter-organizational learning may be seen as an important platform to facilitate collaboration, communication and interaction. Learning is defined as the process where someone acquire new knowledge and changes behaviour on the basis of the new knowledge (Broekema et al., 2017; Jacobsen & Thorsvik, 2013, p. 353; Nonaka & Takeuchi, 1995). Some authors argue that learning can only take place among individuals, but when enough individuals have the competence to change this will also impact on the organization as a whole (Broekema et al., 2017; Lai, 2013). Learning can be both tacit and explicit, and it can happen in both informal and formal settings. In this sense, inter-organizational learning can be seen as the process of transferring knowledge between individuals and further into- and across organizations in various ways (Nonaka & Takeuchi, 1995). Inter-organizational learning can therefore be seen as important for the processes happening in co-located organizations.

The following analytical model describes the research question and its sub-questions which will be outlined below:
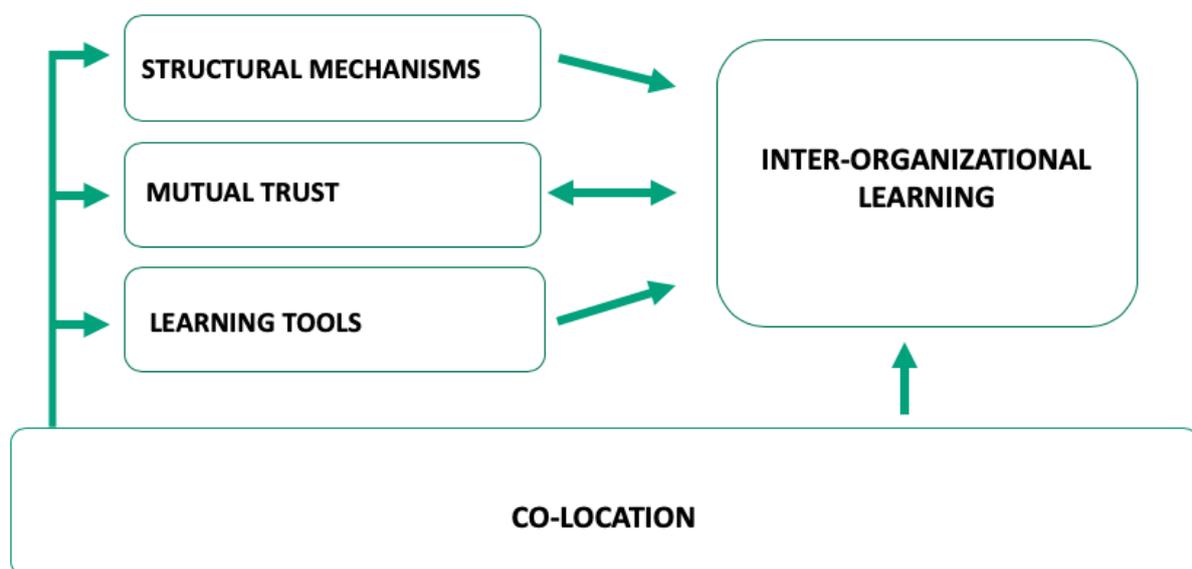
Figure 2: The analytical model of this thesis

The analytical model describes how this thesis aims to examine the interaction between co-located emergency preparedness organizations through studying organizational measures and the use of various learning tools, and moreover try to understand how these impact on inter-organizational learning in a context of co-location. In order to thoroughly understand the connections between all the concepts in the analytical model, the three following sub-research questions will guide the work with this thesis.

1. *How does inter-organizational structuring of a competence partnership affect inter-organizational learning in a co-located context?*

The structure of an organization has a variety of functions, and among others it influences how organizations work. It can be seen as one of the formal building blocks of an organization (Jacobsen & Thorsvik, 2013). In the context of this thesis the structure of the inter-organizational network, for example whether it is flexible or stable, hierarchical or network-based, can influence how it functions, prioritizes and learns (Fiol & Lyles, 1985). If network organizations are to be successful, it is important to work closely to achieve common goals through good communication and coordination, as well as leadership based on social relations (Gil-Garcia et al., 2016). Closeness through co-location can be important for the willingness to cooperate with others (Bradner & Mark, 2002), and co-location can be an organizational structure facilitating for closer interaction and inter-organizational learning. Rules, regulations and procedures are structural measures used to formalize how work is being done in organizations (Kirkhaug, 2015). The inter-organizational structure and its rules and procedures can be important for learning because it lays the foundation for the way work is performed. It can formalize the use of inter-organizational learning tools, among others the frequency and involvement of the employees, and lessons learnt could be included in the procedures and rules in order to make new priorities more visible in the organization. At the same time the formal structures can limit the learning processes because the way work is performed can be rule-based and may leave little room for reflection, improvisation and new ways of solving tasks. Thus, the structural mechanisms of a network organization can determine its capacity to learn and interact with other organizations, and its ability to implement lessons learnt (Broekema et al., 2017; The Norwegian Directorate for Civil Protection, 2015).

2. How is the relation between mutual trust and inter-organizational learning in a co-located context?

This thesis aims to examine the mutual trust among the employees in co-located organizations, and whether there is a reciprocal relationship between trust and inter-organizational learning. Trust is a small ingredient of an organization's culture, which can include almost everything that is non-tangible in an organization. This thesis uses the definition of Schein and Schein (2017), who view culture as the interaction and shared learning in a group, including the system of values, beliefs and norms, and the ability to adapt to internal and external changes. In a co-located context, each organization has its own culture, and perhaps several sub-cultures, while at the same time they will often try to build a common culture for closer collaboration. Trust, which is defined as having positive expectations to other individuals in situations that are difficult to control (Schiefloe, 2019, p. 325), is an important part of this process.

Mutual trust between people, key stakeholders and organizations is vital for learning and collaboration. Organizational cultures based on trust are more likely to succeed with sharing competence than organizations lacking trust (Filstad, 2010). Previous research has shown that lack of trust has been apparent among emergency preparedness organizations, thus impacting on the ability to collaborate (Borch & Andreassen, 2015; Ellingsen & Antonsen, 2017). Trust and a collaborative climate are important for inter-organizational learning to take place. Mutual trust is also the foundation for good communication, which is vital for achieving common situational understanding, getting to know each other and building a common platform for interaction and learning. Previous evaluations from operative environments show that most shared experiences and interaction between co-located emergency preparedness organizations happen in informal settings, which can make it more difficult to systemize and share the competence to all the employees in the organizations (Antonsen & Ellingsen, 2019; Hoel et al., 2019). Working in a co-located setting, where formal agreements and joint management is central for the collaboration taking place, can facilitate for closer interaction and trust among the organizations. The willingness to cooperate increases with interaction, and organizations who collaborate closely are more likely to succeed (Bradner & Mark, 2002). Interaction and trust is closely connected, and important factors affecting inter-organizational learning (Chen, Lin, & Yen, 2014; Huxham & Vangen, 2005). Thus, mutual trust is an important element that affects inter-organizational learning.

At the same time, learning can be an important element for building trust. Filstad (2010, pp. 143-145) outlines several factors that are important for the connection between trust and developing new competence, among others developing a common vision and language; close

communication; and engaged interaction among people. These are concepts that might be developed through learning mechanisms. The capacity to work and learn together is an important factor for success in organizations, and the ability to participate in the networks at the workplace will determine if someone can keep up with their peers or not, according to Tynjälä (2008). Particularly the use of formal learning tools, which are initiated from the management level, can be a method to lead actors closer together, getting to know each other and start building understanding and trust. Thus, inter-organizational learning in a co-located context can lead to closer connections between people and across organizational borders, and thereby also slowly strengthen the level of trust.

> **3.** ***How does inter-organizational learning take place with the use of learning tools in a co-located context?***

Learning is seen as the process where new knowledge, skills, capabilities and attitudes lead to changed behaviour (Jacobsen & Thorsvik, 2013; Lai, 2013). The various learning tools most often in use in emergency preparedness organizations are exercises, trainings, courses, debriefs, or informal interaction with colleagues (Andersson, Carlstrom, Ahgren, & Berlin, 2014; Løvik, 2010; Moynihan, 2008; Sørensen, 2017; The Norwegian Directorate for Civil Protection, 2015). Closeness through co-location can improve the communication and willingness to cooperate (Bradner & Mark, 2002), and will therefore have an impact on inter-organizational learning. Furthermore, learning can be both tacit and explicit. This means that competence can be based on practical experience and may be difficult to explain with words, or universal and easy to communicate to others (Nonaka & Takeuchi, 1995). The various learning tools tries to incorporate both these dimensions and will affect inter-organizational learning in different ways. Nevertheless, working in a co-located context will allow people and organizations to get to know each other better and can encourage new ways of thinking and acting on the basis of learning how others solve a specific task or routine. Getting a better understanding of the inter-organizational learning tools being used, as well as how the organizations work to increase learning and interaction across the organizational borders, can shed light on which measures that can be taken in the future to improve the inter-organizational learning even more.

1.4 Delimitations and structure of thesis

This thesis will focus on the learning processes and interaction between network organizations that work closely in a co-located context. It focuses specifically on the structural mechanisms,

mutual trust and the use of learning tools as factors that affect inter-organizational learning in a co-located context. However, there are other factors that could have been included in this thesis, which could have provided different and interesting insights to the topic of this study. The institutional framework that ties emergency preparedness organizations closely together hinders some of the flexibility in the organizations, while it can also be a powerful tool to promote inter-organizational learning in co-located contexts. Moreover, heavy time pressure and lack of resources are other factors that affect the ability of organizations to interact and focus on inter-organizational learning. These aspects were touched upon by the interviewees but had to be omitted from the analytical framework due to the limited scope of this study. Organizational culture is a dimension with many facets such as values, beliefs and norms, which could have been interesting to study in detail as factors that affect closeness and inter-organizational learning. As the theoretical concept of organizational culture is encompassing, it was decided to focus on trust specifically as the most important cultural variable affecting inter-organizational learning in a co-located context in this study.

Furthermore, this thesis will not go into or analyse any questions related to the actions of one single organization in the case study. Nor will it discuss external relations that may influence the interaction between the co-located organizations. This includes political processes, the interaction between the governmental sectors "owning" the organizations being discussed in the case study, or the interests of all the stakeholders that depend on the emergency preparedness organizations to do a good job.

The structure of this thesis is as follows:

The first chapter has outlined the background for this thesis and has aimed to actualize the topic of inter-organizational learning in co-located emergency preparedness organizations. Relevant reports and research on inter-organizational learning and its importance to achieve good collaboration have been discussed on order to actualize the research questions.

The second chapter will outline the theoretical foundation for this thesis. First, it studies how collaboration takes place in crisis response organizations, and how closeness is important for interaction and cooperation. Second, it discusses what learning is and how it takes place, as well as presenting important learning tools in an emergency preparedness management context. Third, it outlines perspectives on organizational structuring mechanisms such as how work is coordinated and what it takes for inter-organizational networks to be effective. Lastly, it discusses perspectives on mutual trust, and particularly why trust is so important for learning to take place.

The third chapter is dedicated to the methodology of this thesis. It describes the research design and outlines the process of data collection. As semi-structured research interviews are the main source of data in this thesis, the focus is primarily on the sampling and process of interviewing. This chapter also describes how the data was analysed and the quality of the research.

Chapter four presents the data that has been collected in the work with this thesis. To provide an overview for the reader, the case of Samlok nord and its organizations are presented. Then, the collected data is presented according to the topics and structure outlined in the analytical model, research questions and theory chapter. The context variable of closeness through co-location is presented, before data related to organizational structure, mutual trust and how learning takes place is presented in more detail. In each of these topics, an overview of the most important concepts is given and the main points from the data material presented to give the reader an overview before the next chapter where the analysis takes place.

Chapter five discusses of data in light of theoretical perspectives, as it aims to answer the research question and its three sub-questions. The chapter discusses how organizational structure affects inter-organizational learning, the relation between mutual trust and inter-organizational learning, and lastly how the use of learning tools affects inter-organizational learning between the organizations in Samlok nord.

The sixth and final chapter presents the conclusion of this thesis. The main conclusion is that organizational structures, mutual trust and the use of learning tools have a positive impact on inter-organizational learning in Samlok nord. Working together in a network organization provides the foundation for closer interaction, which again leads to trust and better understanding of each other's work across organizations.

2   Theory

This chapter outlines the theoretical framework for this thesis. First, it will provide the context by discussing crisis response organizations and the importance of closeness, as well as the concept of collaboration as a significant premise for how emergency preparedness organizations work together. Second, theories of learning and building competence will be outlined. The SECI-model of Nonaka and Takeuchi (1995) explains the dynamics between tacit and explicit learning, and furthermore different learning tools often used in emergency preparedness will be discussed. Third, theories of organizational structure will be explained. This section will focus on formal structural mechanisms such as hierarchy, flexibility, rules and procedures, as well as how inter-organizational partnerships such as networks and strategic alliances work together in order to be successful at learning and collaboration. Lastly, organizational culture will be briefly defined before a more thoroughly focus on mutual trust will be explored as an important element for inter-organizational learning.

2.1   Crisis response organizations in a co-located context

Emergency preparedness organizations have to handle unexpected situations, high pressure and complex tasks. Such organizations can be characterized as high reliability organizations (HROs) because they have strong focus on handling risks and uncertainties. HROs have cultures that focuses on learning from mistakes, which enables the organization to avoid crisis over time (Boin, t'Hart, Stern, & Sundelius, 2005, pp. 364-365). Roberts (1990, pp. 101-102) classify HROs in this manner: *"To identify these organizations one must ask the question, "How often could this organization have failed with dramatic consequences?" If the answer is many thousands of times the organization is highly reliable"*. Thus, emergency preparedness organizations such as police, health services and fire- and rescue services, including their emergency coordination centres, fit the description of HROs.

According to Weick and Sutcliffe (2015), successful HROs pay attention to five aspects of operation in order to manage unexpected situations in the best possible manner: Preoccupation with failure, reluctance to simplify, sensitivity to operations, commitment to resilience, and deference to expertise. In short, these principles indicate that HROs focus on organizational culture, continuous development of competence, learning from mistakes, having a good situational understanding, and focusing on building networks. The more complex and uncertain situations that are handled, the higher the need for learning across organizations is (Sienkiewicz-Malyjurek et al., 2019). The management levels in organizations have a vital role

to ensure how an organization work with other organizations, particularly in co-located organizations. There can for example be a joint management group which is responsible for strategic decisions, ensuring the formal agreements and mandates for the collaboration (Jacobsen & Thorsvik, 2013). Furthermore, the management level has an important role in impacting on the culture in the organization and to prioritize learning. This entails all the informal interactions within the organization, including building trust, the interactions, attitudes and values, and also how organizations operating in a network can start building a common organizational culture. The management level is also responsible for providing the learning tools so that employees can have the proper competence to solve the tasks at hand (Antonsen & Ellingsen, 2019; Ministry of Justice and Public Security, 2016-2017a; NOU 2012: 14, 2012; Sienkiewicz-Malyjurek et al., 2019).

Being geographically close affects how people in organizations collaborate. In a study on the impact of closeness and distance on collaboration, researchers found that the quality of communication is improved by closeness, and the willingness to cooperate increases when people are closely located. In addition, they are less likely to deceive others and more open for persuasion by someone located closely as opposed to in a distant location (Bradner & Mark, 2002). Moreover, in an experiment they found that being distant increased scepticism of collaboration with others, but when this scepticism was met with cooperation from the other party the suspicions diminished (Bradner & Mark, 2002, p. 232). This aligns with findings from Huxham's (2003, pp. 408-409) research, who states that new partners in a collaboration are often sceptical of each other before they have had time to establish trust. Thus, closeness is important for collaboration, and co-location is a way of establishing trust, connectivity and cooperation in organizations. However, in modern work life it is important to establish closeness no matter if workers are geographically close or distant, and this is a particular leadership responsibility (Kolb, Prussia, & Francoeur, 2009). Closeness through co-location facilitates for joint management group, formal agreements and other cooperating mechanisms which increases communication and cooperation.

2.1.1 Collaboration

Inter-organizational collaboration is relevant in many sectors and disciplines, and as outlined above it is a central principle in the way Norwegian social safety and emergency management is organized. The Norwegian government defines collaboration as "*the requirements for all governmental organizations to secure the best possible cooperation with relevant parties and*

actors in order to prevent and handle emergencies and crisis" (Ministry of Justice and Public Security, 2011-2012, p. 39). Collaboration can be seen as the process where organizations gain more from working together than what they could have achieved by working individually (Huxham, 2003, p. 403; Huxham & Vangen, 2005). Collaboration can also be described as the *"process of prestigeless horizontal exchanges"* (Berlin & Carlström, 2008, p. 178). Kristiansen et.al. (2017, p. 16) defines collaboration as the process of working towards a common goal or purpose. This thesis defines collaboration as the process where several organizations work together to achieve a common purpose through an understanding that they will gain better results from cooperating than working individually.

The context impacting on collaboration can include political, economic, technological, sociological and human factors. Crises can be complex or simple, volatile and turbulent or stable, and they will impact on resources, working environment, performance and decision making. The combination of these factors will impact on the number of roles and organizations involved in an incident, thus also affecting the level and complexity of collaboration between actors (Borch & Andreassen, 2015). The Possibility study argues that organizational structure, culture and leadership are important factors when it comes to promote collaboration between the preparedness organizations (The Norwegian Directorate for Civil Protection, 2015).

Sørensen (2017, pp. 26-27) describes different perspectives on collaboration: Vertical/horizontal, and formal/informal. *Vertical collaboration* is about the hierarchy within organizations and organizational structures. It is useful in daily work, as each unit has a defined area of work and responsibility, but it can also be challenging in crisis situations with a need for clear and quick decisions. *Horizontal collaboration* is the idea of an ideal relationship between equal partners, where resources are made available to all partners and decisions are made on common ground. This form of collaboration can be challenging to achieve in real life because of the need for quick and clear decisions. *Formal collaboration* are the rules, procedures and agreements that outline the roles and tasks of the emergency preparedness organizations. These formal agreements make the collaboration predictable and structured but can also hinder collaboration in some situations if they are too detailed. *Informal collaboration* is the form of cooperation that is established through relations, trust, knowledge of each other or similar organizational background. This thesis will focus on how horizontal, formal and informal collaboration together with the organizational factors impact the inter-organizational learning in co-located organizations.

The literature on emergency preparedness and crisis management argue that collaboration is a complex term because it can be seen as a solution that is supposed to fix all

problems. One should avoid that collaboration becomes a buzz-word without meaning or contents (Langlo, Lægreid, & Rykkja, 2013, p. 27). Huxham (2003, pp. 403-404) argues that collaboration is difficult to achieve in practice, and in rare occasions the cost can outweigh the benefits. Furthermore, collaboration can hinder effectivity in some situations, especially if it conflicts with rules and procedures that are already established (Magnussen et al., 2018, p. 131). Other barriers for collaboration can be static routines, conflicting interests, or fear of making mistakes (Løvik, 2010). When organizations cooperate, they bring their own culture, methodology, priorities and approaches, and any challenges related to organizational factors must be solved before an incident happens (Sørensen, 2017, p. 27). Research on collaboration between the fire, health and police departments have shown task-uncertainty and asymmetries between the organizations, thus providing some difficulties despite many positive effects of collaboration (Andersson et al., 2014, p. 80). Working with common procedures, improved communication between organizations and managers, and working to achieve common situational understanding can be concrete measures that will counteract challenges along the way. Focus on organizational culture and mutual trust is also important. Lack of collaboration can lead to asymmetry in sharing information, slow processes, isolation and stagnation. Collaboration is central for solving the many complex tasks that the society meet every day, and the possibility to involve a range of organizations with specific competence will improve cross-organizational cooperation (Kristiansen et al., 2017).

2.2 Learning and building competence in order to achieve better collaboration

Conventional wisdom states that "*progress require learning from failure*" (Boin et al., 2005, p. 115). However, experience indicates that this is difficult to do in the real world. Most leaders can agree that it is important to increase competence within the organization and across organizational borders, but several studies and reports state that preparedness organizations have potential to work more systematic in this regard (Antonsen & Ellingsen, 2019; Hoel et al., 2019, pp. 14-17; Hoel & Bjørkelo, 2017, pp. 192-204; Ministry of Justice and Public Security, 2016-2017a, p. 138; NOU 2012: 14, 2012, pp. 450-452). In order to examine how co-located emergency preparedness organizations learn together and from each other it is necessary to study some theoretical concepts related to learning. This section starts with a brief examination of what the concept of learning entails, before outlining the process of learning as explained by Nonaka and Takeuchi (1995). Lastly, this section examines which tools that can be used for inter-organizational learning taking place.

2.2.1 The process of learning

Learning in organizations can be seen as *"a process where people and organizations acquire new knowledge, and changes behaviour due to this knowledge"* (Jacobsen & Thorsvik, 2013, pp. 353-354). This indicates that all learning processes starts with the individuals in organizations, and their knowledge has to be spread to others in the organization in order to achieve collective learning. Furthermore, the organization as a whole has to translate the new knowledge into changed, collective behaviour and more effective organizational action (Broekema et al., 2017, p. 327; Jacobsen & Thorsvik, 2013). Linda Lai (2013, pp. 46-52; 117) states that learning is the process of acquiring new competence. She defines competence as "*the collective knowledge, skills, capabilities and attitudes that makes it possible to perform tasks according to the defined demands and goals*". The terms used in this definition can be further explained in the following manner: Knowledge is about what we know, or what we think we know. Skills are the ability to perform complex tasks and can relate to the physical/actual things we do, and to cognitive skills like the ability to analyse or interpret situations. Capabilities relate to someone's personality and will therefore be less likely to change than the other aspects that constitute competence. Lastly, attitudes can relate to a person's confidence in her own competence and will strongly influence how she learns, as well as her motivation for learning and further developing own competence. In the real world, all these dimensions of competence will flow into each other and are difficult to differentiate from each other.

Some scholars argue that learning is directly connected to changed behaviour. Lai (2013, p. 119) argues that such definitions are too narrow, as learning does not automatically change someone's behaviour – rather, a series of factors will influence how, why, when and if changed behaviour takes place. Thus, learning is seen as the process of acquiring new or altered competence in form of new knowledge, skills or mind-sets, that can potentially change someone's behaviour over time. More specifically it is the responsibility of the leader to utilize the relevant tools and strategies to facilitate so that the employees' competence becomes useful for the organization (Newell, Robertson, Scarbrough, & Swan, 2009, pp. 24-25). Being co-located makes interaction easier, and thus it will also be easier to share information and competence (Antonsen & Ellingsen, 2019). It is crucial to share and exchange competence in order to gain development and learning in organizations. This opens for reflection, discussion and exploring in one-to-one-relations, groups, teams and organizations, which is important for achieving a systematic approach to learning as suggested by the Possibility study (2015).

However, this is a complex process and challenging to achieve because it involves aspects of power, politics and trust, and it can put individuals and organizations in vulnerable positions (Filstad, 2010, pp. 128-129).

Research shows that social factors and organizational culture is of importance if organizations are to succeed with sharing competence both within the organization and across organizational borders. Organization cultures based on trust are more likely to succeed with sharing competence. Affiliation, reciprocity and justice are important ingredients to uphold trust (Filstad, 2010, p. 136; Pee et al., 2010). Furthermore, research from Norwegian organizations shows that people experiencing trust from others, as opposed to being controlled or told what to do, will be more motivated to mobilize their competence (Lai, 2013, p. 166). However, Filstad (2010, p. 269) also states that trust between colleagues can be easier to establish through informal structures, especially if and when people figure out that they have common interests. Thus, it can sometimes be easier to share knowledge and competence in informal settings.

Learning in organizations takes place on various arenas. As previously stated, this thesis follows the notion that learning takes place within individuals. Therefore, if organizations are to develop, they depend on the individuals in their organizations. Nonaka and Takeuchi (1995, pp. iiiv; 56-73) have developed the SECI-model (figure 4), describing the process of knowledge creation through four steps: Socialization, externalization, combination and internalization. It incorporates the dimensions of tacit and explicit knowledge. The former is the kind of knowledge that is personal and hard to explain or communicate to others, and individuals might not be aware of this kind of knowledge that they use in everyday work and life. The latter is the kind of knowledge that is formal, often portrayed through written language.
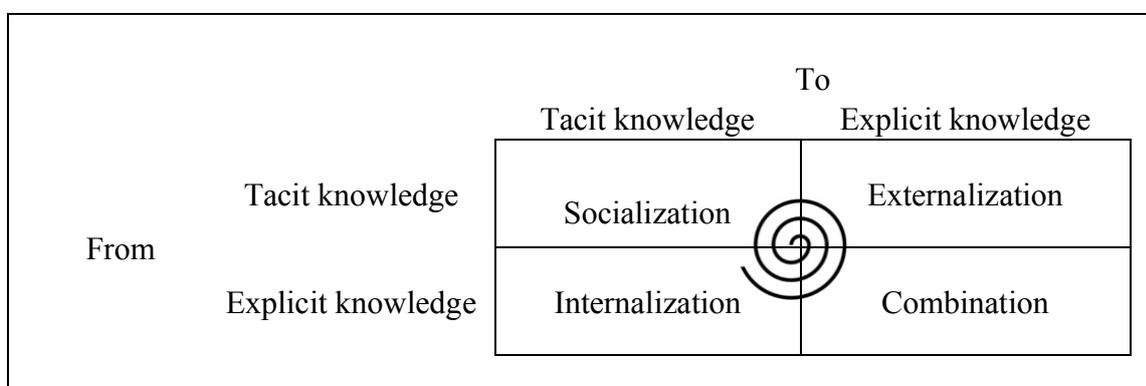

Figure 4: The SECI-process
  (Nonaka and Takeuchi, 1995).

The SECI-process explains how the interaction of knowledge emerges from the individual level to the organizational and inter-organizational levels. *Socialization* is the process of going from tacit to tacit knowledge, where individuals share knowledge without using language. Instead, observation, imitation and on-the-job-training describes the process of learning and the process of taking the unspoken knowledge of others and making it one's own. *Externalization* is the process of going from tacit to explicit knowledge, for example through formalizing an individual's tacit knowledge into written procedures or something tangible. This process will often take place through dialogue or collective reflection. *Combination* is the process where explicit knowledge is sorted or categorized in ways that can transform the formal knowledge to new knowledge. An example of this process is when middle managers "translate" or operationalize the organization's vision and goals into palpable measures further down in the hierarchy of the organization. Lastly, *internalization* is the process of going from explicit to tacit knowledge and can in many ways transfer to the notion of "learning by doing". This can happen when individuals absorb information that is available through written documentation and processing it as their own knowledge. This is the last step of the SECI-process, indicating that knowledge has transferred through the organization, and the socialization process therefore starts a new spiral of transferring knowledge. At the same time, knowledge can spiral from one organization to another according to the theory, making inter-organizational knowledge creation part of the SECI-process. This is necessary for development and innovation (Nonaka & Takeuchi, 1995).

Learning can take place at several levels within an organization, but also across organizational borders. Networks allow people to interact and learn from each other across professions and fields of expertise, creating a potential for innovative learning. This means that people develop ideas and new ways of working with their own context as a starting point, and it means that organizations as a whole can develop new ways of thinking and acting. Interaction, shared goals, dedicated participation of the members in the organizations, trust and a collaborative climate are important aspects for learning networks to function properly (Tynjälä, 2008, p. 137). Inter-organizational learning processes are most effective when they are a combination of management initiatives and spontaneous activity during action (Sienkiewicz-Malyjurek et al., 2019, p. 295). It often differs how organizations facilitate for learning, and the structural and organizational factors are important in this regard. Nonaka et.al. (2000, p. 14) refers to the concept of *ba*, which is defined as "*a shared context in which knowledge is shared, created and utilised*". They argue that interaction is the central idea of *ba*, thus inviting individuals in organizations to participate in the process of creating knowledge

and competence. Thus, being co-located and organized as a network of emergency preparedness organizations should be a solid foundation for achieving inter-organizational learning.

2.2.2 Learning tools

The tools being used to promote inter-organizational learning can be both tacit and explicit, formal and informal. Learning from colleagues through formal or informal mechanisms, trainings (drills), exercises, courses, virtual experiences and written documentation are examples of learning tools (Andersson et al., 2014; Løvik, 2010; Moynihan, 2008; Sørensen, 2017, pp. 27-28; The Norwegian Directorate for Civil Protection, 2015, p. 12). The formal learning tools are those that someone facilitates, such as training, competence development days and exercises. The informal learning tools are the arenas where people can meet and talk, without an agenda of that they have to do. Antonsen and Ellingsen (2019) argue that co-location is an organizational model where informal learning can take place easily, but there is need for more focus on the formal learning tools. Moreover, the ability to learn together and to learn from each other is important for success in organizations. At the individual level, having the chance to participate in learning networks is important for progress (Tynjälä, 2008, p. 135). Focusing on learning across organizations is effective in order to be better prepared when something happens in everyday work or in specific incidents. Training and drills on common procedures allows members to get to know each other and to evolve a common language, and exercises involving several organizations makes it possible to test own competence (The Norwegian Directorate for Civil Protection, 2015). Often, it is important to acquire knowledge about the other organizations in order to make better decisions on behalf of your own organization. In total, this can contribute to better collaboration (Sienkiewicz-Malyjurek et al., 2019, p. 291).

An outline of the courses and educational systems for emergency preparedness organizations show that there are different structures and educational levels offered. Some organizations/sectors offer courses and practice-oriented learning, while other organizations/sectors offer education at vocational college and/or university levels. It also varies how these courses and educations emphasize collaboration with other organizations as part of the curriculum. Thus, one ends up with variations in terminology, educational level, organizational cultures and focus on collaboration (The Norwegian Directorate for Civil Protection, 2015, pp. 19-22). This can have an impact on how these organizations learn together

and from each other in everyday work. Furthermore, learning from crises is another approach which is challenging, because crises are often chaotic, complex and stressful. However, it is important for handling future incidents in a better way. A recent study on learning from crisis found that learning is best viewed as a continuous process that needs constant focus. The authors found that written reports had limited value for the members in the organizations when it came to the learning aspect after crisis, rather they were used as check-lists for managers and for political purposes (Broekema et al., 2017).

Learning in the workplace is often informal in its nature. It is also contextual, tool-based and collaborative (Filstad, 2010; Tynjälä, 2008). Studies of the police and of co-located ECCs have found that learning often takes place in informal settings, through casual conversation, during incidents or at random in meetings, which makes it difficult to formalize the learning points from incidents and share with other members within or across organizations. At the same time the informal talk is valuable because it is effective in building trust and it helps people getting to know each other better (Antonsen & Ellingsen, 2019; Hoel et al., 2019). Antonsen and Ellingsen (2019, p. 52; 61) claim that a more systematic approach to learning from experiences can enhance the collaboration between the three organizations studied, preferably with operators and their leaders reflecting and discussing together. Collective reflection of practices, incidents and experiences is important in order to learn, for example in order to change procedures or the way work is performed if necessary. The management level has a central role in facilitating for such bottom-up processes. This entails that exchanging experiences should happen in a systemized manner and not only through informal interaction in order to maximize the outcome of the learning processes in the organizations. Thus, having an open mind towards change, and being willing to change the procedures or culture within one organization will benefit the inter-organizational learning process (The Norwegian Directorate for Civil Protection, 2015, pp. 34-36).

Exercises can be important for building trust among organizations (Andersson et al., 2014, p. 88). An internal report from the Norwegian police states that exercises and courses are the learning tools applied the least. The work in the ECC happens 24/7, which makes it impossible to gather all employees for learning activities and reflection at the same time (Antonsen & Ellingsen, 2019, p. 48). Collaboration exercises, either table-tops, full scale, virtual or simulator-based, can also allow participants getting to know the roles and persons within and among organizations, plans and procedures, and the risk factors (Løvik, 2010). Research shows that inter-organizational exercises have to focus on learning outcomes related to collaboration and not the individual focus areas of the organizations, because it may be

difficult to achieve both aspects in the same exercise. It is also important to leave room for improvisation in inter-organizational exercises. Real incidents involving several actors will very often involve elements that are not described by procedures or plans, thus leaving it to the involved actors to communicate and find alternative solutions (Sørensen, 2017, pp. 28-29).

Barriers to learning can relate to both structural and organizational factors. Lai (2013, pp. 131-132) points to three factors: Personal, inter-personal and organizational factors. She explains that there may be resistance to learning and change in some organizations because employees might get a feeling of inadequacy if facing tasks they are not mastering fully. People who are looking for personal and professional development might be more open for learning and the potential change it can bring. Furthermore, the culture for giving feedback will impact on the ability and willingness to learn. If too much negative feedback is given it can hinder the openness to learning. The norms and values in the organization are important in this regard. Lastly, factors such as organizational structure, work environment, technology and the specific tasks being performed will impact on the motivation for learning among employees. Sienkiewisz-Malyjurek et.al. (2019, p. 294) found in a study of inter-organizational learning in public emergency preparedness organizations that situations were interpreted differently by the participating organizations, and there was some reluctance to adapt to other organizations. Moreover, some organizations were afraid of making mistakes. This exemplifies some of the difficulties of cross-organizational learning, as differences in structure and culture can influence how individuals and organizations handle change, how organizations interpret and experience incidents, and how organizations are rigged for sharing information and resources. Therefore, it is important to tackle these challenges by examining how the structure and culture in organizations can impact on the co-located organizations learn together and from each other.

2.3 Organizational structure

The organizational structure is vital for any organization, as it defines how tasks and responsibility are divided and coordinated. The expectations to individuals in the organization, that is how they behave, their duties and responsibilities, will impact on the organizational structure (Jacobsen & Thorsvik, 2013, pp. 72-73). The organizational structure also impacts on the management level's ability to manoeuvre the organization in the daily work (Kirkhaug, 2015, p. 121). Thus, the type of structure can influence the learning in organizations. Whether the organizational structure is centralized/decentralized, flexible/non-flexible, and whether it

is rigged to open up to new insights does affect if and how learning takes place (Fiol & Lyles, 1985, pp. 804-805).

2.3.1   Coordination of work: Hierarchy, flexibility and procedures

When several organizations are co-located, they will often have different responsibilities and specialities which complement each other. Every organization has special skill and knowledge, and in incidents involving more than one organization it is important that the specific information is shared with others. This creates a need for inter-organizational learning (Sienkiewicz-Malyjurek et al., 2019, p. 289). At the same time, one can argue that the medical services, fire- and rescue services and police have a division of tasks based on function, which allows each of the organizations to be really good at what they do. However, it is a possibility that "silo mentality" can develop when organizations have function-based division of tasks. This means that the culture and ways of working within each unit can be based on professions and their specializations, and there might be lack of understanding for the work that others perform. This may also make it more difficult to collaborate (Jacobsen & Thorsvik, 2013, pp. 75-76). Even if these principles are mainly related to division of functions within one organization, it can be argued that these difficulties may apply in a co-located context too, especially because the organizations have to work together in many of the incidents happening every day.

Emergency preparedness organizations can be characterized as bureaucracies, which build on hierarchy, stability, specialization, standardization and routines as important aspects for task performance (Bigley & Roberts, 2001; Borch & Andreassen, 2015). The advantage with this organizational structure is that such organizations are often effective, stable and predictable, with a clear understanding of who makes decisions. One of the disadvantages is that bureaucracies can be very rigid and difficult to change (Jacobsen & Thorsvik, 2013, pp. 96-97). Leaders in hierarchies will often emphasise institutional trust and focus on the importance of stability and standardization. This means that the rules, procedures and laws are important for creating a predictable working environment, and also that the ties to own organization is strong (Kirkhaug, 2015, pp. 38-39, 123). Rules and procedures are also a way of ensuring that the whole organization perform tasks in the same way. For example, as an inhabitant in Norway you should receive the same kind of help regardless of which ECC that receives your call for help, and therefore it is also evident that rules and procedures are important for standardizing the work that is done. Rules and procedures can encourage learning

and sharing of information and competence if it is written down and established as a preferred way of working. However, it can also inhibit learning if it limits the flexibility and ability to critically reflect upon the way things are done (Broekema et al., 2017, p. 329). Underdeveloped rules of collaboration can lead to limitations in inter-organizational learning (Sienkiewicz-Malyjurek et al., 2019, p. 295).

Many managers are looking for flexibility, as well as trying to uphold the structure and hierarchy found in many bureaucratic organizations. This can be seen as contradictory and challenging to maintain for leaders, especially in HROs like emergency preparedness organizations (Bigley & Roberts, 2001, p. 1281; Rice, 2018). Boin and t'Hart (2005, pp. 358-359) discusses what constitute effective emergency management. They state that crisis plans are often based on organizational hierarchy and centralized decision making, but such plans do not necessarily reflect the local capacity on the operational level which will be in place when an incident occur. Instead, the formal roles in the organizations should facilitate for working patterns that assure flexibility and steady information flows, as this will ensure more effective emergency management. This argument is supported by case studies from complex maritime incidents in the Arctic showing that there is a need for flexibility in coordination and inter-organizational cooperation (Andreassen, Borch, & Ikonen, 2018). Organizations that manage to balance the hierarchical structure with a flexible approach in emergency response will be more ready to handle complex incidents that involve collaboration between several organizations (Andreassen et al., 2018; Bigley & Roberts, 2001; Borch & Andreassen, 2015). In order to manage this balance in real incidents, it is important that these perspectives are reflected in the learning schemes in the organizations (Sienkiewicz-Malyjurek et al., 2019).

In order to coordinate the work in organizations there are several approaches to take. In hierarchies, the leader will have direct influence over the work performed by others in the organization. This is a way of formalizing the authority, and also a way to maintain control. Standardizing the tasks that are performed in the organization is also a way of coordinating the work, with the aim of ensuring that tasks are performed the same way every time. This way of coordinating is effective, but it may hamper flexibility. Moreover, organizations may also focus on results in order to coordinate and control the work. Thus, the workers are freer to solve the tasks as they want, but it may also put too much emphasis on the results and degrade other important areas in the organization. Lastly, co-localization among organizations at the horizontal level may also be an approach to coordinating. This can provide complex organization structures as there will be many projects to coordinate the various focus areas across the organizations. However, it may also open up for new ways of thinking and

organizing the work (Jacobsen & Thorsvik, 2013, pp. 80-87). Organizations often use different approaches to coordinate the work, and a combination of the ones mentioned above is not uncommon. In a co-located context, the organizations might emphasize these mechanisms differently in order to coordinate the work internally, while at the same time having to establish mechanisms to coordinate the work that is done across the organizational borders. As argued above, inter-organizational work such as learning might be formalized in the organizational structures and it might also be informal interaction.

2.3.2 Inter-organizational networks

It has become more common for organizations to partner up as a response to changes in the external factors and new demands to organizational performance. Samlok nord can be seen as an example of a joint venture, strategic alliance or a network, which is also co-localized. Such partnerships are often cooperation between equal partners, meaning that there are no hierarchical relations among them. The objective is to gather resources in order to solve tasks better together than the organizations can do by standing alone. Organizations can also partner up as a result of strategic focus (Jacobsen & Thorsvik, 2013, pp. 224-230). Gil-Garcia, Pardo and Sayogo (2016) claim that generating goals, managing functions, setting the structure and promoting communication and coordination are the main features of organizational networks. More specifically, having a collective purpose for working together is necessary. The leadership in networks are often based on social relations rather than hierarchy, and the role of the leader is to be mediator and to focus on the process of developing and achieving the goals. The role of trust is key to success. However, the leadership of networks need connections to the bureaucratic hierarchy, as the latter often takes political leadership in crisis, allocate resources and deployment. In a crisis situation, co-location increases the chances of interacting more closely and being more effective (Gil-Garcia et al., 2016). Jacobsen and Thorsvik (2013, pp. 228-230) argues that the connection between organizations in formal networks are officiated through agreements, mandates and procedures. In these networks the organizations work closely together, and sometimes there is a coordinator hired to reinforce these connections. Often, the organizations being part of such networks will contribute with resources as well.

Benson (1975, p. 235) studied which factors that contribute to inter-organizational balance in network-based organizations, i.e. a situation where the cooperation is based on mutual respect, consensus and highly coordinated actions. Four factors were identified:

Domain consensus, which means agreement on the role and scope of the cooperation; *ideological consensus*, regarding the nature of the tasks and the approach taken to solve these; *positive evaluation*, meaning the appreciation of the work done by the other organizations; and *work coordination*, indicating that the tasks are coordinated in such a way that the collaboration works effectively. Other studies have also proved that trust is an important factor for a functional and effective network-based organization (Chen et al., 2014; Gil-Garcia et al., 2016; Jacobsen & Thorsvik, 2013, p. 230). Furthermore, a recent study on the dynamics of inter-organizational emergency management networks claims that networks based on reciprocal connections will handle disasters more effectively than connections that are based on one-way dependencies. The study also found that a strongly tied network can strengthen knowledge and institutional norms, and that collaboration can be strengthened through formal and informal communication (Jung et al., 2019). Co-located organizations which also are tied together in a network will have further advantages for creating a solid foundation for collaboration (Ellingsen & Antonsen, 2017).

Collaborating in networks or strategic alliances can be effective arenas for competence and learning as partners share their skills and knowledge with each other. Knowledge is one of the most important competitive advantages of an organization, and therefore the management has an important role in facilitating for these processes (Inkpen, 2000, p. 1019). A study from the United Kingdom police force concluded that there are no coordinated strategies for sharing knowledge across the organization, although they acknowledged the importance it can play in organizational performance. In many senses it is seeming that "*knowledge is perceived to be power",* and therefore it can be difficult to share knowledge in practice. The study argues that knowledge management can be a method for the police force to become more effective (Seba & Rowley, 2010, p. 623). A study on inter-organizational learning in strategic alliances found that networks can provide access to the knowledge and competence in the other organizations. In the learning process it is important that the organizations have a desire to learn, which can be done especially if the management focuses on this aspect and also communicate the importance of learning to the operational level. Moreover, giving access to information and being willing to discuss problems is another success factor for learning (Hamel, 1991, p. 90-94). However, in order to acquire knowledge and competence in networks and strategic alliances it is important to create new knowledge as well, and not only process existing knowledge. The alliance itself will develop over time, and so will the learning processes (Inkpen, 2000). Establishing trust among the partners and building long-term partnerships is important for inter-organizational knowledge sharing (Chen et al., 2014).

2.4   Mutual trust

The organizational factors are vital for understanding how learning takes place in organizations (Lai, 2013; Ministry of Justice and Public Security, 2016-2017a; NOU 2012: 14, 2012; Tynjälä, 2008). This section will give a brief definition of the term organizational culture and how it can impact on the ability to learn together and from each other in co-located organizations. The importance of mutual trust between organizations is especially highlighted as an important aspect for understanding and cooperation across organizational borders.

2.4.1   Organizational culture

There are several ways of defining organizational culture, but the definition of Edgar Schein (2017, p. 6) often stands out in the literature:

> *"The culture of a group can be defined as the accumulated shared learning of that group as it solves its problems of external adaptation and internal integration; which has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, feel, and behave in relation to those problems. This accumulated learning is a pattern or system of beliefs, values, and behavioural norms that come to be taken for granted as basic assumptions and eventually drop out of awareness."*

This definition implies that organizational culture is complex. Shared learning is seen as the core of culture, as it focuses on how organizations adapt to new circumstances and changes internally and externally. How organizations communicate, work towards common goals and adapt to changes and new experiences impact on the culture. Being able to handle the internal integration and external adaptation as a whole is what separates successful and learning organizations from others. Furthermore, this definition also implies that an organizational culture can change; it is upheld only as long as it is perceived as valid. It is the values, beliefs and norms of the individuals that make up the culture, and when the majority accept the change it is taken for granted and taught to new members of the organization. Leadership is essential to upholding and changing the organizational culture, although this is challenging and time-consuming work (Jacobsen & Thorsvik, 2013, p. 130; Schein & Schein, 2017, pp. 6-14).

The three organizations in the case of this thesis represent different professions that all have strong organizational cultures that are different from each other based on traditions, well-established rules and procedures, and informal identities and values (Langlo et al., 2013, p. 25). According to Schein and Schein (2017, pp. 13-14) occupations can have own cultures, which

is often embedded through education and training periods. Newcomers will be socialized into values and beliefs that exist within the profession. Working so closely together can pose both a challenge and a strength for the ability to learn from each other and learn together. It can be challenging because different professions, experiences and points of view can lead to discussions and conflicts about how to do things in the collective sphere, but it can also be a strength making it possible to learn and exchange competence in a better way than previously. Getting to know each other in order to establish trust and good communication will be vital to exploit these differences as a positive effect on learning. Thus, working together across organizational borders with a focus on inter-organizational learning might be an approach to achieve a stronger, common culture which in turn will lead to stronger collaboration. In a setting where several organizations are co-located it is important to have a common sense of belonging, as well as maintaining each individual culture. Leaders developing a new, common culture will have to balance between building an integrated and diversified culture. Most importantly, they must create the sense within and across organizations that learning is worth investing in (Broekema et al., 2017; Schein & Schein, 2017, pp. 351-354).

2.4.2 Trust

Trust can be defined as the willingness to rely on others and having positive expectations of their actions, in situations where there is high risk and the outcome might be negative (Julsrud, 2018; Schiefloe, 2019). Trust is often based on the expectation that others will behave in a certain way that upholds the established norms, beliefs and values in the organization, and the experience that these expectations are fulfilled. Trust is often developed through long-term cooperation. It takes long time to build trust, and it doesn't take much to break trust. If there is trust between management levels and employees, whether within or across organizations, there is less need for control and administration (Jacobsen & Thorsvik, 2013, pp. 127-128; Schiefloe, 2019, p. 325). Trust is primarily built among individual actors, and can from there contribute to trust in societies or institutions, according to Gulbrandsen (2019). Furthermore, trust is an important factor in network-based organizations that are perceived effective and successful (Chen et al., 2014; Gil-Garcia et al., 2016; Jacobsen & Thorsvik, 2013). Some researchers even argue that trust is an essential trait in order to succeed in developing new competence, focus on innovations and to cooperate with others (Julsrud, 2018). Organizational cultures built on trust are more likely to develop a learning culture and to share competence (Filstad, 2010).

There are many perspectives to studying trust among people and among organizations. It can be seen as a *strategic* approach where the positive gain of establishing trust will outweigh the alternative, and thus it becomes the product of rational actions. Moreover, trust can be seen as an *institutionalized* practice where trust in organizations can be upheld through rules, procedures and common daily activities. Trust can also be analysed through a *norm-based* perspective, meaning that trust is part of the culture in society. This kind of trust can be built on common values, or on specific incidents connecting people more closely together. Lastly, trust can be based on *relations and networks*, indicating that people who have frequent interaction are more likely to develop trust than others (Julsrud, 2018). When studying trust in co-located contexts, all these different perspectives on trust can be relevant. It is said that Norwegian society score high on trust in general, and also most Norwegians would agree that trust is important for establishing good cooperation. However, emergency preparedness organizations can focus on trust across organizations because it is strategic to do so in order to solve tasks and assignments. In addition, in a co-located context it may be important to focus on and uphold trust through building common procedures and ways of working together in a co-located context. Being co-located may also develop and explore new ways of building trust and new ways of collaborating.

Trust is an important element for collaboration and learning (Huxham & Vangen, 2005; NOU 2012: 14, 2012; The Norwegian Directorate for Civil Protection, 2015). It can be challenging enough to establish trust across units within a single organization, if not across organizations. Research shows that there has been lack of trust between emergency preparedness organizations in the past, which has made learning and collaboration more challenging (Borch & Andreassen, 2015; Ellingsen & Antonsen, 2017). However, if one manages to establish inter-organizational trust it will also benefit knowledge sharing and collaboration (Chen et al., 2014). Working in a co-located organizational model increases the ability that understanding and accept for each other is taken for granted, and it forms the new way of interacting (Ellingsen & Antonsen, 2017). Mutual trust is also essential for establishing good communication across organizations. This is why trust is an important element to discuss when studying how organizations learn together and from each other in co-located emergency preparedness organizations.

Huxham (2003, pp. 408-409) argues that suspicion rather than trust is often the starting point between new partners, and the process of building trust is essential for collaboration to work according to its function. According to research, there are two factors that have to be in place for organizations to build trust: There has to be common expectations for the

collaboration, for example in the form of past experiences or agreements; and the partners have to be willing to take risks when initiating the collaboration. If successful, the first steps can spiral into new ways of collaborating. Boin et.al. (2005, p. 49) points out that mutual trust across organizational borders and among the key stakeholders is vital for successful work in crisis teams. They also argue that groups function better if all parties accept the different roles and responsibilities being held in an incident, including agreeing on who makes the decisions. Trust between the partners is essential to upholding collaboration and it must be nurtured constantly, as small changes can disturb the established trust. Furthermore, the leader's ability to keep focus is crucial for collaboration, particularly in a context with many stakeholders and tasks fighting for attention (Huxham, 2003, pp. 414-416).

Ellingsen and Antonsen (2017) have been studying the issue of trust in ECCs in the Norwegian context. They claim that trust is essential for achieving collaboration, and that trust is built through cooperation face to face where people get to know each other. This type of interaction will open up for dialogue, reflection and questions, which makes it easier to clarify misunderstandings and at the same time build a common situational understanding. The Possibility study (2015, p. 34) also claim that systematic reflection about common experiences is effective for learning and collaboration, and essential if the goal is to achieve change in the way work is done. This entails establishing common language and terminology and agreeing on new procedures and structures to incorporate the new learning points. The study on trust in ECCs conclude that Samlok is the best organizational model to facilitate for trust and collaboration in comparison to other organizational models, but also argue that there is potential for a more systematic approach to build trust and collaboration between the emergency preparedness organizations (Ellingsen & Antonsen, 2017).

3 Methodology

This chapter will give an overview of the methodological approach in this thesis, through examining the design, the data collection, and the strengths and weaknesses of the project. The objective of this chapter is to give a thorough and transparent description of the choices made during this research project. This thesis is based on qualitative methodology using semi-structured interviews in addition to document studies and participative observation.

3.1 Research design

The research design entails all the choices and considerations that the researcher has to make, including what, how and whom to examine in order to answer the research questions (Johannessen, Christoffersen, & Tufte, 2011, p. 77). A general distinction between qualitative and quantitative approaches to research is that the former goes in-depth and seeks understanding, while the latter seeks overview and explanation. However, both approaches can be used to study the same phenomena, but the questions being asked and the analysis of the data are done differently (Tjora, 2017, pp. 28-30). In this study, a quantitative research design could have provided insights to the organizational factors and use of learning tools from a broad range of employees at the three ECCs, and possibly also given the opportunity to compare results and views from the various levels in the organizations. This is in contrast to a qualitative research design, which usually includes fewer informants and aims to describe the phenomena being studied more closely and detailed. However, as the thesis aims to go in-depth to study a specific phenomenon, namely how inter-organizational learning takes place in a co-located context, a qualitative research design is more applicable. More specifically, semi-structured interviews was used to examine the manner more thoroughly. A qualitative design can be implemented in various ways, and therefore it is important that the research is transparent throughout the whole research process (Johannessen et al., 2011, p. 86).

3.1.1 Case study

A case study is the examination of a single unit, for example an organization, a programme, an activity, an individual or an incident. The researcher collects detailed data from a case during short- or long term (Johannessen et al., 2011, pp. 89-90). The case study is used to generate knowledge about the specific case and its participants (Tjora, 2017, p. 41). This thesis studies the inter-organizational learning between the co-located emergency coordination centre

(ECCs) that handles calls directed to the police, fire brigades or medical units, and therefore it is regarded as a case study.

This case study consists of one case and three analytical units. A single case study is applied as the methodology of this thesis because it well suited for in-depth analysis of the complexity in the co-located setting, which consists of different organizations working to establish better collaboration. Moreover, the focus on trust, the various structural mechanisms, the use of learning tools and the interaction happening between the people in the organizations necessitated a methodology such as a single case
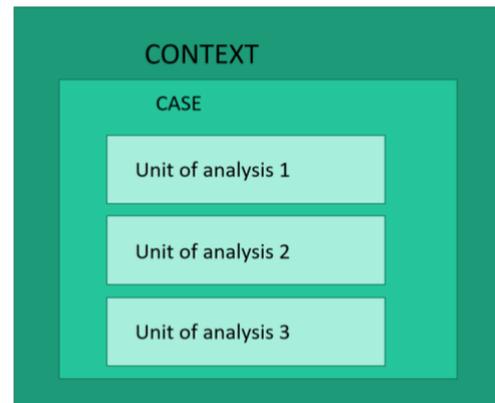
Figure 3: Design for case studies with a single-case design and multiple units of analysis Yin (2018: 48).

study approach in order to study these phenomena in detail. This means that the thesis studies the three organizations in Samlok nord as one case, while also acknowledging that they have differences and similarities that makes them distinct organizations (Johannessen et al., 2011, pp. 91-92). At the same time, the research question is formed in such a way that it aims to examine the inter-organizational learning and the interaction between the tree organizations, which can be an argument that there is only one unit of analysis. However, even if the three organizations collaborate closely both with regards to solving daily tasks and focusing on inter-organizational learning, they are still three separate organizations. This particular case and its organizational form is what makes it interesting to study how inter-organizational learning takes place in such a setting.

In Yin's (2018, pp. 27-34; 37-28) description of case study research, five important components are described. These are presented below and then linked to this thesis. *1) The researcher should form a research question that aims to explore a process,* meaning how or why something happens, or to understand a phenomenon better. This thesis wants to understand how inter-organizational learning takes place in a co-located context, and the relation between factors that might influence the learning process.

2) The researcher will often make assumptions about the phenomenon being studied based on a theoretical foundation, and these assumptions will guide the further research. In this thesis, the starting point was the interest in a particular phenomenon, namely how inter-organizational learning takes place in a co-located context. A theoretical platform was developed on this basis, guiding the collection of empirical information. Thus, this research process is mainly deductive. However, the theoretical platform has been adapted throughout

the process, particularly during the data collection and the analysis, making it a flexible approach.

3) Deciding on the unit of analysis is the next step according to Yin. The research question of the thesis has narrowed the context for the research to co-located emergency preparedness organizations. The researcher was interested in the ECCs as these have been in focus in several studies, evaluations and reforms in Norwegian society during the last ten years. On a broad scale there has been a lot of focus on learning and building competence in emergency preparedness organizations. More specifically, the co-location of three organizations in Samlok is a new and innovative way of organizing these services which opens up for new ways of working and learning. There was only one case in Norway fitting these characteristics at the time of writing, namely Samlok nord in Bodø. Thus, deciding on the unit of analysis was based on the research question and the limited availability of cases fitting the criteria based on theoretical criteria.

4) The connection between the collected data and the assumptions being made should be based on theory. In this thesis, it will be a matter of recognizing patterns and key terms from the different interviews that can help to describe how inter-organizational learning takes place in the co-located emergency preparedness organizations. This will all be based on the theoretical platform outlined above.

5) The criteria used to interpret the findings of the research should be based on existing theory. This includes identifying rival explanations for the findings, and to counter for this already when preparing for the data collection. Thus, one should be able to keep, modify or develop existing theory after the analysis is done. Yin (p. 37-8) calls this "analytic generalization", meaning that it is possible to go beyond the specifics of the case being studied when drawing up the conclusions. In this thesis, the aim is to identify which factors that affect inter-organizational learning in a co-located context.

3.2   Data collection

The data collection phase is important in all types of research, and it consists of the sampling strategy, the size of the sample, and how the informants are recruited. The technique being used to collect data determines the further work with the research project (Johannessen et al., 2011). Qualitative research interviews, document studies and active participation will be used as the methods in this thesis. The work with this thesis has been influenced by the fact that the organization I work for have close cooperation with Samlok nord. There are both advantages

and disadvantages tied to this, which will be discussed further down in this chapter. I had valuable help from one of the "gatekeepers" in the co-located Samlok nord, and this is a person who knows the project well, and who knows the people that work in the ECCs. I know this person professionally through my job, as we have met through common projects meetings. In order to make sure that the research would be open and adhere to all privacy regulations, information about the research project was sent to the Norwegian Centre for Research Data. They judged the information given about the project and the precautions taken to ensure the consent and privacy of informants and gave a clear signal to start the project (appendix 3). Furthermore, I asked for permission to do interviews with the leaders at each of the ECCs, in order to have the work formally acknowledged in the organizations (Johannessen et al., 2011, pp. 99-100; 127-108). All the informants got a letter with information about the research project, as well as information about their rights as informants.

3.2.1   Qualitative semi-structured research interviews

Qualitative research interviews can be seen as a conversation with an objective to describe and understand the topic being studied. The researcher aims to understand the phenomena being studied from the view of the interviewee, and therefore, the construction of knowledge happens in interaction between the interviewer and the interviewee. Thus, the qualitative research interview is a conversation with purpose and structure (Brinkmann & Kvale, 2015; Johannessen et al., 2011). In this thesis, the aim is to explore how inter-organizational learning takes place in a co-located context. As a researcher, I am interested to understand this phenomenon from the view of the team leaders, who have a great impact on the daily work in each of the three organizations.

Furthermore, the qualitative research interview is relevant when the researcher wants to explore the nuances in the experiences of the interviewees. It is important to establish trust between the researcher and interviewee in this regard (Tjora, 2017, pp. 114-116). Brinkmann and Kvale (2015, pp. 3-4) argues that the qualitative research interview should view people as subjects, meaning that all people are formed by the context they operate in. The researcher is interested in how the person sees the world, but also to explore how the society, workplace and culture influence on how people articulate and form opinions. This aspect is relevant in this thesis because the interviews are done with representatives with each of the three organizations in the case study. As the theory has argued above the three organizations have different cultures and structures, and this might influence how they see the world. The interviewees perspectives

and thoughts to the questions posed will be discussed in light of theory further down in the paper.

This thesis will use semi-structured interviews, which means that it will have themes and questions written down in an interview guide. Semi-structured interviews build on a theoretical understanding of the topic of the interview, and it is important to have a good understanding before talking to interviewees (Tanggaard & Brinkmann, 2012, pp. 26-27). At the same time, this type of interview opens up for follow-up questions and changes in the order of questions. Having a structure of the interviews allows the researcher to ask similar questions to all the interviewees, and it might be easier to compare and contrast answers in the analysis phase of the research project. This form of interviewing is opposed to the unstructured or structured interviews, which might provide more or less flexibility and more or less ability to compare answers (Johannessen et al., 2011, pp. 145-147). In this thesis, the semi-structured interview will allow for enough flexibility to allow the researcher to follow-up on interesting topics being brought up in the interview, and it will also contribute to an informal atmosphere in the interview setting. Furthermore, because the topic of the thesis is how the three co-located emergency preparedness organizations learn together and learn from each other, it is necessary to ask the interviewees similar questions in order to get a better understanding of the context.

Sampling

In a qualitative research design, the objective is most often to gain in-depth insight into a specific topic. Therefore, the data collection has a concise target and purposeful sampling is most often used. This means that the researcher has to have a clear strategy to select the right people from the population that is in the target group of the research question. This approach is in contrast to quantitative research, which aims to find statistical significant results (Johannessen et al., 2011, p. 110). In this case the population is determined by the research question and theoretical framework limiting the possible samples to co-located emergency preparedness organizations. Furthermore, the aim is to focus on the operational level of the organizations, namely the ECCs. As previously explained, the team leaders have an important role in the execution of the daily work in the ECCs, and the aim was to examine the perspectives of this group on learning, structures, interaction and trust. The project management, and particularly the project leader, has an important role when it comes to facilitating for inter-organizational learning. On this basis the population for the sampling in this thesis is narrowed down considerably. Thus, the method of sampling is criteria-based; namely that the

interviewees have to know the case well, they have to work in the ECCs in Samlok nord, and they have to be in the role of team leader[7].

Tanggaard and Brinkmann (2012, pp. 20-21) argues that it is common to sample less informants in student projects as opposed to individual research projects, mainly due to resources and time constraints. They state that it is better for the project to do fewer interviews with a thorough analysis than too many interviews with the risk of not managing to get a good overview of the material. In the work with this project I have talked to six people from the operational management level at the ECCs; two from each organization. In addition, the project leader for Samlok nord has been interviewed. This number allows time and resources to go more thoroughly into the material. The topics being discussed in this thesis, namely how learning takes place across several organizations in a co-located setting and which factors that affect this learning, will always be influenced by subjective meanings. Thus, this thesis represents some of the opinions of the employees in Samlok nord on this topic. However, there is reason to believe that the opinions of the interviewees do not differ all that much from the rest of the members of the organizations, as the topics being discussed are such an intrinsic part of everyday working-life and part of the culture and values of the organizations as well as the co-located setting all together. Therefore, the number of interviewees being sampled in this thesis should be sufficient to give insight into how the co-located organizations learn together and learn from each other.

The following table provide an outline of the interviewees in this thesis:

Organization and role	Experience as leader at the ECC	Abbreviation
Operational leader, police	6 years	P1
Operational leader, police	2 years	P2
Operator, health	17 years	H1
Operator, health	1 year	H2
Commander, fire dep.	4 years	F1
Commander, fire dep.	7 months	F2
Project leader Samlok nord		PL

Table 1: Overview of the interviewees in the thesis

[7] The organizations use different terminology for their team leaders: The 112-central (police) have operational leaders, the 110-central (fire and rescue) have commanders, and the 113-central (health) have not established the team leader role. Instead, they share this responsibility depending on which task they perform while at work.

It is important to note that all the informants have worked in their respective organizations for a longer time than their experience as leaders at the ECCs account for. In addition, several of the informants have relevant work experience from other organizations in the emergency sector. Moreover, when referred to as a group, the interviewees will be referred to as "team leaders" because there is no common terminology within the three organizations determining their roles.

Interview guide

The interviews build on an interview guide, which contains themes and questions that aim to get answers to the research questions. Tanggaard and Brinkmann (2012, pp. 30-31) argues that research questions often seek explanations, while interview questions seek descriptions. Furthermore, they argue that the research interview should be both thematic and dynamic: Thematic means that the researcher has to ask questions that are relevant to cover all the themes that are important for the analysis. Dynamic means that the interview should be relaxed and positive, and the researcher has to follow-up on interesting topics being brought up during the conversation. The interview guide developed for this project[8] has aimed to formulate questions that are related to each of the sub-research questions, which also connect to the analytical model and the topics discussed in the theory chapter.

Furthermore, the interview guide can be seen as a funnel; it should start with the general questions before moving to the core of the topics that are of interest. The questions being asked have to balance between being clear, not too sensitive, not demanding particular skill that the interviewee might not possess, and they should give room for the interviewee to form and express own opinions (Dalen, 2011, pp. 26-27). Johannessen et.al. (2011, pp. 149-151) highlight the importance of formulating the questions the right way, using the correct terminology and words to set the mood, and being aware of the approach to the interview situation as a researcher. In this project, the interview guide has been tested on a person that knows the case of the Samlok-project well, in order to make sure that the questions, wording and tone is appropriate in this setting. This allowed the researcher to make changes before continuing with the interviews.

[8] See appendix 1 for the full interview guide

Interview setting

The interviews were supposed to take place face-to-face at a place chosen by the interviewees; either at the workplace of the interviewees or at the interviewer's workplace. However, as the pandemic Covid-19 spread during the period when the interviews were scheduled to take place, governmental restrictions on face-to-face-meetings were put in place. Thus, the interviews were conducted through virtual meeting arenas like Skype for business or Teams instead. Luckily, the technology allows for meetings and conversations without meeting in person, but one can argue that this may limit the level of connectedness between the people involved in the conversation.

According to Brinkmann and Kvale (2015, pp. 156-159), the first few minutes of an interview are important. This is where the interviewer should establish good contact with the interviewee, so that the conversation later on can flow freely. Being clear about the objective of the study, showing interest, attentive listening, and respect for what the interviewee says are important elements in this regard. For me as an interviewer, it was important to conduct the interview through video communication instead of just using a telephone. I believe that seeing each other makes it easier to establish a connection, and it was a "second best alternative" when meeting in person was not possible. Spending the first few minutes with casual talk before diving into the formalities was important in order to set the scene. One lacks the opportunity to see and use body language when not meeting in person, but nonetheless it worked better than expected with video interviews. Only the sound recordings from the interviews were used in further processing of the data. At the end of the interview I asked all of the interviewees if they had anything to add and rounded off with casual conversation. It was also important to point out that they at any time could make contact to clarify something or ask questions if something came up in retrospect.

3.2.2   Document studies

Most qualitative data are conceived in textual form, either in the form of documents and books or notes and transcriptions from interviews or observations. The analysis of such texts can be quite similar, according to Johannessen et.al. (2011, p. 186). The objective is to grasp the contents of the text and try to make meaning of it.

I have been given access to the annual reports of Samlok nord for 2018 and 2019, as well as copies of procedures that have been developed for the co-located organizations. This has given additional insight to the work that is done to develop the co-located setting with the

three organizations working closely together. The annual reports have given factual insights to how the work is organized in Samlok nord. Learning and collaboration are two of the topics in focus of the Samlok-project as a whole, and therefore these reports have also given insights and factual information on the progress of the work with these factors over time, as well as discussing some of the challenges and successes in the project. The procedures have given insights to some of the more specific and formal elements of the project, and they have also complemented some of the topics in the conversations with the interviewees. In addition, I have studied documents, reports and White Papers about collaboration, learning and co-location in emergency preparedness organizations. These have given a better background for the processes at a national level, as well as providing a background and better understanding for the case.

3.2.3   Participant observation

Observation is a matter of registering impressions, and when it comes to research these impressions and observations can lead to new knowledge when systemized and put into a context. Active observation gives the researcher direct access to the context of study, and one can observe interactions between people and processes in organizations (Johannessen et al., 2011, pp. 121-123).

Observation was used as a secondary method in this thesis. I obtained access through activities and meetings in a work setting. As previously mentioned, I am professionally involved in projects working closely with the organizations and some of the people in managing positions at Samlok nord. I have participated in meetings and projects discussing the topic of collaboration between the three co-located organizations, and between Samlok nord and my workplace. I have not met any of the team leaders prior to the interviews, which has been important in order to be neutral in the interview setting. I have also been given tours in the localities where the ECCs are located at several occasions, although I've only had the chance to enter the ECC of the fire and rescue-department due to strict rules of confidentiality concerning the ECCs of the police and health sector. These arenas have provided a basis for active participation that has given access to the field not initially meant for this thesis, but that still has given me a backdrop for this project. Thus, I have not written field notes or categorized any of the observations, as suggested by Johannessen et.al (2011, pp. 134-136). The participative observations have rather formed a backdrop for my interest in this case in the first place, and further sparked an interest in some of the topics raised in the theoretical chapter and the interviews.

3.3 Analysing the data

The analysis of qualitative research data is the process of transcribing, categorizing and analysing the data collected. There are many different ways of analysing research data. This thesis will mainly follow the steps of Yin's (2018) case study as outlined above where theoretical assumptions lie the groundwork for the analysis. As the interview guide was set up according to the research questions and the topics covered in the theory chapter, it was natural to conduct the analysis along the similar pattern. The analysis of the data is based on theoretical assumptions and the topics described in the theory chapter. In order to have a holistic view on how learning takes place in the co-located setting, it is important to analyse and interpret all the findings in relation to each other (Johannessen et al., 2011, pp. 226-227).

All the interviews in this study were recorded. Upon completion of the interviews, they were all transcribed in order to provide a foundation for analysis. The transcription of the interviews was made by a third party. They were done in a written style, meaning that the contents and meanings of the interviewees were the most important to capture. Pauses in the conversations were conceived in the transcriptions (Tanggaard & Brinkmann, 2012, pp. 34-35). There can be issues of reliability tied to having someone else than the interviewer transcribing the interviews, since the interpretation of data starts already with the style of the transcription and where pauses and punctuations are inserted to the text (Brinkmann & Kvale, 2015, pp. 211-212; Nilssen, 2012, pp. 47-48). However, at several stages through analysing the written text of the interviews I went back to the recordings to listen to parts of the conversations, and I could verify that the transcripts gave an accurate version of what was said. The interviews and transcripts were done in Norwegian, but the quotes were translated to English by me. The quotes are transcribed in order to provide meaning for the reader, but still in such a way that the interviewee's meaning is portrayed in the context that the quotes were uttered.

To start off the process of analysing the data, I started to write down the key points from the interviews right after they were finished. This could be descriptions of what I learnt from the interviews and surprising findings (Tanggaard & Brinkmann, 2012, p. 38). I also tried to compare and contrast the answers given in order to get a better understanding of the dynamics and the factors affecting how learning takes place in the co-located setting of Samlok nord. The interviews were then examined in more detail based on the transcripts of the conversations with the interviewees, and the findings categorized according to topic with a link to the relevant research question and theory. This process can be referred to as concept-driven categorization, as the categories are developed by the researcher in advance based on the theoretical concepts

(Brinkmann & Kvale, 2015). Throughout the process of analysing the data, I realised that some of the theory had to be adapted, while at the same time I had to go back to one of the interviewees for follow-up questions. The next step in the process was to interpret the stories and examples mentioned by the interviewees, in which the theoretical concepts were useful as analytical framework. This is a method of making sense of the data, according to Nilssen (2012). Moreover, she explains that if there is data that do not fit into the theoretical framework, it is necessary to seek out other theoretical concepts to interpret the data (Nilssen, 2012, pp. 65-66). This was necessary in my case.

3.4   The quality of the research

It is important to describe every aspect of the research process and argue for the decisions that are made to allow the reader to evaluate the process. Thus, it is important to comment on the deviations, perceptions or other aspects that may have influenced the research process (Johannessen et al., 2011, p. 249). Terms like reliability and validity are used to describe the quality of the research. The former is a matter of describing how the research has taken place, so that others can replicate the study. The latter is a matter of whether the research examines what it set out to do in the first place (Yin, 2018). This section will therefore discuss the reliability, validity and ethics of this thesis.

3.4.1   Reliability

Reliability is a matter of how credible the research is. How is the data collected, how are they used and how are they processed? Reliability is a matter of demonstrating how the research process has foregone so that others might replicate the study in the future with similar results, thus to minimize the biases or errors (Johannessen et al., 2011, p. 44; Yin, 2018, p. 46). The documentation through the research process is important in this regard, and I will reflect on the choices made in the process of planning and writing this thesis.

The context of the research and the researcher's relation to the case and informants is an aspect that can influence the reliability of the thesis. Would another researcher come to the same conclusions if the study was replicated (Tjora, 2017, p. 238)? As already mentioned, I have a relation to the case through my work. The observations made in various meetings and activities has helped to form a context for the thesis which has made me understand some of the strengths and challenges with being co-located. There can be reliability issues tied to this, as some of these participant observations were done informally before the data collection for

the research project was officially initiated. Thus, my participation in meetings were not tied to being a researcher, but as part of my role through a work-setting. However, I have not registered any data or used any of the observations specifically when writing this thesis. Rather, my observations have provided a backdrop for the work and it has given a better understanding of the context as opposed to being an outsider with no previous knowledge. As Nilssen (2012, p. 137) states, the thought that the researcher is completely unbiased when doing research is utopian. The questions being asked, the interpretation and analysis of the data may be influenced by any preconditions I have from my knowledge of the organizations beforehand (or what I think I know). Thus, my objective as a researcher has been to be neutral and listen to what the interviewees have to say, and not jump to any conclusions. Basing the analysis and discussion on theoretical concepts has also been a way to increase the reliability of the research. It is also important to note that I did not know any of the team leaders beforehand, and I am not an insider to their culture. Nor do I have any background experience from the organizations studied in this case. This can be seen a way to increase the neutrality and credibility of the research and not favour any organization over the other when it comes to collecting data or analysing and discussing the results. In qualitative research the researcher will very often be engaged in the issue being studied to some extent, and this can be seen an asset to the research process (Tjora, 2017, p. 235).

The use of quotes can be a method to increase the reliability of the research, because the voices of the informants are presented to the reader. It is however important that the researcher present why these quotes are chosen and which points they can illustrate (Tjora, 2017, p. 237). In this thesis the interviews were done in Norwegian, as it is the mother tongue and working language of the informants. The interviews were also transcribed in Norwegian. All the quotes used in the thesis have been translated by the researcher. The quotes were translated in in a style and tone that tried to capture what the interviewee said, while at the same time allowing smaller rewritings in order to ensure the fluency and essence of the sentence. I have used the transcripts actively and listened to the tape recordings whenever necessary in order to understand and capture the essence of what was being said. However, there is always a risk that one does not manage to reflect the content in all the nuances of what was said when translating. At the same time, it is not uncommon to do research in one language and presenting the results in another language. In order to avoid any misunderstandings, the researcher has to be reflexive and thorough in order to present credible data (Nilssen, 2012; Tjora, 2017).

3.4.2 Validity

Validity is a question of whether the research examines what it aimed to do in the first place. The validity can be strengthened by clarifying the choices that are made throughout the research process (Brinkmann & Kvale, 2015, pp. 283-284).

One aspect of validity is the question of whether there is compliance between the topic being studied and the operationalisation of that topic/concept (Johannessen et al., 2011, p. 75). In order to avoid a study being criticized for being based on the researcher's subjective notions and not being objective enough, it is important that the collection of data and the analysis is based on theoretical concepts already established by other researchers (Tjora, 2017, p. 234; Yin, 2018, pp. 42-44). In this thesis, the broad concepts have been to study which organizational factors and learning tools that affect inter-organizational learning. The theoretical concepts of organizational structure, mutual trust and the use of learning tools have followed this research process from the analytical model and theory chapter, to the interview guide and analysis of the collected data, up until tying these concepts together in the discussion and conclusion. This process follows the steps of doing case study research as outlined by Yin (2018) above, and following this method has been important in order to ensure the validity of the project.

Another way of strengthening the validity of a research project is to use several methods to study the phenomena in question (Johannessen et al., 2011, p. 247). In this thesis I have mainly relied in qualitative research interviews as a main source of data, but I have also used document studies and participative observations as means to get better insight to the case. These methods have complemented each other, and I believe that it has strengthened the validity of the project as opposed to using interviews as the only source of information. Moreover, during the process I decided to include the interview with the project leader in the data material, although this was initially thought as a test of the interview guide and a conversation to provide background information for further data collection. I experienced that the project leader had an overall view of some of the processes going on at Samlok nord, and that this person tried to see the case as a whole and not from the point of view of only one of the organizations. Moreover, I experienced several times during the interviews that people from different organizations had the same views on similar topics and confirmed the same aspects about each other's being and doing. This can also be a way to validate that the answers given in the interviews are trustworthy (Johannessen et al., 2011, p. 249).

Studying concepts that are difficult to grasp and measure can impact on the validity of the project. It is difficult to study trust among people and organizations. Quantitative studies have been in common use to measure trust in society or in organizations, but these kinds of studies might not grasp the whole picture of trust. In contrast, taking a qualitative approach will allow the researcher to go more in-depth and study trust in the social setting it takes place (Julsrud, 2018, pp. 164-165). This thesis has aimed to go in-depth and study how trust influences inter-organizational learning through qualitative research interviews with team leaders in the ECCs in Samlok nord, as well as trying to examine whether inter-organizational learning and co-location has improved trust among employees. It has also tried to examine how trust among employees in the ECCs have developed over time. More specifically, the aim has been to examine whether being co-located and working more closely together has affected the level of trust as opposed to previous ways of organizing the work. Ideally this should have been done by following the organizations over time, preferably from before they were co-localized, in order to compare the results. Due to time constraints in this student project this was not possible. However, these questions were still too interesting in this context to leave it out of the equation. I tried to minimize the possible weaknesses by sampling team leaders who had the same role both before and after the co-localization was formalized. In addition, I asked them questions related to trust and learning related to both before and after being co-located. One of the team leaders had shorter work experience from the ECC and were therefore not able to discuss these specific questions. Still, asking these kinds of questions can only give subjective answers. There is also a possibility that these differences might not have been captured as thoroughly as they could have been if there had been more time to collect data. However, I do not claim to present the "truth" in this thesis. Rather, it is a presentation of subjective opinions of each of the interviewees, and it is a presentation of how the organizations in the co-located setting has worked together to strengthen the collaboration, where mutual trust is an important aspect to consider.

It is often questioned whether it is possible to generalize results from qualitative studies to other contexts, cases or situations. This can be referred to as external validity. A common argument is that few cases and/or interviews do not provide enough knowledge in order to draw conclusions that are relevant for other settings. Analytical generalization is a way of reasoning of how findings from one study can be used to explain what might happen in another similar case. Such reasoning should be based on theoretical foundations (Brinkmann & Kvale, 2015, pp. 295-297; Yin, 2018, pp. 37-38). Silverman (2017, p. 264) argues that qualitative research

is trying to identify social processes rather than trying to generalize to populations, and this is what I have tried to do in the work with this thesis.

3.4.3 Research ethics

Research ethics is an important part of doing credible and trustworthy research. First and foremost, it is a matter of having respect for other people's work, opinions and thoughts. I have done my best to convey the thoughts and reflections of the interviewees from their everyday work. Moreover, the informant's right to autonomy in the research process is part of the ethics that the researcher have to take into consideration (Johannessen et al., 2011, pp. 93-101). In this project, several measures were taken in order to ensure an ethical process. First, the leaders of each ECC were contacted with information about the project. They were also asked whether two employees from each organization could be informants in the project. Second, I had a dialogue with the Norwegian Centre for Research Data (NSD) prior to engaging in data collection to make sure that the process I had planned was thorough. Their reply is attached in appendix 3. Third, all the informants also got a letter with information about the project and their rights as informants prior to the interview, and I also asked them all to sign a form of consent (see appendix 2). In addition, this information was repeated prior to starting the formal interview. These measures were important in order to make sure that they all knew what they were saying yes to, and also making sure that their privacy would be accounted for in the project.

4 Presentation of data

This chapter will present the data material that has been collected in the work with this thesis. The aim of the chapter is to explain more thoroughly for the reader the daily work in the co-located ECCs as context for the discussion that will follow in the next chapter. The overall objective is to present data that will answer the research question, which examines how organizational factors and the use of learning tools impact on how emergency preparedness organizations learn together and learn from each other in a co-located context.

This chapter is structured as follows: First, an outline of the ECCs in Samlok nord will be briefly presented in order to give the reader a context before the presentation of findings and the following discussion. Second, the presentation of data from the interviews and document studies will be divided in four sections according to the structure of the analytical model and the topics covered in the theory chapter; namely collaboration in crisis response organizations, structure, mutual trust and learning.

4.1 Presentation of Samlok nord

Samlok nord is the collective name for the three co-located ECCs of the fire- and rescue services (110), the police operational central (112) and the emergency medicine communication central (113). Samlok nord is located in Bodø, Norway, and was officially opened 6th June 2017. The primary objective of Samlok nord is to "*effectuate measures that will contribute to better collaboration in the future compared to today's practice.*" The project will enable the ECCs to go from co-location to collaboration (Flage, 2018, 2019b). The co-location is formally acknowledged by formal agreements between the organizations, stating common objectives for the collaboration that is taking place. Both the police and the fire- and rescue service have reduced the number of ECCs in the county during the last few years; the fire- and rescue service reduced from three to one ECC in 2013, while the police reduced from two (three)[9] ECCs to one in 2017 due to the major police reform. Thus, the ECC in Bodø now operates on behalf of the whole county. The health sector still has three emergency medicine communication centres (EMCCs) operating in the geographical area of Nordland county. The ECCs cover different geographical areas and have different organizational structures. The differences and similarities will be outlined in this section.

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[9] Two of the ECCs were geographically located in Nordland, while the third were located in what was Troms county at the time. The last ECC still covered some geographical areas in Nordland county.

Responsibility: The 110-central is an alarm central for fire- and rescue incidents in Nordland and Southern parts of Troms, meaning that it receives calls and allocate resources to handle incidents that are called in to the central. The local fire- and rescue services handle the actual incident once personnel and resources are called to the scene. The 112 operational central of Nordland police district covers the geographical area of Nordland county. As an operational central, it is responsible for command and control in all incidents happening within police jurisdiction in the county, from allocating resources to making general provisions. The 113-central is the EMCC for the geographical area covered by Nordland Hospital, which includes the regions of Salten, Lofoten and Vesterålen. This means that the regions of

Figure 4: Map of Nordland county   (Thorsnæs, 2019)

Helgeland and Ofoten are covered by other medical emergency call centres (113 Helgeland and 113 Troms).

*Ownership***:** The 110-central is owned by the municipalities in the country but operated by the regional fire- and rescue services, Salten Brann. The Norwegian Directorate for Civil Protection has the overall supervision of the fire and rescue services in Norway. The 112-central is owned and operated by Nordland police district, which in turn is supervised by the National Police Directorate. The services of fire and rescue and the police belongs to the jurisdiction of the Ministry of Justice and Public Security. The 113-central is owned and

operated by the Nordland Hospital, which is part of the Northern Norway Regional Health Authority. The Norwegian Directorate of Health and have the overall supervision of the regional health authorities, which in turn is under the jurisdiction of the Ministry of Health and Care Services.

*Organization of daily work***:** The 110-central has two to three people working each shift, depending on day/night. The leader of the team is called the shift commander. The sound of incoming calls is heard in speakers in the centre as well as in the headsets of the operators. The police operational central (112) has approximately five people working each shift. The team leader is the operational leader of the police district, meaning that he/she has jurisdiction from the Chief of Police in Nordland. All incoming calls and alarms are only heard in the headsets of the operators, and therefore there are no sounds or alarms heard aloud in the central. The EMCC (113) also has two to three people working each shift, depending on day/night. They do not have a team leader, but instead work with a flat organizational structure with set roles within the team. One operator receives all calls to the central, while another allocates resources. The third operator can do both these tasks and will assist the other two when needed. Incoming calls to the EMCC are heard through speakers in the central, while all communication during calls happens through headsets. Each of the three ECCs have a leader, as well as a person responsible for competence development. These six people meet regularly to coordinate the work in the three ECCs together with the project leader of Samlok nord, and they are often referred to as the working group.

Physical design: The ECCs are laid out so that the three centres are located next to each other, with glass doors between each. The 110-central is located in the middle, with the 112- and 113-centres on either side. The 110-central handle the incidents and cases with the least sensitive information about personnel and missions of the three ECCs, and therefore the physical design is laid out so that operators from all three centres can meet and discuss incidents in this area. On the other side of the hallway, each of the organizations have meeting rooms. It is also possible to remove the walls between the meeting rooms in case there is need to work more closely together across organizations in large or complex incidents.

4.2   Context: Co-location and closeness

Co-location provide the context variable in the work with this thesis, and in this setting the co-location of organizations provides an important factor for inter-organizational learning. Closeness is important for interaction and collaboration (Bradner & Mark, 2002), and close

relations can be important for learning to take place (Filstad, 2010; Tynjälä, 2008). Co-location in this context is characterized by organizations forming a competence partnership established by formal agreements and a joint management group. The management level is important for setting the framework for how high reliability organizations learn, develop and interact. The data material shows that there are considerable changes in inter-organizational learning and collaboration compared to before co-location, which makes it vital to understand closeness and co-location as context for this thesis.

The informants were asked what collaboration means to them in their daily work. The project leader argued that collaboration as a concept can be difficult to operationalize, while at the same time it is intuitive for everyone working in the emergency services, including the ECCs. However, there were some nuances in what the team leaders from the different organizations thought of as important when collaborating with others, indicating that there might be some differences in ways of thinking and working with collaboration in the organizations. The police operational leaders were occupied with competence and situational understanding. They said that it is important to understand the police's role in an incident, hereunder having the right personnel and competence at hand, as well as understanding how they can serve the other collaborating partners in the best possible way. In addition, they expected their partners to have knowledge about the rules and procedures for different types of incidents. The operators from the health sector were more relationally oriented, and one of them said:

"I expect that the others do the best they can based on the available resources. And I experience every time that there is a willingness at all the ECCs to do the best, be good team players, and utilize the capacities that are available." (H2)

The commanders at the 110-central focused on the cooperative element when saying that collaboration is a matter of giving and receiving support when needed, as well as sharing available resources to solve a mission.

Each of the organizations in Samlok nord have their own management structure. However, Samlok nord as a project also has a joint management structure which consists of a project leader who works closely with the steering group and the working group. In addition, there is a reference group. The steering group consists of the regional leaders of each of the three emergency service organizations, as well as other representatives from the regional emergency preparedness organizations. They set the agenda for the project as a whole and meet

regularly to discuss the collaboration between the organizations on a strategic level, aiming to constantly develop the possibilities in the closeness and co-location of the organizations. In addition, there is another project closely linked to Samlok nord, which is called Albertmyra II. The objective of this project is to explore the possibilities of co-locating several emergency preparedness organizations next to the existing buildings of Samlok nord, The new centre will in essence be an innovative centre for collaboration, public safety and emergency preparedness in Nordland (Pettersen et al., 2019).

The project leader and the working group, which consists of the leaders of the ECCs and the competence development manager from each of the organizations, are responsible for the daily work in Samlok nord. The main tasks of the project leader are to effectuate the objectives and measures set in the project mandate, which is a matter of testing and evaluating different activities to see if they can promote collaboration between the partners. The project leader said that there had been a lot of focus on formal learning tools such as competence development days and trainings/exercises, while also establishing common procedures for the ECCs. There has not been the same focus on the informal learning arenas, but these are aspects that the people in the organizations facilitate for themselves to a large degree. Sometimes, the main challenge is to find time to sit down to discuss and reflect across organizations, according to the project leader. The ECCs in Samlok nord all have to handle risks and uncertainties in the daily work, and collaboration as a principle together with project management is a large part of how they work to solve missions involving two or more organizations.

4.3 Structure: Type of organization, rules and procedures

The data material related to organizational structure is centred around how the co-located context of Samlok nord impacts on the three organizations, common procedures regulating the work being done when all three organizations are involved in an incident, as well as some of the structural barriers to inter-organizational learning.

4.3.1 Co-location

At the time of writing, Samlok nord has been in service for about three years. When asked to describe what Samlok nord is and what the potential effects of being co-located are, the respondents mentioned several central factors: First and foremost, it is a collection of people working towards the same objective; namely to provide safety and security for inhabitants. Second, Samlok is a matter of physical co-location, which makes it easier to get to know each

other and interact. It provides the organizations with better situational understanding, because being physically close allows the operators to gather around a map, a screen or a table to discuss the challenge at hand if and when needed. Third, the physical co-location facilitates for closer personal connections. The operators in the ECCs know each other's faces and voices now, as opposed to before being co-located, which makes it easier to communicate. Lastly, the informants stated that Samlok is an arena for learning. The learning activities include for example exercises, trainings, competence development days and informal talk. Thus, being co-located is important for interaction and learning across organizations.

However, being co-located also has some physical implications. Some of the interviewees said that the lack of a neutral social zone to meet for coffee or lunch hinders interaction and informal learning activities across organizations. Each of the organizations have a small kitchenette located within or close to the ECC, but the threshold for entering these areas from the outside seems to be high. There is also a common area at the ground floor of the building, but it is too far away from the ECCs for it to be used during the shift. Due to lack of social facilities, and also very busy shifts and lack of staff, several interviewees said that they often eat their lunch by the computer. The annual report from 2018 shows that the project management has tried to find solutions for the missing social area, but so far this has not been a success as it would have led to lack of localities in some other form. Thus, this issue remains unsolved for the time being.

4.3.2 Procedures

The annual reports for Samlok nord states that developing common procedures is part of the mandate and project plan for the co-location process. Common procedures can therefore be seen as one of the measures that shall contribute to better learning and collaboration between the emergency preparedness organizations. The project leader explained in the interview that several procedures have been developed to enhance the collaboration between the organizations, for example procedures for handling confidentiality, for evaluating large incidents, for execution of small cross-organizational exercises and for handling threatening situations to the ECCs. The project leader stated however that the organizations adapt and implement these common procedures in different ways. Most often they might be implemented in existing procedures in the organization, and the work with these procedures might be "invisible" to many of the team leaders and operators. During the interviews, the team leaders were asked about common procedures for how the organizations are supposed to work together,

but except for triple alert calls, the dispatcher's alarm call check list and use of tetra mobile radio system for emergency services nothing else was mentioned. In addition, there are national procedures on handling life threatening violence, but there was not dedicated much time to this exact procedure in the interviews as it is not specific to the ECCs alone.

All the informants talked a lot about triple alert calls during the interviews, as this is how they most often communicate and collaborate across the ECCs in the daily work. Triple alert calls are formally acknowledged as *"... alerts between 11X-centres regarding incidents where more than one emergency service might be needed to respond. Triple alert calls shall be used between 11X-centres to ensure fast and correct efforts to incidents where there is danger to life, health, environment or material value"* (The National Police Directorate, 2018, p. 17). When triple alert calls are initiated, a cross-organizational procedure called the dispatcher's alarm call check list will guide the interview with the caller which helps the ECCs to make decisions of how to respond to the alert. Samlok nord have been using the dispatcher's alarm call check list since the opening of the co-located ECCs, as it was "inherited" by Samlok in Drammen which developed this way of cross-organizational collaboration in the period it operated. At the end of 2019 the dispatcher's alarm call check list became a national procedure guiding the triple alert calls in all ECCs in Norway. There are eight different alarm call check lists altogether[10], tailor made for the most common situations involving all three organizations. They ensure that no matter which organization that lead the interview, questions are formed so that all of the organizations have enough information to respond to the incident.

There are also procedures and rules that are specific to the work in each organization. For most of the time, this does not pose any challenges according to the interviewees, as the organizations have specific areas of work and they handle most of the incidents coming to the ECCs separately. However, all three organizations in Samlok nord have confidentiality rules that they have to comply with, and these rules are based on different laws. In Samlok nord, debates related to confidentiality rules have been an issue and is to some degree still an issue, although the interviews indicate that many challenges have been solved during the three years of co-location. In short, the conflict has evolved around the police operational central arguing that in some incidents they do not get enough information to solve a mission, while the EMCC cannot give information because they have to take the patient's best into account and uphold the health worker's confidentiality clause. The different views on how much information is needed, and how much information that can be shared, has caused frustration in both

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[10] An example of an alarm call check list is attached in appendix 4.

organizations. However, also the police have to abide by strict confidentiality rules, but it seems like there is less need for transfer of information the other way in order to solve missions. The police will very often have a coordination role in incidents involving more than one emergency preparedness actor. During the interviews it was stated by several organizations that formal and informal learning activities, including getting to know each other and understanding the work of the other organizations, has helped to decrease some of the tension related to this issue.

There are also common procedures established for the use of the tetra mobile radio system for emergency services. These procedures are developed in agreement between all the major sectors involved in emergency preparedness in Norway. Some of these procedures also influence the work at the operational level in the ECCs. For example, following a triple alert call there shall always be established a group calling mode[11] involving the fire- and rescue service, the health service and the police, involving resources from tactical and operational level from all three organizations working on a specific incident. The operators at the ECCs can easily share relevant information on this channel, as well as listening to the collaboration at the tactical level and assist if needed. The introduction of this communication channel has been an asset to improved situational understanding, learning and collaboration in the emergency preparedness sector across Norway.

4.4   Mutual trust

All the interviewees said that mutual trust is an important factor for learning and collaboration in emergency preparedness organizations. The data material presents the thoughts of the informants on what trust is, and the importance of meeting in person for actually being able to develop mutual trust in the first place. Thus, it also touches upon how the level of trust has changed to the better since establishing Samlok nord. This section also outlines the informant's thoughts on how belonging to different organizations affect the trust and the work being performed in the collaborative sphere.

The informants were asked to reflect on what trust means to them in a work-situation, and the team leaders from the three organizations presented different views. The operational leaders from the police both said that sharing information is important for building and upholding trust, as well as daring to think outside the box and disagreeing with each other. One of the operational leaders mentioned the issues with the confidentiality rules and having enough information to do a proper job as an example. The operators from the EMCC said that trust to

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[11] Called «BAPS» in Norwegian, for Brann (fire) – AMK (health) – Politi (police) – Samvirke (collaboration).

them means respect for the fact that others do their job the best way they can. One of them gave an example, saying that if the EMCC judges a mission to be something they can handle themselves as a health service, the other organizations have to trust them on this decision and not discuss this afterwards. One of the commanders from the 110-central said that being open-minded and speaking to each other in a proper way is important for mutual trust. The project leader exemplified trust by saying that one has to ease some command and control in order to give space for others to solve a mission to the common best, and also that the opposite of trust is control. Thus, there were some different views on how to create and develop trust across organizations, but at the same time all the informants agreed that building relations and meeting in person is a common denominator for trust in Samlok nord.

It was clear from what all the interviewees said that face-to-face-interaction is vital for building trust and a closer working relationship. One of the interviewees from the EMCC uttered that there had been some scepticism to co-location before Samlok nord was established, especially because it meant leaving their professional environment behind to being co-located with organizations they did not know very well. According to several of the interviewees, before being co-located most of the contact between the ECCs happened over the phone, and messages were redistributed without much further contact. This gave room for misinterpretation and the organizations could end up with very different situational understanding. However, being co-located has led to team leaders and operators getting to know each other and interacting more on a daily basis, from meeting each other in the hallway and participating in social activities to working more closely in incidents involving all three organizations. The data material indicates that mutual trust has developed between the team leaders during the period of being co-located. Being able to interact on an informal basis has been important to build this trust.

At the same time, the informants stated that trust is important for learning. One of the informants said:

> *"If I am to have any interest in learning, it has to be because I believe that the other person knows something of benefit for me. And if there is no trust, if there is no understanding of what the others are doing, it is not worth pursuing, right? The trust to the other emergency services is very important."* (P2)

It seems like the more the team leaders get to know each other, the easier it is to participate in learning activities. The learning takes place in both formal and informal settings. The project

leader seems to have an important role in facilitating for the formal learning activities together with the working group. For example, there are daily team leader meetings, weekly triple call alert trainings and competence development days twice a year. Learning more about how the other organizations work, from their procedures to ways of thinking and prioritizing, has a positive impact on the mutual trust. In addition, the informal interaction such as Friday lunch at the end of each month, social happenings and the occasional cup of coffee is important for building both trust and learning. Thus, it is evident that trust is an important aspect in Samlok nord, as it affects the learning, interaction and collaboration between the organizations.

Despite representing different organizations with different cultures and ways of working, the interviewees said that it is a strength to be able to work closely together in Samlok nord. The differences make the collaboration more interesting, and now that they have gotten to know each other they also see that they can learn something from the other team leaders and operators. One of the interviewees from the EMCC said that this had not always been the case, and in the beginning, there were some perceptions that the police operators were somewhat self-confident. However, as time has progressed, the interviewee said that no one tries to act as they are better than the others, and it has become common to ask each other questions related to their field of expertise. Thus, it seems like there has been development in how they perceive each other across the organizations. The co-location has been important for the development of trust and learning also in this domain.

4.5   Learning together and learning from each other

The core question in this thesis is how emergency preparedness organizations in a co-located setting are learning from each other and learning together. This section will outline the data related to which learning tools that are used in Samlok nord.

When it comes to inter-organizational learning it is important to have a wide array of tools available that can be used in different settings and for various learning outcomes. The project leader and the working group are important facilitators for the learning that takes place in Samlok nord, although much of the activity and interaction happens between the team leaders and the operators. The project leader explained the following about the learning process and the facilitation in this project:

"We work a lot on the organizational level with establishing procedures and how we should do things, and sort of formalizing this bit. And then you have the thing that happens when people sit together, work together and solve missions together, right. I experience that the inter-

individual exchange of experiences that takes place is helping to build the culture called "this is how our community is", and this is happening without my involvement." (PL)

From the interviews it seems like there is a lot of focus on the formal learning tools such as competence development days, triple call exercises, morning meetings and exercises, while the informal learning activities happen as a consequence of being co-located and slowly building more trust across the organizations. A more thorough description of the various learning tools being used in Samlok nord are given below.

Competence development days

The competence development days are arranged twice a year, each with a separate topic that needs further focus. According to the annual reports for Samlok nord, there has been one competence development day in 2018 and two in 2019. It seems like this has not been done before:

"I have never participated in any competence development days where all three organizations have been together until Samlok nord was established." (F2)

Normally, one topic has been chosen for each competence development day, and this is usually topics that have great importance for all three organization and the collaboration between them. In 2019, the topics covered were confidentiality rules during the spring, as discussed above, and the dispatcher's alarm call check lists during the autumn, which were nationally introduced as common procedures for all ECCs towards the end of 2019. One operational leader explained that the competence development days handle the big topics, but smaller issues must be discussed or solved when they happen. The project leader said in the interview that managing to arrange two competence development days each year is challenging, because all the organizations have a certain number of internal competence development days in addition to high daily activity in the centres. However, the organizations prioritize these meeting points because they are arenas for working with common procedures, getting to know each other, as well as building a common "we" in Samlok nord.

Triple call alert exercises

The triple alert call exercises are held every Tuesday and Wednesday at Samlok nord. One person calls in to one of the ECCs, and the task for the receiver of the call is to start a triple

alert and interview the caller according to the dispatcher's alarm call check lists. Afterwards, the involved actors meet to discuss learning points from the exercise, such as if the right questions were asked, if the caller was reassured, and if they missed something vital. For example, the project leader explained that they recently discovered a new learning point after a triple call alert exercise: The operators realised that they had different situational understanding when they had hung up with the caller, and thus agreed that it might be fruitful if the operators sum up briefly after the caller has left the conversation to share perceptions and ensure that all the important information has been noted. In that way, they will be able to present a coherent picture of the situation to tactical units that might be called out to the incident. Thus, it seems like these exercises are effective for training on working procedures and collaboration that are a big part of the operator's everyday life at work.

The informants said the following about this learning tool: Triple alert calls are effective because they do not take much time or resources to carry out. For new operators, the triple alert calls are important preparations for the real incidents, because it can be challenging to do all the right things when you know that many people are listening to what you say and do. There are varied themes in the triple alert calls, in order to provide a good outcome for all three ECCs. It is important that the scenarios are not too complicated, in order to actually being able to train the procedure and not lose focus. Repeated training give effect for each operator and the collaboration in the ECCs as a whole. It is also easier to ask the others why triple alert calls were not initiated in real incidents when they have been repeated often during exercises. It was also said that it is sometimes difficult to carry out the triple alert call exercises because some days there are few people at work.

"To meet in the middle"

"Meeting in the middle" has become an expression in Samlok nord, and it refers both to a table in the 110-central as well as the interaction between people from the three ECCs where quick meetings can be held. The 110-central is located in the middle of the physical area of the ECCs, and one of the reasons is that the fire- and rescue service deal with the least sensitive information related to missions, making it a good place to meet and discuss topics of common interest. The objective is that one team leader from each organization have quick morning meetings at 08.15 every day where they can share information about the planned activity for the day that is relevant for the others. It also functions as an arena for getting to know each other better and building trust, according to the informants. The project leader said that

sometimes the team leaders can forget these meetings, either because it is busy or some people might not see the value in meeting with the others, but nonetheless they are carried out more than half of the days. Also, meeting in the middle as a method is used during exercises, either during triple alert call exercises as outlined above, or during exercises where they can experiment with this arena for achieving better situational understanding, for example by showing pictures or film from the incident scene.

The team leaders rarely meet in the middle during incidents because it is easier to communicate, coordinate and log decisions when they talk on the telephone. Also, there is limited time available to meet in person because it is normally busy in their own ECC during a mission. However, one of the interviewees from the EMCC said that they can meet in the middle when a situation is under control, and these meetings can give a better impression of the other organization's priorities and available resources. Another example of meeting in the middle during an incident was provided by one of the operational leaders: During a CBRNE12-incident the team leaders from the three organizations met several times during the initial phase to achieve common situational understanding. Questions like what the actual situation were, what protective equipment were available and where it was stored, how they could secure the public and the crew in the best possible way were discussed face to face. This incident was told as an example of successful collaboration, where the meeting in the middle helped the team leaders and ECCs achieve better situational understanding.

Debriefs

Debrief is defined as having a conversation about an incident in a group of people, where the objective is to process the incident rationally and emotionally (Malt, 2019). They can be done formally, for example being facilitated by a superior with all the involved actors participating, or it can be done informally in smaller groups right after an incident. Debriefs are perceived as effective for learning by the informants, but they claim that this learning tool is rarely used. One of the reasons might be lack of resources, according to one of the operational leaders in the police, and not the willingness to do so. Debrief seems to be a learning tool that is more often used internally in organizations than in inter-organizational learning. Several of the informants explained that debriefs involving operators and team leaders from all three

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12 CBRNE is a collective term for all incidents involving chemical, biological, radiological, nuclear and explosives hazards.

organizations only happen after large incidents or incidents which have a big impact on the involved personnel.

Other learning activities: Exercises and courses

There are several exercises during the year that involve all three organizations. The PLIVO13 procedures, which is short for procedures regarding ongoing life-threatening violence, impose the three emergency service organizations to exercise every year. This also includes the ECCs. Informants from the EMCC and the police mentioned specifically that they have had inter-organizational exercises more often since this procedure was introduced, as all the operators in all the ECCs have to partake in these exercises once a year.

The ECCs also participate in other exercises, such as Exercise Nord which is a yearly full-scale exercise organized by Nord University together with the Nordland Police District and the Joint Rescue Coordination Centre, who share the main responsibility according to the type of incident that is in the scenario. These exercises involve among others the emergency service organizations, volunteer organizations, military units, municipalities, the county governor's administration and students from the university. Thus, the ECCs only have a small role in these exercises. The ECCs also assist in exercises held at the tactical level in the emergency service organizations, for example assisting with directing resources and communicating across organizations.

Moreover, one of the operational leaders from the police mentioned a one week-course that was held last year that focused on collaboration on the tactical level, which also had some participants from the operational level. There was a positive learning effect of being together several consecutive days, getting to know each other, giving honest feedback and learning more about the resources of each organization. The operational leader said that it would be fruitful in the future if one could have more exercises and courses together across organizations in order to learn together and learn from each other.

Observation

One way of getting to know the people, work and procedures in the other ECCs is to observe the work they are doing. Since the start of Samlok nord, there have been plans to facilitate for systematic observation in the other ECCs for those operators who want to. Several of the interviewees said that they would observe the work in the other ECCs if they got the

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13 PLIVO is short for «pågående livstruende vold» in Norwegian.

opportunity. In order to prepare for this, a working group in Samlok nord identified several topics that such an observation programme could contain. Some of the main points were introduction to the organization, roles and procedures within each of the ECCs; the qualification requirements to the operators at each of the ECCs; which tools the ECCs use in their work; and other actors/organizations they work closely with outside the ECC. However, due to juridical questions this has not been possible to go through with yet. The different confidentiality rules are one aspect, and the police have to figure out how to handle possible information about illegal activities which might be the case if they are listening to calls coming in to the EMCC or the 110-central. This is still in the process of clarification with lawyers in the organizations at the national level. The plan is to facilitate for observation at least for all new operators in the ECCs when these issues are sought out.

Informal interaction

The informal interaction has been defined as a learning tool in this thesis because informal meeting points can be an important way of learning. At the same time, it is important to note that it is not a formal tool that someone can control or plan what to do with. Informal interaction can be meetings in the hallway, having a cup of coffee, Friday lunches at the end of the month, or interactions across the ECCs either to say hello, to clarify issues or have a discussion – to mention some examples. It has been outlined above how the team leaders appreciated how all operators meet for lunch one day each month, where extra treats are served, and it is possible to get to know each other across organizations. These meetings provide important foundation for the primary tasks of the ECCs which is about handling incidents from people in need for help. Several of the informants also mentioned that they would have liked to have an arena close to the ECCs to meet informally more often, as meeting on neutral ground might be easier than to go into the other ECCs for an informal chat when not knowing if people are available or not. It was also discussed in the annual report for 2019 that there are individual differences in how people interact. Having a place to meet for lunch or coffee across organizations would be an asset for building relations. It is difficult to measure the effect of the informal interaction, but it seems evident that it is valuable to be co-located for getting to know each other, interacting more closely, getting a better situational understanding and collaborating more closely.

5   Discussion

This chapter will closely examine and discuss how organizational factors and the use of learning tools impact on how emergency preparedness organizations learn together and learn from each other in a co-located context. The organizations being studied are high reliability organizations, meaning that they have to handle unexpected situations, high working pressure and complex tasks. Collaboration forms the context for the work these organizations do. In this thesis, collaboration has been defined as organizations working together with a common purpose, and that these organizations have more to gain from working together than individually. One of the objectives of being co-located is that inter-organizational learning shall promote better collaboration and handling of incidents, which in turn will benefit the public whom the ECCs and emergency preparedness organizations are there to serve in the first place. Thus, these underlying perspectives will follow the discussion throughout the chapter.

The chapter is structured according to the three sub-research questions posed in the introduction of this thesis, as these encompass both the theoretical perspectives and the data material which has been presented in previous chapters. The first section discusses how organizational structures affect inter-organizational learning and argues that co-location as a structural framework promotes the establishment of common procedures, better situational understanding and closer interaction between the centres. Thus, the organizational structures provide a framework for closer inter-organizational learning. The second section discusses the relation between mutual trust and inter-organizational learning and aims to discuss whether there is a reciprocal relation between the two. It argues that co-location has caused the building of mutual trust in Samlok nord, which again has led to inter-organizational learning. In turn, having more formal learning activities has also made the team leaders in the ECCs understanding that learning from each other and learning together is an asset for both the individual organizations and the collaboration as a whole. The third section discusses how the use of learning tools affect inter-organizational learning. It presents the various learning tools being used in Samlok nord and the informant's views on the effect of these, in addition to discussing how inter-organizational learning takes place in the co-located context. It argues that discussion and collective reflection is important for creating new knowledge with the help of the learning tools, and also that this knowledge has to be internalized by each individual in the ECCs in order to make a change that will contribute to inter-organizational learning. Furthermore, interaction, trust and co-location are important factors to facilitate for the use of learning tools and for inter-organizational learning to take place in Samlok nord. These three

sections will provide the foundation for answering the overall research question, and finally to draw up the conclusion in the final chapter of this thesis.

5.1 How does inter-organizational structuring of a competence partnership affect inter-organizational learning in a co-located context?

The structures in an organization describe how tasks and responsibility are coordinated, and it impacts on how individuals in the organization behaves as well as the management level's flexibility in manoeuvring the daily work (Jacobsen & Thorsvik, 2013; Kirkhaug, 2015). In this context, organizational structures refer to the fact that the three ECCs in Samlok nord has chosen to co-locate, which has provided the closeness which is seen as important for interaction and the willingness to cooperate (Bradner & Mark, 2002). It also refers to the rules and procedures governing each of the three organizations separately as well as the procedures governing the collaboration and interaction between the three. Organizational structures such as rules and procedures can promote inter-organizational learning if the organization states that this their preferred way of working. However, structures can also inhibit learning if they make the organization too rigid to open up for new ideas (Broekema et al., 2017). All these interpretations of organizational structuring mechanisms affect inter-organizational learning in co-located contexts in different ways.

5.1.1 Co-location

Co-location as an organizational structure makes it easier to learn together and learn from each other. Co-location is a way to organize the work, and cooperating in strategic alliances or networks is a method to enhance organizational performance (Jacobsen & Thorsvik, 2013; Jung et al., 2019). Moreover, working in networks or strategic alliances promotes communication and coordination, it generates common goals, provides management functions and help to set the structure (Gil-Garcia et al., 2016). According to the annual report, the objective with Samlok nord is to effectuate measures that can enhance collaboration. The overall impression from the interviews stated that being co-located will enhance interaction and relationships across organizations, increase the use of learning tools and make it easier to establish structures and procedures that will support these measures. Several positive effects of being physically co-located were mentioned in the interviews, particularly related to closer interaction between operators working at the ECCs. One informant from the police mentioned several effects:

"The obvious difference in how we interact is that we have a better situational understanding now. (...) We manage to make a forum where we can cooperate, develop and work together in the same direction. We didn't do that before." (P2)

Another informant stated that getting to know each other makes it easier to understand the reactions of co-workers in the other organizations. One of the commanders at the 110-central explained that there are several advantages of being co-located:

"What is great with Samlok is that we get to know the people. We know their faces and we talk to each other. (...) You feel perhaps more secure knowing who the others are and how they react. This is important. (...) We are also more robust when issues need clarification because we can gather around a map, a picture, a screen... We wouldn't have had the same opportunity if we weren't co-located." (F1)

One of the operational leaders in the police explained that being able to interact in the co-located setting has been important for the work that is performed:

"There's an obvious difference in working more closely with EMCC Bodø because we know their faces, we've had common competence development days and we have clarified the confidentiality issues which has been a big problem in our working relationship." (P1)

These reflections explain some of the advantages the team leaders have experienced after being co-located in Samlok nord. Working together in networks allow organizations to learn from each other, and interaction, shared goals, trust and active participation is key for learning to take place (Tynjälä, 2008). Co-location has facilitated for formal and informal learning activities, which again have promoted better interaction between the operators at the ECCs.

However, one statement from an informant exemplifies that being co-located has not been problem free:

"If you had been here three years ago when we started, I thought this [Samlok nord] was stupid. Today I have a different explanation – Samlok nord is great because we have a cooperation that is unique." (H1)

When asked to elaborate this statement, the operator said that initially it was difficult to understand why the EMCC were to move from the hospital, where the medical community was

close, to a building being co-located with the police and fire- and rescue services. The informant claimed that few people at the ECCs saw the potential in Samlok nord the first year of being co-located, and that the organizations existed side by side without having contact or knowing each other. Thus, it seems like the ECCs initially continued as before and there were little or no learning activities taking place. Some authors claim that collaboration is not always straight forward in the daily work of organizations (Andersson et al., 2014; Huxham, 2003; Magnussen et al., 2018). Sørensen (2017) argues that differences in the structural domain can hinder collaboration, such as approaches to solving incidents, methodologies, procedures and cultures, and that it is important to solve these issues for collaboration to work as intended. It seems like some of these issues were evident in the beginning of being co-located, but that time has helped in solving some of the uncertainties and differences.

The organization of the practical and daily work in the ECCs is to a large degree divided between three different organizations. Each of the ECCs are experts in their field. According to Jacobsen and Thorsvik (2013), such division of tasks can lead to "silo mentality" developing in the organizations, meaning that each organization is occupied with their professions and specialities. This can lead to little understanding of the work of the partners. It seems like this have been the case to a large degree before the three organizations co-located, as several of the interviewees said that there were rarely any contact between the ECCs previously except from the triple call alerts. Often there would be misunderstandings and discontentment because they did not understand each other's working procedures, ways of thinking and prioritizing. It seems like some of these frustrations have lessened after the co-location. Even though most of the calls received at an ECC is specific only to one organization, several of the interviewees specified that they have quite a lot of contact with the other ECCs during a shift. One of the operational leaders explained some of the changes in ways of working after being co-located:

> *"Most importantly, we have a better understanding of the tasks of the other ECCs (…) because we have learnt to know each other. Second, the way that missions were solved previously (...) gave room for misinterpretations, hence all the ECCs did not have the same situational understanding. We work a lot with this issue now, especially during the triple alert calls."* (P2)

Thus, it seems like being co-located have decreased some of the barriers that can hinder collaboration. Instead, it has improved both the formal and informal collaboration (Sørensen, 2017). It also seems like being co-located have facilitated for closer interaction and learning

activities. This aligns with Inkpen's (2000) argumentation that learning will develop alongside the development of the alliance of organizations.

Benson (1975) lists four factors that have to be in place for inter-organizational networks to be balanced and based on mutual respect, consensus and coordinated actions. This ties in with making an environment where people want to interact, learn together and learn from each other. First, there has to be domain consensus, meaning that the role and scope of the cooperation must be clear. The three organizations have different areas of expertise and there is a clear division of tasks, even in triple call alerts involving all three ECCs. The cooperation is also formalised through written agreements and there is a project organization with a steering group, reference group, project leader and working group that ties together the network. Second, ideological consensus has to be in place, which refers to the nature of the tasks and the approach taken to solve these. The nature of the tasks is clearly stated in the differences of the organizations, and through Samlok nord there has been established different procedures that guides how common tasks are solved. Third, there has to be positive evaluation, indicating that the partners have to appreciate each other's work for the collaboration to have a positive outcome. There has been some irritations and frustrations between the ECCs, but it seems like most of this tension has eased after being co-located as exemplified by the statement from the operational leader above. One of the informants from the EMCC also explained that the respect for the work done in the other ECCs has increased after being co-located:

"I have a much greater understanding of what the other organizations work with. (…) We understand the limitations of each other. And I think that goes for all of us." (H1)

Lastly, the tasks have to be coordinated in such a way that the collaboration works effectively. It has been exemplified above how this works in practice in Samlok nord. In addition, trust is an important factor for the success in inter-organizational networks (Chen et al., 2014; Jacobsen & Thorsvik, 2013), which will be further discussed in the next sub-chapter. From this discussion it seems like there is balance in the inter-organizational collaboration of Samlok nord. Some of the criticism to collaboration discussed above also seems less important in the light of Benson's four factors, as having a clear coordination and consensus in the work seems to be important for positive outcome of collaboration.

As discussed above, co-location is an organizational structure to coordinate activities which can also promote inter-organizational learning. Having a management structure is important in this regard (Gil-Garcia et al., 2016; Hamel, 1991). An important element in

Samlok nord is the project leader who is hired to effectuate the overall objective, which is to go from co-location to collaboration. The project steering committee has identified several measures to be tested in order to achieve this objective, and the project leader's role is to test, evaluate and effectuate these measures. Leadership in successful networks is based on social relations, and most often the focus is on the process of developing and achieving the goals through a mediator role. This leadership role plays alongside with the leadership in the bureaucratic hierarchy, which is responsible for allocating resources and provide the overall vision of the activities (Gil-Garcia et al., 2016). It seems like the project management in Samlok nord is organized according to this structure.

According to the project leader, the focus has mostly been on structural and formal measures like establishing procedures and exercises, while the relational and informal measures and exchange of experiences happen on the individual level. These are considered as formal and informal learning tools that both are important for achieving better collaboration (Antonsen & Ellingsen, 2019). The project leader talks to people in all of the three organizations, which makes it easier to get ideas for new projects or areas where the organizations can learn together and from each other. The mediator role is important in this regard. The project leader explained how this interaction can create new ways of interacting and learning through an example:

> *"For example, I heard that the police were planning to do a search after a person supposedly perished the next day. Later on, I heard that the local fire- and rescue service were planning to train their drone pilots the next day. And I thought that it must be possible to combine these two, that the drone pilots could assist in the search instead of training somewhere close by. (...) These are things that the organizations normally do not talk about, because it is not directly related to collaboration but to the tasks within each of the organizations. (...) My role is loosely organized, and I constantly look for opportunities that can be tested."* (PL)

According to one of the informants from the EMCC, the organizations started working more closely together when the project leader started the job, seven months after the official opening of Samlok nord. The first few months, they just co-existed side by side, according to the informant. One of the operational leaders from the police said that the project leader has contributed to increased understanding in the police organization for how the EMCC operates and works. Thus, it seems like the project leader has an important role as a catalyst for many of the processes that are now running across the organizations. Being co-located has facilitated

for the organizations to learn from each other and learning together, as well as having closer interaction and the development of common procedures and situational understanding to further the collaboration between the partners.

5.1.2 Common procedures enhancing learning and collaboration

Emergency preparedness organizations can be characterized as hierarchical bureaucracies, where rules and procedures are important for creating a stable and predictable working environment. Moreover, bureaucracies are often specialized, stabile and focusing on standardization and routines (Bigley & Roberts, 2001; Borch & Andreassen, 2015; Kirkhaug, 2015). Rules and procedures are methods for ensuring that tasks are performed the same way, and it can be argued that this is especially important for organizations such as police, fire- and rescue services and the health services. Triple alert calls and the dispatcher's alarm call check lists are examples of two procedures that have been established to ensure that all ECCs handle incoming calls in the same way. These procedures have been formally approved by the national authorities during the last few years, although triple alert calls have been the norm for longer time. The dispatcher's alarm call check lists are important in many regards, as exemplified by two of the interviewees:

> *"The dispatcher's alarm call check lists make it easier to follow a set structure in a conversation, and hopefully everyone will have a common situational understanding at the end of the call."* (P2)

> *"The dispatcher's alarm call check lists are important for establishing trust [among the ECCs], because we have already agreed on what we shall ask the caller. It also leads to more confidence in the triple alert calls."* (H1)

Thus, having these procedures ensuring how a triple alert call should be handled ensures that callers to the ECCs will be asked the same questions, no matter which 11X-central they call, either in Samlok nord or at other ECCs in the country. This creates a sense of stability and confidence among the workers in the ECCs. These procedures also ensure that operators can achieve common situational understanding easier than before these procedures were established.

According to Sienkiewicz-Malyjurek et.al. (2019), the lack of rules for collaboration can lead to less inter-organizational learning. Therefore, one can argue that having these

procedures developed and tested in a co-located context has facilitated for a structural framework in which inter-organizational learning can take place. This can be exemplified by how work is organized during a triple alert call: According to some of the interviewees, there seem to be more triple alert calls now than before Samlok, although there are no statistics to verify this claim. The informants from the EMCC both explained that there is a low threshold for triple alert calls now, as opposed to before Samlok. They did not have the same system for alerting each other which could lead to valuable time being lost when sending ambulances to an incident. The operators coordinate their efforts through telephone in the majority of the cases, as often there is no time to meet in person to discuss matters across organizations while at the same time coordinating resources and efforts within their own organization. However, the operators in the organizations will help each other to get as much necessary information as possible based on their expertise and knowledge. Several of the interviewees also explained that operators from all three organizations can and will ask questions during a triple alert call. Sometimes the organization with most knowledge of the incident will lead the interview with the caller after the first initial questions are asked. This aligns with the findings from Sienkiewicz-Malyjurek et.al.'s study (2019) of inter-organizational learning in public safety organizations. When the initial phase of an incident is settled, the team leaders can in some cases meet in person to discuss or clarify certain aspects of the case if needed. Thus, this example shows that having precise procedures opens up for learning activities.

Having common procedures can help the operators feel safer and more confident in their work. Fear of making mistakes can be a hinder for collaboration (Løvik, 2010). Fear of not mastering tasks can hinder inter-organizational learning (Lai, 2013). The dispatcher's alarm call check lists seem to be a procedure that help the operators being accountable in their daily work. An operator from the EMCC specified that they carefully follow the dispatcher's alarm call check lists because then no one can accuse them of not doing their jobs the correct way after an incident. The same interviewee talked about some challenges in the collaboration in the beginning, due to insecurities and incidents of being reproved by team leaders from the other organizations in the past. Sienkiewicz-Malyjurek et.al. (2019) point out that situations can often be interpreted differently by various organizations, and there can also be resistance to adapting to the way the others work. In addition, fear of making mistakes is not uncommon in emergency preparedness organizations. Therefore, several researchers have established that trust is vital for inter-organizational learning to take place (Chen et al., 2014; Huxham & Vangen, 2005; The Norwegian Directorate for Civil Protection, 2015). In bureaucracies it is common to emphasize institutional trust, meaning that the procedures and rules create the

stability that upholds trust needed to do the job (Julsrud, 2018; Kirkhaug, 2015). Therefore, procedures such as the dispatcher's alarm call check lists, which improves the confidence of the operators and creates more structure in how they work together, is helping to improve the learning and collaboration between the three organizations.

5.1.3 Different rules and regulations

As already pointed out above, having rules and procedures makes organizations effective, stable and predictable (Kirkhaug, 2015). The emergency preparedness organizations are different in many regards, because they are specialists and operate in different domains. Thus, they also abide by different laws and procedures. For the ECCs, the issue of confidentiality rules has proved to be a particular challenge affecting how the organizations work together. This goes especially for the police operational central and the EMCC, as both organizations have to abide by strict confidentiality rules for ethical reasons and to protect the people they are going to help. This is one of the reasons why the national health authorities have been reluctant to advice all EMCCs to co-locate with police operational centres and 110-centrals, and instead allowing each regional health authority to make this decision based on local needs (Minstry of Health and Care Services, 2016). These structural differences can affect the collaboration between the partners, especially if the ideal is horizontal collaboration between equal partners (Sørensen, 2017). Having too rigid structures and procedures can hinder inter-organizational learning (Broekema et al., 2017). However, although the ECCs in Samlok nord operate in a strategic alliance, they are still three separate organizations that have to follow the laws and guidelines for their sector. This is something they have to account for in how the daily work is organized and how the inter-organizational learning activities are facilitated for.

Being co-located has given opportunities to address the challenges related to different rules and laws, because the differences have provided some challenges and frustrations with regards to information sharing and creating common situational awareness in missions where the police and health services cooperate. In the co-located context, it has become easier getting to know each other, to build relations and respect, and to facilitate for inter-organizational learning activities. The use of learning tools has facilitated for better understanding and a way of working around the common challenges. This aligns with Tynjälä's (2008) statement that the ability to work and learn together is an important factor for success in inter-organizational relations. In Samlok nord, a whole competence development day was dedicated to discussing confidentiality rules in 2019, which seems to have contributed to more understanding of the

challenges at hand and also possible solutions. Among others, lawyers from the health sector participated and explained what kind of information that health workers can and cannot release to the police. At the same time, representatives from the police got to present the issue from their side. One of the operational leaders from the police said:

"I have gotten more knowledge about the issue through common competence development days and through talking and discussing with the others, and I can see the case from their side. It is easier to handle the issue with better understanding as a foundation." (P2)

Thus, the use of formal and informal learning tools has helped the operators to understand why the rules are different, and perhaps also accept that they will not be able to share all information as long as they are separate organizations.

The differences between the organizations related to confidentiality rules is also evident in the comparison of collaborating with co-located ECCs as opposed to ECCs being located elsewhere. This goes especially for the police, who share missions with EMCCs outside Samlok nord as well. In a co-located network, it is easier to set the structure, establish common goals and establish good communication and coordination (Gil-Garcia et al., 2016). The operational leaders explained in the interviews that the collaboration can be more challenging with the ECCs not being co-located. Some of the reasons that were given are that they do not know the people working there or their procedures that well, which can pose some challenging situations. Thus, even though some of the rules and procedures are similar all over the country, there are still local interpretations and working patterns that will differ from place to place. Not knowing each other can also make it more challenging to communicate and create common situational awareness in stressful situations. If there is lack of trust, it will impact on the ability to collaborate and learn together (Borch & Andreassen, 2015; Chen et al., 2014; Ellingsen & Antonsen, 2017). The fire- and rescue services also work with other EMCCs, but according to the interviews the differences in confidentiality rules has not affected how they can perform their tasks. Thus, it is evident from the interviewee's stories that being co-located, getting to know each other and working with common issues across organizational borders have been a strength for collaboration, even if there is still frustration in the ECCs from time to time, particularly in the police operational central.

Despite structural regulations regarding confidentiality and differences in the way the organizations work, it seems like many of the team leaders and operators in Samlok nord are pragmatic in everyday work in order to solve missions in the best possible way. Collaborating

organizations that manage to keep the balance between keeping the organization's structure with a flexible approach to real incidents, will have an easier time solving complex situations (Andreassen et al., 2018; Bigley & Roberts, 2001; Borch & Andreassen, 2015). This approach can also make it easier to learn across organizational borders (Broekema et al., 2017). This is exemplified by two informants from the health sector and the police:

> *"We are tied by confidentiality rules in all three organizations. (…) Often, we cannot say things to the police that they want to know, because we have different rules and regulations to comply with. Most of the time this works out fine. Also, we can find loopholes everywhere."* (H1)

> *"We can see that the people working at the EMCC are practical…they are really good at their jobs, to put it like that, and sometimes they might say too much, I don't know. At least this helps to solve the missions in a better way than if we did not have that information."* (P2)

These quotes show that the common objective for all three organizations is to save lives and assist the inhabitants in the best possible way, and that the operators are flexible in order to improve how the organizations work together. As exemplified above, the focus on inter-organizational learning in the co-located context have facilitated for this understanding and flexibility.

A specific example from an incident also illustrates how the missions become more effective and safer due to flexible solutions and willingness to help each other out, despite not being able to share full information about a mission. As previously stated, the formal rules and regulations can hinder effective emergency management and flexibility needed in specific missions (Boin et al., 2005). One informant told a story from a health-related mission, where the ambulance was sent to a house to check on a patient. As part of their procedures, the operator at the EMCC checked if there were minors present in the house, which was confirmed in this case. The operator was not sure of the state of the patient and asked the police if they could act as back-up if needed, without giving any details about the mission in order to uphold the confidentiality rules. Everything went well in the beginning of the mission, until the alarm of one of the ambulance workers went off because a violent situation had occurred. It turned out that the police were right outside the house, even if they were not asked to, and they could assist quickly. This flexibility probably made a big difference for both the patient, the child that were present in the house and the ambulance workers involved in the incident that day. The operator at the EMCC explained that this is only one of several examples where the police

offers to assist whenever they have the possibility and resources to do so. Thus, the use of learning tools in order to ease conflicts related to confidentiality issues have had an effect on the flexibility in the organizations and the collaboration among the ECCs.

The differences in rules and procedures that the organizations have to abide have given some extra challenges for the ECCs. However, being co-located and having the ability to use both formal and informal learning tools has bridged some of the "silo mentality" that can arise between organizations that have to abide by different laws.

5.1.4   Physical structures

Some of the physical structures in Samlok nord were mentioned as barriers to collaboration, learning and interaction by some of the interviewees. One can argue that the physical structures are upholding the "silo mentality" between the organizations, making it more challenging to interact, learn and collaborate on a daily basis (Jacobsen & Thorsvik, 2013). Particularly the lack of a social area located close to the ECCs was declared as something missing in today's physical localities:

"If the localities were designed even better, we could have had a neutral meeting place right outside the ECC, which would make it easy to be back in the central quickly if needed." (F1)

Several of the respondents said that they missed a place to eat their lunch, have a coffee, or somewhere to sit down that belongs to all ECCs in common. If seeing someone sitting there it would be easy to pop out for a few minutes of informal talk if time and resources allowed. These informal arenas are important for building trust and for informal inter-organizational learning (Jacobsen & Thorsvik, 2013; Jung et al., 2019), and therefore the lack of facilities for social interaction hinders the learning together and learning from each other.

Moreover, the lack of shared technological platforms was another physical structure mentioned by some of the interviewees that can hinder inter-organizational learning. One of the disadvantages with bureaucracies is that they are rigid and difficult to change (Jacobsen & Thorsvik, 2013), and this might be the challenge in this case. At the time being, there is no platform for sharing resources or logs during missions, except for triple alert calls and the tetra mobile radio system for emergency services as a common communication channel. One of the operational leaders from the police said that it would have been interesting to share resources in a map-based system during missions in order to communicate better and get better situational understanding. It is technically possible with the systems available today according to the

informant, but little willingness to pursue this issue at the national level. The project leader had similar experiences, as developing common technology was one of the initial goals of the Samlok nord project. Even if there is willingness to try this out on a local level, the process has stopped because they depend on these processes being nation-wide. Thus, it seems like the organizational structures on the regional level in the ECCs has developed during co-location, forming a wish to be innovative and test new solutions, but that the organizational structures at the national level seem to be more rigid and thus hindering further inter-organizational learning in the technical domain.

However, there are also some bright spots promoting learning together and learning from each other on the technical arena. Some of the interviewees mentioned that the regional fire- and rescue service Salten Brann has focused on technological innovations aimed at providing a better situational understanding at the operational (and strategic) level(s). For example, they can stream videos and pictures from the tactical level to the 110-central, which can give the operators at the ECC a better situational understanding of an incident. Because they are co-located, it is easy for operators from 112 or 113 to look at the streaming too, which was mentioned as an asset by some of the team leaders during the interviews. According to Inkpen (2000), the inter-organizational learning will develop as the strategic alliance develops, as is evident in the way that team leaders and project management tries to push some of the structural boundaries that affect inter-organizational learning.

5.1.5 Summary

This section has discussed how organizational structural measures can affect the inter-organizational learning across the organizations. How co-location as organizational structure promotes learning together and learning from each other, the development of common procedures, issues related to confidentiality rules, and physical structures are all aspects related to organizational structure that promote and inhibit learning and collaboration in Samlok nord.

Co-location is a structural framework that promotes the creation of common procedures, interaction, relations and inter-organizational learning activities. The project management of Samlok nord has an important role as facilitator for the learning processes that take place. Some of the procedures that are developed are national guidelines for all ECCs, such as triple alert calls and the use of the dispatcher's alarm call check list. Not only were the latter developed in a Samlok-context, but the discussion has shown that being co-located and getting to know each other makes it easier to apply these procedures and create common

situational understanding. The police operational central collaborates with several ECCs, and the operational leaders clearly stated that the collaboration is more seamless with the ECCs that are co-located because the operators know each other, and they have had time to work through some of the differences that previously created frustration and barriers. At the same time, some rules, procedures and structures have hindered collaboration, such as the confidentiality rules. Being co-located and having the ability to facilitate for formal learning activities such as competence development days and informal learning through closer interaction, have decreased the tensions related to some of the structural hinders. Therefore, one can argue that having common procedures does not promote inter-organizational learning in itself. This is something that has to be prioritized and facilitated, often by the management. However, being co-located provides a structure that makes inter-organizational learning easier, both through formal and informal instruments. Lastly, the physical structures seem to hinder formal and informal learning between the ECCs to some degree. The data material indicates that the Samlok nord management and the ECC team leaders have managed to find flexible solutions as a first step to promoting further inter-organizational learning and collaboration.

5.2   How is the relation between mutual trust and inter-organizational learning in a co-located context?

Trust can be defined as the willingness to rely on others in situations where there is high risk and the outcome might be negative, as well as having positive expectations that others will behave in ways that upholds the established values, norms and beliefs (Julsrud, 2018; Schiefloe, 2019). Several authors argue that trust is essential for a learning culture and shared competence (Chen et al., 2014; Filstad, 2010; Huxham & Vangen, 2005; Julsrud, 2018; The Norwegian Directorate for Civil Protection, 2015). This sub-chapter will discuss the relation between mutual trust and inter-organizational learning in a co-located context and examine whether this is a reciprocal or one-way relation between the two.

5.2.1   The development in the level of trust

There are several approaches to studying trust among people in organizations. Through examining these approaches one can also discuss how the trust between the partners in Samlok nord has developed from before being co-located and through the years since being co-located. According to Huxham (2003), the management's focus is important for trust to develop in organizations with many stakeholders. Kolb et.al. (2009) also found that the leadership in

organizations have an important role in facilitating for closeness, which is necessary for interaction and effectiveness. In Samlok nord, the project leader has an important role for the formal and informal processes happening in the network. Although trust is not something that can be decided on, the activities and structures that are planned in the co-located context can provide a more systematic approach to building trust (Ellingsen & Antonsen, 2017). However, it is difficult to measure the level of trust before and after Samlok, as there is no quantitative or qualitative data to verify the changes. Thus, the subjective experiences and reflections of the interviewees represent their view on these changes that has happened.

According to Julsrud (2018), trust can be seen as a strategic approach where rational choices determine that trusting the other party can be a wise choice in certain situations. This might have been the case for the ECCs before co-location, because they have to trust each other and cooperate in order to solve common missions. One team leader said that there were hardly any contact between the ECCs before Samlok nord was established, except for incidents where all three organizations had to cooperate. Before Samlok, there could be discontentment within the organizations due to not knowing each other and not understanding each other's positions and ways of working. One commander from the 110-central said:

"I can't say that we didn't trust the others before, but we didn't know who they were." (F1)

According to Huxham (2003), suspicion rather than trust is often the starting point between new partners, and it takes time to develop trust and collaboration. The project leader explained that there were few, if none, regular meeting points across the ECCs before Samlok nord, which could lead to small irritations becoming big problems before they sat down to talk. The meeting points for building trust and relations were non-existing. Therefore, there were hardly any arena for inter-organizational learning before being co-located either.

Trust can also be institutionalized, meaning that the rules and procedures in organizations set some boundaries which makes it easier to trust each other (Julsrud, 2018). There were already some common procedures for how the ECCs should work together before Samlok nord and there have been more developed since being co-located, as discussed above. Trust can also be seen through a norm-based perspective, indicating that trust is part of the culture and develops through establishing common values or due to knowing each other (Julsrud, 2018). The informants in this study all explained that there have been evident changes in the level of trust in a positive direction after Samlok nord was established, where seeing each other face to face and getting to know each other might be one of the explanations to the

improvement. In order to establish trust, the partners have to have common expectations for how they should collaborate, and they also have to be willing to take some risks in the beginning (Huxham, 2003). One can argue that this has been the case in Samlok nord, as according to the interviewees there seemed to be little trust before- and in the beginning of being co-located. Being able to work more closely together and having informal and formal learning arenas has improved the level of trust between the team leaders and the operators.

Trust can come as a result of building networks and relations, meaning that people who have regular interaction are more likely to develop trust than others (Julsrud, 2018). The impression from the interviews indicate that this has been the case in Samlok nord. One of the operators from the EMCC said that trust is essential for the collaboration that takes place in Samlok, and exemplified it in this way:

"Knowing who the others are and having someone to talk to [face to face] makes it easier to discuss common challenges and learn something from it." (H2)

The operators at the EMCC said that the relations to the other organizations are good now, and the operational leaders in the police said that relations have improved immensely despite some barriers related to the confidentiality issue. One of the reasons for this change is the lower threshold for asking questions, and also acknowledging that people in the other organizations hold a competence that complement their own. The team leaders said that they have a better understanding of each other's strengths and limitations.

"Before, we had to cooperate with several different ECCs. If there were things we didn't understand, it was difficult to put the pieces together. Now we can ask each other directly, suggest new ways of solving issues, and understand each other more easily." (F1)

For the job performance, this results in better situational understanding through the triple alert calls and better clarifications among the ECCs before and after resources are called out to an incident. Thus, this discussion shows how trust between the team leaders and operators in the ECCs has developed from being based on the minimum level only, to closer interaction and exchanging of competence.

5.2.2 The importance of face to face interaction

The stories from the interviews indicate that informal learning activities and events that someone facilitates has led to development of trust among the operators at the ECCs. They also show that time has been an important factor for developing trust. A study by Bradner and Mark (2002) showed that distance increased scepticism among people in a work setting, but this diminished when they were met with cooperation. Thus, closeness increases the willingness to collaborate with others. At the same time, formal learning activities such as competence development days and morning meetings have been important for the development of trust in Samlok nord. According to Ellingsen and Antonsen (2017), who have studied trust in Norwegian ECCs, it is easier to establish trust through a co-located context where face to face interaction is the norm. This increases the probability that understanding, accept and trust is established as the new way of interacting. Being co-located makes it easier to share information and competence (Antonsen & Ellingsen, 2019). Also, it can be easier to establish trust and learn together in informal settings (Filstad, 2010).

All through the conversations about trust during the interviews, the face to face meetings were highlighted as important. One of the operational leaders from the police said it quite simply:

"The closeness we have [due to Samlok] has broken down the shutters between the organizations." (P1)

Informal gatherings were said to be important for getting to know each other, which in turn affects the collaboration between the ECCs. One of the measures put in place is "waffle Friday" at lunchtime once a month, where the operators from all the ECCs gather:

"The waffle Fridays are really important, because when we have to handle the complex incidents where cooperation is important, it is so much easier [after these informal gatherings]." (P2)

This quote shows how informal meetings have a positive impact on the trust between the operators, which again has a positive effect on the collaboration between the ECCs (Ellingsen & Antonsen, 2017; Huxham & Vangen, 2005). Another measure has been social gatherings outside the workspace, such as summer parties or skiing trips. It did not seem like there had been a big turnout to these events among the interviewees, but one informant said that the social

interaction outside the work arena can be important for creating confidence and trust at work. In addition, the morning meetings where the team leaders from each of the ECCs meet were also mentioned as important for building trust. This arena is used to present the plans of the day that might be of interest to the other ECCs, and to have a coffee and a chat if there is time. Several of the interviewees said that these meetings have been important for getting to know each other. According to Nonaka et.al. (2000), interaction is central for creating and sharing competence, which is key for inter-organizational learning. Thus, being co-located have facilitated for several informal meeting points which have affected the level of trust among the team leaders and also the learning across organizations.

However, the data material suggests that the team leaders to a varying degree go to the other ECCs to say hello or to have an informal discussion. It seems that it is easier to interact if someone facilitates for these activities as opposed to seeking them out on their own initiative. This can indicate that the form of trust that is based on relations and networks as outlined by Julsrud (2018) is not fully developed yet. However, busy days and high work pressure in the ECCs can also be a reason for less informal contact between the centres. One of the operators from the EMCC commented that it is easier to see people you already know for a coffee. One of the commanders from the 110-central said that this kind of informal interaction is person dependent, as some people are more open than others, but when they do open the doors between the centres for a chat it also helps to build trust. According to the project leader, the team leaders who go into the other centres for informal talks, will probably work together with the other ECCs during missions in a different way than those team leaders who do not prioritize this. For example, it will become easier to discuss challenges in the collaboration or concrete missions without the other party misinterpreting this as negative critique. The team leaders that do not seek out the other centres as much, will perhaps have a more professional relationship to the other ECCs. Also, getting to know each other can be effective for decreasing the barriers that have existed in the past and to some degree still exist. An operational leader from the police said:

"I am fan of going to visit and talk across organizations and centres in order to get to know each other. I think that will make us work better together when we meet difficulties." (P1)

These examples indicate that there are different approaches to face to face interaction that are person dependent. Organizational cultures can change only as long as individuals are willing to try new ways of interacting. How people communicate and work together is important in

this regard (Schein & Schein, 2017). Therefore, interaction and informal learning as methods to develop trust can be beneficial for the network as a whole.

It takes long time to build trust, and it is often developed through long-term cooperation. Trust can also be broken quickly (Jacobsen & Thorsvik, 2013; Schiefloe, 2019). Particularly there has been some reluctance in the EMCC to interact with the police, one of the operators explained:

"In a way we have been a little afraid to go to the police operational centre, we are not there that often. (...) However, it has improved a lot during the last year, because we didn't dare to go in before. Actually, I have to credit the police for some of it, because they understood that we didn't come in that much. (...) They have been really good at inviting us in." (H1)

One of the operational leaders referred to the same topic:

"We have heard from the operators at the EMCC that we are a little scary. We have tried to do something about this, even trying to invite them to come over to our centre." (P1)

Thus, it seems like time helps to develop trust between team leaders and operators at the ECCs, and closeness increases the quality of communication as well as the willingness to cooperate (Bradner & Mark, 2002). The different organizational cultures in the ECCs might seem frightening before getting to know the people who are part of that culture (Schein & Schein, 2017). It takes time to experience that the others share similar values and norms, and believing that the expectations one have to others will be fulfilled (Julsrud, 2018; Schiefloe, 2019). The stories referred to in the interviews indicate that trust has developed through long-term cooperation and being co-located.

Being co-located has also brought an unexpected outcome that has benefited the relations between the organizations, as the management level has also come physically and relationally closer. Trust is important also at the management level in network organizations, and the social relations are of more value than the hierarchy if networks are to be successful (Gil-Garcia et al., 2016). The leaders of the ECCs now have offices in close proximity. One of the interviewees from the police mentioned that this makes it easier to discuss topics that can be challenging across organizational borders. The management level is important as role models for how other employees should behave, and in addition leaders have an important role in creating a common sense of belonging (Broekema et al., 2017; Schein & Schein, 2017).

Although several informants mentioned that it is easier to give feedback to people in the other centres when being co-located as opposed to before co-location, there are still questions cannot be solved directly between the team leaders. These questions are lifted to the management level, and during office hours most issues are solved in short time. These processes would normally have taken longer time if not being co-located. Similar thoughts were also mentioned by the project leader, who stated that having the leaders of the ECCs physically close to each other was a positive side effect of the whole co-location process, especially as the bureaucratical processes are fewer. Thus, it seems like being co-located has brought leaders and operators more closely together which has developed mutual trust between the organizations and more informal and formal inter-organizational learning (Ellingsen & Antonsen, 2017).

5.2.3   Three different organizations with different cultures

Occupations and professions can have strong cultures, embedded through education, training, values and beliefs in the organization. When several organizations with strong cultures are to collaborate in a network organization it can pose some challenges, especially because experiences and different points of view can lead to discussions about how to do things in the collective sphere (Schein & Schein, 2017). However, none of the respondents said in the interviews that representing three different organizations with distinct cultures, procedures and ways of working, affect how they work together. Rather, several respondents saw this as a strength:

> *"I think that differences create positive effects. I don't feel that this is an obstacle. (...) In some incidents we have to utilize each other's differences and knowledge. This expands my horizon",* (P2)

The operational leader continued on arguing that both the police and the health sector have to abide by strict laws and procedures, while the fire- and rescue service are freer in that regard and also more practical oriented. In that sense, the three organizations complement each other. Schein and Schein (2017) also point out that having different cultures can be a strength, because it presents a possibility to learn and exchange competence in ways that are difficult to achieve within one's own organization. This is also confirmed by Tynjälä (2008), who argues that networks can be a great arena to learn from each other. It seems like this is the case in Samlok nord. Having had time to develop relations and trust in a co-located context has allowed the

team leaders to see that differences can be a strength and an opportunity to learn together and learn from each other.

At the same time, all respondents said that there are still three different organizational cultures in Samlok nord, and that it takes time to develop a common organizational culture. This coincides with other stories referred to above, about how there was more scepticism and conflicts when the network organization was established. In a co-located context, and a newly established network organization, it is important to create a sense of belonging while also maintaining the individual organizational cultures. According to Boin et.al. (2005) groups function better if all parties accept that they have different roles and responsibilities. Simultaneously, leaders must create the sense that working and learning together is an activity worth investing in that will benefit the network as a whole (Broekema et al., 2017; Schein & Schein, 2017). One of the commanders from the 110-central said that the three organizational cultures are very different, but at the same time there is a common understanding that they are all part of Samlok nord. The project leader explained that making changes takes time, whether these changes are related to culture, trust or procedures:

"In order to create a common "we" you have to live with each organization's "we."" (PL)

As argued above, the ECCs have become closer in the three years since the official opening. There has been learning happening all the way according to one of the respondents and having common procedures and established ways of working has helped bringing the organizations more closely together. The project leader mentioned a recent example, when the leaders of the ECCs came together to create common procedures and rules for handling the Covid-19 pandemic during the spring of 2020. This was initiated by one of the leaders because of the need to think of the common "we" when handling such a situation and not only "my" organization. This work involved several levels in the organizations, exemplifying that the thought of Samlok as a common unit is spreading and involving more people. Thus, the aspect of trust comes together in different perspectives through this example: It can be built through common procedures, and establishing common values for the work being done, and it is manifested through relations and the network that Samlok nord is developing (Julsrud, 2018). The project leader hoped that this is an example of the new way of working and thinking when solving challenges in the organizations, also impacting on the inter-organizational learning and collaboration.

5.2.4 Summary

This sub-chapter has discussed the relation between mutual trust and inter-organizational learning in Samlok nord. The interviewees pointed out that the level of interaction has increased during the existence of Samlok nord, and as a consequence the level of trust has also increased. It seems like the team leaders and the operators meet more often across organizational borders in informal settings, ask each other several questions, know the rules and regulations for the organizations better and have several formal learning activities, which in turn leads to more understanding and respect for each other's work. Thus, one can argue that trust has led to several informal learning activities, while also having more formal learning activities has helped to develop trust and understanding among the team leaders and operators of the ECCs.

5.3 How does inter-organizational learning take place with the use of learning tools in a co-located context?

This sub-chapter aims to discuss how the use of learning tools affect inter-organizational learning, as well as discussing how inter-organizational learning takes place in a co-located context. Being co-located allows for closer interaction, the development of mutual trust and more focus on inter-organizational learning. Two statements from the interviews explain some of the sentiments regarding this issue:

> *"I don't think any of the emergency services work as closely across the organizations as we do in Bodø."* (F2)

> *"The learning environment we create by being co-located is magical. There is so much learning that is not tied to individuals or the organizations, it just happens between people."* (PL)

Thus, Samlok nord can be said to gather the three organizations more closely physically and relationally, allowing processes of interaction and learning to form and take place.

5.3.1 The use of learning tools for creating new competence

The literature clearly states that learning takes place when new knowledge leads to changed behaviour (Broekema et al., 2017; Jacobsen & Thorsvik, 2013). Moreover, it is not only about acquiring new knowledge, but also to develop skills, capabilities and attitudes, which are the fundamental parts of someone's competence (Lai, 2013). If organizations are to change and

develop, it is crucial that the individuals in the organizations change first. The learning tools become handy in this regard, as these can be both tacit and explicit, formal and informal (Antonsen & Ellingsen, 2019; Nonaka & Takeuchi, 1995). For example, several of the informants said that there were little or no interaction between the ECCs before co-location, which was the starting point for more systematic learning from each other and learning together. Having competence development days, weekly triple call alert exercises, daily meetings and informal interaction has shown the team leaders who were interviewed that they have something to learn from the others, that they can learn something to the others, and that there is a possibility to develop together. This has impacted on the dimensions of the concept of competence as outlined by Lai (2013). For example, this has made the team leaders aware that they do not have to be experts in every field, because they have other experts next door, thus impacting the view on knowledge. Having formal and informal learning activities has affected the ability to perform complex tasks together as well as improved situational understanding across the ECCs, thus improving the skills of the operators and team leaders. Being more closely connected and seeing the potential in learning, may have impacted the motivation for inter-organizational learning among many of the team leaders, thus affecting their attitudes (Lai, 2013). The use of learning tools can in this regard be seen as the aids that help individuals, and in turn organizations, to develop competence and change their behaviour.

The SECI-model describes the process of knowledge creation in four steps: Socialization, externalization, combination and internalization (Nonaka & Takeuchi, 1995). Figure 4 places the various learning tools used in Samlok nord along the dimensions of the SECI-model. Tacit knowledge is personal, hard to explain and something one might not be aware of, and therefore often expressed when people can work side by side and learn by doing. Explicit knowledge is often more tangible and formal and can for example be expressed through written language. However, the figure below shows that formal and informal learning tools can be expressed as both tacit and explicit knowledge. The categorization is related to how knowledge is developed, first on the individual level and then later on in the process it can be transferred to the organizational level. For organizations, this is important for development and innovation (Nonaka & Takeuchi, 1995).

From \ To	Tacit knowledge	Explicit knowledge
Tacit knowledge	**Socialization** - Trainings - Exercises - Observation - Informal interaction	**Externalization** - Procedures - Exercises - Debriefs - "Meeting in the middle" - Informal interaction - Competence development days
Explicit knowledge	**Internalization** - "Learning by doing" - Individuals acquiring new competence due to use of other learning tools	**Combination** - Adopting procedures based on experiences - Competence development days

Figure 5: The SECI-model applied on the learning tools in use in Samlok nord

Socialization is the process of going from tacit to tacit knowledge. It can be seen as a process where knowledge is transferred without using language, where people work side by side making someone else's knowledge into their own (Nonaka & Takeuchi, 1995). Trainings and exercises can be one way of developing such knowledge, in the sense that these are arenas where people get to know each other and observe other people's actions (The Norwegian Directorate for Civil Protection, 2015). Such tacit knowledge can contribute to inter-organizational learning in the sense that ways of doing things are observed and passed on throughout the organizations, and in the long run changed behaviour. Observation as learning tool has not been in use in Samlok nord, but it has been discussed thoroughly in the working group and there are plans to start the observation programme as soon as all the juridical issues are solved. Several of the interviewees said that they would like to participate in such an observation programme, even if they have worked in the ECC for several years, because the procedures and technical tools being used are different between the three organizations. Being able to observe team leaders and operators in another ECC could enhance the opportunity to learn and bring the best practice back to their own ECC. Such informal learning could also build stronger relations between the ECCs and build trust among the team leaders (Filstad, 2010).

Externalization is the process of going from tacit to explicit knowledge, which can be a way of formalizing someone's knowledge through collective reflection, dialogue or into written documents (Nonaka & Takeuchi, 1995). Many of the learning tools being used in Samlok nord can be placed in this category, as ways of working and doing things often are

formalized through discussions and collective reflection or written down. The common procedures that are developed for Samlok nord is a result of collective work with the goal of working more seamlessly and closely together. Competence development days are also an example, and it seems like the team leaders appreciate these meeting points, discussions and opportunity to delve into a specific topic. One operator from the EMCC said:

"The competence development days provide a lot of input to my work. I learn a lot from being together with people from the police and fire- and rescue service, as well as hearing their thoughts on various issues." (H1)

The competence development days are an arena for talking about specific incidents, reflecting and learning from them, as well as opportunity to voice an opinion. The inter-organizational learning happens in the reflections between the participants. Furthermore, the morning meetings where team leaders from each organization meet "in the middle" is another example where knowledge is developed across organizations through dialogue and collective reflection. This is a formal tool, as it is decided that these meetings shall take place every day, but it is also informal because it can allow time for a cup of coffee and informal talk. An EMCC-operator preferred informal interaction as method of learning:

"The informal cup of coffee right after an incident have the best learning effect for me, because you remember all the details since the incident recently happened." (H2)

One commander from the 110-central noted that informal talk can solve a problem at the spot, but the colleagues that are not working this shift will not know what has been discussed. However, according to an operator from the EMCC the informal interaction makes it easier to ask questions if something is unclear and will also make it easier to admit mistakes. According to the informant, most of the colleagues in the ECCs have become better in doing just this, which in turn increases learning across all the ECCs. The value often lies in the interaction that takes place in those moments where individual knowledge, skills and attitudes are expanded, which in the longer run can be transferred to other colleagues and the organization as a whole, thus contributing to inter-organizational learning (Antonsen & Ellingsen, 2019; Hoel et al., 2019; Lai, 2013).

Antonsen and Ellingsen (2019) argue that there is potential for better and more systematic reflection and discussion in ECCs in order to promote learning between

organizations, and particularly a focus on the formal learning tools can be prioritized. Samlok nord has prioritized the formal learning tools in the objectives for the project. However, both the annual report and the project leader noted that taking a systematic approach to learning is on the agenda for the years to come, as this has not been in focus in the initial phase of the project. Debriefs is an example of a learning tool that needs more attention. It seems like several of the informants would have liked to have debriefs with colleagues from the other ECCs more often than what is the case today. At the same time, one of the informants from the EMCC said that they can have quick ad-hoc debriefs after an incident to clear up or avoid any misunderstandings. It seems like these types of debriefs are happening on the initiative of the operators or team leaders themselves, and not as part of any systematic review. Moreover, a study of the Norwegian police states that exercises are one of the learning tools used the least (Antonsen & Ellingsen, 2019), and a study of UK police states that there is no coordinated strategies for learning across the police (Seba & Rowley, 2010). There are few studies examining this aspect across organizations, but data from the interviews indicate that there is potential for a more systematic approach to exercises in Samlok nord. At the moment, the triple call exercises are scheduled twice every week. The organizations differ in how much they want to exercise cross-organizationally as they also have requirements to exercise internally. However, exercises can be seen as an externalization process because every time they are executed there will be some form of collective discussion and reflection afterwards improving the learning potential. Thus, there are several formal learning tools in use in Samlok nord. Systemizing these processes could enhance the learning outcome of these learning tools (Antonsen & Ellingsen, 2019; The Norwegian Directorate for Civil Protection, 2015).

Combination is the process of going from explicit to explicit knowledge, which can be a process of transferring formal knowledge into new knowledge (Nonaka & Takeuchi, 1995). The ECCs participate in some exercises where the informants described that the team leaders and operators function as support to the other actors in the exercise, instead of training specifically on their own learning outcomes. However, even these incidents can be a potential for inter-organizational learning and knowledge development, as the ECCs sometimes make changes in internal procedures in order to be more coordinated with the other organizations in the future. This is a way of transforming existing knowledge into new knowledge that is positive either to the one organization in question, or for the collaboration as a whole. In addition, these kinds of activities help to build trust, which can be an asset for further learning on other arenas (Andersson et al., 2014). Moreover, the competence development days can function as an arena to transfer existing knowledge into something new, as has been the case

with the confidentiality rules. The frustrations regarding the different rules and how they impact on the collaboration and situational understanding have been discussed and reflected upon across organizations, and in this setting the network organization as a whole has come to a new understanding of how they can make this work in the daily setting.

Internalization is the process of going from explicit to tacit knowledge, which in many ways can be referred to as learning by doing. This is the process when people absorb the formal knowledge and make it their own (Nonaka & Takeuchi, 1995). Several of the already discussed learning tools can fit into this category as well. Learning tools such as exercises, trainings, working with procedures ,competence development days and interaction produces knowledge that has to be internalized in each individual if they are to make sense and lead to changed behavior, which is described as the sentiment of learning by several authors (Broekema et al., 2017; Jacobsen & Thorsvik, 2013; Lai, 2013). This step finalizes the knowledge creation spiral in the SECI-process, while at the same time it starts a new spiral where individual knowledge development can lead to organizational learning and development (Nonaka & Takeuchi, 1995).

5.3.2 Inter-organizational learning in Samlok nord

Learning in network organizations provide the opportunity to learn across professions, cultures and fields of expertise. In order for these learning networks to function ideally, it is necessary to interact, be dedicated, have shared goals and trust each other (Tynjälä, 2008). Nonaka et.al. (2000) also argue that interaction is central for shared learning and have presented the concept of "ba" to exemplify how individuals can come together in the process of creating new competence and knowledge. There has been evident change in inter-organizational learning during the last three years according to the informants, as exemplified by one of the commanders at the 110-central:

"The interdisciplinary learning-focus has increased since Samlok was established, because it was almost non-existent before." (F2)

As the discussion in the previous sub-section showed, there was less interaction and trust among the ECCs before being co-located, which may have been one of the reasons why there were also less inter-organizational learning. For example, when new operators were employed, they had a small tour to the other ECCs. Except from that there was little interaction and communication among the operators or team leaders. Similar stories were told by informants from all three organizations, even with examples from other places in the country. One of the

commanders from the 110-central noted that there might not be that different in how new operators are presented to the other ECCs on the formal scale today. However, the big difference is the informal aspect, because being co-located introduces new operators to the other organizations on a daily basis. This impacts on how they get to know the other people and organizations, improves common situational understanding and how common missions are solved. Thus, sharing common objectives and interacting more closely as described by Nonaka et.al's (2000) "ba" is important for inter-organizational learning to take place in Samlok nord.

Network organizations that manage to create a sense of trust among the collaborating partners will have an advantage when it comes to inter-organizational learning, as trust is an important means to increase motivation for learning among individuals (Filstad, 2010; Lai, 2013; Pee et al., 2010). Several of the informants spoke of the relationship between trust and learning:

"As long as people are open and honest with each other, it is easy to learn. (…) There is some knowledge that has to be common for all the ECCs, and my impression is that we are about to make a solid model for learning." (F1)

"For me as a project leader, everything we do is about change. We are about to learn to do things in a different way than before, and it is extremely important that we trust each other." (PL)

According to all the informants in this thesis, being co-located has created a foundation for establishing trust, which is vital for learning. This aligns with findings from previous studies (Filstad, 2010; Huxham & Vangen, 2005; Julsrud, 2018; NOU 2012: 14, 2012; The Norwegian Directorate for Civil Protection, 2015).

There are also some barriers to inter-organizational learning in Samlok nord. There can be several reasons for this: Being afraid of making mistakes, not having a well-developed culture for giving feedback or not having the proper framework and structure that allow inter-organizational learning activities to take place can be explanations for why these exercises are sometimes skipped (Lai, 2013; Sienkiewicz-Malyjurek et al., 2019). In some organizations, knowledge seems to be closely connected with power, which can make it more difficult to share with others (Seba & Rowley, 2010). In addition, time- and personnel constraints can be another reason that hinders inter-organizational learning. In a network organization, there has to be acceptance for all the organizations having busy days and sometimes little time and

resources to exercise. The collective development in Samlok nord is always dependent on the organization with the least resources at the time, and when someone says that they cannot prioritize inter-organizational activities, there is consensus in the network that they postpone that activity. This kind of understanding and management based on social relations rather than command and control is important in successful networks (Gil-Garcia et al., 2016).

The triple call alert exercises were brought up as an example in one of the interviews. According to the project leader, everyone in the project is positive to having exercises; from the steering committee, to the leaders of the ECCs, the team leaders and the operators themselves. It seemed from the interviews that the project leader in Samlok nord has primarily initiated and lead the triple alert call exercises, although trying to delegate some of the responsibility to others in the ECCs. However, there seems to be some barriers to getting it done when having to initiate these kinds of activities themselves. The project leader said the following:

"There is some resistance to the weekly triple alert calls. Everyone wants exercises and expresses a want and need for exercising. However, it is easy to back out when it is actually happening if there are small obstacles on the way." (PL)

It was still noted that these exercises are carried out most of the time, but it is important to have a person that is responsible for carrying out these kind of learning activities (Gil-Garcia et al., 2016). In this setting, the project leader's role is among others to remind the ECCs to prioritize inter-organizational activities that promote collaboration and learning. Thus, part of the project leader's objective is to be a bearer of continuity and keep prioritizing these exercises, as well as focusing the mindset saying that it is not only important to exercise but it is also fun. In this sense, the project leader functions as mediator and focuses on the process of developing learning tools, understanding that it takes time to achieve all the objectives (Gil-Garcia et al., 2016). It might also impact on the motivation for learning (Lai, 2013). Even though there are positive attitudes towards learning activities both at the management level, among team leaders and operators, there are also some barriers to getting this done.

Being willing to change and believing that others can contribute with positive new elements makes it easier to overcome resistance to change, according to informants from the police and health sector. This aligns with Schein and Schein's (2017) view on organizational culture, as well as the definitions of trust (Jacobsen & Thorsvik, 2013; Julsrud, 2018), who argue that shared learning and the ability to adapt is the core of culture as well as the willingness

to believe that others will do you well. In this sense, Samlok nord has contributed to changes both within each organization and for each of the team leaders. When asked what they have learnt from colleagues in the other organizations, some of the informants gave the following reply:

"I have learnt to have more respect, more patience, more understanding for the work of the others than what I had before, because we have been working too separately. Now that I know their way of thinking, I have more respect and patience for what they do than I did previously [before Samlok]." (P2)

"The term "situational understanding" has gotten a new meaning for me after being co-located. It is a lot easier to achieve common situational understanding now as opposed to 6-7 years ago." (F2)

Common situational understanding, more respect and understanding are key words when summing up the feedback from the team leaders on learning points from the others.

On the organizational level, learning has also taken place as a result of increased interaction and trust. Networks can create potential for inter-organizational learning, as people develop new thoughts and ideas based on what they see and experience that others do (Tynjälä, 2008). The informants from the 110-central said that they have more focus on formalizing knowledge and focusing on procedures now as opposed to before being co-located. One informant from the EMCC said that they have started a process towards formalizing the role as operational leader, because they see the need for a leader in the central as opposed to having a flat structure. Both the 110-central and the police operational central have a leader role in their centres. Moreover, having a neater working structure after co-location has also been a result for the EMCC. At the same time, the EMCC work according to an index for different kinds of incidents, which have inspired the other organizations to consider introducing similar tools in their organizations. The police also mentioned that they have become more technology-oriented after being co-located. Thus, small ideas and changes are in process as a result of learning from the other organizations. As the network develops so will the learning processes develop (Inkpen, 2000). This will not happen by itself though, and the management level has an important role in facilitating for the use of the relevant tools and strategies (Newell et al., 2009).

5.3.3 Summary

This sub-chapter has discussed how the use of learning tools affect inter-organizational learning. The SECI-model was used as a framework for placing the various learning tools among the dimensions of tacit and explicit knowledge. Most of the learning tools discussed in this thesis was categorized as externalization, because the process of going from tacit to explicit knowledge is the process where discussion and collective reflections creates new knowledge. However, it was also argued that the internalization process is closely linked, as all knowledge has to be processes and translated to changed behaviour if it is to count as learning according to the literature. The informants appreciated different tools, but all agreed that being co-located and having the ability to interact more closely than they did before Samlok nord has been important for inter-organizational learning to take place. Moreover, this sub-chapter discussed how inter-organizational learning takes place in Samlok nord. It discussed some of the barriers that can hinder inter-organizational learning, but also outlined how trust and interaction are effective for countering these barriers.

6 Conclusion

This thesis has focused on the relation between closeness through co-location and inter-organizational learning. The study shows that organizational structures, trust and the use of learning tools all contribute to inter-organizational learning in different ways. The physical closeness facilitated trust as well as structuring mechanisms in the form of a joint partnership supported by top management, which has contributed to improved information exchange and coordination efforts. Being co-located has improved situational understanding, built relations across organizations, contributed to better understanding and respect of each other's work, more formal and informal learning activities, and development of common procedures to strengthen the work across the organizations. The network management has an important role in facilitating for inter-organizational learning through building relations, mediating and being a bearer of continuity to ensure that the objectives in the co-location project are reached. This study shows that there may be some challenges with co-location too, especially related to different laws in the organizations hindering situational understanding. The use of learning tools has helped to create respect and understanding, thus decreasing some of the tension. Having common procedures seems to improve the confidence of the team leaders and create better structures for the cross-organizational work, as well as increasing the inter-organizational learning and collaboration.

This study shows that there may be a reciprocal relationship between trust and inter-organizational learning. On the one hand, being co-located and getting to know and trust the people in the other co-located organizations might have made people more positive towards the learning activities. More specifically, having the time to get to know each other have facilitated closer interaction and informal learning. On the other hand, having an organizational structure where inter-organizational learning is in focus may change the attitudes of the respondents from being neutral or even slightly negative, to trusting the people from the other organizations and believing that there is something to learn from them. In this sense, the formal learning activities has led to more respect for the others, which in turn has become mutual trust. The way the organizations have worked with competence development days to overcome some of the challenges regarding the confidentiality rules is an example of how inter-organizational learning can lead to mutual trust, but also how getting to know each other can facilitate for understanding for the work that others do. Thus, one can argue that there is a reciprocal relationship between trust and inter-organizational learning.

This study reveals that the range of learning tools available contribute to formal and informal inter-organizational learning in different ways. The discussion showed that the externalization process, where discussion and collective reflection is central, is important for creating knowledge no matter which learning tool that is being used. It also showed that the internalization process is just as important, because it allows knowledge to be transferred to changed behaviour in individuals, which in turn leads to inter-organizational learning.

6.1 Limitations of the thesis

This study has some limitations related to research model and methodology. As for the methodology, the single case strategy, the cross-sectional data collection, not including data from the strategic level and a limited number of respondents limit the validity of this study. As for the research model, the study has aimed to grasp and understand complex processes happening in co-located organizations. In retrospect, the thesis might have benefited from a narrower scope, allowing even more detailed focus to some of the perspectives.

The work with this thesis has given rich data from the perspectives of some of the team leaders working in the ECCs in Samlok nord. However, it would have been interesting to have several informants from the Samlok-environment in order to get more and different perspectives on inter-organizational learning in this co-located context. For example, combining the qualitative research interviews with a quantitative survey among team leaders and operators, or interviewing people from the management level in the ECCs or the management level above in the organizations could have given new perspectives to how inter-organizational learning takes place in a co-located context. Having contrasting perspectives from different levels in the organizations could have provided different views and opinions than what has come up in this thesis. Nevertheless, the data collection has been done within the time constraints that were available at the time of writing.

6.2 Recommendations for further studies

It is valuable to understand the relation between closeness through co-location and inter-organizational learning, because it may affect how organizations can work to achieve better collaboration. However, there are many mechanisms that can shed light on this relation, among others the institutional framework of organizations, the role of strategic management and organizational culture. Future studies could examine these variables' effect on the inter-organizational learning in co-located contexts.

The institutional framework sets the standard for how organizations work and operate, and co-located organizations may operate under very different frameworks. These differences can affect inter-organizational learning and collaboration in co-located contexts. Future studies may explore some of the limitations and strengths related to the institutional framework(s) and how it will affect the relation between closeness and inter-organizational learning. In continuation of this aspect, the strategic management in organizations may also have an important role in how inter-organizational learning takes place in co-located contexts. The top management is responsible for strategic decisions, budgets, results, resources and priorities in organizations, which in turn can affect the inter-organizational learning taking place in co-located contexts. Moreover, organizational culture may affect the interaction and inter-organizational learning in co-located organizations. There are several approaches to organizational culture that can be of interest for future studies, among others the values, beliefs, norms and artefacts in organizations, as these aspects may influence how organizations learn from each other and learn together.

Future studies on the relation between closeness and inter-organizational learning should include methodological approaches that include data from the strategic levels of the organizations in order to understand the mechanisms described above. Moreover, cross-sectional data collection can also provide different insights that can complement findings from other studies.

7 Literature

Andersson, A., Carlstrom, E. D., Ahgren, B., & Berlin, J. M. (2014). Managing boundaries at the accident scene - a qualitative study of collaboration exercises. *International Journal of Emergency Services, 3*(1), 77-94. doi:https://10.1108/IJES-02-2013-0003

Andreassen, N., Borch, O. J., & Ikonen, E. (2018). Managerial Roles and Structuring Mechanisms within Arctic Maritime Emergency Response. *Arctic Yearbook, 2018*. Retrieved from https://nordopen.nord.no/nord-xmlui/bitstream/handle/11250/2591156/Andreassen.pdf?sequence=1&isAllowed=y

Antonsen, Y., & Ellingsen, M.-B. (2019). Samlokalisering av nødmeldingssentralene til politi, brann og helse utvider praksisfellesskapet og læring om samvirke. *Nordisk politiforskning, 6*(1), 46-64. doi:https://doi.org/10.18261/issn.1894-8693-2019-01-05

Benson, J. K. (1975). The Interorganizational Network as a Political Economy. *Administrative Science Quarterly, 20*(2), 229-249. Retrieved from https://www.jstor.org/stable/2391696

Berlin, J. M., & Carlström, E. D. (2008). The 90-second Collaboration: A Critical Study of Collaboration Exercises at Extensive Accident Sites. *Journal of Contingencies and Crisis Management, 16*(4), 177-185. doi: https://doi.org/10.1111/j.1468-5973.2008.00548.x

Bigley, G. A., & Roberts, K. H. (2001). The Incident Command-system: High reliability organizing for complex and volatile task environments. *Academy of Management Journal, 44*(6), 1281-1299. doi:https://doi.org/10.5465/3069401

Boin, A., t'Hart, P., Stern, E., & Sundelius, B. (2005). *The politics of crisis management. Public leadership under pressure*. Cambridge: Cambridge University Press.

Borch, O. J., & Andreassen, N. (2015). Joint-Task Force Management in Cross-Border Emergency Response. Managerial Roles and Structuring Mechanisms in High Complexity-High Volatility Environments. In A. Weintrit & T. Neumann (Eds.), *Information, communication and environment: marine navigation and safety of sea transportation* (pp. 217-224). United Kingdom: CRC Press.

Bradner, E., & Mark, G. (2002). Why Distance Matters: Effects on Cooperation, Persuasion and Deception. *CSCW'02: Proceedings of the 2002 ACM conference on Computer supported cooperative network*, 226-235. doi:https://doi.org/10.1145/587078.587110

Braut, G. S., Borch, O. J., Broch, L. E., Jamtli, B.-O., Knutsen, C. T., Myrvang, B., . . . Nedrevåg, L. (2016). *Rapport fra arbeidsgruppen for oppfølging av*

«Mulighetsstudien» («Samvirkekompetansegruppen»). Retrieved from https://www.regjeringen.no/contentassets/67d5bf89fbce4bdd8dddb12e4011f97e/rapport-fra-samvirkekompetansegruppen.pdf

Brinkmann, S., & Kvale, S. (2015). *InterViews. Learning the Craft of Qualitative Research Interviewing.* (3rd ed.). Los Angeles: Sage Publications, Inc.

Broekema, W., Daphne, v. K., & Steen, T. (2017). What Factors Drive Organizational Learning From Crisis? Insights From the Dutch Food Safety Services' Response to Four Veterinary Crises. *Journal of Contingencies and Crisis Management, 25*(4), 326-340. doi:https://10.1111/1468-5973.12161

Chen, Y.-H., Lin, T.-P., & Yen, D. C. (2014). How to facilitate inter-organizational knowledge sharing: The impact of trust. *Information & Management, 51*(5), 568-578. doi:http://dx.doi.org/10.1016/j.im.2014.03.007

Dalen, M. (2011). *Intervju som forskningsmetode - en kvalitativ tilnærming* (2nd ed.). Oslo: Universitetsforlaget.

Ellingsen, M. B., & Antonsen, Y. (2017). Samlokalisering skaper tillit i nødmeldingstjenesten. *Norsk statsvitenskapelig tidsskrift, 33*(03-04), 254-271. doi:https://doi-org.ezproxy.nord.no/10.18261/issn.1504-2936-2017-03-04-03

Filstad, C. (2010). *Organisasjonslæring – Fra kunnskap til kompetanse* (2nd ed.). Bergen: Fagbokforlaget.

Fiol, M., & Lyles, M. A. (1985). Organizational Learning. *The Academy of Management Review, 10*(4), 803-813. Retrieved from https://www.jstor.org/stable/258048

Flage, J. H. (2018). *Årsrapport 2018*. Retrieved from Samlok nord.

Flage, J. H. (2019a, 18.08.2019). Samlokalisering av 110, 112 og 113-sentralene gir bedre samhandling. *Sykepleien*. Retrieved from https://sykepleien.no/meninger/innspill/2019/08/samlokalisering-av-110-112-og-113-sentralene-gir-bedre-samhandling

Flage, J. H. (2019b). *Årsrapport 2019*. Retrieved from Samlok nord.

Gil-Garcia, J. R., Pardo, T. A., & Sayogo, D. S. (2016). From bureaucratic machines to inter-organizational networks. Characterizing the response to the World Trade Center crisis. *Transforming Government: People, Process and Policy, 10*(4). doi:https://10.1108/TG-02-2016-0011

Gulbrandsen, T. (2019). Hva er tillit? Retrieved from https://sosiologen.no/essay/essay/hva-er-tillit/

Hamel, G. (1991). Competition for competence and inter-partner learning with international strategic alliances. *Strategic Management Journal, 12*(SPEISS), 83-103. Retrieved from https://www.jstor.org/stable/2486643

Hoel, L., Barland, B., & Lillevik, M. (2019). *-Ville ikke vært det foruten: Evaluering av stabs- og lederutviklingsprogrammet ved Politihøgskolen*. Retrieved from http://hdl.handle.net/11250/2596203

Hoel, L., & Bjørkelo, B. (2017). «Kan det være godt politiarbeid?»: En undersøkelse av erfaringslæring av gråsonesaker. *Nordisk politiforskning, 4*(2-2017), 187-210. Retrieved from http://hdl.handle.net/11250/2464440

Huxham, C. (2003). Theorizing collaboration practice. *Public Management Review, 5*(3), 401-423. doi:https://10.1080/1471903032000146964

Huxham, C., & Vangen, S. (2005). *Managing to Collaborate. The Theory and Practice of Collaborative Advantage.* Oxon: Routledge.

Inkpen, A. C. (2000). Learning Through Joint Ventures: A Framework of Knowledge Acquisition. *Journal of Management Studies, 37*(7), 1019-1043. doi:https://10.1111/1467-6486.00215

Jacobsen, D. I., & Thorsvik, J. (2013). *Hvordan organisasjoner fungerer* (4th ed.). Bergen: Fagbokforlaget.

Johannessen, A., Christoffersen, L., & Tufte, P. A. (2011). *Forskningsmetode for økonomisk-administrative fag* (3rd ed.). Oslo: Abstrakt forlag.

Julsrud, T. E. (2018). *Organisatorisk tillit. Grunnlaget for samarbeid i nettverkenes tid*. Bergen: Fagbokforlaget.

Jung, K., Song, M., & Park, H. J. (2019). The Dynamics of an Interorganizational Emergency Management Network: Interdependent and Independent Risk Hypotheses. *Public Administration Review, 79*(2), 225-235. doi:https://doi.org/10.1111/puar.12993

Kirkhaug, R. (2015). *Lederskap. Person og funksjon*. Oslo: Universitetsforlaget.

Kolb, D. G., Prussia, G., & Francoeur, J. (2009). Connectivity and Leadership. The Influence of Online Activity on Closeness and Effectiveness. *Journal of Leadership and Organizational Studies, 15*(4), 342-352. doi:https://10.1177/1548051809331503

Kristiansen, E., Magnussen, L. I., & Carlström, E. (2017). Samvirke ved kriser - en nygammel utfordring i det nasjonale krisehåndteringssystemet. In E. Kristiansen, L. I. Magnussen, & E. Carlström (Eds.), *Samvirke - en lærebok i beredskap* (pp. 13-18). Oslo: Universitetsforlaget.

Lai, L. (2013). *Strategisk kompetanseledelse* (3rd ed.). Bergen: Fagbokforlaget.

Langlo, P., Lægreid, P., & Rykkja, L. H. (2013). Samordning for samfunnssikkerhet: Utviklingen av Justisdepartmentets ansvar. *Nordiske Organisasjonsstudier, 3*(15), 7-33.

Løvik, K. (2010). *Øvelse gjør mester. Planlegging, kommunikasjon og gjennomføring av øvelser*. Kristiansand: Høyskoleforlaget.

Magnussen, L. I., Carlstrøm, E., Sørensen, J. L., Torgersen, G.-E., Hagenes, E. F., & Kristiansen, E. (2018). Learning and usefulness stemming from collaboration in a maritime crisis management exercise in Northern Norway. *Disaster Prevention and Management, 27*(1), 129-140. doi:https://10.1108/DPM-06-2017-0131

Malt, U. (2019). Debriefing. Retrieved from https://sml.snl.no/debriefing

Ministry of Justice and Public Security. (2011-2012). *Samfunnssikkerhet*. (Meld. St. 29 (2011-2012)). Oslo. Retrieved from https://www.regjeringen.no/contentassets/bc5cbb3720b14709a6bda1a175dc0f12/no/pdfs/stm201120120029000dddpdfs.pdf

Ministry of Justice and Public Security. (2015-2016). *Politiets rolle i den nasjonale kriseledelsen*. Oslo. Retrieved from https://www.regjeringen.no/contentassets/8412978e25084fd5b31e65c491f09bd3/mulighetsstudien-rapport.pdf

Ministry of Justice and Public Security. (2016-2017a). *Risiko i et trygt samfunn - Samfunnssikkerhet*. (Meld. St. 10 (2016-2017)). Oslo Retrieved from www.regjeringen.no

Ministry of Justice and Public Security. (2016-2017b). *Risk in a Safe and Secure Society. On Public Security*. (Meld.St. 10 (2016-2017)). Oslo. Retrieved from https://www.regjeringen.no/contentassets/00765f92310a433b8a7fc0d49187476f/en-gb/sved/stm201620170010000engpdfs.pdf

Minstry of Health and Care Services. (2016). *Sentrale elementer vedrørende organisering av AMK-sentralene*. Retrieved from https://www.regjeringen.no/no/dokumenter/sentrale-elementer-vedrorende-organisering-av-amk-sentralene/id2511460/

Moynihan, D. P. (2008). Learning under Uncertainty: Networks in Crisis Management. *Public Administration Review, 68*(2), 350-365. doi:https://10.1111/j.1540-6210.2007.00867.x

Newell, S., Robertson, M., Scarbrough, H., & Swan, J. (2009). *Managing Knowledge Work and Innovation* (2nd ed. ed.). London: Palgrave Macmillan.

Nilssen, V. (2012). *Analyse i kvalitative studier. Den skrivende forskeren*. Oslo: Universitetsforlaget.

Nonaka, I., & Takeuchi, H. (1995). *The Knowledge-Creating Company. How Japanese Companies Create the Dynamics of Innovation.* New York: Oxford University Press, Inc.

Nonaka, I., Toyama, R., & Konno, N. (2000). SECI, Ba and Leadership: a Unified Model of Dynamic Knowledge Creation. *Long Range Planning, 33*(1), 5-34. doi:https://10.1016/S0024-6301(99)00115-6

NOU 2012: 14. (2012). *Rapport fra 22. juli-kommisjonen*. Oslo. Retrieved from www.regjeringen.no

Pee, L., Kankanhalli, A., & Kim, H.-W. (2010). Knowledge Sharing in Information Systems Development: A Social Interdependence Perspective. *Journal of the Association for Information Systems, 11*(10), 550-575. doi:https://10.17705/1jais.00238

Pettersen, P.-G., Jensen, R. K., Vangen, T., Strand, P. M., Borch, O. J., Andreassen, M. I., . . . Brodersen, J. (2019). *Albertmyra II. Innovasjonsarena for trygghet i Nordland. Mulighetsstudie*. Retrieved from Bodø: https://bodo.kommune.no/getfile.php/1312447-1560845933/Filer/2019/06%20Juni/Albertmyra_mulighetsstudie_lavoppl%C3%B8st.pdf

Prop.61 LS. (2015). *Endringer i politiloven mv. (Trygghet i hverdagen - politireformen)*. Oslo. Retrieved from https://www.regjeringen.no/contentassets/0f5847ca5bae4b2996b6441423e5ea09/no/pdfs/prp201420150061000dddpdfs.pdf

Rice, R. M. (2018). When hierarchy becomes collaborative. Collaboration as sensemaking frame in high reliability organizing. *Corporate Communications: An International Journal, 23*(4), 599-614. doi:https://10.1108/CCIJ-04-2017-0032

Roberts, K. H. (1990). Managing High Reliability Organizations. *California Management Review, 23*(4), 101-113. Retrieved from https://search-proquest-com.ezproxy.nord.no/docview/215882454?accountid=26469

Schein, E. H., & Schein, P. (2017). *Organizational Culture and Leadership* (5th ed.). Hoboken: Wiley.

Schiefloe, P. M. (2019). *Mennesker og samfunn. Innføring i sosiologisk forståelse.* (3rd ed.). Bergen: Fagbokforlaget.

Seba, I., & Rowley, J. (2010). Knowledge management in UK police forces. *Journal of Knowledge Management, 14*(4), 611-626. doi:https://10.1108/13673271011059554

Sienkiewicz-Malyjurek, K. E., Kozuch, B., & Szczyglowski, J. (2019). Inter-organizational learning in public safety management system. *Disaster Prevention and Management, 28*(2), 286-298. doi:https://10.1108/DPM-09-2017-0217

Silverman, D. (2017). *Doing Qualitative Research* (5th ed.). London: Sage Publications Ltd.

Sørensen, J. L. (2017). Det norske beredskap- og krisehåndteringssystemet. In E. Kristiansen, L. I. Magnussen, & E. Carlström (Eds.), *Samvirke - en lærebok i beredskap* (pp. 19-32). Oslo: Universitetsforlaget.

Tanggaard, L., & Brinkmann, S. (2012). Intervjuet: Samtalen som forskningsmetode. In S. Brinkmann & L. Tanggaard (Eds.), *Kvalitative metoder: Empiri og teoriutvikling*. Oslo: Gyldendal Akademisk.

The National Police Directorate. (2018). Felles sambandsreglement for Nødnett. Retrieved from https://www.nodnett.no/globalassets/felles-sambandsreglement-for-nodnett.pdf

The Norwegian Directorate for Civil Protection. (2015). *Mulighetsstudien. Vurdering av nasjonale og regionale øvings- og kompetansesentre.* Retrieved from https://www.regjeringen.no/contentassets/8412978e25084fd5b31e65c491f09bd3/mulighetsstudien-rapport.pdf

Thorsnæs, G. (2019). Nordland. Retrieved from https://snl.no/Nordland

Tjora, A. (2017). *Kvalitative forskningsmetoder i praksis* (3rd ed.). Oslo: Gyldendal Akademisk.

Tynjälä, P. (2008). Perspectives into learning at the workplace. *Educational Research Review, 3*, 130-154. doi:https://10.1016/j.edurev.2007.12.001

Weick, K. E., & Sutcliffe, K. M. (2015). *Managing the unexpected. Sustained performance in a complex world.* (Third ed.). Hoboken, New Yersey: John Wiley & Sons.

Yin, R. K. (2018). *Case Study Research and Applications. Design and Methods.* (6th ed.). Thousand Oaks: SAGE Publications, Inc.

8 Appendices

8.1 Appendix 1: Interview guide

Informasjon i forkant av intervjuet:

- Innsamlet informasjon brukes i masteroppgave
- Det vil ikke refereres til navn i oppgaven, men informasjon kan knyttes til organisasjon og arbeidserfaring på 11X-sentralen
- Det vil gjøres lydopptak av intervjuet. Dette transkriberes etterpå. All informasjon slettes når sensur for oppgaven har falt.
- Noen spørsmål knyttet til dette?

Problemstilling:

Hvordan påvirker organisatoriske faktorer og bruk av læringsverktøy hvordan samlokaliserte beredskapsorganisasjoner lærer fra hverandre og lærer sammen?
(How does organizational factors and the use of learning tools impact on how emergency preparedness organizations learn together and learn from each other in a co-located context?)

Introduksjon

1. Fortell om din rolle i organisasjonen
2. Hvor mange år har du vært hhv. i organisasjonen og i nåværende stilling?
3. Fortell om dine viktigste arbeidsoppgaver

Kontekst: Samvirke og samlokalisering

4. Hvis du skulle beskrive hva Samlok nord er til noen som ikke har kjennskap til konseptet, hva ville du si?
5. Hva legger du i begrepet samvirke ut fra din arbeidshverdag?
6. Etter din mening, hvilke faktorer ved samlokalisering fremmer eller begrenser læring og tillit mellom organisasjonene?
7. Hva er de største endringene i måten dere jobber på sammenlignet med tidligere (før/etter Samlok)? Gi gjerne eksempler.

Struktur

8. Kan du beskrive (kort) hvordan organisering av arbeid og beslutningstaking skjer i det daglige virke i din organisasjon?
9. Hvilke typer oppgaver er overlatt til egen vurdering i ditt daglige arbeid, og hvilke typer beslutninger er vanskelig å ta?
10. I hvilke situasjoner har dere kontakt med de andre 11X-sentralene, og hvordan koordinerer dere dette arbeidet?
11. Har dere felles prosedyrer som regulerer hvordan samspillet utføres, og kan du gi noen eksempler? Hvordan jobber dere for å utvikle disse?

12. Hvordan skjer beslutningstakingen på operasjonelt nivå i situasjoner der de tre 11X-sentralene har kontakt?
13. I hvilken grad har din organisasjon fokus på læring og samarbeid på tvers av organisasjonsgrensene gjennom prosedyrer og/eller arbeidsmåter? Gi gjerne noen eksempler.
14. Hvilke forutsetninger/rammebetingelser mener du må være på plass for å skape en optimal læringssituasjon i Samlok?

Kultur og tillit

15. Hva legger du i begrepet tillit i din arbeidshverdag?
16. Hvordan er interaksjonen mellom ansatte på sentralene når dere er på vakt?
17. Hvilke forventninger har du til ansatte på de andre 11X-sentralene når det gjelder å fremme best mulig samvirke?
18. Hvordan påvirker det tilliten til hverandre at det er tre ulike profesjoner som er samlokalisert og jobber så tett innpå hverandre?
19. Hvilke arenaer har dere for å møtes på tvers av organisasjonene på og utenfor arbeidsplassen utenom vakt?
20. Etter din mening, vil du si at dere har en felles organisasjonskultur i Samlok Nord? Utdyp gjerne.
21. På hvilke måter mener du at tillit er viktig for å kunne lære sammen og å lære av hverandre?
22. Hvordan var tilliten mellom ansatte på 11X-sentralene før Samlok nord?
23. Hvilke endringer kan du peke på fra før til etter Samlok når det gjelder tillit mellom ansatte på sentralene?
24. Hvordan jobber du som leder for å skape tillit og bedre samarbeid mellom ansatte i de tre organisasjonene?

Læring og kompetanse

25. Kan du forklare hva som skjer når dere som operasjonsledere «møtes i midten», og hvordan dette påvirker den pågående aksjonen/arbeidet som utføres?
26. Hvordan legger du som leder (sammen med øvrig lederteam) til rette for læring og kompetansedeling på tvers av organisasjonene i Samlok nord?
27. Hvilke «verktøy» brukes i dag for å lære sammen på tvers av organisasjonene? (Eg. Trening, øvelser, kurs, simulering, rapporter, debrief, uformelle samtaler med kollegaer)
28. Lykkes dere bedre på noen av disse arenaene enn andre? Hvorfor/hvorfor ikke?
29. Har det skjedd endringer i interaksjon mellom ansatte på sentralene etter at dere begynte å ha mer fokus på felles læring? Hvis ja, kan du gi noen eksempler?
    29.1. Hva slags type interaksjon er påvirket og hvordan? (Eg. utvikling av rutiner/prosedyrer, uformell kontakt, informasjonsflyt, beslutninger, samarbeid på nye områder etc.)
    29.2. Hvilke læringsverktøy har bidratt til hvilken type læring og interaksjon?
30. Har dere ordninger for hospitering eller andre måter dere kan jobbe side om side for å lære av hverandre? Kan du gi noen eksempler?
31. Hvis du ser tilbake til begynnelsen av din karriere på 11X-sentralen, hvordan vil du beskrive læringen som foregikk mellom etatene da? Hva er annerledes i dag?

32. Hvordan inkorporeres læringspunkter fra hendelser, øvelser el. i daglig arbeid? Kan du gi noen konkrete eksempler?
33. Hva er det viktigste du har lært av ansatte i de andre organisasjonene etter at Samlok ble etablert?
34. Hva mener du er det viktigste din organisasjon har lært av de andre organisasjonene etter at Samlok ble etablert?
35. Hvilken kunnskap, ferdigheter og holdninger er det viktig å utvikle for å styrke samarbeidet mellom organisasjonene?
36. Hvordan opplever du villigheten for å gjøre endringer i organisasjonene med mål om å oppnå bedre læring og samarbeid på tvers av organisasjonsgrensene?

Avslutning

37. Hvis du skulle gi et råd til andre fylker/distrikter som skal starte Samlok; hva ville det vært?
38. Er det andre tema eller momenter som vi ikke har snakket om, men som du mener er viktig å få dekket?
39. Er det greit om jeg tar kontakt på et senere tidspunkt, dersom jeg har noen oppfølgingsspørsmål?

Tusen takk for at du stilte opp!

Ta gjerne kontakt i etterkant dersom du kommer på noe som du ikke har fortalt nå.

Vil du delta i forskningsprosjektet

" Læring og samvirke.
En studie av interorganisatorisk samarbeid og kompetansedeling i samlokaliserte beredskapsorganisasjoner"?

Dette er et spørsmål til deg om å delta i et forskningsprosjekt hvor formålet er å undersøke hvordan samlokaliserte beredskapsorganisasjoner lærer av hverandre og hvordan de lærer sammen. I dette skrivet får du informasjon om målene for prosjektet og hva deltakelse vil innebære for deg.

Bakgrunn og formål
Forespørsel om å delta i dette prosjektet gjøres i forbindelse med en mastergradsoppgave på studiet MBA i Ledelse ved Nord universitet. Målet med oppgaven er å undersøke hvordan organisatoriske faktorer påvirker måten samlokaliserte beredskapsorganisasjoner samarbeider, lærer fra hverandre og lærer sammen.

Selve oppgaven skrives på engelsk, men intervjuene vil gjennomføres på norsk.

Forskningsspørsmålene er som følger:
Hvordan påvirker organisatoriske faktorer og bruk av læringsverktøy hvordan samlokaliserte beredskapsorganisasjoner lærer fra hverandre og lærer sammen?
(How does organizational factors and the use of learning tools impact on how emergency preparedness organizations learn together and learn from each other in a co-located context?)
- Hvordan påvirker organisasjonsstrukturer interorganisatorisk læring?
- Hvordan er forholdet mellom tillit og interorganisatorisk læring?
- Hvordan påvirker bruk av læringsverktøy interorganisatorisk læring?

Hvorfor får du spørsmål om å delta?
Henvendelsen om å delta rettes til deg som operasjonsleder/vaktkommantør (stillingstittel kan variere) ved operasjonssentralene/alarmsentralene i organisasjonene Nordland politidistrikt, Salten Brann eller Nordlandsykehuset AMK. Det er ønskelig med to personer fra hver organisasjon; en med lang erfaring som operasjonsleder/vaktkommandør og en med kortere erfaring. Dette for å få tilstrekkelig variasjon i informasjonen som innhentes.

Forespørsel om å delta i prosjektet distribueres via prosjektleder for samlokaliseringsprosjektet Samlok nord. Lederne av de tre operasjonssentralene er også spurt om tillatelse til å gjennomføre denne studien.

Hva innebærer det for deg å delta?

Hvis du velger å delta i prosjektet, innebærer dette at du stiller opp på et intervju som vil ta ca. 50-60 minutter å gjennomføre. Intervjuene gjennomføres i mars 2020. Nærmere tidspunkt og sted for intervju tilpasses den enkelte.

Det er ønskelig å gjøre opptak av intervjuene slik at informasjon som gjengis i oppgaven blir mest mulig korrekt. Intervjuene vil transkriberes (skrives ned) i etterkant slik at informasjonen kan gjengis mest mulig korrekt.

Tema i intervjuet vil være ulike former for læring som skjer i samspillet mellom organisasjonene samt organisatoriske forhold som har innvirkning på læringen.

Det er frivillig å delta
Det er frivillig å delta i prosjektet. Hvis du velger å delta, kan du når som helst trekke samtykke tilbake uten å oppgi noen grunn. Alle opplysninger om deg vil da bli anonymisert. Det vil ikke ha noen negative konsekvenser for deg hvis du ikke vil delta eller senere velger å trekke deg.

Ditt personvern – hvordan vi oppbevarer og bruker dine opplysninger
Vi vil bare bruke opplysningene om deg til formålene vi har fortalt om i dette skrivet. Vi behandler opplysningene konfidensielt og i samsvar med personvernregelverket.

Opplysningene som samles inn vil kun være tilgjengelig for student og veileder, samt en tredjeperson som transkriberer intervjuene. Oversikt over hvem som har deltatt holdes adskilt fra øvrig informasjon som samles inn. Opplysninger som brukes i oppgaven vil anonymiseres så langt det lar seg gjøre: Det blir ikke brukt navn i oppgaven, men i analysen vil funnene kunne relateres til organisasjon og arbeidserfaring. På grunn av små forhold i organisasjonene vil det være en mulighet for at andre ansatte i organisasjonene som omtales i prosjektet kunne kjenne igjen personer med bakgrunn i stilllingstittel, erfaring og organisasjon.

Hva skjer med opplysningene dine når vi avslutter forskningsprosjektet?
Prosjektet skal etter planen avsluttes 15. mai 2020. Etter at sensur har falt vil data fra undersøkelsen slettes, dette anslås til å være senest 12. juni 2020.

Dine rettigheter
Så lenge du kan identifiseres i datamaterialet, har du rett til:
- innsyn i hvilke personopplysninger som er registrert om deg,
- å få rettet personopplysninger om deg,
- få slettet personopplysninger om deg,
- få utlevert en kopi av dine personopplysninger (dataportabilitet), og
- å sende klage til personvernombudet eller Datatilsynet om behandlingen av dine personopplysninger.

Hva gir oss rett til å behandle personopplysninger om deg?

Vi behandler opplysninger om deg basert på ditt samtykke. På oppdrag fra Nord universitet har NSD – Norsk senter for forskningsdata AS vurdert at behandlingen av personopplysninger i dette prosjektet er i samsvar med personvernregelverket.

Hvor kan jeg finne ut mer?
Hvis du har spørsmål til studien, eller ønsker å benytte deg av dine rettigheter, ta kontakt med:

- Nord universitet ved student Line Djernæs Sandbakken, tlf. 99261551 eller e-post line.d.sandbakken@nord.no, eller veileder for oppgaven Professor Odd Jarl Borch, tlf. 75517616 eller e-post odd.j.borch@nord.no
- Personvernombud ved Nord universitet: Toril Irene Kringen, tlf. 74022750 eller e-post toril.i.kringen@nord.no
- NSD – Norsk senter for forskningsdata AS, på epost (personverntjenester@nsd.no) eller telefon: 55 58 21 17.

Med vennlig hilsen

Prosjektansvarlig og veileder   Student
(sign.)   (sign.)

Odd Jarl Borch   Line Djernæs Sandbakken
Professor, Nord universitet   Nord universitet

Samtykkeerklæring

Jeg har mottatt og forstått informasjon om prosjektet *"Læring og samvirke.*
En studie av interorganisatorisk samarbeid og kompetansedeling i samlokaliserte beredskapsorganisasjoner", og har fått anledning til å stille spørsmål. Jeg samtykker til:

- ☐ å delta i intervju
- ☐ at opplysninger jeg gir i intervjuet kan være gjenkjennelig for andre på bakgrunn av at min arbeidsgiver (organisasjon), stilling og arbeidserfaring i nevnte stilling kan nevnes i oppgaven

Jeg samtykker til at mine opplysninger behandles frem til prosjektet er avsluttet, ca. 12. juni 2020.

(Signert av prosjektdeltaker, dato)

8.3 Appendix 3: Confirmation from Norwegian Centre for Research Data

NSD **Personvern**

25.02.2020 09:11

Det innsendte meldeskjemaet med referansekode 449942 er nå vurdert av NSD.

Følgende vurdering er gitt:
Det er vår vurdering at behandlingen av personopplysninger i prosjektet vil være i samsvar med personvernlovgivningen så fremt den gjennomføres i tråd med det som er dokumentert i meldeskjemaet med vedlegg den 25.02.2020, samt i meldingsdialogen mellom innmelder og NSD. Behandlingen kan starte.

MELD VESENTLIGE ENDRINGER
Dersom det skjer vesentlige endringer i behandlingen av personopplysninger, kan det være nødvendig å melde dette til NSD ved å oppdatere meldeskjemaet. Før du melder inn en endring, oppfordrer vi deg til å lese om hvilke type endringer det er nødvendig å melde: nsd.no/personvernombud/meld_prosjekt/meld_endringer.html Du må vente på svar fra NSD før endringen gjennomføres.

TYPE OPPLYSNINGER OG VARIGHET
Prosjektet vil behandle alminnelige kategorier av personopplysninger frem til 19.06.2020.

LOVLIG GRUNNLAG
Prosjektet vil innhente samtykke fra de registrerte til behandlingen av personopplysninger. Vår vurdering er at prosjektet legger opp til et samtykke i samsvar med kravene i art. 4 og 7, ved at det er en frivillig, spesifikk, informert og utvetydig bekreftelse som kan dokumenteres, og som den registrerte kan trekke tilbake. Lovlig grunnlag for behandlingen vil dermed være den registrertes samtykke, jf. personvernforordningen art. 6 nr. 1 bokstav a.

PERSONVERNPRINSIPPER
NSD vurderer at den planlagte behandlingen av personopplysninger vil følge prinsippene i personvernforordningen om: - lovlighet, rettferdighet og åpenhet (art. 5.1 a), ved at de registrerte får tilfredsstillende informasjon om og samtykker til behandlingen - formålsbegrensning (art. 5.1 b), ved at personopplysninger samles inn for spesifikke, uttrykkelig angitte og berettigede formål, og ikke behandles til nye, uforenlige formål - dataminimering (art. 5.1 c), ved at det kun behandles opplysninger som er adekvate, relevante og nødvendige for formålet med prosjektet - lagringsbegrensning (art. 5.1 e), ved at personopplysningene ikke lagres lengre enn nødvendig for å oppfylle formålet

DE REGISTRERTES RETTIGHETER

Så lenge de registrerte kan identifiseres i datamaterialet vil de ha følgende rettigheter: åpenhet (art. 12), informasjon (art. 13), innsyn (art. 15), retting (art. 16), sletting (art. 17), begrensning (art. 18), underretning (art. 19), dataportabilitet (art. 20). NSD vurderer at informasjonen om behandlingen som de registrerte vil motta oppfyller lovens krav til form og innhold, jf. art. 12.1 og art. 13. Vi minner om at hvis en registrert tar kontakt om sine rettigheter, har behandlingsansvarlig institusjon plikt til å svare innen en måned.

FØLG DIN INSTITUSJONS RETNINGSLINJER
NSD legger til grunn at behandlingen oppfyller kravene i personvernforordningen om riktighet (art. 5.1 d), integritet og konfidensialitet (art. 5.1. f) og sikkerhet (art. 32). For å forsikre dere om at kravene oppfylles, må dere følge interne retningslinjer og/eller rådføre dere med behandlingsansvarlig institusjon.

OPPFØLGING AV PROSJEKTET
NSD vil følge opp ved planlagt avslutning for å avklare om behandlingen av personopplysningene er avsluttet.

Lykke til med prosjektet!

Tlf. Personverntjenester: 55 58 21 17 (tast 1)

TRAFIKKULYKKE

Innledende spørsmål

1. Adresse / sted / kommune / posisjon?
2. Telefonnummer?

Formidle at innringer blir satt i konferanse med de andre sentralene og gjengi innhentet informasjon

Felles avklaringer

3. Hva har skjedd / hva ser du?
4. Er skadestedet sikret / er du i sikkerhet? Også mtp annen trafikk?
5. Hvor mange kjøretøy / personer er involvert?
6. Farlig gods? Orange fareskilt? Hvis ja: Brannvesenet overtar samtalen for utspørring parallelt med rådgivning. Vurder bruk av «CBRNE» verktøy.
7. Er det noen som sitter fastklemt? – Får du åpnet dørene?
8. Er airbager utløst? Flere steder i bilen?
9. Er alle våkne og kan snakke?

Hvis ja

1. Ryker det fra kjøretøyet? I så fall hvilken farge?
2. Hvilke type kjøretøy?
   Elbil / gassdrevet? Hvis ja: registreringsnummer?
3. Hvor fort kan kjøretøyet (ene) ha kjørt?
4. Fartsgrense på stedet?
5. Lekkasje?
6. Er kjøretøy på eller utenfor vei?
7. Rundvelt? Kastet ut av kjøretøyet?
8. Noen som har forlatt skadestedet, beskrivelse av disse?
9. Hvordan går trafikken forbi skadestedet?

Hvis nei

Helse overtar samtalen for videre utspørring og rådgivning.

1. Etabler frie luftveier.
2. Fortsett utspørring og rådgivning iht. aktuelt oppslagskort i Norsk indeks for medisinsk nødhjelp.

Råd til innringer

1. Sikring av skadested: Gul vest, varseltrekant, skru av tenning, sette på nødblink.
2. Egen bil som vern? Flytte eventuelle passasjerer over i annet kjøretøy hvis mulig.
3. Ved høyhastighetsvei: vurder å forlate eget kjøretøy på sikrest mulig måte for deretter finne en sikrere plassering i terrenget i påvente av nødetatene.

TRAFIKKULYKKE

Handling

Trippelvarsling / vurder SAR varsling

Varsle egne ressurser

Politiet / HRS definerer felles talegruppe (BAPS, SAR, SAMV) og formidler dette i løpet av telefonkonferansen

Avtal oppmøtested / adkomstvei

Avtal landingssted for luftambulanse / helikopter

Varsle / vurder varsling av

Politi

VTS
Bergingsbil / Tungberger
Havarikommisjonen
Politihelikopter
Kommunens kriseteam
Befolkningen via Twitter

Brann

Ytterligere brannressurser
E- verk
Kystverk
Vannverk

Helse

LV-lege / LVS (alltid parallelt med ambulanse)
Luftambulanse / Legespesialist
Sykehus
Annen AMK / R-AMK
AMK-lege
Regionalt traumesenter
Egen ledelse

Lokale tilpasninger

SAMLOK NORD

X