FACTORS CONTRIBUTING TO TRUST IN TEMPORARY ONLINE EXPERT COMMUNITIES

Lappeenranta–Lahti University of Technology LUT

Master's Thesis

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Examiners: Professor Kirsimarja Blomqvist

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ABSTRACT

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Factors contributing to trust in temporary online expert communities

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Keywords: Trust, temporary online expert community, knowledge creation, FET

This Master's thesis examines trust in temporary online expert communities. The aim of this thesis is to understand how trust is formed in temporary online expert communities, and which factors influence the formation of trust. To understand the multidimensional concept of trust and trust formation in temporary online expert communities, the study focuses on the trust formation from both expectation, and experience perspective.

To research the topic, qualitative research was conducted. The material was collected in 2021 from individual phone interviews and focus group interviews. The aim of the 61 individual phone interviews was to understand the role of expectations in trust formation, whereas the five (5) focus group interviews gave insight on participant experiences on trust formation, as well as providing insight on experienced trust barriers. The interviewed participants were Finnish experts with diverse backgrounds.

The key findings of this study indicate that the trust building process is multidimensional, as expectations, actions and experiences influence it comprehensively. The process begins from the initial trust formation, however, it is crucial that the expectations are met to create a trusting and reliable environment. Crucial factors for developing swift trust and interpersonal, institutional, and system trust, were concerning personal factors, system factors and institutional factors. To develop higher trust, roles should be defined clearly, participants should have adequate time, digital collaboration platforms should have correct information flow and architecture, and personal differences and relationships should be concentrated on.

TIIVISTELMÄ

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Luottamukseen vaikuttavat tekijät väliaikaisissa digitaalisissa asiantuntijayhteisöissä

Kauppatieteiden pro gradu -tutkielma

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Tässä pro gradu -työssä tarkastellaan luottamusta väliaikaisissa digitaalisissa asiantuntijayhteisöissä. Tutkielman tavoitteena on ymmärtää, kuinka luottamus muodostuu asiantuntijayhteisössä ja mitkä tekijät vaikuttavat luottamuksen syntymiseen. Luottamuksen syntymiseen vaikuttavien tekijöiden hahmottamiseksi tutkielmassa keskitytään luottamuksen muodostumiseen sekä ennakko-odotusten että kokemusten näkökulmasta.

Aiheen tutkimiseksi toteutettiin laadullinen tutkimus. Materiaalina hyödynnetään vuonna 2021 kerättyjä puhelin- ja fokusryhmähaastatteluja. Ennen asiantuntijayhteisöön osallistumista tehtyjen 61 yksittäisen puhelinhaastattelun tavoitteena oli ymmärtää ennakko-odotusten rooli luottamuksen muodostumisessa, kun taas viisi (5) fokusryhmähaastattelua antoivat näkemystä osallistujien kokemuksista luottamusta edistävistä ja estävistä tekijöistä. Haastatellut osallistujat olivat suomalaisia asiantuntijoita erilaisilla taustoilla.

Tutkimuksen keskeiset tulokset osoittavat, että luottamuksen rakennusprosessi on moniulotteinen, sillä ennakko-odotukset, toiminta ja kokemukset vaikuttavat siihen kokonaisvaltaisesti. Prosessi alkaa alkuluottamuksesta (*initial trust*) rakentuen jo ennakko-odotuksista. Huomioitavaa on, että ennakko-odotusten tulisi täyttyä luottamusta rakentavan ilmapiirin luomiseksi. Ratkaisevia tekijöitä nopean luottamuksen ja ihmisten välisen, institutionaalisen ja persoonattoman luottamuksen kehittymisessä olivat henkilökohtaiset ja institutionaaliset tekijät. Vahvemman luottamuksen rakentamiseksi osallistujien roolit tulee määritellä selkeästi, heillä tulee olla riittävästi aikaa ja yhteistyöalustojen tulee tukea tiedon jakamista. Myös osallistujien henkilökohtaisiin eroihin ja ihmissuhteisiin tulisi keskittyä luottamusta rakentaessa.

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In Helsinki 30th of December 2023.

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1. INTRODUCTION

Digital transformation and the Covid-19 pandemic have changed the way organizations operate around the world. As the pandemic forced organizations to quickly transform their operations to go digital, it revealed challenges within organizations, but also success stories. As an example, remote work and digitalization in organizations has increased flexibility and lowered costs. (Faraj, Renno & Bhardwaj 2021, 1-2.) Due to digitalization, digital platforms and tools have become a key enabling factor for organizations to benefit from distributed knowledge (Sedera, Lokuge, Grover, Sarker 2016, 367). Indeed, digital platforms are considered beneficial to organizations, as they provide new ways of collaborating with external environment for knowledge, ideas, and technologies (Hossain & Lassen 2017, 55).

Due to the changed nature of work, the way of working has also drastically changed during the recent years, and how expert workers and knowledge are brought together. Today, organizations might need to look for competence and knowledge outside of the organization, to solve complex issues (Hossain & Lassen 2017), thus the idea of knowledge-based theory of the firm is shifting. In knowledge-based view of the firm (KBV), knowledge is seen as an organizational asset and competitive advantage, which is found inside an organization. (Alsharo, Gregg & Ramirez 2016).

As compared to the KBV, digitalization and new ways of working ensure the competitiveness of an organization, by finding knowledge outside organizational borders. In more detail, expert knowledge is often looked outside the organization by utilizing the expert network across organizational boarders, to target a specific problem or task by operating in an online setting. By bringing together expert workers outside an organization working for a common goal, can therefore reach their full potential and solve complex issue. As it might be difficult to find the right competence within an organization to solve complex issues, outside expertise is required, especially when the issue is requiring comprehensive knowledge and expertise. Therefore, new ways of organizing are needed to support organizations in solving these issues, even on a fast schedule. (Ferraro, Etzion & Gehman 2015; George, Howard-Grenville, Joshi & Tihanyi 2016; Hossain & Lassen 2017, 58.)

As the expert workers that are specialized in a certain field, work for a shared goal and common project, the expert groups are often temporary, gathered for a certain task (Stanko, Fisher & Bogers 2017, 543; Santoso, Prijadi & Balqiah 2019, 438). Indeed, as said, temporary organizing is a common form of collaboration across borders (Edmonson & Harvey 2018, 347). These temporary expert communities, sometimes also referred as network of experts, often work on digital platforms, which grants many benefits within the team, such as the fact that the participants are not dependent on geographical location. The temporary online expert communities or teams consisting of expert workers can be created, for example, to product development or in an emergency or crisis situations. The aim in general is to solve the needed issues within the given time frame, meaning that the communities are temporary and have a certain start and end date. (Majchrzak, Jarvenpaa & Hollingshead 2007.)

Although digital platforms and online communities provide new possibilities and features, they may also pose challenges for organizations (Hossain & Lassen 2017, 55-57). One of these challenges concerns trust in temporary online expert communities. Even though trust has multiple benefits and may help participants in online communities, such as, to make decisions, it has been found difficult to build trust in different types of online communities, for example, due to being sparsely connected. (Ruan & Durresi 2016, 150.)

Trust has a crucial role also within online expert communities, as it may influence for example, knowledge sharing, engagement, communication, commitment, and cooperation. (Barney & Hansen 1994; Mayer et al. 1995; Dirks & Ferrin 2001; Ridings, Gefen & Arinze 2002; Blomqvist 2002; Ratnasingam 2005; Ellonen, Blomqvist & Puumalainen 2008, 161; Wu, Cheng & Chung 2010; Hsu, Chiang & Huang 2012). Therefore, trust is a fundamental element of cooperative relations and cooperation is possible only if trust is in place. Despite the importance of trust in online expert communities, according to Bernd & Matzat (2004) many online communities fail due to the lack of trust. As organizations and ways of working are constantly changing and developing into more complex ones, investments in building trust are required from organizations today (Schafheitle, Weibel, Ebert, Kasper, Schank & Leicht-Deobald 2020). Therefore, it is crucial to understand how trust is built and what are the factors contributing to trust in temporary online expert communities, as trust is also a fundamental part of a well-functioning and innovating temporary online expert community.

1.1 Research question and aim of the thesis

As the way of working has changed towards more online and temporary teams and communities, it is crucial to research the role of trust within different types of online communities, such as temporary online expert communities. Communities and more specifically, online communities have been previously researched by many well-known authors, such as Faraj (e.g. 2011, 2016, 2018, 2021). Trust in online communities has also become an important topic, and especially the effects of trust in online communities have been researched quite significantly (see e.g. Jarvenpaa & Leidner 1999, Ridings et al. 2002 and Hsu, Ju, Yeng & Chang 2007). However, most of the online community trust research has concentrated on information and knowledge sharing, rather than the role of trust, and the factors contributing to it.

Despite the growth of online communities and vast research on trust in online communities, the research focusing on factors influencing and building trust in an expertise based temporary online communities is still scarce. Even though the success factors of online groups and communities have been researched more actively (Kayworth & Leidner 2000; Malhotra & Majhrzak 2008), there is a research gap to understand the factors building trust on trust in temporary online expert communities better, to understand the critical factors of building trust in such communities.

Therefore, this thesis aims to understand how trust is formed in temporary online expert communities. Also companies build online communities increasingly, and expert working within companies participate in online communities within their organization, or cross-boundary communities. Therefore, it is crucial to understand more about the role of trust in temporary online expert communities, and the main research question of this thesis is:

Q1: How is trust formed in temporary online expert communities?

To understand more of the type of trust and critical factors impacting the evolution of trust in temporary online expert communities, the two sub questions of this thesis are:

Q2: What factors impact trust in temporary online expert communities?

Q3: How can trust be increased in temporary online expert communities?

The three research questions will be addressed using interview data and information found from prior literature and research.

1.2 KEY CONCEPTS

Trust:

Trust does not have a one specific definition, as the concept of trust has been widely studied by different disciplines, such as psychology, social psychology, sociology, computer science and economics. However, a known definition of trust is from Mayer, Davis & Schoorman (1995, 712), who define trust as the following: "*The willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party."* Even though the definition of Mayer et al. (1995) has been published some time ago, the definition has been considered as the most cited and used definition of trust, even for non-dyadic studies, like communities (Usoro, Sharratt, Tsui & Shekhar 2007, 201).

Another classic definition by Rousseau, Sitkin, Burt & Camerer (1998, 395) define trust as the following: "*psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions of behavior of another*". This definition has been later cited considerably, and can be seen applicable in different situations, such as when examining employee trust in organizations (Lewicki & Brinsfield 2017).

Online community:

According to Bernd & Matzat (2004, 2), communities are a group of people with a special feeling or solidarity between the members of the community, people who share the same interests, values, and goals. Individuals within communities are usually interacting together in locally restricted environments, while developing relationships (Bernd & Matzat 2004, 2). Online communities (OCs), also known as e.g., virtual or digital communities, are communities interacting in an organized way via the Internet, with the online community members sharing the same goals or commons of interest (Johnson, Safadi & Faraj 2015, 165).

Online expert community:

Online expert community (also known as e.g. professional online or virtual community) is a type of online community. Historically, according to Adler & Christopher (1999) and Lai, Chen & Chang (2014, 523), online communities have been classified to three different types being: 1) A demographic community, 2) A professional community or 3) Personal interest community. An online expert community is "*indented for discussion on certain areas of expertise*." Online expert communities are often seen to have benefits, such as the fact that the communities are enabling members to communicate digitally, which combines the benefits of online and expert communities. (Lai et al. 2014 2014; Hsu, Ju, Yen, & Chang 2007.) For an expert community to succeed, knowledge and information sharing along with communication are required (Lin, Hung & Chen 2009).

Temporary expert community or organization:

Burke & Morley (2016, 1236) define temporary organizations (TOs) as "*a temporally bounded group of interdependent organizational actors, formed to complete a complex task*". TO's always have an end date and limited duration, and today they are seen more as project-based organizations within, or outside an organization. TO's have also said to increase innovation and creativity within a group. (Burke & Morley 2016.)

Temporary online expert community is also often built to complete a complex task, in a temporary setting, with a start and end date. Individuals gather bringing their expertise and knowledge about a certain subject and collaborate. The community commits to the project by sharing their individual expertise and knowledge about the shared topic, thus creating value and knowledge to the community. (Majchrzak & Malhotra 2016, 686.)

Digital collaboration platform:

Digital platforms (for example crowdsourcing platforms, open innovation platforms or online marketplaces) (Hossain & Lassen 2017, 55), do not have an established definition, but according to Komljenovic (2021, 321) digital platforms can be defined as the following: *"The digital platform is a socio-technical intermediary creating multi-sided markets and coordinating network effects."*

Digital collaboration platforms are one type of and functioning on digital platforms, more specifically, they focus on developing and sharing knowledge (Majchrzak, Faraj, Kane & Azad 2013, 40) in a large group of people. As the correct architecture of a digital platform is crucial depending on the virtual group, digital collaboration platform architecture enables collaboration, information and knowledge sharing. (Spagnoletti, Resca & Lee 2015; Laitinen 2020, 18-19).

Knowledge work:

According to Pyöriä (2005, 124) knowledge work "*requires extensive formal education and continuous on-the-job learning*" as well as "*low level of standardization, involves working with abstract knowledge and symbols*". In addition, it is stressed that knowledge work refers purely to expert labor who are competitive in solving and identifying new problems (Reich 1991; Pyöriä 2005, 120). The term knowledge worker on the other hand refers to people (e.g. an employee within an organization) who uses their knowledge and expertise to achieve a desired outcome or the best possible performance and maximum productivity (Davenport 2002; Dul 2011).

1.3 STRUCTURE OF THE THESIS

This thesis begins with an introduction to the topic and presentation of research questions in chapter 1. Then, the theoretical framework is presented in chapter 2. The theoretical framework consists of two main themes, first to understand more about the online communities and digital platforms in general. Then, trust in online communities, the type of trust and factors influencing trust are evaluated. Chapter 3 consists of introduction to the study methods and material used for this research. The findings of this research are introduced in chapter 4, and finally, chapter 5 and 6 include discussion and conclusions, limitations of this research as well as future research ideas. The main framework of this study is illustrated on the Figure 1. This thesis and Figure 1 are in the context of knowledge work and information sharing in temporary online communities.

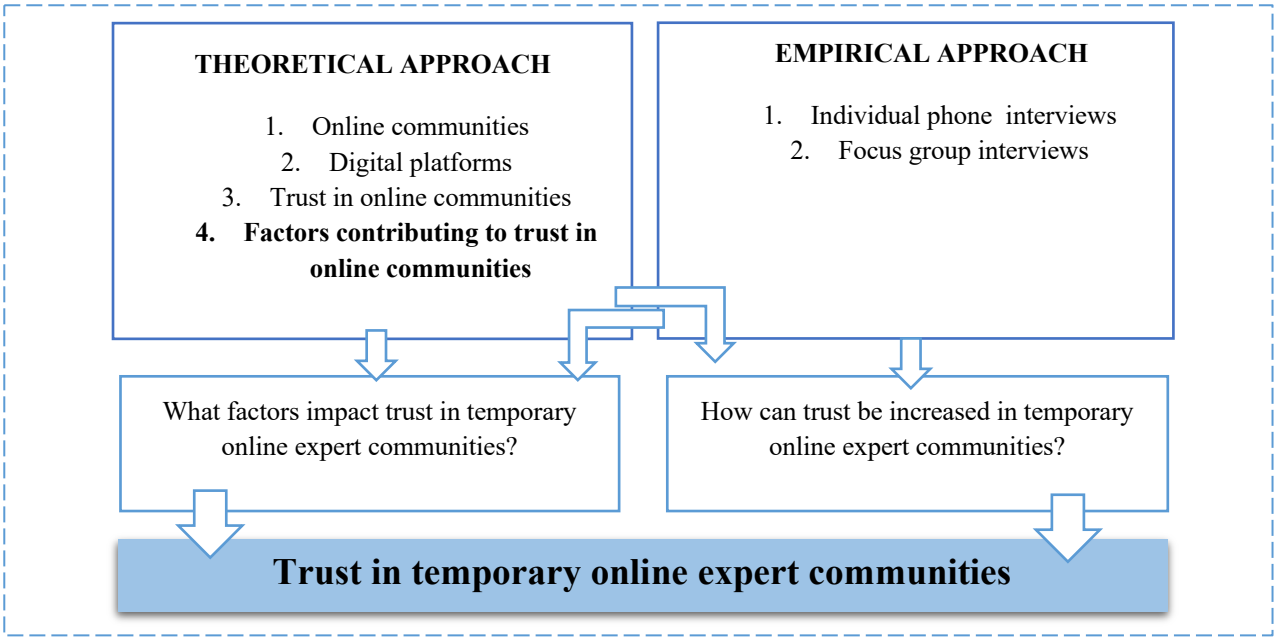

Figure 1. Research framework

This study focuses on an online community level trust. Therefore, trust in online team level is not examined in much detail. Furthermore, this study does not include platform data, thus the technical usage and details of the online community members and the impact on trust are not considered in this thesis. One should also notice that the data of this thesis is collected from one type of temporary online expert community in Finland, thus the results may vary depending on, for instance, the digital platform, cultural differences or organizational factors.

2. TRUST AS AN ENABLER OF TEMPORARY ONLINE EXPERT COMMUNITIES

As mentioned in chapter 1, the way of working has drastically changed throughout the years, and today expert workers may be brought together for a temporary setting, to work for a common goal. This is possible due to digitalization, as online expert communities can gather together e.g. on a digital platform. The aim of this theoretical framework is to understand both the role of trust in temporary online expert communities, and the factors that influence trust within these communities. This theoretical framework is divided into two main parts, first part concentrating on the online communities and digital platforms, and then on the specific role of trust.

2.1 ONLINE COMMUNITIES ON DIGITAL PLATFORMS

As the members of online communities often share a common goal or interest, online communities can bring together people from different nationalities, geographical locations, time zones, or even organizational boundaries (Johnson, Safadi & Faraj 2015, 165-166). Therefore, online communities are an attractive place for individuals to share their knowledge with others, providing the opportunity to reflect and learn (Hsu, Chang & Yen 2011, 587), and they have grown rapidly within the last years (Johnson, Safadi & Faraj 2015, 165). To understand more of the factors contributing to trust in online communities, it is first needed to understand more about online communities and digital platforms in general.

2.1.1 ONLINE COMMUNITIES

Characteristics defining online communities generally are fluid boundaries, expertise-based authority, and emergent roles. In addition, online communities are also often characterized by low interactional cues, meaning that it might be hard for the members of the community to understand, for example, facial expressions of voice intonations in online communication. Additionally, due to the nature of online communities, the communities may also have difficulties with providing immediate feedback. (Faraj & Johnson 2011, 1465; Johnson et al.

2015, 165.) Examples of traditional online communities working on digital platforms are YouTube, Wikipedia or Facebook (Johnson et al. 2015, 165) or even a chat room or an email program (Ridings 2002, 273).

Traditionally, three main differences can be identified between online communities and face-to-face communities, which are 1) Physical location is not relevant in online communities, 2) Most participants in online communities are relatively invisible (for example, many members might just read messages instead of contributing) and 3) Costs to participate in an online community is lower. (Sproull & Faraj 1997; Ridings et al. 2002, 274.)

However, as the definitions of Sproull & Faraj (1997) and Ridings et al. (2002, 274) disclose that the members of in the online communities are relatively invisible, it is not usually the case with online expert communities, where the aim is to share knowledge and collaborate on a digital platform. Instead, more recent research states how in online communities, knowledge capital is crated when members of the community share their previously known knowledge and expertise. (Faraj, Jarvenpaa & Majchhrzak 2011.) Therefore, especially in online expert communities, where knowledge is shared and created, the participants are highly visible and interacting with each other. Indeed, knowledge sharing, and collaboration is studied to have a vital role in ensuring the sustainability of online communities. By the members sharing their knowledge, individuals not only derive personal benefit but also contribute to the overall value of the online community and possible temporary project. (Faraj et al. 2011, 1224.)

A very similar form of online community is also known as **Community of practice** (CoP)**,** which has been introduced by Wagner and Lave, from where Wenger has further studied the concept (Lave & Wenger 1991; Wenger 1998). According to Nicolini, Pyrko, Omidvar & Spanellis (2022, 680), CoP means groups of people, united by three main features: joint action, expertise or passion to the common theme and willingness to learn and improve one's own actions/operations. In CoP, the members of the community often share their knowledge and expertise to other members (Nicolini et al. 2022, 680).

CoPs can also be online community of practices (also known as virtual communities of practice, VCoP), which are online groups of people with usually the same interest, skill or professional area, where individual members are expected to create a team dynamic that

leads to a "*virtual knowledge-based community*" (Chrisentary & Barrett 2015, 25, 27). Thus, online community of practice offers a way to connect with likeminded people, for example, with the same interest and knowledge and give peer support to each other (Wenger-Trayner 2014; Henriques, Van Hout & Teixeira 2020, 471).

Even though CoPs may also perform online, one of the main differences compared to online communities is that CoPs are traditionally organized face-to-face rather than online. Compared to online communities, CoPs are usually also more often inside an organization rather an interorganizational, meaning that the members of an organization may join the internal communities within an organization. Like online expert communities, the members of CoP are usually knowledge workers. (Faraj et al. 2011; Pyrko 2017; Nicolini et al. 2022, 685-687; Toivikko, Blomqvist, Vartiainen & Salo 2023.) Due to these differences, in this thesis the term online community is used rather than CoP or VCoP, despite the resemblance of the terms.

To conclude, online communities are communities bringing together people with the same interest and expertise. There are various benefits to online communities, for example, the mentioned flexibility and knowledge sharing within the participants. For more detailed information about the possible outcomes and effects of trust in online communities, please refer to chapter 2.2.1.

2.1.2 Digital platforms

Digital platforms are convenient platforms especially for networking and collaborating in a geographically dispersed environment (Yoo & Henfridsson 2010; Gawer 2022, 114). Digital platforms can also be seen to build competitive advantage in organizations (Parker, Van Alstyne & Choudary 2016; Cenamor, Parida & Wincent 2019, 196), since digital platforms may allow organizations to take advantage of information management (Cenamor, Rönnberg, Sjödin & Parida 2017; Cenamor et al. 2019, 196).

In addition the possibility of bringing competitive advantage to an organization, digital platforms play a crucial role in enabling and sustaining online communities (Spagnoletti et al. 2015, 364). Thus, Spagnoletti et al. (2015, 364) argue that organizations should identify effective design principles for digital platforms supporting online communities (DPsOC), as

architecture is a significant factor when designing a digital platform. Therefore, it is important to design digital platforms to match the social interaction structure of an online community.

One way to determine the correct digital platform architecture is to analyze the social interactions of an online community. According to Spagnoletti et al. (2015, 367), there are three different types of social interactions taking place in online communities. The interactions are ***information sharing*** (actors release content, which is available on the internet, free participation where no collaboration is required), ***collaboration*** (actors follow rules and engage in activities which require group collaboration) and ***collective action*** (actors have a common goal and rules which they follow, strong internal cohesion with shared values and trust, e.g., to complete a task). (Spagnoletti et al. 2015, 367.) According to Costa et al. (2020, 6), these three social interaction classifications are still useful and relevant today when studying online communities' performance on digital platforms.

As online communities enable different types of interaction, it is crucial to design digital platforms to match the right online community need and interaction. As an example, in collective action it is important that the digital platform provides mechanisms for negotiating goals and loyalty among members, when in information sharing external control of the digital platform needs to be in place. (Spagnoletti et al. 2015, 367-368.) Therefore, the digital platform architecture needs to support the needs of the online community (Spagnoletti et al. 2015, 368), by providing, for example, the correct IT capabilities and applications (Spagnoletti & Resca 2012), and tailor the main functionalities to match the needs of users, while being flexible (Spagnoletti et al. 2015, 368).

Other researchers have further contributed to the study of Spagnoletti et al. (2015), and different studies have shown how different social interactions and engagement in an online community can be achieved when the digital platform architecture follows three basic functions: match, facilitate and pull. Match means that the digital platform must fit well to the user’s needs and characteristics, such as assuring the information exchange in an online community. Facilitate concerns the capacity to enable valuable interaction between the participants, such as having a user-friendly interface or easy tools to use for collaboration. Lastly, pull means the ability of swiftly and effortlessly expanding, amplifying, and

reinforcing the advantages offered by network effects. (Choudary 2015; Parker 2016; Cusumano, Gawer & Yoffie 2019, Drewer 2021; Caridà, Colurcio & Melia 2022.)

However, as digital platforms have evolved, also the use and architecture has changed during the years, from transactional to more relational and collaboration directed. For temporary online expert communities sharing information, the term **digital collaboration platform (DCP)** is more appropriate, referring to their social interaction within the community. Similarly, to digital platforms, digital collaboration platforms and their architecture may also differ depending on the purpose or members of the community, however, share similar characteristics. (Mačiulienė & Skaržauskienė 2016, 4827; Spagnoletti et al. 2015, 366; Karna & Ko 2022.)

As said, generally, digital collaboration platforms connect geographically dispersed experts together, which allows the experts to share knowledge, and collaborate in the same digital platform also interorganizationally. Digital collaboration platforms enable this way, for example, collaboration projects, where people with different expertise and skills gather to work for a certain project or task for a shared goal. This is due to the nature of digital collaboration platforms, and these type of collaboration digital platforms requiring collaboration from its members, are used to replace face-to-face work. (Spagnoletti et al. 2015, 366; Karna & Ko 2022.)

Therefore, these digital collaboration platforms are designed in a way, where members of a knowledge sharing, temporary online expert communities may work together, be transparent about their skills and share their knowledge. The digital collaboration platform architecture is built in a way to ensure interaction and communication between the members. Indeed, digital collaboration platforms are designed to be used in online communities, to support their "*social innovation process, facilitating knowledge sharing, cooperative work and networking*". (Singh, Sharma & Paliwal 2020, 497.)

Even though the architecture of digital collaboration platforms differs depending on the purpose of the platform, they share same factors. The architecture of digital collaboration platforms in the case of co-creation and knowledge sharing, are seen to be dynamic, open and flexible. Digital collaboration platforms also often have diverse engagement forms and memory system on the platform which stores information and knowledge. One of the most important aspects of digital collaboration platform is also recognized to be security and

privacy, and it is studied to be crucial for an active online community and the encouragement of diverse opinions. (Mačiulienė & Skaržauskienė 2016, 4827.)

To conclude, using the correct digital platform and architecture enables the collaboration and knowledge sharing between the members of the online community, as by doing so, it alleviates the cognitive burden of the participants, thus they can focus on knowledge sharing and communicating on the platform. (Füller, Mühlbacher & Jawecki 2010). As such, the correct digital platform architecture can be used to support certain behaviors and needs (Toivikko et al. 2023). In general, if a digital platform is designed well, it has shown to affect positively the user experience. On the contrary, digital platforms which are hard to use or navigate are shown to create frustration among community members and even make them feel less attached to the online community. (Preece 2000; Childers, Carr, Peck & Carson 2001; de Valck, Langerak, Verhoef & Verlegh 2007.) Therefore, it is crucial to choose a correct form of digital platform and architecture that matches the online community needs, enables the community to thrive and achieve set targets as well as ensures the functionality of the community.

2.1.3 Temporary organizing

Online communities may be either temporary or permanent, depending on the target of the community. One form of permanent online community is an open-source online community, such as Wikipedia, mentioned in the previous chapter from Johnson et al. (2015, 165). These types of online communities have certain structures and formal control, such as organizational hierarchy and formal leaders. Therefore, online communities like, for example, Wikipedia, will be present even if members of the community may leave, thus are not temporary.

However, as mentioned in chapter one, online community can also be set up only for a temporary time, to e.g. gather participants for innovative knowledge sharing for a certain project or to solve a specific issue. These types of online communities are also known as **temporary online crowds**. Temporary online crowds are: *"characterized as a group of strangers coming together for a short period of time for a particular purpose, disbanding once the time period or purpose is achieved, and with minimal normative effects created by*

a shadow of the future.“ (Malhotra & Majchrzak 2014; Majchrzak & Malhotra 2016, 685-686.) Indeed, online communities may often work as temporary online networks to facilitate new learning and share knowledge or solve complex issues (Majchrzak & Malhotra 2016, 685-686; Nicolini et al. 2022, 687), thus do not need to be permanent communities.

For example, temporality in online communities has similar advantages to temporary organizations. Indeed, today temporary organizing is considered beneficial for innovation, knowledge sharing and problem solving, similarly to the advantages of temporary online crowds. In history, TO’s have been defined to be within an organization, however, interorganizational TO’s have also received a lot of attention in recent years, as well as project-based organizations (Bakker 2011; Burke & Morley 2016, 1236.).

Compared to traditional permanent online communities, such as Wikipedia, in temporary online communities knowledge creation and sharing is different. As an example of the differences between temporary and permanent communities, in temporary organizing, the participants are aware of the limited time of the community. Indeed, as the participants have limited to use for interaction, it influences the group dynamics, role definition, leadership, norms, and communication. Additionally, in temporary online communities the participants may also have limited time to participate to the temporary online community. Therefore, in temporary settings the limited time and the usage of time is seen as a key indicator and difference compared to permanent online communities and organizing. (Bakker 2010.)

Therefore, despite the advantages of temporary organizing, challenges concerning the temporary structure are, for example, having participants from different organizations and background without often knowing others or their way of working. Therefore, the participants need to form a new temporary culture and processes together to the temporary team within a limited time frame, while being used to their own ways of working and work cultures. Due to the temporary nature, the environment of the online communities may change or be cross-organizational, therefore, not as permanent as traditional projects or online communities. (Faraj et al. 2011; Johnson et al. 2015; Gilson, Maynard, Jones Young, Vartiainen & Hakonen 2015.)

Closely related to temporary online expert communities of organizing professionals is **network of experts**. Online network collaboration in general means that participants such

as organizations or individuals are collaborating and sharing knowledge in an online setting. As said, if the online network is cross-boundary, it is often organized for a temporary setting (Clegg, Josserand, Mehra & Pitsis 2016, 278-280; Spagnoletti et al. 2015, 367, Edmonson & Harvey 2018, 347; Toivikko 2021, 10). However, the term online or collaborative network or more specifically, network of experts, is a rather new term recognized as a type or social interaction of an online community (Spagnoletti et al. 2015; Costa, Soares & Sousa 2020.) The terms of online expert community and network of experts are quite similar and may even be used as a synonym; however, the main difference can be seen within the purpose and duration of these terms. Therefore, the notion of temporary online expert community is used in this thesis, due to the features presented in this paragraph and chapter 2.1, and due to topics emerged from the research data.

To conclude, online communities may be formed either in temporary or permanent settings, depending on the online community and its purpose. Temporary organizing and temporary online communities are a way to collaborate, innovate and share knowledge, also across organizational and geographical boarders. Therefore, temporary organizing may be a beneficial and flexible way to work cross-organizationally within a certain timeframe.

2.2 THE CONCEPT OF ONLINE COMMUNITY TRUST

Trust is a key factor when building communities, as communities and trust may be closely intertwined concepts. Trust forms the basis of interaction also in online societies and communities. Therefore, trust and the type of trust are needed to understand also in temporary online expert community settings, as well as the factors influencing trust identified by previous research.

2.2.1 ONLINE COMMUNITY TRUST

Previous research on trust has supported the assertion that trust is multidimensional, consisting of three distinct beliefs or factors: ability, benevolence, and integrity (Meyerson, Weick & Kramer 1996; Ridings et al. 2002; Usoro et al. 2007). Online community trust is defined by Posey, Lowry, Roberts & Ellis (2010, 186) as: "*the degree to which an individual*

beliefs that those within his or her selected online community are reliable and trustworthy with information that makes the individual vulnerable". In earlier research, the role of trust in organizational as well as online based communities has been highlighted (Kosonen 2009).

As mentioned, trust is studied to develop the communication, engagement, and commitment in different types of online communities. In addition, trust creates a sense of safety and security among online community members and fosters cooperation and collaboration. (Barney & Hansen 1994; Mayer et al. 1995; Dirks & Ferrin 2001; Ridings et al. 2002; Blomqvist 2002; Ratnasingam 2005; Ellonen et al. 2008, 161; Wu et al. 2010; Hsu et al. 2012). To clarify some of the above terms, by community engagement it-is meant: "*the consumer's intrinsic motivation to interact and cooperate with community members*" (Algesheimer 2005, 21). Hsu et al. (2012, 77) define community engagement as members of the community actively getting involved in joint activities and making positive contributions willingly giving their personal time and knowledge, to help the community as a whole. Commitment on the other hand means that someone is voluntarily sustaining and supporting constructive relationships. There are different types of commitment types, for example, affective (based on positive feelings usually leading to long-term relationships), normative (commitment out of obligation or accountability) or continuous commitment (the continuation the of current relationship is seen as an asset for both parties). (Wu et al. 2010, 1027-1028).

Trust is indeed a crucial part especially for online communities' social interactions, since as mentioned previously, in online settings the interaction between members is different compared to face-to-face interaction, as social cues are hard to understand and since there are no clearly defined standards to guarantee that others will behave as anticipated (Hsu et al. 2011, 588; Ridings et al. 2002). Thus, trust has a central part in online communities to avoid the issues associated with the lack of trust by reducing such issues related to social complexity (Hsu et al. 2011, 588). In a community where trust is high, people are more likely to facilitate unselfish interactions such as help each other or ask for help, work together towards common goals, participate actively, and share knowledge. (Ridings et al. 2002; Hsu et al. 2011, 592; Bruhn, Schnebelen & Schäfer, 2014, 166-169.)

As said, many studies have shown the relation of trust to knowledge and information sharing, such as Chen & Hung (2010), who found out that especially interpersonal trust influences

knowledge sharing in an online expert community. Additionally, trust in online communities fosters knowledge sharing but also the desire to access knowledge (Ridings et al. 2002; Hsu et al. 2011, 589). Tseng & Feng-Chuan (2014, 38), emphasize the significance of strong ties between members of an online community. Especially in an online expert community where participants are knowledge workers, sharing complex knowledge is easier when the members have strong ties (Tseng & Feng-Chuan 2014, 38). Additionally, in a study of Sibbald, Burnet, Callery & Mitchell (2022) trust also has a crucial role in creating a creative and socially supportive environment, conforming the idea of benevolence, which therefore influences knowledge sharing.

According to Hsu et al. (2011, 596) research model, knowledge sharing intention in online communities is influenced heavily especially by trust in members and trust in systems, as shown in Figure 2. By knowledge sharing intention it is meant: "*the degree to which a member believes that he/she will engage in knowledge sharing act*". (Ridings et al. 2002; Hsu et al. 2011, 594).

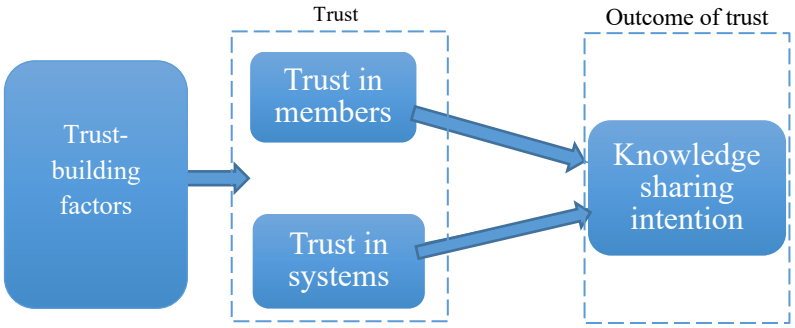

Figure 2. Trust relationship to knowledge sharing intention in online communities (Adapted from Hsu et al. 2011, 596)

In addition to the previous research stating the importance of trust in knowledge sharing and knowledge sharing intentions in online communities, Rye (2022) discusses how some studies show that on top of trust, the length of collaboration affects knowledge sharing. In addition, despite trust has been studied to influence to boost knowledge sharing in online communities, according to some studies, trust does not necessarily have a significant impact on the quantity of knowledge sharing (Chiu, Hsu & Wang 2006).

As mentioned, trust is crucial factor in building and maintaining strong communities, also in online settings, as various research emphasizes the importance of trust. The information about different types of trust and the factors influencing trust building in online communities are explained in more detail on chapters 2.2.2 and 2.2.3.

2.2.2 Type of trust in online communities

The type of trust in online communities is a complex and multidimensional subject. When researching trust and the factors influencing it, it is important to take into account the specific context, as trust has both social and operational context (Mayer et al. 1995, 710-711). According to Chowdhury (2005), trust can be developed between people (interpersonal trust), systems (impersonal trust) or an organization (institution-based trust). However, research may vary on how the online trust setting should be divided, as some scholars divide online community trust into two categories, interpersonal trust, and system trust (Leimeister, Ebner & Krxmar 2005; Ratnasingam 2005; Hsu et al. 2011, 588) or according to Ardichvili (2008, 547), personal knowledge-based trust among with institution-based trust are the most important types of trusts in online communities. In addition, according to Hsu et al. (2012, 77, 83), the type of trust in online communities can also be social trust. When social trust is built in the online community, the participants are more prone to participate, engage and commit in the online community (Hsu et al. 2012).

In the context of temporary online expert communities, it is important to understand trust from the different fields which are recognized by most of the researchers and scholars of the topic, as the factors contributing to trust in online communities has different levels. Therefore, in this research, online community trust is looked through the lens of interpersonal trust, as well as system-based and institution-based trust, to get a comprehensive review online community trust, different types of trusts, and the factors contributing to the types of trust. In addition, these three types of trusts are the most used by notable researchers as mentioned in the above paragraph, thus chosen for this research.

As shown by previous research of the topic, most often the type of trust in online communities can be understood in the context of **interpersonal relationships**, meaning trust between people and other members of the community. This is because usually in online

communities, trust is often generalized on the collective level, as members of the community interact with multiple different people. According to Ardichvili (2008, 547), interpersonal trust is seen important and should be developed, as the members of the community can therefore predict how the other members act in different situations. Therefore, trust can develop between individuals and a group of strangers in online communities. It has also been shown that the members of community work better together when they have developed trust. (Ridings et al. 2002, 275.) The dimensions of interpersonal trust can be seen as competence, reliability, and benevolence, whereas these dimensions of interpersonal trust also impact the innovation within an organization (Ellonen et al. 2008, 161).

Despite often looked through the lens of interpersonal trust, trust in online communities is not always purely interpersonal trust. As online communities are working on different types of digital platforms (see chapter 2.1.2), also the notion impersonal **system-based trust** is essential, meaning, for example, the trust to digital platforms, systems and technology in general. Impersonal trust in the context of technology can be divided into three dimensions interacting with each other; organizational trust, interpersonal and system trust. Organizational trust means trust towards the technology, interpersonal trust means trust between the users of technology e.g. online community members, and system level of trust refers to the trust on technology itself. (van der Werff, Real & Lynn 2018.) As showed in Figure 2, trust to systems such as system quality and reliability (Hsu et al. 2011, 593) is important for multiple factors such as knowledge sharing as shown.

Thirdly, an important aspect of online community trust is **institution-based trust,** founded on the idea that the needed organizational structures and procedures are in place, ensuring trustworthy behavior (Ardichvili 2008, 548). In more detail, institution-based trust can be characterized as trust to the organization in general. Trust to the organization may include, for example, vision and strategy of the organization, justice, structures, technological competence or HR policies. (Atkinson & Butcher 2003, 290-291; Ellonen et al. 2008, 162.) Thus, on a general level, it could be said that institution-based trust focuses on the impersonal trust, meaning the organizational practices and processes. Noteworthy, depending on literature, institution-based trust may also be seen to contain both interpersonal and impersonal aspect (Zucker 1986; Lane 2002; Vanhala 2011). However, similarly to this thesis, the institution-based trust most often refers only to impersonal trust, as there is rarely mutual trust relationship between top management and employees in organizations.

These different types of online community trusts have similarities and they overlap with each other. An example of such, according to McKnight et al. (2011, 5) system-based trust and interpersonal trust have similarities. Generally, trust in technology requires functionality, helpfulness, and reliability, when trusting other people requires competence, generosity and integrity. Indeed, it is studied that people tend to trust the systems and even see them with human characteristics since the platforms are designed and controlled by human, thus trust in humans is also important. (Li, Browne & Wetherbe 2006; Hsu et al. 2011, 589.)

To conclude, online community trust is a multidimensional concept, and it has to be understood from the different dimensions and types of trust in online community setting. As described, the type of trust in online communities is often interpersonal, but can also be impersonal, i.e. system-based and institution-based, or even social. However, to include all the most relevant types of different types of trust used in research, the types of online community trust in this thesis are looked through the lens of interpersonal, system-based, and institution-based trust, as mentioned in the first chapter. To have a better understanding of the types of trust in online expert communities and the critical factors, please refer to chapter 2.2.3 or Table 1.

2.2.3 Factors contributing to trust in online communities

Trust in general is influenced by many factors of the online community. According to Mayer, Davis & Schoorman (1995), trust to other participants is affected by, for example, relying on other party's skills, knowledge, judgment or action. Even though developing trust in online settings has found to be much easier if the members have met at least one other community member in person before (Ardichvili et al. 2003), different types of trust can also be built in online settings without face-to-face contact.

To understand the trust in online expert communities in detail, the critical factors of trust in this thesis are looked through the lens of the three main types of online community trust (interpersonal, system-based and institution-based). Thus, the development of trust and the factors influencing it, is looked specifically from authors and research concentrating on online communities with expert workers and/or knowledge sharing, preferably in temporary

settings. Types on online community trust and the critical factors affecting trust in the context on expert knowledge sharing communities are shown on Table 1, from which this chapter 2.2.3 is also based on. The topics will be discussed in more detail in the below paragraphs.

Table 1. Critical factors in online expert communities (Based on chapters 2.2.2 and 2.2.3)

Type of trust	Main characteristics of the type of trust in online communities	Critical trust-building factors in online communities	Examples from literature
Interpersonal trust	Trust between the online community members, i.e. trust between the users of the online community	Person related factors, such as empathy, similarity, competence, openness, benevolence, reciprocity, and active participation.	See e.g. Feng, Lazar & Preece (2004), Usoro et al. (2007), Hsu et al. (2011), Jarvenpaa & Majchrzak (2011), Booth (2012), Tseng & Feng-Chuan (2014)
System-based trust	Trust in systems (e.g. digital platforms) and trust to technology itself	Digital and system factors, such as privacy, transparency, and platform architecture.	See e.g. Leimeister et al. (2005), Lin & Lee (2006), Ardichvili (2008), Hsu et al. (2011)
Institution-based trust	Trust in the organization in general, i.e. trust to the structures of the online community	Organizational factors, such as reputation and expectations, shared values and goals, facilitators, and organizers.	See e.g. Ardichvili et al. (2003), Usoro et al. (2007), Lin et al. (2009), Zamani, Kazemi & Masoomi (2021), Shepherd & Doris (2023)

Antecedents of interpersonal trust in online communities

As interpersonal trust is argued to be the most common type of trust in online communities (see chapter 2.2.1), also multiple critical factors have been found to be crucial when developing it. As mentioned in e.g. chapter 2.2.2 the dimensions of interpersonal trust can be seen as competence, reliability, and benevolence. Later different authors have also found more dimensions of interpersonal trust in online community settings, such as Booth (2012), who in her study found that the most important factors to interpersonal trust were openness, honesty, reliability, benevolence, and competence, which are also closely identified as the attributes of trust by Mayer (1995) and later Usoro et al. (2007).

To develop interpersonal trust, one of the key factors was found to be sharing personal knowledge between members in online communities. Knowing other members on a personal level is shown to be important, as for example, other online community members as

emotional support was found to be a factor of interpersonal trust. (Tseng & Feng-Chuan 2014, 38.) Identifying, understanding and getting to know the members of an online community on a personal level, promotes the individual's interest to collective processes and the group outcomes, and has been associated with expectations of benevolent behavior and active participation in the online community (Usoro et al. 2007). Therefore, to create interpersonal trust between the members, it is important to know others on a personal level. To do so and decrease anonymity, sharing personal information or e.g. supportive messages and emphatic accuracy might help build online interpersonal trust. (Feng et al. 2007.)

Another way to share personal knowledge and increase interpersonal trust between different stakeholders or online community members, is to connect with, for example, similar hobbies, values, and interests or shared experiences (Tseng & Feng-Chuan 2014, 38). Indeed, Ziegler & Goldbeck (2007) have also proved in their study how trust and interest similarity have a strong correlation in online communities. Therefore, similarity between people has been proven to increase interpersonal trust in online communities, as it creates the feeling that one's actions are approved, for example, morally or ethically by others (Gefen 2004; Hsu et al. 2011, 589). In addition, a shared vision was also found to be one key factor to create interpersonal trust in online communities (Gefen 2004; Bruhn et al. 2014, 166-169; Hsu et al. 2011, 589-591.), as well as shared values and common identity were a critical factor in building trust and knowledge sharing in an online community (Wu, Chen & Chung 2010; Booth 2012).

On top of sharing personal information, the communication is also important, as repeated interaction has been studied to increase interpersonal trust in online communities, as it predicts future actions, forms closeness and familiarity in the group, thus develops trust, both interpersonal and social (Gefen 2002; Ridings et al. 2002, 275; Hsu et al. 2011; 589). More specifically, it is shown how people are drawn to online communities, as they "*provide an **engaging environment** in which to connect with other people – sometimes only once, but more often in an ongoing series of interactions that create an atmosphere of trust and real insight.*" (Lai, Chen, Chang 2014, 523). Sharing personal knowledge has also showed to increase, for example, discussion and knowledge sharing in an online community (Tseng & Feng-Chuan 2014, 38). Therefore, to create interpersonal trust in an online setting, members also need to be able to actively react and collaborate with other members of the online community.

Therefore, open, transparent, and emphatic communication on digital platforms is seen as an important factor when building interpersonal trust in online communities. To increase such behavior and active communication, digital platforms should support this, and according to Lin et al. (2009, 937) examples of such are: ”*personal message boards, chat rooms, technical forums and blogs as tools for improving online communication and contacts among members”.* Additionally, relational capital and private messaging in online communities have also been shown to strengthen trust (Park 2016). Similarly, Hsu et al. (2012) have shown that community identification and commitment to the digital platform leads to higher interpersonal trust but also to more engagement in an online community. However, Hsu et al. (2012, 77) also mention that to have active participation and engagement in a digital platform, trust is needed: “*so that a person can make contributions without fear of other taking advantage”.*

Jarvenpaa & Majchrzak (2010) also argue in their study that online collaboration platforms have numerous benefits to online communities, but they also cause challenges due to the ambivalent nature of user participation. Active participation can therefore also cause damage to trust if there is information overload or the quality of contributions differs. (Jarvenpaa & Majchrzak 2010.)

Hashim & Tan (2015) have additionally showed in their study how satisfaction in online communities has an influence on identification trust, and trust then influences knowledge sharing in the community. As an example, if a community member feels satisfaction to the digital platform one is operating on, tends to trust and engage with the site more. These findings are in line with Lin et al. (2009, 937) shown previously, how digital platforms may increase activity on the online community, thus also system-based impersonal trust influences the creation of interpersonal trust (Hashim & Tan 2015, 149). Technology can therefore have positive impact on other factors of interpersonal trust in online communities to, for example, increase transparency and openness in online communities. As an example, it has been studied that blockchain technology factors may be used in online community platforms to increase trust, as utilizing blockchain technology was found to create a safe, transparent, and open space to share knowledge with strangers. (Renqiang & Zhang 2023.)

In more detail, Usoro et al. (2007, 202) also indicate how transparency and openness are key factors when building interpersonal trust in online communities, as transparency enables

trust in an online community without any social interaction. Indeed, in online communities: "*anonymity decreases trustworthiness and accountability of knowledge and may also reduce knowledge contributions if people are worried about not getting credit for their input and ideas*" (Faraj, Jarvenpaa & Majchrzak 2011, 1228). That is why transparency and offering support to trust other members, such as having clear identification of member profiles is crucial to have a transparent online community and digital platform (Kang, Han & Kwon 2019, 1319), especially in an online expert community when information sharing, and knowledge creation is the objective.

In conclusion, it matters how one communicates and participates on the digital platform of an online community, as it has been studied how empathic behavior is an important factor when developing interpersonal trust in online community setting. In more detail, it was studied how the response type also influenced the perceived level of empathy, thus also trust. In an online community, a member who communicated in the most empathic and supportive way, was trusted the most by other participants. In addition, the same study found that online interpersonal trust is closely related to liking, and people who were more liked, were most trusted in the community. (Feng et al. 2004, 103-104.)

More particularly, it has also been studied already by Blau in 1964 that the norm of reciprocity has a strong positive impact on trust (Blau 1964; Chiu, Hsu & Wang 2005, 1883; Lin et al. 2009, 936). Lin et al. (2009) showed in their study, how the norm of reciprocity has also influenced the forming of trust in online expert communities, which in turn effects to multiple factors such as knowledge sharing. By reciprocity it is meant that the members of a community must receive e.g., credit for sharing their knowledge, as then reciprocity helps participants to "*cooperate, understand and empathize*", thus transparency and visibility of the norm of reciprocity enables trust in online communities. (Lin et al. 2009, 932, 936.) Posey et al. (2010) have also showed how positive social influence, but also reciprocity and trust, increases self-disclosure in an online community. Therefore, reciprocity is an important factor in building interpersonal trust in online communities, along with empathy, openness, and transparency. On the contrary, trust may be low, if the engagement and response type or emphatic accuracy are inconsistent (Kim, Park & Jin 2008).

However, out of all the dimensions from Mayer et al. (1995), Usoro et al. (2007), and Booth (2012, 22), Booth (2012) found the most crucial factor of interpersonal trust and knowledge sharing to be competence, which was mentioned the most by members of the online community researched. When trusting the competence of others in online expert communities, the members were also more likely to share knowledge. The findings of Booth (2012) are in line with other studies such as research by Sibbald et al. (2022), who also showed that competence along with benevolence and integrity are important factors to knowledge sharing in a community, as well as Hsu et al. (2011) who showed a strong correlation of knowledge quality and trust. In knowledge sharing online expert communities, competence is therefore crucial, as also a study by Jiarui, Xiaoli & Jiafu (2022) showed how trust and the quality of knowledge were the main motivators for knowledge sharing.

Antecedents of system-based trust in online communities

To form impersonal system-based trust in online communities, the used technology and digital tools are seen as crucial factors. As the architecture of the digital platform is crucial in an online community for several reasons. Indeed, similarly, according to Leimeister et al. (2005) website design factors may influence the level of trust within an online community.

Trust to digital platform in general is influenced by the transparency of goals, active communication, quality of the content, motivation of hosting operators and accessibility to information (Leimeister et al. 2005; Kim et al. 2008, 816). Satisfaction in the architecture of an online community (and therefore trust) has been seen that the online community is e.g. *"visually appealing, trustworthy and responsive to member requests"* (Lin & Lee 2006, 483). Additionally, as mentioned in the above chapters, digital platforms need to enable communication and be easy to use, to avoid frustration to the digital platform thus damage the impersonal system-based trust. Therefore, trust in digital platform and technical systems reflects the willingness of the community member to rely on the digital systems to carry out the given task (Hsu et al. 2011, 588).

As previously stated, openness, closeness as well as transparency as factors of trust go in line with previous research that familiarity and other's confidential information on online community has increased trust between the members (Gefen 2002, 2004; Ridings et al. 2002; Hsu et al. 2011, 589). It has also been studied that to trust online community digital platform

and to be able to share personal information and build system as well as interpersonal trust, one must trust the digital platform and the fact that their personal data is not misused. To trust the digital platform and share personal information, the digital platform should be well controlled by organizational control mechanisms. (Ardichvili 2008, 548.) Thus, the building of system-based trust might be influenced by institution-based trust in online communities. In addition, the system quality (such as reliability and stability) has been shown to correlate with trust in system (such as member's belief in reliability, ability and honesty of online community). (Kankanhalli, Tan & Wei 2005; Hsu et al. 2011.)

Thus, the digital platform and website privacy policies have been proven to enhance the level of impersonal system-based trust in online communities (Wu et al. 2010). As sharing personal knowledge was seen as a key factor of interpersonal trust, it was stated how in online communities sharing personal knowledge should be trustworthy and easy. Therefore, to trust the digital platform and technology, the digital platform should be private and guarded, on top of the fact that the members need to trust each other with their information. This is not always the case and according to Zamani et al.'s (2021, 118) study, many members of the community might feel unsecure to share personal information or information in general, as they are not sure if their information will be shared or leaked to somewhere else.

To conclude, to trust the systems and digital platforms the online communities are operating on, the system architecture along with privacy are the most important factors of impersonal system-based trust. Additionally, as mentioned, the digital platform needs to be easy to use and navigate for the participants to create impersonal system-based trust, in order to avoid frustration to the platform, therefore damage the trust.

Antecedents of institution-based trust in online communities

As shown, having shared vision, goals and same areas of interest (such as same goals of a project or shared personal values and interests), were found to be a factor in increasing interpersonal trust in online communities. However, to develop institution-based trust, it should be considered that in online communities the expectations also affect trust. As an example of such, in online student communities, the desire and expectations (based on reputation, defined practices and limited interaction) for an institution was found to affect

trust to the organization (Shepherd & Doris 2023). In addition to online student communities, the reputation of an online expert community, or the past behavior of the members are important factors of institution-based organizational trust, also influencing the development of interpersonal trust. (Usoro et al. 2007; Lin et al. 2009, 933.)

It was also shown by Ardichvili et al. (2003, 74), how institution-based trust was higher in online knowledge sharing communities, when the researched international organization was transparent and communicated their expectations how participants should share knowledge and information on the community. Thus, communicating about clear goals for the community members was shown to increase institution-based trust and knowledge sharing, as it reduced anxiety and uncertainty about, for example, what to post on the digital platforms. Therefore, to meet the expectations and create trust to the organization from the very beginning, reputation, communication methods, culture of the community or organization should be considered, to make sure expectations are in line and met. (Ardichvili et al. 2003.)

Usoro et al. (2007) and Lin et al. (2009, 933), also show how the cultural values of a community and the creditability of a community's reputation influence the trust of the organization or a project. In addition, members of the community were also found to be more trusting and satisfied to the digital platform and share knowledge more, when the community had a trustworthy and active facilitator on the platform (Booth 2012, 22-23). An example on how, for example, managers could possibly improve the institution-based trust among members of the online community, is to facilitate the norm of reciprocity (Lin et al. 2009, 937). Additionally, similarly to active participation as a factor to build interpersonal trust, the consistency of behavior is also an important factor to build institution-based organizational trust (Usoro et al. 2007; Lin et al. 2009, 933).

Indeed, individuals supporting community collaboration, i.e. facilitators, have an important role in online communities. As an example, facilitators are needed to govern and control the digital platform and gain the trust in the online community. It has been studied that if "*an individual trusts a community, then it is possible for the individual to trust the members of the community****, with the understanding that the community will take disciplinary actions against its members when cheating behaviors occur****. Therefore, online communities could potentially be an effective way of building trust.* (Ba 2001, 334). Thus, strong leadership in

the digital platform supports organizational trust in online communities, and therefore also affects positively the building of impersonal system-based trust as well as interpersonal trust. However, according to Ardichvili et al. (2003, 74), the most important factor of institution-based trust in online communities is that the organization trusts the individuals of the community.

Therefore, transparency about expectations, but also procedures are found to promote trust in online communities, to provide clear communication and expectations for all participants (Ardichvili et al. 2003; Ardichvili 2008, 551). Thus, for the members of an online community to trust the organization and community in general, the digital platform with its facilitators as well as the organization's reputation, communication, competence and culture need to be consistent and transparent. These factors are important, as Zamani et al. (2021, 118) discuss how members might not want to share information as they might not trust the government or company, since there might a fear of spying on these technologies or digital platforms. However, as Ardichvili et al. (2003) mentions that institution-based trust may be developed by clear instructions, for example, about what to post on the digital platforms. When the institution-based trust is higher, the members of the online community are also found to be less hesitant to post to the digital platform, when they believe that their information is not misused, and they trust the organization. (Ardichvili et al. 2003.)

To understand the critical trust-building factors and type of trusts, as well as the influence of trust in online communities, please refer to Figure 3. As can be seen on the Figure 3 and shown in this chapter, interpersonal trust (i.e. trust between people), is crucial for trust development in online settings. Other most common type of trusts in online communities are system-based and institution-based trust, which also influence especially the creation of interpersonal trust. Therefore, the different type of trust and factors also are related to each other. However, as Cheng, Nolan & Macaulay (2013, 312) point out, developing trust in online collaboration platforms differs between online community and teams, as also online teams and communities, are unique.

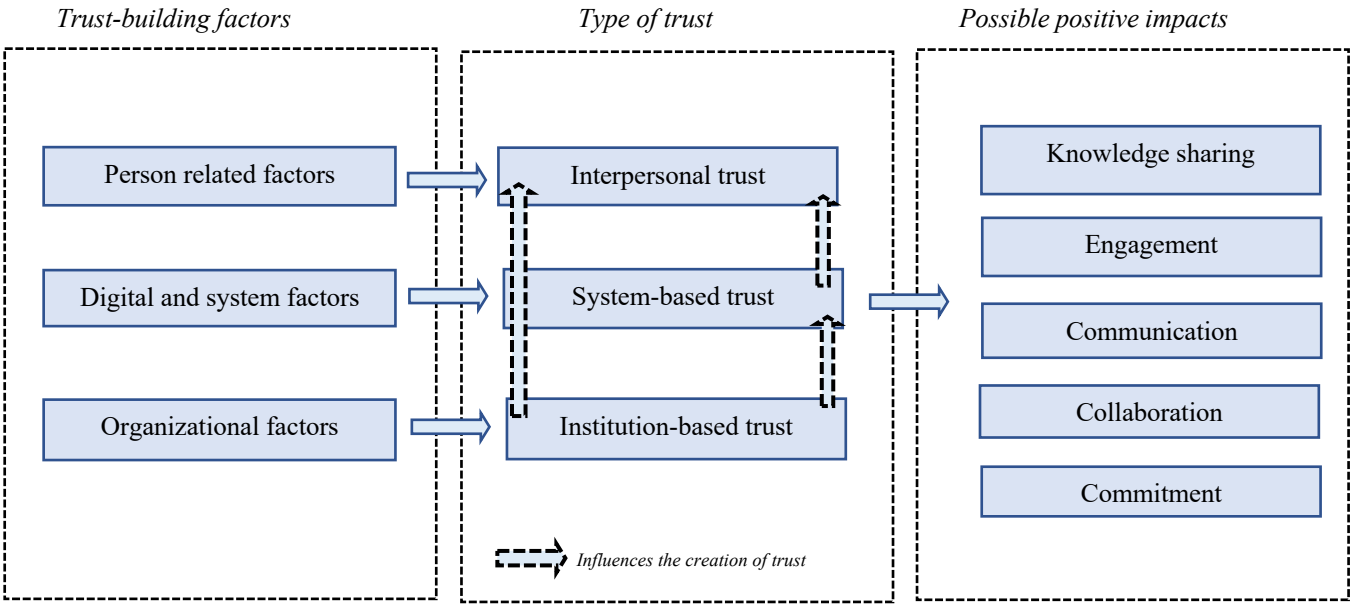

Figure 3. The relation of trust in online communities (Own illustration based on chapters 2.2.2 and 2.2.3)

2.2.4 Rapidly evolving trust in temporary online communities

As previously mentioned, organizations today might bring experts together virtually only, for example, for the length of a certain project. Therefore, trust in temporary online expert communities often develops high trust, by following a swift trust model, as opposed the traditional model of trust development.

Swift trust as a concept was developed in 1996 by Meyerson et al., explaining trust building in temporary settings. Swift trust is defined by Meyerson et al. (1996, 191) as: "*a unique form of collective perception and relating that is capable of managing issues of vulnerability, uncertainty, risk and expectations*." Unlike traditional trust, which is developed by e.g. shared experiences, familiarity and promises, swift trust relies more on actions than relating to others. (Meyerson et al. 1996, 167.) In swift trust, the team assumes others are trustworthy, and begin working like trust is already built, as there is no time to build on trust on the temporary settings (Meyerson et al. 1996). Additionally, other relevant characteristics can be seen as having diversified skills, short history and limited collaboration experience, and being involved in small group with clear deadlines and objectives, having continuous communication to address unique tasks with people from different networks. (Mayerson et al. 1996, 169, 173, 181; Blomqvist & Cook 2018, 36.)

As said, swift trust is based more on actions than relating (Mayerson et al. 1996, 167). To create early trusting beliefs impacting on late trusting belief, normative actions (such as setting and monitoring group performance norms) are needed. Strong early trusting belief fosters confidence to engage in normative actions, leading to increased late trusting beliefs and improved performance. Normative actions were found especially important with virtual members located in different locations virtually. (Crisp & Jarvenpaa 2013.)

In more detail, the role-based interaction leads to faster trust building process than human interactions, in swift trust temporary teams. If the roles of others are not disclosed, trust forming will be slower. (Meyerson et al., 1996, 173, 181.) Characters concerning swift trust are vulnerability, uncertainty, risk and expectations, more specifically positive expectations (Coppola, Hiltz & Rotter 2004, 95; Meyerson et al. 1996).

Swift trust in online settings is often researched in online teams rather than online communities. An example of such, Jarvenpaa & Leidner (1999) have studied the concept of swift trust in global online teams, as Meyerson et al. (1996) have developed the concept of swift trust to concern face-to-face teams. In global temporary online teams, the specific roles were not seen as important when building trust, instead, knowledge was more important factor when building high trust. In addition, if teams had high trust, there was discussion about commitment, support, and excitement. (Jarvenpaa & Leidner 1999.) Empirical studies have also showed, how frequent, proactive, and factual communication together with trust influence performance and swift trust in temporary online teams (Chuboda & Maznevski 2000; Sarker, Ahuja & Kirkeby 2011).

In temporary online settings, developing swift trust is said to consist of three main factors; vulnerability, uncertainty and ventures. According to Xu (2007), swift trust is "*doing rather relating*", meaning that "*swift trust is not socially interactive, it is precognitive trust based on action."* (Xu 2007, 96.) Gammelgaard (2010, 353) also point out, how "*uncertainty is the primary reason for knowledge sharing based on swift trust since, in cases of great certainty, the receiver typically prefers to trust (or distrust) the sender.*" The foundation for swift trust is, consequently, uncertainty but it only occurs in cases where this uncertainty is unacceptable (Xu et al. 2007).

Gammelgaard (2010, 354) also argues that swift trust is higher in online communities than in other online networks. That is because often in online communities, the culture is friendly and based on knowledge sharing, which is the foundation of swift trust. In online communities the members often share a same passion or have a strong sense of belonging. In line with Meyerson et al. (1996), trustworthiness and reputation positively affect swift trust in face-to-face settings, and these factors are also important in temporary online communities. (Gammelgaard 2010, 353-354.)

A similar concept to swift trust can be seen **fast trust,** which also includes affection and personalized interaction (Blomqvist 2002; 2005). An especially important factor to develop fast trust is, for example, shared vision of the members. In addition, especially in complex knowledge sharing tasks, personalized fast trust between the members in these settings may improve and enable e.g. "*the open tasks and risk-taking inherent in cooperative experimentation*". (Blomqvist 2002; 189, Blomqvist 2005; 136.)

Another trust concept, **initial trust,** is high trust between members, who do not know each other. Initial trust is often developed in situations when the members are geographically sparse and new to each other. (McKnight, Cummings & Chervany 1998.) According to McKnight et al. (1998, 474-475) in the initial trust model, initial trust forms through personality-based (tendency to trust others in general), institution-based (trust represents the sense of security one experiences in situation due to the presence of guarantees, safety measures or other supportive frameworks) and cognition-based trust (trust depends on swift cognitive cues on first impressions, as opposed to personal interactions). McKnight et al. (1998, 476) also mention knowledge-based-trust, referring to the fact that the members might have had a brief history or interaction or first-hand knowledge of others. Knowledge-based trust is not addressed more by McKnight et al. (1998) since the original theory on initial trust does not include any past or ongoing interaction.

McKnight et al. (1998) has explained initial trust through high level trust concept, with the consequences of trusting beliefs and intention, rather than behaviors. Trusting beliefs mean the beliefs or perceptions of individuals when first establishing a trust, for example, benevolence, honesty, predictability, and competence. In addition, high trusting beliefs is often influenced by different factors, such as reputation categorization or stereotyping. Trusting intention means the willingness of an individual to depend on another party.

Trusting beliefs and intention are affected by disposition of trust, trusting beliefs, institution-based trust and cognitive processes (including e.g. benevolence beliefs, competence belief, honesty belief and predictability belief). (McKnight et al. 1998.)

In initial trust, trusting beliefs and intentions are more important than behaviors such as sharing personal information or knowledge when developing high initial trust. By disposition of trust is meant the tendency to be willing to depend on others, and can be divided into two forms; 1) Faith in humanity and 2) Trusting stance. Faith in humanity means the belief that most people are inherently good-natured and reliable, reflecting an individual's confidence in the overall trustworthiness of others and faith in humanity influences trusting beliefs. Trusting stance, meaning the makes an individual to rely on someone else, is influencing trusting intention. Trusting intention on the other hand was researched to be fragile in three different cases: 1) Inadequate support from antecedent constructs, 2) The tentative and assumption-based nature of the antecedent constructs and 3) High perceived risk. (McKnight et al. 1998, 475-479, 483; McKnight et al. 2002.)

To conclude, in temporary online settings, the developed trust is often high swift trust, which is influenced, for example, by actions of other community members. Shared visions, goals and communication are examples of factors influencing high swift trust in knowledge sharing, temporary online communities. According to Blomqvist & Cook (2018, 41), the more complex the tasks, interdependency or need for creativity there is, the more vital it is to be able to build trust quickly. As temporary online expert communities require such characteristics, the importance of trust is high within these types of online communities.

3. RESEARCH METHODOLOGY

In this section, the study methods and material used for this thesis are presented. First, the research context, data collection and data are introduced. After that, the methodological approach as well as data analysis is shown in detail.

3.1 RESEARCH CONTEXT AND APPROACH

This research is qualitative. One of the main differences of qualitative research compared to quantitative research is the fact that qualitative research does not include numerical data, instead other methodologies are used to focus and understand, for example, the dynamics of relationships (Queirós, Faroa & Almeida 2017). According to Patton (2015, 14), qualitative research "*...includes collecting quotes from people, verifying them and contemplating what they mean.*" Data for qualitative analysis may be collected by different means, such as by interviews, observations, fieldwork, or documents (Patton 2015, 14). The interview types according to Brinkmann (2013, 19-21) in qualitative research may be, for example, structured, semi-structured or unstructured. The most used interview type for qualitative research are semi-structured interviews, either individually or in groups (DiCocco-Bloom, Barbara, Crabtree & Benjamin 2006, 315).

3.1.1 FAST EXPERT TEAMS - CASE HYBRID WORK

The research data was gathered from a Fast Expert Teams (hereafter FET) network. FET is a combination of digitalization and knowledge management, known as a new way of organizing online and bringing together experts from different fields and organizations cross-boundary. Experts are brought together to an innovative community, usually working in smaller teams inside the FET in a temporary setting on a digital collaboration platform. FET is often gathered from social or professional media networks, such as contacting the participants from networks like LinkedIn. (Blomqvist 2022a; Toivikko et al. 2023.)

With digital tools and platforms, experts from different fields and knowledge may be brought together to solve a complex issue or a challenge on a FET cost and time efficiently, as FET

is not depending on geographical location (Blomqvist 2022a, 4-5; Toivikko et al. 2023). FETs can be therefore used as a new way of organizing temporary online communities and networks to solve complex issues in a temporary setting (Blomqvist 2022b, 4).

FETs can have many positive outcomes, such as learning more about the topic and substance of the FET, both individually and as a community, as knowledge is shared within the online community members. Therefore, besides utilizing one's own expertise and knowledge, the members of the FET may also develop their own skills and knowledge. As the members of FET usually do not know each other beforehand, they will gain new connections and broaden their network. The members of the FET will learn about a new way of organizing. (Blomqvist 2022a, 7, 10; Blomqvist 2022c, 11.)

This thesis uses data that was collected earlier in 2021 by a research team from LUT University. The data was collected by the research team from a FET as a part of a program called WORK2030 (in Finnish TYÖ2030), where experts from working life solved issues related to hybrid work and FET working. The FET network worked on a digital collaboration platform called Howspace (for more detail, please refer to chapter 3.1.2), in a temporary setting, over the span of one-month pro bono. The aim was to bring together expertise and share knowledge about hybrid work and solve problems related to the topic.

Overall, the FET consisted of 80 experts, who worked in smaller teams of six in the digital collaboration platform. The smaller teams inside the FET were given different tasks, as an example, some teams were solving issues related to the development of the operating model (e.g. legal issues) while other teams concentrated more on hybrid work (e.g. how hybrid work should be conducted).

3.1.2 Digital collaboration platform Howspace

Howspace is a digital collaboration platform founded in 2008. Ever since 2008 the company has gained users globally, and today Howspace has over 30 000 active users. Howspace is a digital collaboration platform made to support real-time collaboration and engagement, learning and development and to drive progress. In their own words: "*Howspace is the platform that organizations use to foster culture and reshape how work happens in order to align everyone for the greatest impact."* (Howspace 2023a.)

Therefore, the platform architecture supports such collaborative engagement by providing chats (such as interactive Super Chat), polls and live video meetings to users. In addition, Howspace maintains engagement with targeted email invitations and reminders which are sent to participants. Users may also add personal information of themselves, such as add profile pictures or share photos, and participate actively to other messages by replying or liking them. Facilitators may also create separate teams of participants or noiseless spaces by using Path mode. Howspace utilizes artificial intelligence (hereafter AI) to analyze key points from participants by creating, for example, AI Summaries or Word Clouds. (Howspace 2023b; Howspace 2023c.)

Privacy is important at Howspace and the digital collaboration platform has ISO 27009:2013 certification, covering all business processes, and the hosting providers are ISO/IEC 27001:2013 compliant, which is "*the globally recognized information security standards for Information Security Management Systems (ISMS).*" Howspace is also up to date to General Data Protection Regulation (GDPR), and has a Security Steering Committee (SSC), accountable for information security. The digital collaboration platform itself are hosted on Amazon Web Services (AWS), and the data is also stored on Amazon Web Services premises. (Howspace 2023d.)

3.2 RESEARCH DATA

The method to collect data was by different types of interviews, by utilizing qualitative research methods. The two different interview types were individual phone interviews and focus group interviews. Different types of interviews were conducted to gain a comprehensive understanding of how trust is formed in temporary online expert communities.

As shown in the theory section, trust is a multidimensional concept and different factors such as expectations, actions and experiences influence it comprehensively. Therefore, individual phone interviews were gathered to understand about the participants' expectations of the FET and expectations relation to trust. To get a comprehensive understanding of trust formation, experiences of the FET were inquired with focus group interviews. For more information the data and what it is used in this thesis, please refer to Table 2.

On top of the 80 experts who participated in the FET and the number of those who were interviewed, important factors to carry out the FET were employees and researchers from LUT University. The approach from LUT's side was called *Action Research*, as the LUT's participants were heavily involved in many parts of the research (such as facilitators, interviewers and leading the FET). By action research, it is meant that the research is carried out in "*close collaboration with the research object and its practical problem solving is part of the research process*". Due to the interactive nature of action research, it is often described as being an "*enquiry with people*", rather than just "*research on people*". (Eriksson & Kovalainen 2008, 194-196.)

Table 2. Information about the data

Data item	Individual phone interviews	Focus group interviews
Description of the data	Voice recordings and transcriptions	Video recording and transcriptions
Quantity and quality of data	61 preliminary interviews via phone, 16 to 65 minutes. (N=60)	Five focus group interviews with total of 25 participants in expert roles. (N=25), 57 to 87 minutes
Time	July 2021	August 2021
Type of information from this data	Expectations and background information	Experiences and reflections about the FET
Limitation of the data	Not able to see non-verbal cues	25/80 of FET members participated

Individual phone interviews

The individual phone interviews were gathered before the FET was launched (for a more precise timeline see Figure 4). 61 individual semi-structured phone interviews were conducted in Finnish to understand about the expectations the participants had about the FET project, as well as to learn more about their backgrounds. However, as one interview was conducted in two different parts, a total of 60 individuals were interviewed during the individual phone interviews. Duration of the individual interviews varied from 16 to 65 minutes. The exact lengths of each individual phone interview are presented in Appendix 3. The individual phone interviews have been recorded and transcribed.

The individual phone interviews of this research were semi-structured interviews. Semi-structured interviews mean that the interviews are somewhat guided, where certain questions, topics and issues are discussed with the participants. The advantage with semi-structured interviews is that the theme of the interviews stays systematic and similar, however, the answers and conversation of the interview might vary depending on the interviewee, where also the interviewer can participate more compared to structured interviews. As in semi-structured interviews the questions are often open-ended, other questions may also come up, as the interview is conversational rather than predetermined. (DiCocco-Bloom et al. 2006, 3015; Eriksson & Kovalainen 2008, 85; Brinkmann 2013, 21.) The individual phone interview question template presented to the interviewees are shown in Appendix 1.

Focus group interviews

In addition to individual phone interviews, five focus group interviews were conducted in Finnish for a research project. Focus group interviews is a technique to collect data or even more a method, usually consisting of 2-10 participants selected by researchers to talk about certain focused topic related to the research. Thus, according to also its name, in focus group interview the group is discussing about a certain topic and focuses on discussing and interacting about the chosen topic more with each other than the facilitator. (Eriksson & Kovalainen 2008, 174-177.)

As this thesis focuses on the notion of trust, the focus group interviews concerned five main themes related to trust and online communities: 1) Roles and action, 2) Building trust, 3) Factors promoting and hindering the creation of knowledge, 4) Technology in creating team's knowledge and 5) Leadership. The themes and interview question template can be found from Appendix 2. The facilitators of the focus group interviews guided the conversation around the main themes and tracked the time to stay withing the given time frame, without guiding or contributing to the answers.

The focus group interviews were conducted during the FET or immediately after closing the FET. This timeline ensured that the interviewees had the project and experiences in fresh memory, thus could share their experiences trustworthy. The five focus group interviews consisted of 3-8 participants per group, in total of 25 participants, and were conducted on Microsoft Teams. The participants were self-selected and each of the FET participant had a

chance to participate in the focus group interview if wanted. Duration of the focus group interviews varied from 57 to 87 minutes. For more precise information of the length of each focus group interview, please refer to Appendix 3. Both interviews and focus group have been recorded and transcribed.

Some of the interviewees participated both in individual and focus group interviews, whereas some participated only to phone interviews or to focus group interviews (for a more detailed allocation, please refer to Figure 6 or Appendix 3). A more precise timeline of the interviews and the FET network can be seen below on Figure 4. Please notice that the aim of the timeline is to show an overview of the project and the interviews (marked in cursive text). Therefore, the timeline does not show all the activities nor communication done with the FET community.

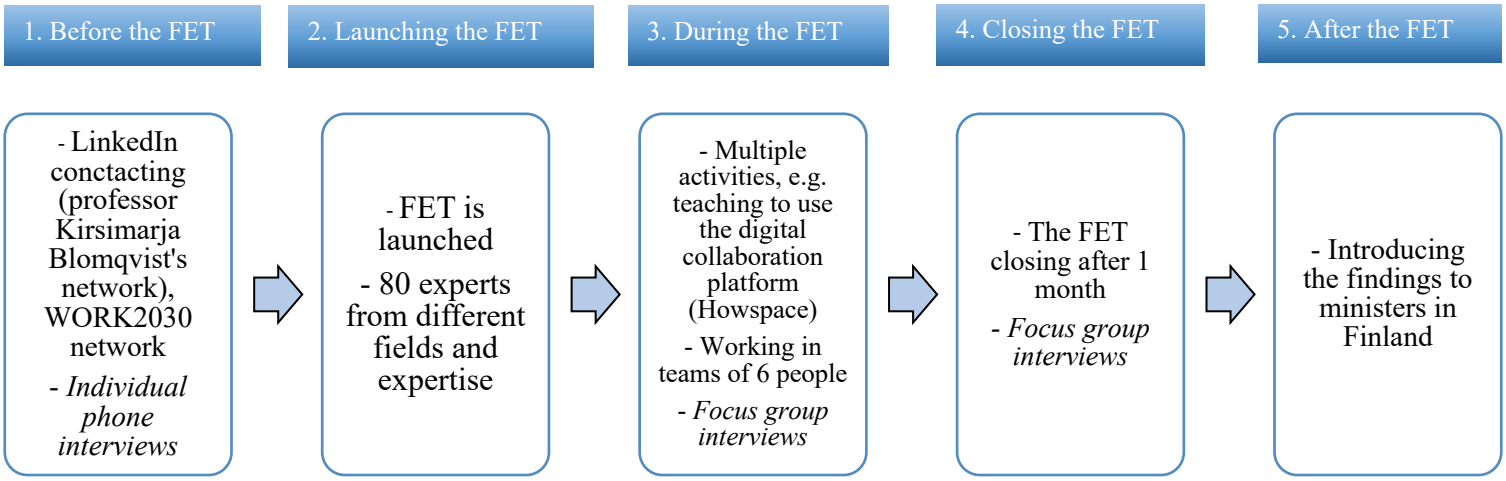

Figure 4. Timeline of the FET community and interviews

3.3 Informants

As shown in Figure 4, professor Kirsimarja Blomqvist (hereafter KB) contacted experts from her LinkedIn network, who were invited to the FET. Additionally, participants were also invited to join the FET from the WORK2030 (in Finnish TYÖ2030) project. Sourcing the experts from KB's network ensured that the background, expertise, and abilities of the participants were known and relevant to the FET. Furthermore, the experts from KB's network were diverse individuals, from different types of organizations, ministries, and trade unions, who had the complementary perspectives and knowledge about the future of hybrid

work. Having experts with different backgrounds and from different organizations, ensured that the FET consisted of diverse and comprehensive expertise knowledge about the FET subject. In addition, as joining the FET community was voluntary for the participants, this ensured that the participants were interested and motivated in joining the FET. For more information about the interviewees (participation rates and gender balances, information about the interviews in general, work experience), please refer to Figures 5 and 6 and Appendix 3.

To clarify, due to the large number of interviews and anonymity of this thesis, more information of the interviewees, such as participation in interviews and length of interviews can be found from Appendix 3. To protect the identity of the interviewees, the job titles or descriptions are not disclosed in more detail. However, many of the interviewees were working as consultants, project managers or heading development roles in different types of companies, public administration organizations, and trade unions. Moreover, a connecting factor on top of the fact that most of the participants were experts with long careers, many of the interviewees were in managerial positions and working in a Finnish organization. The information of the participants and their background was gathered from the interviews and their LinkedIn profiles.

To protect the identities of the interviewees when using direct quotations or referring to an interviewee, the interviewees were marked with pseudonyms. The interviewees were marked with numbers from 1 to 68 in an Excel sheet. The pseudonym numbers do not go beyond number 68, as some of the participants participated in both focus group and individual phone interviews, were thus marked with the same number regardless of the interview type (please refer to Figure 6 or Appendix 3 to see the participation in interviews in more detail).

General information about the gender balance from the interviews can be found from Figure 5. As can be seen, in both focus group and phone interviews, most of the interviewees were women. In addition, as Figure 6 shows, many participants were included both in phone interviews and focus group interviews.

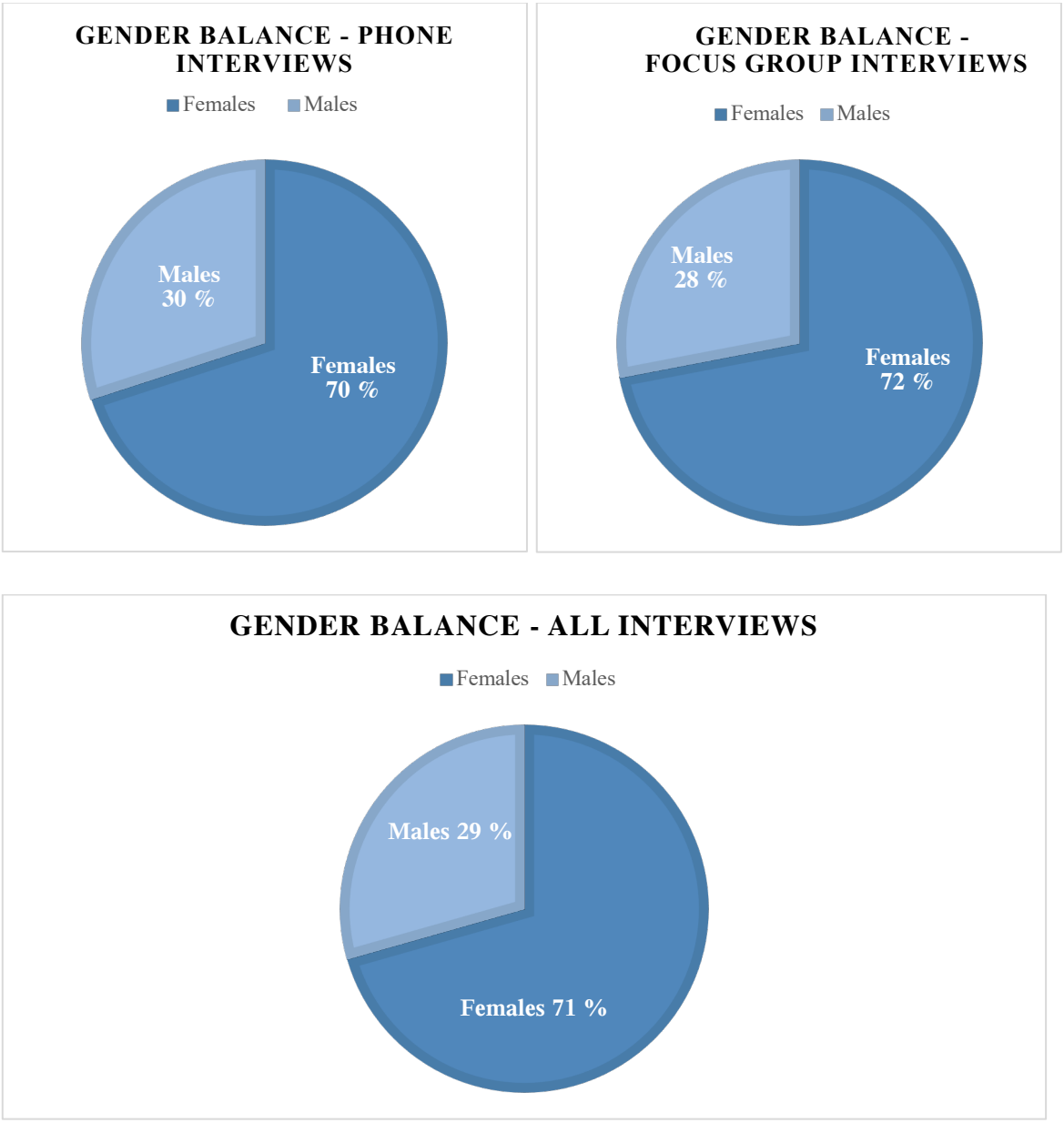

Figure 5. Gender balance of phone interviews, focus group interviews and all interviews

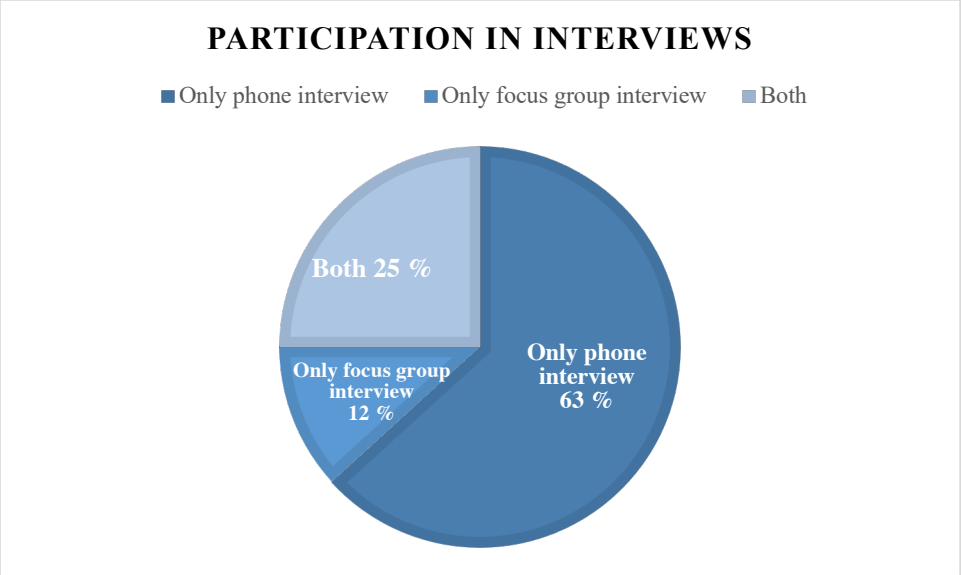

Figure 6. Participation in interviews

3.4 Data analysis

In this research the data is analyzed using Gioia methodology. The Gioia methodology was chosen for this thesis, as it focuses on interpretation and *rigorous* analysis, encouraging to analyze the collected data in systematic way, yet understanding undelaying themes and meanings of the research phenomenon. (Gioia, Corley & Hamilton 2013, 15-16.)

In general, the Gioia methodology is a broadly used template to analyze qualitative data (Mees-Buss, Welch & Piekkari 2022). In Gioia methodology, the data is first analyzed through 1st order codes meaning that the terms and topics relevant to the study are determined by not being too strict and keeping them similar to the original voice of the data (e.g. using the interviewees own words by keeping the data quite untouched at this point). Then, 2nd order themes are formed from the 1st order concepts, which are larger and more abstract themes from the data. In this phase, similar patterns or differences between the codes are identified. Lastly, aggregate dimensions are built based on 1st order concepts and 2nd order themes, meaning the main categories and themes for the research. (Gioia et al. 2013.)

To analyze the data and interviews, the interviews were recorded and transcribed. Each of the interviews have been transcribed into a different file, which according to Metsämuuronen (2011, 220, 254) is important to understand the researched interviews well. The transcriptions have been formed carefully and they include information about the interviews,

such as the length of the interviews, exact date, and speaker marks. The transcriptions have been made by the employees and researchers at LUT University involved in this FET project.

The transcribed individual phone interviews and focus group interviews were transferred into NVivo, which is a tool used for analyzing qualitative data. First, 1st order concepts were created and found with NVivo. As the interviews and transcriptions were conducted in Finnish, the example quotes have been translated from Finnish to English for this thesis, choosing translations carefully as close as the original quote in the original language. Few interviews were triangulated with supervisors for research triangulation before coding all the data individually, to ensure avoiding coding biases. After coding the data individually, a joint session was held to go through the results and main themes before writing the research results and conclusions. The individual phone interviews were analyzed first, and after that the focus group interviews.

Once the 1st order concepts were determined and collected, the next goal was to find larger themes from the interviews, by forming 2nd order themes. Even though there were different interview types, similarities were looked for from all of the interviews. After 2nd order themes were found, five main categories, i.e. aggregate dimensions were formed, being the main themes for this thesis. For a more detailed data structure, most mentioned 1st order codes, 2nd order themes and aggregate dimension formation, please refer to Appendix 4. In conclusion, the aggregate themes were identified as:

1. Expectations shaping trusting intention
2. Demonstrating appropriate behavior and competence
3. Showing interest and motivation towards shared goals
4. Perceiving the organizing party as reliable and competent
5. Experienced trust inhibiting factors

The first aggregate dimension (Expectations shaping trusting intention) is based on the individual phone interviews conducted before the FET. To keep the two different types of interviews separate, please refer to Figure 7 for a clearer data structure of the 2nd order themes and some 1st order codes found from the individual phone interviews. The findings and more detailed data structure of 2nd order themes and some 1st order codes from the focus group interviews can be found from Figure 8.

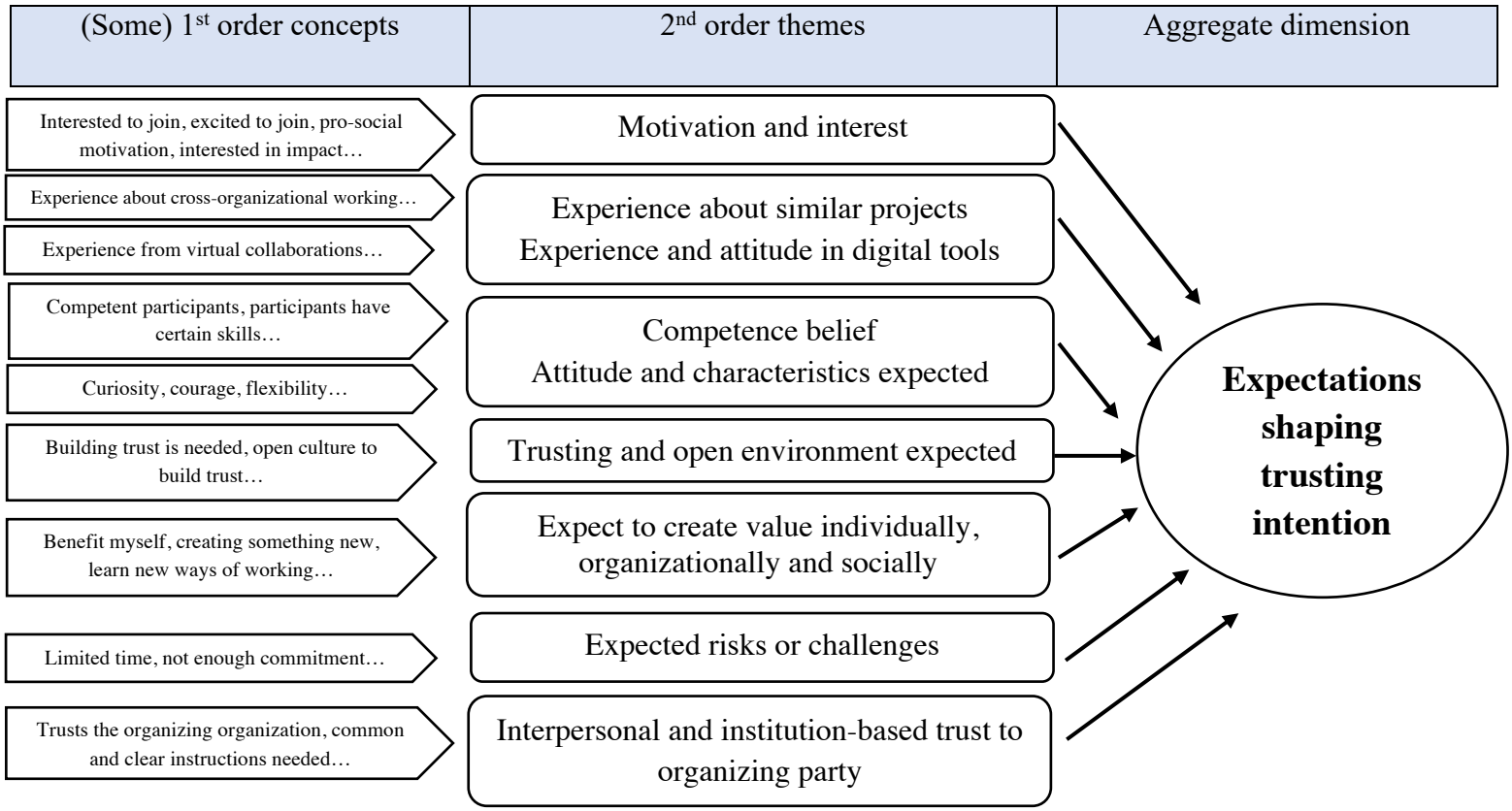

Figure 7. Data structure, individual phone interviews (Based on Gioia et al. 2013, 21)

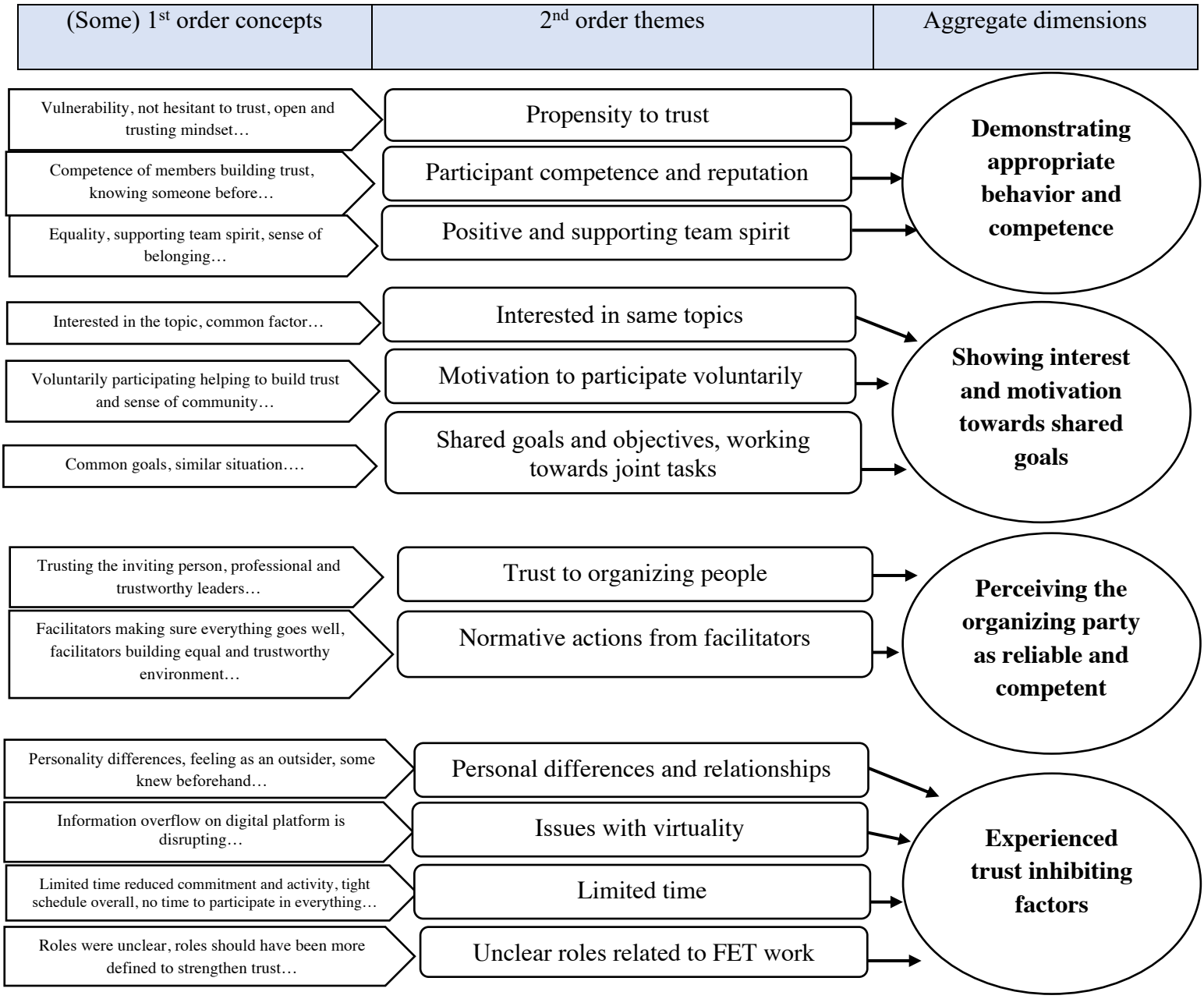

Figure 8. Data structure, focus group interviews (Based on Gioia et al. 2013, 21)

4. FINDINGS

The interview data is analyzed in this chapter. The results are looked through the lens of the main themes and dimensions presented in Figures 7 and 8. The results are first presented from the individual phone interviews on chapter 4.1, to understand the expectations of the participants. Then, to understand the experiences and trust formation in practice in more detail, the results are analyzed from the focus group interviews perspective in chapter 4.2. To gain a comprehensive understanding of trust formation in temporary online expert communities, it is needed to recognize the respective roles of both expectations and experiences in the trust formation process.

4.1. EXPECTATIONS SHAPING TRUSTING INTENTION

From the individual phone interviews, clear common themes arose about the expectations and previous experiences of the participants. One common factor from the expectations was the shared motivation and interest towards same themes and topics. Most of the participants were interested, motivated, excited, or had some other positive feeling of joining the FET. As the participants were picked carefully by KB, with the exception of some participants picked up by WORK2030 (in Finnish TYÖ2030) project, their possible motivation, interest, background and pro social and collaborative behavior were evaluated already when inviting the participants. As the members were carefully picked for the project based on their profiles, they had similar attitudes about the upcoming FET. Indeed, as shown in the quotes below, almost all the chosen participants had positive feelings about the FET.

"At this point, I think everything is interesting."
-Interviewee 11

"With a good feeling and energy, I believe this will be a good thing."
-Interviewee 16

In addition to being personally invested and happy to join, it was also expected that other participants are highly interested and motivated about the topic, with certain characteristics. As a prerequisite, it was expected that the participants were, for example, open, curious, and

brave. These same factors were brought up multiple times, meaning that the participants expected certain type of people to join. Therefore, the participants were able to do positive categorization based on their expectations, as illustrated by interviewee 55.

"*I assume that the participants in this work are probably basically quite open-minded and interested… I don't think I will encounter an awful lot of any strong attitude and other resistance.*"
-Interviewee 55

As said, one clear topic why the participants were interested and motivated to join, was due to the interesting topic and possibility to create value individually, organizationally and socially. To create value personally, many expected to, for example, learn new ways of working, network with new people and generally learn from others. Organizationally, it was expected to create value from finding new inspiration or to gain new knowledge, as the interviews indicate:

"I can see that this is the working model of the future, from which you can get a lot of personal benefit as well."
-Interviewee 53

"…and the organization also benefits from the new thinking and new know-how that such a person brings."
-Interviewee 56

Most importantly, many of the participants, like interviewee 29 quoted below, were expecting to create concrete results to solve societal issues and especially to benefit Finland's work life.

"Well, I hope that first of all you get a good result, that it does benefit it, you reach the goals or what is expected from here, that it does benefits Finland working life."
-Interviewee 29

Similarly, interviewee 54 also thought the FET would create meaningful results for the whole society.

"Understanding the whole picture, participating in this is the benefit of the whole society that then creates something new for everyone…"
-Interviewee 54

Therefore, different types of motivation were identified from the expectations, concentrating on pro-social motivation, related to impact and value creation, as well as intrinsic motivation, related to specific topic. Overall, the common theme was to create value and something meaningful, which was also feeding motivation to engage and participate in the FET. As the data and quotations show, the participants had a shared idea, motivation, and interest to the topic, what they are doing and want to achieve at the FET. Therefore, there was a common factor and sense of belonging even before the FET was formed. Indeed, the feeling of community and sense of belonging was also expected from other participants, as interviewee 38 pointed out.

"Then there should be a shared vision of what we are doing and why, this kind of sense of community."
-Interviewee 38

Another common factor of the participants was the fact that all were experts in their own field, despite having diverse backgrounds. However, some participants had prior knowledge of other participants invited to the FET and had established knowledge-based trust due to prior connections. However, those who did not know other participants beforehand, got information of the profiles and expertise of those who had been invited to the FET. Therefore, members could expect that the other participants were going to be competent, as they had been carefully selected to the group, or due to established knowledge-based trust, thus could trust others' reputation and competence. This can be illustrated in the following quotes.

"…probably the participants are quite an interesting or delicious mix."
-Interviewee 8

But maybe my assumption was that pretty much everyone in this group has this skill."
-Interviewee 46

"…[name deleted] is my former colleague. This is why I am joining."
-Interviewee 51

As said, diverse competence background was expected from the participants:

"It's just very refreshing if there are people looking at it from very different angles, so you can indeed get insights from others."
-Interviewee 51

Additionally, as most of the participants were picked from KB's network, the competence belief was also relied to a third-party trust, meaning that trusting KB had picked the right, competent people.

"Kirsimarja has probably not chosen any useless people here."
-Interviewee 17

Indeed, from the expectations, an institution-based and interpersonal trust was already recognized to the organizing party. Furthermore, it was recognized that the organizing party had a positive reputation, especially their competence, as well as the organizing university in general, as shown by interviewee 51 and interviewee 20.

"A very positive feeling about the university."
-Interviewee 51

"I am pretty confident that this will work out. The start was good and Kirsimarja and her partners were very convincing, those who were talking."
-Interviewee 20

Therefore, the prior experiences or positive categorization about the organizing party helped in the formation of initial trust. Almost all participants expected that the organizing party provides clear instructions and expectations to the participants, as well as having dynamic facilitators and leadership.

Related to competence belief, most members had experience from similar projects, such as cross-organizational work, working with strangers, voluntary informal collaboration, or general information how these types of projects work. The attitude towards cross-organizational work was in general positive, and if someone did not have much knowledge about cross-organizational work, they were eager to learn new ways of working. Additionally, some participants stated that they had positive previous experiences of similar temporary, virtual or cross-organizational projects, thus also influenced positively their expectations about the upcoming FET. For example, interviewee 54 and interviewee 39 shared their experience in cross-organizational work and similar projects.

"Most projects where I am involved in have cross organizational boundaries."
-Interviewee 54

"If we are talking about this expert thing, I have been to a few similar ones."
-Interviewee 39

Unlike most interviewees, interviewee 28 did not have much experience from cross-organizational work, yet was interested to participate.

"This was really interesting in the sense that, cross-organizationally or even internally, have I been able to participate in those, if I really think, confusing how little."
-Interviewee 28

Also, almost all participants had knowledge about digital tools and projects in general. Furthermore, some participants pointed out that the Covid-19 pandemic had increased the usage of digital tools and platforms. Mostly, the overall attitude about these types of projects and digitality was excitement, positivity, curiosity, and interest. Therefore, from the expectations there were no clear trust barriers related to system-based trust and digital factors, as almost all had prior experience from virtual collaborations and virtual collaboration tools. Most often the virtual collaboration tools which the participants had used were Microsoft Teams or Zoom, yet some also had experience from different digital collaboration tools, such as Howspace and Miro.

"In my work, I have always liked to use different digital tools in some way."
-Interviewee 4

"Yes, they are familiar. I actually work virtually one hundred percent of my working time."
-Interviewee 30

Similarly to interviewee 4 and 30, many saw digital tools and technology as a possibility, such as providing opportunities for communication and interaction, as well as time saving.

"I appreciate the openness and cooperation, and digital tools make it possible in a completely new way."
-Interviewee 37

However, despite the fact that many were open and curious about digital tools and collaborations, some also had a negative or neutral attitude towards digital tools. One reason to have a negative attitude towards digitality was due to age or seeing them as a necessary

bad due to the Covid-19 pandemic or because of the digitalization in organizations, as the below quotes indicate.

"I am a man of the old union, I hate all platforms and all other things."
-Interviewee 51

"I see them as a bit of a necessary bad, and I ready to take advantage of them."
-Interviewee 9

However, as said, most participants were rather optimistic and interested in digital collaboration and digital tools. These positive previous experiences, yet overall positive and open attitude provided benevolence and enabled the creation of initial trust and trusting intention at the FET. Indeed, the participants also expected a trustworthy and open environment, thus perhaps being benevolent and open to trust naturally.

Trusting and open environment with good atmosphere was expected as a crucial factor to achieve the shared goals. The participants emphasized the necessity of fostering trust within the FET. Trust was expected to be essential factor to form trust, to enable knowledge sharing and to be vulnerable and brave to share about topics outside your comfort zone. Other factors which were expected from others were participant behavior and attitude, seen in the following quotes.

"Also the creation and emergence of trust is needed quite suddenly."
-Interviewee 2

"The first thing that immediately comes to mind is trust, daring to bring up things that you are not quite sure about."
-Interviewee 12

To create a trusting and open environment, the participants expected that, for example, getting to know others personally is needed. Despite these positive factors to trusting intention, multiple risks were expected. Especially factors such as limited time, virtuality, commitment, and equal contribution came up most often as a possible perceived risk. To demonstrate, limited time as a risk was mentioned by over 40 interviewees, virtuality by over 15 interviewees, commitment by over 10 interviewees and equal contribution by over 15 interviewees.

"The challenge is certainly when people have so much else going on."
-Interviewee 42

"It's really nothing else but the challenge is probably related to whether or not you can, really, can really commit."
-Interviewee 9

Other perceived risks which were brought up several times concerned communication issues, having different people with different background and cultures, engagement, not creating anything useful or using the created work, different levels of virtual competence, uncertainty, arrogance about own skills or that a trusting environment would be challenging to create (in more detail, see Appendix 4). However, 20 interviewees did not recognize any risks related to the project, showing benevolence, and overall trusting nature.

To conclude, the positive and shared expectations of the participants enabled a high initial trust to the basis of the FET. In addition, the selected participants expected others to have similar goals, attitude, values, interest, and motivation, thus the group had high engagement before starting the FET. Therefore, from the expectations no relevant trusting barriers were identified, expect some of the high perceived expected risks.

4.2 Experienced trust formation and inhibiting factors

In this chapter, the factors influencing trust are analyzed from the focus group interview data, to understand how trust is formed in temporary online expert communities. First, this chapter focuses on the positive trust building factors and then experienced trust inhibiting factors. The aim of the sub-chapters 4.2.1, 4.2.2 and 4.2.3 is to answer the research questions 1 and 2, to provide understanding how trust is built in temporary online expert communities, and which factors influence the trust formation process. Then, the trust inhibiting factors based are looked more closely on chapter 4.2.4, to understand how trust could be increased in temporary online expert communities, answering research question 3.

4.2.1 Appropriate behavior and competence of participants

According to the focus group interviews, a critical factor influencing trust was the participant behavior and competence. As such, the participants were experienced to be, for example, trusting, open, vulnerable, and brave. The participants experienced that these characteristics were critical characteristics to a FET, enabling the trusting environment. Additionally, having propensity to trust and sharing similar characteristics were also factors fostering the trusting environment, as for example, interviewee 27 illustrated.

"Somehow people came just with a good attitude, being open and trusting."
-Interviewee 27

Similarly, interviewee 19 experienced vulnerability and openness from the participants:

"And as [name deleted] said, there was no reason not to trust."
-Interviewee 19

These characteristics were also experienced in building the supportive and positive team spirit, which was seen as an important trust building factor, as it created a sense of community and trustworthy environment. The positive team spirit was experienced to be built especially by the active and supporting participants, who with their activity showed their support and value to others. As an example of such, it was mentioned by many participants that the digital collaboration platform provided suitable architecture to build supportive team spirit, as it enabled versatile communication methods, such as being able to like and react to comments or to comment to others' posts. Therefore, showing support and activity through the digital collaboration platform increased impersonal system-based trust, and affected the formation of interpersonal relationships and trust in the FET. For example, interviewee 4 and interviewee 22 pointed out the importance of active participation to trust building.

"Then this valuing of others rose there quite nicely, when we commented on each other's thoughts, gave thumbs up or sent hearts or something else soft, it again brought that feeling of "hey, we value each other" and it built that trust deeper again."
-Interviewee 4

"...we work on a digital platform, so I think it felt nice when we went to like each other's comments or somehow reacted to them, and it brought that same good feeling that we notice each other in those texts, so it's surprisingly important and nice."
-Interviewee 22

As the data shows, supporting activity and behavior was seen important, to show value and respect others, but also to enhance the confidence of others, encouraging them to share their expertise and knowledge. Overall, it was seen that the equal and supporting team spirit contributed highly to the formation of trust, leading the participants to feel a high sense of belonging. In addition, other activities together such as the informal lunch conversations were experiences as a proficient way to get to know others better. Indeed, the participants experienced that getting to know others helped to develop trust, despite according to their experience, there could have been even more opportunities to develop deeper personal connections, as shown by the following quotes.

"In my opinion, the fact that we are all equally on the same line contributes to the building of trust."
-Interviewee 43

"…probably something that has helped build trust at the team level, of course, getting to know a little better the individuals you are with…"
-Interviewee 15

However, despite having mutual experiences about the characteristics, behavior and activity increasing trust, different views were experienced about the previous collaboration history with other participants. Some believed it increased trust not to know anyone beforehand and to have participants from different organizations. As an example, interviewee 52 pointed out that not having shared history with others increased trust, since there is no pressure of losing your reputation, as you are only working with strangers for a temporary project.

"*And when there was no stronger bond than this, it was easy to bring it into it, because there was no risk of losing face or competence debate or authority debate or anything like that."*
-Interviewee 52

As shown in the quote by interviewee 52, also others thought it would be good to not have any history with others, in order to be completely vulnerable. On the other hand, some thought that trust was affected positively if there were familiar participants in the FET.

Knowing others beforehand was seen as a positive trust building factor by some, since the participants had already established knowledge-based trust and could trust in the competence of individuals within their network. Moreover, having prior acquaintance with fellow participants was viewed positively by some, as it provided reliability from the sense that it allowed individuals to count on the familiar people for additional support. To conclude, some experienced knowledge-based trust and history with other participants to increase trust and create trust on the network level in general, as shown below.

"And of course, already knew someone else beforehand, and then we even got closer in the small group,"
-Interviewee 61

"Knowing or understanding another person immediately spreads trust more in the whole network."
-Interviewee 68

As mentioned earlier in the quote of interviewee 52, it felt like there was no competence or authority debate in the community. Indeed, it was experienced that the competence of other participants was building trust to the members, especially for teamwork activities. Many of the participants felt that they could trust others due everyone being experts and having a lot of competence from different backgrounds. Additionally, as mentioned, some experienced that knowing others beforehand boosted trust, as their competence and background was already known. The trust to other participants' competence was also influenced due to third-party trust to the inviting and party and people, since the members trusted the organizing party, they believed the invited people were competent and expert.

"…it created that trust, that, all the time, I had the feeling that experts had been invited there, that is, that I was able to consider each and every one invited as an expert."
-Interviewee 65

"…there are different people and everyone in their own way, you can definitely see that there are skills you don't have, different skills."
-Interviewee 67

In conclusion, the trusting and open environment was created swiftly especially due to the participant behavior and characteristics, of showing support, being vulnerable and open to trust others. Furthermore, the competence and expertise of others were regarded as favorable

attributes, establishing creditability among the participants. Hence, fostering a sense of equality, belonging and expertise elevated the trust, cultivating to team spirit, secure to trust others and exchange knowledge freely.

4.2.2 Showing interest and motivation towards shared goals

The participants felt that they were united especially due to their mutual interests and motivation towards the same topics. The interest related to specific topic also boosted intrinsic motivation, due to many of the participants experiencing the topic as highly meaningful. It was also believed that due to the mutual interests and motivation, a sense of belonging was created, as the shared interests and motivation were a common factor within the participants, thus created trust. As interviewee 43 pointed out, the shared theme united the participants.

"Just the fact that of having interest in that content, that theme is what unites, it does create I [trust], it's very natural."
-Interviewee 43

The interest and motivation to participate to the FET was experienced, for example, since all participants joined voluntarily. Therefore, by participating pro-bono in addition to own work and tight schedules, emphasized the participants' interest and motivation towards the project. Noteworthy, the participants experienced that due to shared interest to the topic and voluntarily participating without any competition, trust was able to be created swiftly, without necessarily the need to build deep trust.

"Once this is voluntary, there is certainly no aspiration for the same people who now somehow came with nothing but with an open mind and trust first."
-Interviewee 42

"As it was that kind of topic, that you didn't have to build deep trust because people felt comfortable doing this, and there was no competition at any point, so you didn't need go two steps further in building trust.
-Interviewee 65

On top of the high interest in the topic, the participants also shared pro-social motivation towards the same goals, to create value and impact through the project. Since sharing the same goals of creating impact of something valuable and meaningful, the participants were

in a similar situation which further united them. Despite not all the solved tasks were conceived necessarily delightful, the participants experienced that being in the same situation and solving issues together strengthened trust. Therefore, the shared goals were seen as an important trust building factor, since the shared goals created sense of mutuality and community, thus the participants could trust others to commit on the same tasks. This is shown in the following quotes.

"...together we kind of worked on the material, so that kind of increased the trust in each other."
-Interviewee 22

"...but what I would like to emphasize is that where that trust comes from, I think a lot of it comes from common goals."
-Interviewee 64

As these results show, the similarity towards same goals, topics, as well as intrinsic and pro-social motivation to create value were seen to increase the trust. The shared goals and objectives were seen as a unifying factor, bringing the participants together swiftly.

4.2.3 Perceiving the organizing party as reliable and competent

According to the interviewees' experience, one of the main factors building trust was the reliable and competent organizing party, especially the organizing people. The interviewed participants saw the organizing people as competent and professional with the correct characteristics, thus being trustworthy. As the organizing party was seen as a reliable and competent, the participants felt confident to trust the process itself, as shown by interviewee 64.

"I would also like to comment on this trust matter, that in my opinion the actions of Kirsimarja, Tuuli and Niina played a big role in building trust. And their attitude, how they put themselves out there in many ways."
-Interviewee 64

Furthermore, as mentioned, many of the participants had knowledge and history-based trust to the organizing person or people, due to having previously worked together or due to other shared experiences. Therefore, apart from trusting the process because of the established institution-based trust, the trust to the organizing party influenced to creating third-party trust to other participants. Thus, the established interpersonal trust to the organizing people

additionally affected the interpersonal trust building between the participants, as mentioned in previous chapters and by below quotes.

"..quite a lot is based on the fact that I trust Kirsimarja. I know Kirsimarja, I trust her. I have known her for a long time, I have followed her work. In other words, a kind of transferable trust that when Kirsimarja invites, these are really good people with whom you can jump into things straight away."
-Interviewee 10

Interviewee 26 had the same thoughts as interviewee 10, trusting the inviting person:

"I especially liked the fact that we were all hand-selected, that it was Kirsimarja who selected us, thus creating a third-party trust."
-Interviewee 26

As shown, the organizers and many participants had already established interpersonal trust, shared positive history and experiences, and trustworthy reputation. Additionally, as shown by interviewee 10, the organizers' competence and experience from similar projects were valued, and increased both interpersonal, and institution-based trust and reputation. However, the actions from the organizers additionally increased the trust in the FET, but also interpersonal trust to the organizers. Firstly, due to the dynamic and active facilitating, the organizers helped in building equal and trustworthy environment, for example, by ensuring equal participation. Due to the fair and active facilitating, the organizing party created a trusting environment, where trust building was possible to start swiftly.

"And the group dynamic starts to shape in certain way and the role of a facilitator is emphasized here, that everyone gets to participate and is equal."
-Interviewee 15

"Certainly the role of the facilitator, so that everyone somehow gets to participate equally and everyone's views are equally valuable."
-Interviewee 15

Additionally, the normative actions from facilitators played an important role in establishing an equal and trustworthy environment. According to the participant experiences, since the organizers were active facilitators, and made sure that the process moved forward overall in schedule, created trust to the processes and institution itself. Thus, due to being a well facilitated and managed process in general, the participants did not need to stress or question the process, instead, their energy could be used in the trust building actions and being present with other participants.

"Another factor which I think created trust is that this was a very well facilitated process"
-Interviewee 66

Similarly, interviewee 67 felt the facilitators had a crucial role in trust formation:

"...named or pre-committed facilitators or responsible persons who bring confidence that this will stay in place and move forward."
-Interviewee 67

As said, the role of the reliable and competent organizers was experienced as a crucial part of trust formation. Furthermore, the organizers also had a strong and crucial role when choosing the participants to join, contacting and choosing the people with correct characteristics and expertise for the temporary online expert community. The role of especially organizers is therefore in crucial already from before launching the temporary online expert communities, to facilitating the process itself by engaging people and facilitating to process, to the very end to meet expectations and create the promised value from the results formed.

To conclude the influence of a reliable and competent organizing party to trust, please refer to Figure 9.

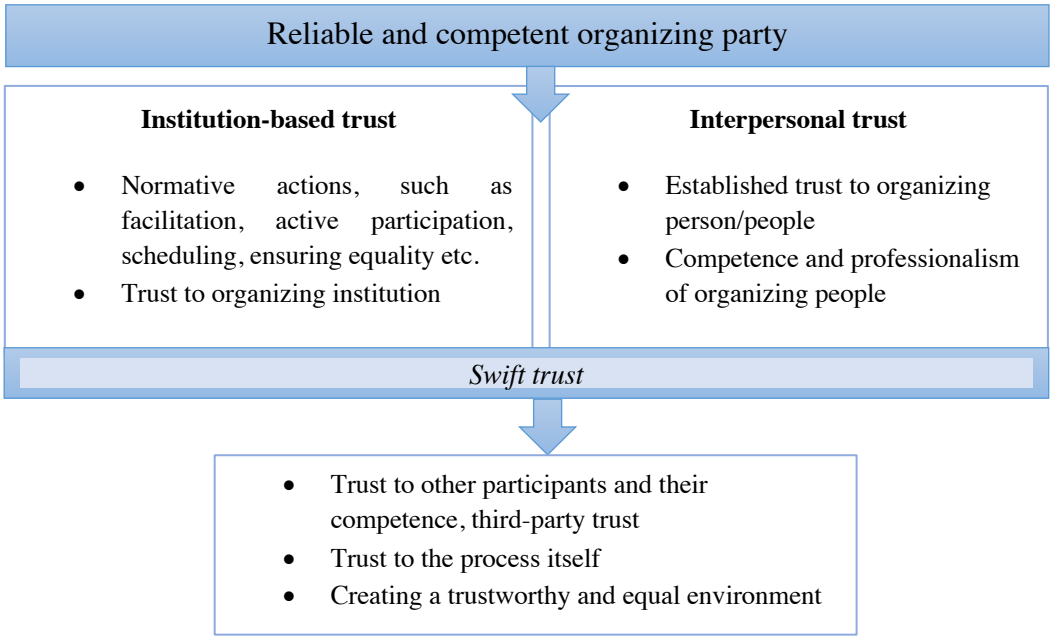

Figure 9. The influence of reliable and competent organizing party to trust

4.2.4 Experienced trust inhibiting factors

Four main trust inhibiting factors were identified from the focus group interviews. The trust limiting factors were concerning limited time, virtual issues, personal differences and relationships and the unclarity of roles.

First, **limited time** was notified as a trust barrier, as the participants felt that the limited time disturbed the communication and active participation. As the participants had limited time to use, they experienced that they were not able to engage in the level desired. As an example, messages were not necessarily reacted to quickly, thus creating the sense of ignorance to other participants, therefore affecting especially interpersonal trust. This can be seen by the quote from interviewee 62.

"So maybe it becomes like ah, why doesn't he/she respond now, should we wait, in a way not directly to trust but concerns it anyway."
-Interviewee 62

The limited time also influenced the commitment and activity broader, as the participants felt like they did not have enough time to commit to the FET. Therefore, the participants felt they did not have enough time to participate, nor communicate with other participants enough. Due to the limited time and tight schedule, the participants recognized issues related to virtuality and the digital platform, which to their experience, took up too much time due to the digital platform being filled up with too much information.

"But also the scheduling issue, that when people get through many messages and so on, they somehow fall off the cart and this particular time was probably the busiest, one of the busiest times of the year…"
-Interviewee 62

Indeed, the **virtuality issues,** i.e. the issues related to the technology-mediated nature of this collaboration, were seen as an issue influencing time management, thus affecting especially impersonal system-based trust, therefore, indirectly interpersonal trust. Additionally, the participants felt that the information overflow and amount of information were excessive and overwhelming, as there was no time to go through the messages on time. As an example, it was mentioned that it was difficult to follow whether someone's post on the digital platform had been commented, as the activity was quick and new comments and notifications came up before being able to react to previous messages. Moreover,

maintaining the discussion proved to be challenging due to the information overflow, and the large number of participants on the digital platform made difficult to track the ongoing activities, as interviewee 30 pointed out.

"The factors that undermined trust were perhaps the fact that there were so many people and at least in Howspace there was so much discussion."
-Interviewee 30

Additionally, virtuality was not experienced as an efficient way to build deep trust compared to face-to-face interaction, as participants believed face-to-face interactions would have allowed even easier and more free communication. As such, in digital settings, participants sensed that conversations could easily shift towards a monologue and lack the essence of a genuine dialogue.

"Of course, building trust to an even deeper level would require seeing people live and having talk to them more freely."
-Interviewee 67

As in virtual settings the communication was perceived to be more challenging than in face-to-face interactions, another trust barrier related to these types of environments concerned **personal differences and relationships,** such as personality differences in online settings. Different personalities and backgrounds, such as being more introverted or having different interests, were seen as a trust barrier, due to being more restricted to the communication and conversation.

"...so perhaps for a person who is a bit more introvert, it can be a challenging environment to get to know people."
-Interviewee 61

Even though there were diverse individuals, pre-existing relationships led to the formation of in-group and out-groups, making some participants feel like outsiders due to prior acquaintanceships. As some participants knew others beforehand and had positive knowledge-based trust, these participants experienced the interpersonal trust to be high due to history with others. Conversely, the participants who lacked prior acquaintanceships, experienced the feeling of in-group and out-group, leading to a sense of being an outsider, thus influencing trust negatively. The in-group and out-group were mentioned, for example, by interviewee 15.

"..maybe a preventing factor could be whether such an in-group and out-group is created, if you come a bit as a new person and then you don't know others, then it could be the same, maybe it's a little difficult for you to get involved."
-Interviewee 15

Therefore, as many of the participants did not know each other beforehand it was seen as a trust barrier that much time was not spent to get to know others personally. As the participants had limited time, the communication shifted to more professional related matters, instead of personal discussions. Personal relationships were considered as an important factor for building trust. However, participants felt that engaging more in personal discussions could have enhanced interpersonal trust further, as shown by interviewee 43 and interviewee 41.

"I completely agree that at first perhaps getting to know others, because trust is only created through that."
-Interviewee 43

"When it's pretty hectic, one-half hour then, other that time, then you have to firmly stick to the point, and you dare to loosen up a little more if you know the group better"
-Interviewee 41

Additionally, **unclear roles related to FET work** were seen as a trust barrier. Since the roles were experienced to be unclear, many felt that there was uncertainty in the FET. Hence, clearer roles would have strengthened trust by boosting confidence and ensuring that each person knew their responsibilities, thus could have trusted in one another to fulfill their tasks effectively. Additionally, uncertainty of roles made the illusion of disturbing and stepping on someone's toes, creating an unsettling feeling. Therefore, clearer roles would have encouraged to more open discussions and fostered trust among participants, as interviewee 19 and interviewee 55 indicate.

"..certain kind of clarity of roles..", "..So it might have strengthened the trust, if you could have been confident that someone is doing it and you can trust it."
-Interviewee 19

"I felt the role of the team leader wasn't always clear, which then brought a bit of uncertainty that I'm stepping on someone's toes", "..so in hindsight it could have made openness to the discussion and more build more trust."
-Interviewee 55

To summarize the experienced trust inhibiting factors and understand why they were experienced to prevent trust creation, please refer to Table 3.

Table 3. Experienced trust inhibiting factors

Experienced trust barrier	Why did it prevent the creation of trust?
Limited time	• Tight schedule limited active participation • Reduced commitment and activity • Limited time disturbed trust building and communication, e.g. discussion about personal matters
Issues with virtuality	• Virtuality limited interaction and communication, deeper trust would be easier to build face-to-face • Information overflow on digital platform was disturbing
Personal differences and relationships	• Feeling as an outsider, some knew each other beforehand • Personality differences influenced communication • Getting to know others more on personal level would have increased interpersonal trust and deeper connections
Unclear roles related to FET work	• Not knowing the roles of other participants increased uncertainty, thus increased confidence and trust to others • Unsettling feeling to disturbing others and stepping on their toes, because of not knowing their roles

5. DISCUSSION

The aim of this section is to answer the three research questions, based on the data analysis as well as comparing the findings to previous research. First, the two sub-research questions are answered, and then the main research question is addressed on the light of the sub research questions. Finally, research limitations and future research ideas are discussed.

5.1 FACTORS INFLUENCING TRUST IN TEMPORARY ONLINE EXPERT COMMUNITIES

To answer the sub-research question *What factors impact trust in temporary online expert communities?* the expectations and experiences found from the individual phone interviews and focus group interviews will be discussed, to understand the critical factors concerning the different types of trust.

Prior launching the temporary online expert community, initial trust was formed. The initial-trust was based on primarily on expectations, such as characteristics of the participants such as disposition to trust and openness, interest towards similar subjects, competence belief, positive categorization, as well as established institution-based trust and interpersonal trust to the organizing party. These factors of initial-trust were closely in line with the initial-trust theory of McKnight et al. (1998), discussing the role of trusting beliefs, cognitive processes, institution-based trust, and disposition to trust affecting trusting intention. However, unlike McKnight et al. (1998) and many other initial-trust researchers, the results of this thesis also considered the aspect of knowledge-based trust, due to some participants and organizers having previous interaction and history.

Compared to the previous research and the theoretical framework on more traditional online expert communities, the findings are mostly in line with the previous research. Similarities concern especially the trust building factors concerning different types of trust; interpersonal, system-based and institution-based trust, however, the findings of this research concentrated mostly on the interpersonal and institution-based trust. The differences can be explained by, for example, the fact that unlike many of the previous research, this

research focused on a temporary online expert community, thus trust concentrating also on swift trust theory.

Furthermore, the main factors affecting interpersonal trust found from this study concerned the personal factors, such as characteristics, behavior and attitude of the participants. These person related factors were mostly in line with the results from previous research by Mayer et al. (1995), Booth (2012) and Usoro (2007) on online expert communities, such as active participation, openness, and competence. Additionally, other relevant person related factors for interpersonal trust not emphasized in previous research of temporary online expert communities, were found to be curiosity, commitment, and bravery. These factors were seen especially important due to the nature of the community, as knowledge sharing was found to require such characteristics, as well as to create a supportive and trusting environment.

Noteworthy, in this thesis results, the interpersonal trust was not just developed between the participants, but also between the participants and the organizing people. As the results show, the competence based, interpersonal trust, already built with the organizing members and inviting party was one of the main factors building trust in the network level as well as to creating third-party trust to other members. Similarly, to Mayer et al. (1995), Usoro et al. (2007), and Booth (2012, 22) on online expert communities, found the most crucial factor of interpersonal trust to be competence, the competence-based trust was crucial in this study between the participants of the community, but also between the organizers and participants. The interpersonal trust was therefore already developed with some organizers and participants but strengthened due to the positive activities such as normative actions from the organizers, and from facilitators being active and reliable.

The findings are also similar the swift trust theory, as for example, Gammelgaard (2010, 354) argues that swift trust is higher in online communities than in other online networks, since the culture is friendly and based on knowledge sharing. Additionally, in online communities the members often share a same passion or have a strong sense of belonging. The results of this study are strongly aligned with the previous swift trust findings in online communities as well, since the sense of belonging, positive team spirit and shared interests were experienced to influence especially swift interpersonal trust. Indeed, aligned with the previous research by Gammelgaard (2010) and Meyerson (1996), there was not necessarily a need to build deep trust, due to the temporality of the project and the swiftly formed trust from the beginning of the FET. Indeed, aligned with the previous research by Gammelgaard

(2010) and Meyerson (1996), some of the participants felt there was not necessarily a need to build deep trust (e.g. form close personal relationships with all FET participants), due to the temporality of the project and the swiftly formed trust from the beginning of the FET. Indeed, in line with the research by Meyerson et al. (1996), the participants assumed others are trustworthy and began working like trust is already built, meaning deep trust was not necessarily required.

The findings of this thesis also support the swift trust theory of Meyerson et al. (1996, 169, 173, 181) and Blomqvist & Cook (2018, 36) that continuous communication builds swift trust, as it was experienced that the supportive and active participation, such as having active communication on the digital collaboration platform, created a sense of belonging and positive culture and spirit. In addition, due to the shared goals and shared interests, the community spirit and positive culture was even more strengthened, in line with the previous research.

However, Mayerson et al. (1996, 169, 173, 181) and Blomqvist & Cook (2018, 36) also argue that short history and limited collaboration experience was seen as a positive factor to build swift trust. Despite the findings of this study also had similar results and it was experienced that not knowing others was beneficial due to being able to be vulnerable and more trusting without having in-group and out-groups, also contradicting findings were made. The findings of this thesis do not completely confirm with previous research, as having history with others and knowing some of participants was also seen as a positive trust building factor by some, since by knowing others, it was experienced good to have someone to rely on and to be sure about their competence. However, experiences varied whether knowing others beforehand was beneficial to trust formation or not.

As said, the reliable and competent organizing party was an important factor to build trust, similarly to previous research. The institution-based trust and normative actions, such as clear communication, expectations and organizing party reputations were experienced as important trust building blocks. These findings are in line with Ardichvili (2003) and Ardichvili et al. (2008), who also point out how communication, expectations and procedures promote institution-based trust. However, a reason why the organizing party and organization was trusted highly, was also due to interpersonal trust and knowledge-based trust to the organizing people, which also influenced positively to the project.

Contradictory to previous research section, system-based trust and the factors related to digitality were not seen as crucial, as for example Leimeister al et. (2005), Lin & Lee (2006), Wu et al. (2010) or Hsu et al. (2011) point out. For example, the digital platform/website privacy policies mentioned by Wu et al. (2010) as a critical factor to build trust, and Mačiulienė & Skaržauskienė (2016, 4827) pointed out how one of the most important aspects of digital collaboration platform is studied to be security and privacy, yet the privacy concerns were not mentioned in this research. However, it was found out that the digital platform architecture in line with, for example, Spagnoletti et al. (2015), Lin & Lee (2006) and Hsu et al. (2011), is indeed a crucial factor influencing trust building in temporary online expert communities due to, for example, enabling active and supportive participation. In addition, contrary to the theory section, information flow on the digital platform was experienced to be more important than, for example, the privacy concerns.

These experiences met most of the expectations, such as the characteristics, interest and competence of participants was what expected, as well as behavior, such as active participation and engagement. Additionally, the participants felt they had created meaningful results, and they perceived the organizing party as reliable and competent. Also, the facilitators were able to meet the expectations of setting clear targets and equal environment. Additionally, some of the perceived risks were met. Although many expectations were met, some expectations, such as some of the risks that were expected were not experienced. An example of risks which were expected but not experienced were related, for example, to the risk of not creating anything meaningful or not to be able to create a trusting environment among the participants. However, as only 25 out of 80 participants participated in the focus group interviews about their experiences, the met expectations are based on a smaller group of people.

To sum up the critical trust building factors in temporary online expert communities, please refer to Table 4 below.

Table 4. Critical factors in temporary online expert communities

Type of trust	Trust is based on expectations or experiences?	(Some) critical trust-building factors in temporary online expert communities
Initial trust, trusting intention	Expectations	• Characteristics of the participants e.g. to disposition to trust, benevolence, competence belief, interest towards similar subjects • Positive categorization • Established institution-based and interpersonal trust to the organizing party • Possible established knowledge-based trust
Interpersonal trust	Experiences	• Person related factors, such as curiosity, competence, active participation, commitment, vulnerability, bravery, openness, shared goals and interests.
System-based trust	Experiences	• Digital and system factors, such as platform architecture and information flow.
Institution-based trust	Experiences	• Organizational factors, such as reputation and expectations, shared values and goals, facilitators, and organizers.
Swift trust	Experiences	• Person related factors of the participants such as propensity to trust, vulnerability, diverse and competent skills • Shared goals and interests • Normative actions from facilitators, trusting the organizing party • Focus on action, such as active participation and active communication
Experiences meeting expectations strengthening trust		

5.2 Ways to improve trust in temporary online expert communities

To investigate the sub-research question *How can trust be increased in temporary online expert communities?*, the findings show ways to further build trust in temporary online expert communities.

As the results found from the data indicated, to increase trust in temporary online expert communities, clear roles should be defined, participants should have enough time for commitment and engagement, digital collaboration platforms should have adequate

information flow and architecture, and sufficient focus for personal differences and relationships, such as spending time to get to know other participants on a personal level.

As found from this thesis, the **personal differences and relationship** issues were seen as a trust barrier since some people knew beforehand, which created an in-group and out-groups and made some participants feel themselves as outsiders. The results indicated similar findings from, for example, swift trust theory. As an example, according to Meyerson et al. (1996) and Blomqvist & Cook (2018, 36), for example diversified skills, short history and limited collaboration are relevant characteristics to swift trust creation in temporary settings. The results of this study also showed that having diversified and competent participants increased trust, as well as having short history with others was seen as a benefit by some participants, since as explained in chapter 4.2.1, knowing others before formed trust due to relying on others' competence and support in the FET. However, this research showed contradicting findings whether it is beneficial for trust formation to have any history with other participants. As shown in chapter 4.2.1 and 4.2.4, not knowing other participants before increased vulnerability. Additionally, some participants considered the in-group and out-group, of some knowing beforehand while others knew no other participants, as a negative factor to trust formation. The in-group and out-group was seen as trust barrier, as it created an unfair atmosphere due to others having a stronger bond. Thus, to create even stronger trust, the participants should have similar interaction histories with others, or spend time to get to know others equally, instead of some people knowing others and creating an unequal atmosphere.

However, contrary to the swift trust theory by Meyerson et al. (1996) emphasizing the role of actions over relating to others in swift trust, this study showed the importance of additionally establishing **personal relationships** as a part of deeper trust creation. The results of this study showed that the FET had a very strong sense of belonging. The strong sense of belonging of the FET was shown in the data, for example, by the shared interests and motives, supportive environment, and overall positive experiences of other participants. However, the participants expressed their wish to know others more on a personal level, as they believed it would have enhanced especially deeper interpersonal trust. The personal acquitance with others might have fostered a greater sense of trust in the community. As the participants felt that for people with different personalities (such as more introverted participants), it was harder to contribute and get to know others, and thus share knowledge.

Noteworthy, aligned with swift trust theory, some interviewees mentioned how the formation of deep trust is not necessarily crucial in these types of online communities, thus the formation of deeper personal relationships does not necessarily align with all of the interviewees researched.

Despite forming personal relationships is not a critical factor in swift trust theory, knowing other participants on personal level is seen to be important in previous research focused on online communities. For example, Tseng & Feng-Chuan (2014, 38) mentioned that receiving emotional support is a factor of interpersonal trust in online communities. However, despite the classic swift trust theories do not emphasize interpersonal familiarity, in this study the personal relationships might have been seen crucial, due to the knowledge intensity of the temporary online expert community. Indeed, aligned with the study of Tseng & Feng-Chuan (2014, 38), especially communities where the participants are knowledge workers, sharing complex knowledge is shared easier when the members have strong ties.

Additionally, some **issues with virtuality** could have been solved to create even higher trust. As the results showed, the experienced issues with virtuality were concerning digital collaboration platform architecture and information flow, such as having too much information on the digital collaboration platform. This trust barrier is similar to previous research, as for example, Leimeister et al. (2005) and Kim et al. (2008, 816) mention how the quality of the content affects the trust to the digital platform. In addition, as mentioned by Lin & Lee (2006, 483), the satisfaction to the architecture of an online community (and therefore trust) comes also from how visually appealing and responsive to participant requests the digital platform is. Hsu et al. (2011, 588) also mention how digital platforms need to enable communication and be easy to use, to avoid frustration to the digital platform, thus damage the system-based trust. As some of these factors found from previous research were missing due to the information overflow, the frustration caused by it, as well as wishes for tighter communication, the digital collaboration platform could be evaluated according to these factors to fit especially the limited time and knowledge intensity of participants.

One of the main trust barriers mentioned was **the limited time**, since the participants were mostly under a very tight time constraints, due joining the FET pro-bono. Therefore, as explained, the tight schedules influenced participation, activity, and commitment to the community. Despite the flexible characteristics of the participants and interest to the topic, to create stronger trust, the limited time of participants could be considered carefully e.g.

from the perspective of the information flow on digital collaboration platform. However, despite the swift trust theory is based on temporary teams on time-constraint (Meyerson et al. 1996), the study showed that to be as active as one prefers, communicate properly, and commit to the temporary online expert community, more time would be needed from the participants.

Moreover, the trust barrier of having unclear roles related to FET work, is in line with swift trust theory. In more detail, the role-based interaction leads to more rapid development of trust than human interactions, in swift trust temporary teams. In line with Meyerson et al. (1996), as the participants' formal roles in their background organizations were not emphasized and there was uncertainty related to others' FET roles, it affected the trust formation negatively; from the perspective that not knowing the roles of others, uncertainty was increased, thus decreased confidence and trust to others. Therefore, the results of this study are also in line with previous research the importance of having clear roles to form swift trust in temporary online expert communities.

Most of these experienced risks were expected as risks from the individual phone interviews. Especially the limited time and issues with virtuality were expected to be one of the main risks and were also experienced as trust barriers. In line with initial trust theory, McKnight et al. (1998, 475-479; 2002) mention that trusting intention is fragile in three different cases, one of them being when perceived high risks. However, the personal differences and relationships as well as unclear roles related to FET work were not fully expected as risks, only themes associated with them, such as the risk of having different personalities and uncertainty of the project were expected risks. Since the risks were already mostly expected to be high or partly mentioned, trust could be developed even higher by trying to solve these issues before establishing the temporary online expert community. Please refer to Table 5 for a summary of perceived trust barriers.

Table 5. Trust inhibiting factors

Experienced trust barrier	Why did it prevent the creation of trust?	Was it an expected risk?	Examples from interviewees on how to solve the barrier
Limited time	• Tight schedule limited active participation • Reduced commitment and activity • Limited time disturbed trust building and communication, e.g. discussion about personal matters	Yes	Time management, simple communication methods (e.g. light information flow on digital collaboration platform)
Issues with virtuality	• Virtuality limited interaction and communication, deeper trust would be easier to build face-to-face • Information overflow on digital platform was disturbing	Yes	Clear and light information flow on digital collaboration platform, possible face-to-face interaction
Personal differences and relationships	• Feeling as an outsider, some knew each other beforehand • Personality differences influenced communication • Getting to know others more on personal level would have increased interpersonal trust and deeper connections	Partly	Getting to know others on a personal level, similar level of history among participants
Unclear roles related to FET work	• Not knowing the roles of other participants increased uncertainty, thus increased confidence and trust to others • Unsettling feeling to disturbing others and stepping on their toes, because of not knowing their roles	Partly	Defined roles at FET work, clear communication about roles

5.3 Formation of trust in temporary online expert communities

To answer the main research question *How is trust formed in temporary online expert communities?* different factors need to be considered, due to the complexity of the subject. Indeed, the previous research along with this study shows that trust is a multidimensional concept, influenced by different factors such as expectations, actions and experiences.

Noteworthy, the findings of this study show that the trust building process starts already before the temporary online expert community is formed. For this temporary online expert community, the members were carefully picked by KB, as well as some joining from the WORK2030 (in Finnish TYÖ2030) network. The participants were picked due to their characteristics, expertise, pro-social competences, and their relation to the topic. As the expectations start to form already from the first contact, it is important to provide a positive, trustworthy, and clear picture of the upcoming project right from the beginning, to affect the upcoming trust formation, build high initial trust, and fulfill the expectations. As the results showed, most participants also trusted or knew the inviting person beforehand, therefore were trusting and open in joining the project, despite the expected risks. Therefore, when developing such communities, it is needed that the contacting person is preferably someone who is already trusted and has the correct competence, as it was one of the main factors creating trust in the initial-trust phase as well as during the FET.

For initial trust building, the expectations according to the individual phone interviews were mostly based on institution-based trust, interpersonal trust to organizing party, disposition to trust, and positive categorization of other participants, therefore, affecting the trusting intention. Most of the findings from the expectations were in line with the study of McKnight et al. (1998), showing that, for example, competence belief, institution-based trust, and trusting belief affect trusting intention positively. On the other hand, in line with McKnight et al. (1998), this study showed how perceived high risks, which according to this study were found to be limited time, personal differences and relationships, issues with virtuality and unclear roles related to FET work, which may influence trusting intention negatively, therefore act as a trust barrier.

Besides the expectations, actions and experiences are crucial part of trust formation process, especially when forming swift trust. The experienced trust building factors found from this study were concerning especially interpersonal and institution-based trust. Factors such as normative actions and shared goals and visions were concerned as affecting positively the institution-based trust. In addition, the interpersonal trust between the members was influenced a lot by the participant behavior and competence, shared goals and interests and similar characteristics. The interpersonal trust already developed to the organizers were however seen as a positive factor also influencing the trust between members, since third-party trust was developed due to the trust to the organizer or organizers.

In this study, the system-based trust did not come up as a crucial factor when building trust, despite being a factor influencing trust. The impersonal system-based trust and digital platform architecture had an effect especially to building interpersonal trust, due to it affecting the communication and participation on the platform. However, the issues with virtuality were also expected to be a risk, and in line with McKnight et al. (1998), was influencing trusting intention negatively and ultimately also the trust formation.

Overall, it is important that the expectations are met, to fulfill and create trust. The expectations for this temporary online expert community were in the big picture considerably mutual and easy to fulfill. As the expectations of the temporary online expert community of this research were mostly fulfilled, it enabled the formation of trust and created a positive foundation to the community. The fulfilled expectations were concerning, for example, creating something meaningful, having competent, reliable and active members, and competent and reliable organizing party.

To conclude the process of trust building in temporary online expert communities, please refer to Figure 10 below. As can be seen from the Figure 10, the trust formation process starts from the very beginning from before the community is formed, up until to closing the community.

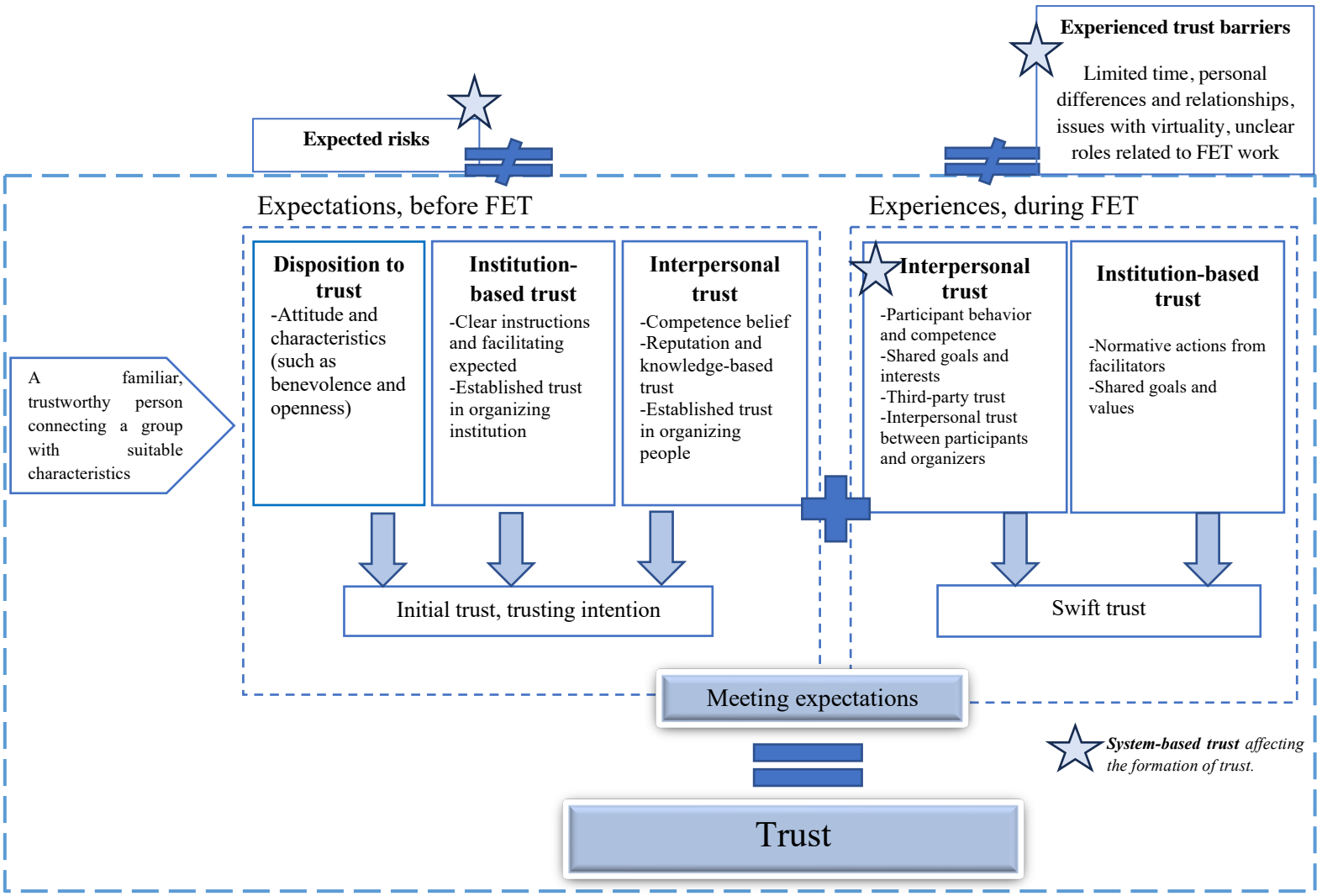

Figure 10. The formation of trust in temporary online expert communities

5.4 Further research ideas and limitations

As a limitation to this study, one should note that this thesis is based on and conducted with Finnish people working mainly in Finnish organizations. Furthermore, many of the interviewees' represented companies that were Finnish public sector organizations. Therefore, the results could have varied if the representatives would have been geographically more dispersed. The geographical limitation of this thesis was due to the selection criteria of choosing people from KB's and WORK2030 (in Finnish TYÖ2030) network, as well as since the aim of the FET was to solve issues related to hybrid and FET -work, specifically in Finland. Therefore, Finnish experts representing Finnish companies were chosen to understand the issue in its context. Additionally, the interviews were

conducted in the respondents' native language Finnish, which could be seen as a communication advantage to ensure smooth communication and prevent potential language barriers.

The interviews consisted of highly competent people who were experts in their own field of work. However, the individual phone interviews can be seen as shortcoming, as for example, body language could not be further analyzed due to only hearing the interviewees' voices. Additionally, I was personally not involved in the interview process, despite coding the data, which could be seen as a limitation.

Another possible shortcoming may be the fact that the data has been collected in 2021, more than two years ago. Also, the results during the Covid-19 pandemic might have been different if interviewed today with more current information and data. Furthermore, as 'temporary online expert communities' is not an established term, and academic literature on FET is rather new and limited, finding the relevant journals was a burdensome task.

For future research, it would be interesting to understand how trust is formed in temporary online expert communities in different countries and cultures outside of Finland. The differences would be interesting to understand, since today many companies may work inter-organizationally but also across geographical borders, which is easily enabled by digital tools and platforms. Additionally, it would be useful to understand how the trust formation differs in other digital collaboration platforms, since according to previous research, especially the digital platform architecture is a crucial part of trust formation in online communities.

5.5 Trustworthiness of the research

Various methods have been used to ensure the quality criteria for this thesis to guarantee a high level of trustworthiness throughout this research. According to Guba & Lincoln (1994, 114) and Sarma (2015, 184), qualitative research trustworthiness can be determined by four primary factors, which are credibility, transferability, dependability, and confirmability. To consider these factors, the data for this research was collected with different types of interviews (individual phone interviews and focus group interviews) from a large sample size, providing a thorough understanding of the topic (Patton 2015).

The findings from the data are compared to previous research findings in this thesis. Due to the limited academic literature on FET, the main articles and sources for the literature review of this thesis were first gathered to an Excel sheet and checked by thesis supervisors, ensuring the quality and fit of the main sources for this thesis.

The comparison of findings and different sources is also known as triangulation in academic research (Bell & Bryman 2011, 397). Researcher triangulation was also used to increase reliability by discussing the coding together with supervisors in two different phases, thus ensuring research triangulation and avoiding data biases. Furthermore, the detailed and transparent coding is shown in Appendix 4.

To conclude, the combination of high-quality interviews, transparent coding and triangulation, of this research ensures the high quality and criteria for the thesis.

6. CONCLUSION

In conclusion, this study aimed to understand how trust is formed in temporary online expert communities, by understanding the trust formation process fully from both expectations and experiences point of view. As showed in line by previous research, the formation of trust in temporary online expert communities is swift due to the temporary time frame, and nature of the community. The results indicated especially the importance of interpersonal and institution-based trust in these types of communities. Noteworthy, the impersonal system-based trust had a strong impact on trust building, for example, digital collaboration platform architecture profoundly influences the formation of especially interpersonal trust. In addition, this study contributes to previous research by bringing a more detailed understanding of the role of initial-trust and expectations as a part of the trust formation process. As shown by previous research and this study, trust is a multidimensional concept and different factors from both expectations and experiences, as well as actions influence it comprehensively.

The aim was to answer three research questions; thus, a qualitative analysis and research was conducted. First, a thorough literature review and theoretical framework were conducted to understand more about the subject and the findings from previous literature, to contextualize the research within an academic framework. The empirical part of this study was conducted from analyzing two types of interviews, individual phone interviews and focus group interviews based on a 2021 FET, to get a comprehensive understanding of the trust formation process in temporary online expert communities. With the two types of interviews and 65 interview in total, information about temporary online expert communities, factors contributing to trust, trust barriers and trust improvement ideas were able to be identified.

The key findings of this study indicate that the trust building process is multidimensional, beginning from the initial trust formation before starting the temporary online expert communities. It is crucial that the expectations are met, to create a trusting, predictable and reliable environment, knowing that the process and community can be trusted. Crucial factors for developing swift trust and interpersonal, system-based, and institution-based trust, were concerning especially reliable and competent organizing party, open and supportive participant behavior and activity, as well as having shared goals and interests

creating a sense of community and mutuality. However, this study showed that to develop even higher trust, roles should be defined clearly, participants should have adequate time to enable high commitment and participation, digital collaboration platforms should have correct information flow and architecture, and personal differences and relationships could be more concentrated on, such as spending more time to get to know other participants on personal level.

In conclusion, trust is a fundamental part of online communities, as well as temporary online expert communities. Due to new ways of working across organizational borders, and the fact that the traditional KBV is shifting, meaning expertise may be needed and searched cross-organizationally outside organizations, it is crucial to understand how trust is formed in these types of settings. This study showed in detail how trust formation can potentially happen in temporary online expert communities, more specifically in a FET, from the expectations to experiences point of view, providing a full understanding of the trust formation process.

Therefore, this study is important to both employees and organizations especially concerning knowledge workers, to understand the formation of trust when exploring new ways of working. As this study showed in line with Ridings et al. (2002, 288), trust is a fundamental part of online communities, also temporary online expert communities: *"People come to virtual communities to exchange information—either by providing it to others or by soliciting it from others. This exchange is based upon the trust the members have in each other, and without this trust [in] the virtual community there is no exchange and the virtual community will cease to exist."*

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Appendix 1. Interview questions for individual phone interviews

1. Could you briefly tell us about your background?
2. What are your experiences with such projects and working across organizational boundaries in general? What part of your work has been like this? E.g. a rough percentage estimate?
3. How familiar are virtual collaboration projects to you?
4. How familiar is working with strangers on a common problem or task to you?
5. How familiar are the digital tools used for working together and which digital tools have you used? Are you already familiar with the Howspace platform? Have you participated or led the work?
6. How would you describe your attitude towards the digital tools of co-development and to new technology in general?
7. Tell me about your previous experiences with this kind of work that mostly comes to mind? What do you think was successful and/or challenging about it?
8. What do you think this kind of Fast Expert Team work requires to be successful?
    a. From the participant?
    b. From the teams?
    c. From the whole network?
    d. From the background organization?
9. What kind of expectations do you have for the approx.. month-long digital working that is starting for working and co-development? What do you hope to learn or otherwise gain from working in the project? What is particularly interesting or potentially challenging?
10. Do you have any reservations about the working? Do you see any risks?
11. What do you think you can bring to this work? Where can other get help from you?
12. Would you like to host a virtual lunch discussion about a certain topic? What topic?
13. Would you like to act as a team leader – responsible for either building the concept or coordinating the team?
14. Would you like to add something else?

Appendix 2. Interview questions and themes for focus group interviews

1. Roles and action
    a. Can you briefly tell us who you are and how would you describe your role and activities in the different stafes of the FET process?
2. Building trust
    a. Which factors promoted & hindered the building of trust in a) the team and b) the network?
3. Factors promoting and hindering the creation of knowledge
    a. What factors promoted and hindered problem definition?
    b. Which factors promoted and hindered ideation?
    c. What factors promoted and hindered the integration of ideas into the team's joint final product?
4. Technology in creating teams' knowledge
    a. How did digital tools help in creating knowledge?
    b. What tools did you use, and why these?
    c. If you used AI, what were the benefits/disadvantages of AI?
5. Leadership
    a. How does management differ on a digital platform from face-to-face management?
    b. How can management be developed at a) team level and b) network level?
6. Is there anything you would like to add? What would be important for us to understand in developing the FET model?

Appendix 3. Introduction of the interviewees

Interviewee	**Years of relevant work experience**	**Participation to phone interview and/or focus group interview**	**Duration of interview(s)**
1	20+ years of experience	Phone interview	21 minutes
2	20+ years of experience	Phone interview	16 minutes
3	20+ years of experience	Phone interview	23 minutes
4	20+ years of experience	Phone and focus group interview	Phone interview: 22 minutes Focus group interview: 63 minutes
5	20+ years of experience	Phone interview	27 minutes
6	15+ years of experience	Phone and focus group interview	Phone interview: 19 minutes Focus group interview: 87 minutes
7	20+ years of experience	Phone interview	21 minutes
8	15+ years of experience	Phone interview	19 minutes
9	20+ years of experience	Phone interview	33 minutes
10	20+ years of experience	Phone and focus group interview	Phone interview: 19 minutes Focus group interview: 58 minutes
11	15+ years of experience	Phone interview	31 minutes
12	20+ years of experience	Phone interview	19 minutes
13	20+ years of experience	Phone interview	19 minutes
14	15+ years of experience	Phone interview	23 minutes
15	15+ years of experience	Phone and focus group interview	Phone interview: 26 minutes Focus group interview: 57 minutes
16	15+ years of experience	Phone interview	21 minutes
17	20+ years of experience	Phone interview	63 minutes

18	20+ years of experience	Phone interview	23 minutes
19	20+ years of experience	Phone and focus group interview	Phone interview: 29 minutes Focus group interview: 87 minutes
20	20+ years of experience	Phone interview	30 minutes
21	20+ years of experience	Phone and focus group interview	Phone interview: 34 minutes Focus group interview: 61 minutes
22	15+ years of experience	Phone and focus group interview	Phone interview: 27 minutes Focus group interview: 87 minutes
23	20+ years of experience	Phone interview	41 minutes
24	20+ years of experience	Phone and focus group interview	Phone interview: 34 minutes Focus group interview: 57 minutes
25	20+ years of experience	Phone interview	35 minutes
26	20+ years of experience	Phone and focus group interview	Phone interview: 47 minutes Focus group interview: 58 minutes
27	20+ years of experience	Phone and focus group interview	Phone interview: 25 minutes Focus group interview: 57 minutes
28	20+ years of experience	Phone interview	32 minutes
29	20+ years of experience	Phone and focus group interview	Phone interview: 24 minutes Focus group interview: 61 minutes
30	20+ years of experience	Phone and focus group interview	Phone interview: 24 minutes Focus group interview: 58 minutes
31	20+ years of experience	Phone interview	28 minutes

32	20+ years of experience	Phone interview	31 minutes
33	20+ years of experience	Phone interview	24 minutes
34	20+ years of experience	Phone interview	28 minutes
35	20+ years of experience	Phone interview	42 minutes
36	20+ years of experience	Phone interview	22 minutes
37	20+ years of experience	Phone interview	65 minutes
38	20+ years of experience	Phone and focus group interview	Phone interview: 63 minutes Focus group interview: 61 minutes
39	20+ years of experience	Phone interview	41 minutes
40	15+ years of experience	Phone interview	34 minutes
41	15+ years of experience	Phone and focus group interview	63 minutes
42	20+ years of experience	Phone interview	27 minutes
43	20+ years of experience	Phone and focus group interview	Phone interview: 24 minutes Focus group interview: 58 minutes
44	20+ years of experience	Phone interview	23 minutes
45	15+ years of experience	Phone interview	36 minutes
46	20+ years of experience	Phone interview	51 minutes
47	20+ years of experience	Phone interview	29 minutes
48	20+ years of experience	Phone interview	36 minutes
49	20+ years of experience	Phone interview	31 minutes
50	20+ years of experience	Phone interview	34 minutes
51	20+ years of experience	Phone interview	30 minutes
52	20+ years of experience	Phone and focus group interview	Phone interview: 42 minutes Focus group interview: 87 minutes

53	10+ years of experience	Phone interview	36 minutes
54	20+ years of experience	Phone interview	25 minutes
55	10+ years of experience	Phone and focus group interview	87 minutes
56	20+ years of experience	Phone interview	32 minutes
57	20+ years of experience	Phone interview	26 minutes
58	20+ years of experience	Phone interview	37 minutes
59	10+ years of experience	Phone interview	21 minutes
60	20+ years of experience	Phone interview	38 minutes
61	20+ years of experience	Focus group interview	57 minutes
62	20+ years of experience	Focus group interview	87 minutes
63	20+ years of experience	Focus group interview	87 minutes
64	20+ years of experience	Focus group interview	87 minutes
65	20+ years of experience	Focus group interview	61 minutes
66	20+ years of experience	Focus group interview	58 minutes
67	20+ years of experience	Focus group interview	63 minutes
68	20+ years of experience	Focus group interview	61 minutes

Appendix 4. Detailed data structure

(Some) quotes from interviews	(Some) 1st order codes	2nd order themes	Aggregate dimensions
Interviewee 52 "I come with a curious and open mind." **Interviewee 43:** "Participating with an open and curious mind."	Curious and open to join	**Motivation and interest**	**EXCPECTATIONS SHAPING TRUSTING INTENTION**
Interviewee 28: "...I'm joining with an open mind." **Interviewee 14:** "…I'm with very open mind, your invitation sounded so interesting, this is fun." **Interviewee 7:** "…I'll keep an open mind."	Open attitude		
Interviewee 9: "With pleasure and very positive mind." **Interviewee 16:** "With a good feeling and energy, I believe this will be a good thing." **Interviewee 8:** "With good mind.."	Positive and good feeling		
Interviewee 13: "Really excited, it is fun to try this." **Interviewee 53:** "Yes, sounds interesting and there is a lot of opportunities to work as the team sees best, so I am very excitingly waiting." **Interviewee 15:** "Very excited."	Excited to join		
Interviewee 16: "It's interesting that you invited me to this type of event." **Interviewee 6:** "I was very taken that Kirsimarja asked to join.." **Interviewee 35:** "It's nice that I can participate in this, that I have been invited…"	Positive about invitation		
Interviewee 48: "Well, it requires you have your own motivation to develop that part of the area." **Interviewee 38:** "...it is very difficult to generate that internal motivation if it lacks.." **Interviewee 1:** "And it really requires enthusiasm and that you have your motivation to it."	Intrinsic motivation related to specific topic		
Interviewee 40: "The concept is really interesting. I look forward to Monday and the following weeks to see what happens." **Interviewee 19: "**With very interesting mind." **Interviewee 44:** "This looks very interesting."	Interested to join		
Interviewee 51: "…with interest, but it is a busy time." **Interviewee 10:** "In principle interested, but work is coming from windows and doors."	Interested but busy		
Interviewee 38: "…requires an interest to the doing and topic." **Interviewee 60:** "I think if people are here, they have a basic interest to the matter." **Interviewee 13:** "The topic must be interesting so you can commit to it."	Interest needed from participants		
Interviewee 34: "The topics are very interesting..." **Interviewee 33:** "As a theme it is very interesting."	Interested in the topic		
Interviewee 12: "It is really interesting and important topic." **Interviewee 29:** "I feel these topics are very interesting, very meaningful and interesting."	Interesting and meaningful topic		
Interviewee 15: "I also want to do socially important work and contribute to the greater good." **Interviewee 50:** "Motivation comes perhaps from being part of something bigger."	Pro-social motivation, interested in impact		

Interviewee 13: "…but that there is actually a desire to influence working life in general, and sometimes to do good."			
Interviewee 22: "…as a background factors, we are on the verge of a common issue." **Interviewee 38:** "Then there should be a shared vision of what we are doing and why, this kind of sense of community." **Interviewee 9:** "What the common goal or mission we are doing."	Shared goals as a common factor		
Interviewee 42: "This is of course a topical subject." **Interviewee 16:** "A very topical topic…" **Interviewee 57:** "There is such a topicality in the matter."	Topical subject		
Interviewee 57: "And here volunteering is taking place, so in general, you have to be interested in some level if you are here." **Interviewee 25:** "…volunteers in this group, the people who have come here, actively themselves and no one has been forced, so the conditions are better for functionality." **Interviewee 23:** "…it would be good of course if it is based on voluntarity."	Voluntarily participating		
Interviewee 15: "I have done a lot of different collaborations across organizational boundaries." **Interviewee 54:** "Most projects where I am involved in are cross organizational boundaries." **Interviewee 19:** "….I have experience from cross-organizational work."	Experience about cross-organizational working	**Experience about similar projects**	
Interviewee 39: "There are often strangers." **Interviewee 25:** "—worked with strangers, people from different backgrounds and organizations." **Interviewee 23:** "Yes it's very familiar."	Experience about working with strangers		
Interviewee 39: "If we are talking about this expert thing, Iäve been to a few similar ones." **Interviewee 9:** "I founded a pro bono coalition called [name deleted]…" **Interviewee 52:** "… and I was an expert sparring for the start-up phase of [name deleted]."	Experience from voluntary informal collaboration		
Interviewee 41: "..exactly these things, of course, skills and know-how of tools and modes of operation.." **Interviewee 46:** "…we all probably have some experience or know about these methods."	Knowledge of how these projects work		
Interviewee 55:"...attitude can also be greatly influenced by the experiences so far." **Interviewee 43:** "…there are very positive experiences overall." **Interviewee 9:** "I think, the experiences are definitely good."	Previous experiences shaping attitude towards future projects		
Interviewee 29: "…I have quite little experience from my own work, as they are more related to voluntary work or hobbies." **Interviewee 23:** "Well, there is less of it, but there is a lot of involving people." **Interviewee 16:** "Less than five percent, the focus has been a lot more in inter organizational projects."	Not much experience from exactly similar projects		
Interviewee 46: "But maybe my assumption was that pretty much everyone in this group has this skill." **Interviewee 58:** "I can already see these qualifications in these people."	Participants have certain skills	**Competence belief**	

Interviewee 6: "…good line up there I guess." **Interviewee 8:** "probably the participants are quite an interesting or delicious mix." **Interviewee 26:** "I have looked up the group of participants, such enormous competence and capacity."	Competent participants		
Interviewee 13: "If there were enough diverse and different people, then it would be fruitful conversation." **Interviewee 44:** "Well, I would say that people with enough different views, so that all points of views will be covered." **Interviewee 23:** "…what I believe is sought in this community, is the different views of people."	Diverse individuals for rich conversations and views		
Interviewee 23: "Bringing your own expertise and contribution, and the fact you don't even try to be like someone else." **Interviewee 16:** "Well it requires the same that everyone brings their own contribution and really invests", "teams should be a mix of different people, so that everyone brings their own expertise and personality to the table."	Contribute your own expertise and competence		
Interviewee 46: "And yes, at the moment there are a few people I know.." **Interviewee 51:** "…[name deleted] is my former colleague. This is why I am joining." **Interviewee 37:** "..it can clarify that we see each other and how many of the participants are previously link to each other, know each others and their competence, and trusts each other.."	Knows someone else and trusts them, knowledge-based trust		
Interviewee 46: "Well, I'm sure we've already been blocked at this point in some way according to the fact that we all probably have some experience." **Interviewee 17:** "Kirsimarja has probably not chosen any useless people here."	Beliefs only competent people have been invited		
Interviewee 52: "Being present with both image and sound on is the most essential." **Interviewee 18:** "…people are using video so we can see each other." **Interviewee 57:** "You have to be present."	Being present, camera on	**Attitude and characteristics expected from participants**	
Interviewee 22: "...people are really active." **Interviewee 45**: "…active participation." **Interviewee 27:** "At least being active on the platform..."	Active participation		
Interviewee 49: "It takes courage..." **Interviewee 19:** "It requires courage to throw yourself out there." **Interviewee 53**: "…also the courage to fail, so to speak, and try and make mistakes."	Courage		
Interviewee 33: "It requires curiosity..." **Interviewee 43:** "It requires you are very open and curious."	Curiosity		
Interviewee 59: "…the desire to work together.." **Interviewee 10:** "…desire to build relationships and interact."	Desire to work together		
Interviewee 15: "…well, good communication skills are definitely required." **Interviewee 16:** "It requires at least good interaction." **Interviewee 25:** "…from the participants communication as well."	Good communication and interaction skills needed		
Interviewee 7: "…you have to know how to be flexible." **Interviewee 46:** "...there must also be flexibility."	Flexibility		

Interviewee 60: "It means you have to listen and you can't grind your own vies endlessly." **Interviewee 22:** "Hears also others views." **Interviewee 17:** "Listening to others and what the other person is saying..."	Listening to others		
Interviewee 4: "Definitely open attitude..." **Interviewee 28:** "Definitely the open-mindess need to be." **Interviewee 40**: "…openness..."	Open attitude needed		
Interviewee 56: "I guess it needs the people who puts themselves out there…" **Interviewee 32:** "It requires that people are ready to throw themselves to unknown." **Interviewee 41:** "...requires throwing yourself out there from everyone..."	Putting yourself out there		
Interviewee 24: "…respecting others..." **Interviewee 8:** "...then that you have to respect others opinions." **Interviewee 42:** "...respect..."	Respecting others		
Interviewee 51: "It is very much about the personality." **Interviewee 26:** "…what kind of person will join the work…" **Interviewee 41:** "…similar character traits..."	Personality and values		
Interviewee 6: "Of course, that someone puts it together and sees the big picture." **Interviewee 46:** "…a big enough picture and a theme that focuses far enough." **Interviewee 50:** "In the sense of putting your own case in a bigger picture."	Able to see the big picture		
Interviewee 61: "And the ability and skill of self-management." **Interviewee 21:** "…self-organizing..." **Interviewee 60:** "It requires a lot how much a person is able to do self-organizing."	Self-organizing needed		
Interviewee 37: "It is based on information sharing." **Interviewee 46:** "…openly sharing results.." **Interviewee 4:** "..,culture of sharing."	Actively sharing results and information		
Interviewee 12: "I guess commitment is the most important." **Interviewee 15:** "It requires commitment..." **Interviewee 47:** "Then what else it requires, commitment of course, that we start to do it with full power."	Commitment needed and expected		
Interviewee 19: "..in my opinion, it is based on how well (we can) build trust right at the beginning." **Interviewee 45:** "…I would see that that trust is number one and how to achieve it, of course." **Interviewee 48:** "…it is based on trust and good cooperation."	Building trust is needed	**Trusting and open environment expected**	
Interviewee 32: "…what goes beyond company boundaries, of course there will be these matters of confidentiality and, how do you define what you can share and what you can't share." **Interviewee 4:** "…everything that is not intended to be made public is treated with trust.."	Trustworthiness about what can be shares		
Interviewee 49: "…and it takes an awful lot of trust." **Interviewee 2:** "Also the creation and emergence of trust is needed quite suddenly." **Interviewee 42:** "Trust is a priority."	Trust needed for this type of project		

Interviewee 12: "The first thing that immediately comes to mind is trust, daring to bring up things that you are not quite sure about." **Interviewee 24:** "…in a certain way, honesty and trustworthy so that enough information can be shared in that group."	Trust needed for teams to share knowledge		
Interviewee 2: "…we just decide to trust them when we have a common goal." **Interviewee 25:** "The trust is created because we like, all take responsibility and are jointly responsible for the things." **Interviewee 26:** "We really forgot who was from which organization when we all worked towards common goals."	Having shared goals creates trust and community spirit		
Interviewee 45: "…or somehow, in that way, everyone's voices or writings are equally important, so the trust is created equally." **Interviewee 2:** "…it also increases trust in relation to the situation, you are not insecure and we'll get over it, everyone feels safe to start working, and it requires that everyone goes through some procedures either beforehand or when work starts, including those who don't know the tools."	Equal setting and knowledge as a way to create trust		
Interviewee 29: "Well, it would probably be good to get to know others in some way." **Interviewee 52:** "Of course getting to know others." **Interviewee 45:** "…like the basic grouping stuff."	Getting to know others is needed		
Interviewee 51: "It's terribly important what that atmosphere is like." **Interviewee 48:** "Maybe the atmosphere there, also." **Interviewee 18:** "... common spirit for working."	Good atmosphere		
Interviewee 55: "That it is an open culture." **Interviewee 9:** "…that creating an atmosphere where people are ready to share and be open."	Open culture to build trust		
Interviewee 13: "It's like when people kind of also learn to know each other. It is easier to comment and trust is created more easily." **Interviewee 60:** "Whenever we work together, we have to get that mutual familiarity and trust to do it."	Personal relationships to build trust and conversation		
Interviewee 35: "I will get a lot out of this." **Interviewee 28:** "… you can get a lot of personal benefit from this." **Interviewee 34:** "…creation from which you can benefit."	Benefit myself	**Create value individually, organizationally, and socially**	
Interviewee 50: "Probably a sufficient concrete goal." **Interviewee 5:** "…that there are clear goals." **Interviewee 51:** "…clear goals."	Concrete goals needed		
Interviewee 23: "…that you also get something reasonable from it." **Interviewee 22:** "…getting something concrete." **Interviewee 56:** "…the point here is that you get concrete results."	Getting concrete results		
Interviewee 48: "…creating something new." **Interviewee 35:** "… and we can create something new."	Creating something new		
Interviewee 11: "…also expanding your own network." **Interviewee 15:** "Of course networking, meeting new people." **Interviewee 42:** "Maybe I also wait the networking."	Expand own network		

Interviewee 25: "…this creates value to our organization." **Interviewee 29:** "…new ideas to work." **Interviewee 18:** "…I get something to share to our organization."	Ideas to own organization and work		
Interviewee 12: "I namely hope to learn." **Interviewee 40:** "…personally to learn." **Interviewee 4:** "I hope to learn more."	Interested in learning and gaining new knowledge		
Interviewee 13: "Let's just say it's really interesting to see how this is led." **Interviewee 44:** "…I hope to learn new facilitation techniques." **Interviewee 1:** "…I am interested in seeing how it is led."	Interested in learning leadership facilitation		
Interviewee 15: "I am very interested in learning how to use Howspace." **Interviewee 40:** "…virtual collaboration too." **Interviewee 59:** "Interested to see the digital tools."	Wants to learn new digital tools and platforms		
Interviewee 9: "And this is a way of working and a method from which I think there is a lot to learn elsewhere as well." **Interviewee 35:** "This way of working is extremely interesting." **Interviewee 45:** "Well, at least I hope to learn that way of working."	Learn new ways of working		
Interviewee 55: "Probably, at the very least, it requires allowing that it is okay to do this and that it is okay to spend time on this." **Interviewee 59:** "…is able to take some time off from the work, to take some time off from work." **Interviewee 13:** "There should be a permission to use working time for this."	Legitimate to use time		
Interviewee 29: "Well, I hope that we will get a good result that will benefit, or what is expected so that it benefits Finland." **Interviewee 22:** "Or it can be carried on in the society more broadly." **Interviewee 54:** "…participating in this is in the interest of the whole society, create something new for everyone, that is in everyone's interest."	Meaningful results for society		
Interviewee 17: "…organizations must see the benefits of working this way for them." **Interviewee 27:** "…it is recognized in background organization that something useful could follow from this project." **Interviewee 43:** "…the background organization must understand the value of doing this."	Own organization understands the value of the process		
Interviewee 32: "…with some it might demand to have support from own organization." **Interviewee 25**: "There has to be support from own organization."	Support from own organization		
Interviewee 42: "I wait to get new perspectives." **Interviewee 34:** "…I hope to gain new perspectives..." **Interviewee 35:** "…to get new perspectives to things."	Gain new perspectives		
Interviewee 12: "… of course, I also hope that I can bring my own experiences and that the team will benefit from it." **Interviewee 39:** "I can make my expertise available to others."	Share knowledge and own expertise		

Interviewee 6: "At least I hope that I can bring something that I can share with others."			
Interviewee 38: "…it turns into egoism, you don't need to prove your own competence and professionalism perhaps too much." **Interviewee 5:** "You're a bit overemphasized, emphasizing your own expertise and your own views." **Interviewee 54:** "Even if we are experts, so that you give up the same roles and titles according to the fact that because I am X, I know the most about the matter."	Arrogance about own skills	**Expected risks and challenges**	
Interviewee 9: "It's really nothing else but the challenge is probably related to whether or not you can, really, can really commit." **Interviewee 12:** "I don't see a bigger challenge here, other than the commitment." **Interviewee 39:** "How do they actually commit."	Not enough commitment		
Interviewee 24: "But it's a bit about communication, you never have a communication which is in order, there's always a challenge." **Interviewee 16:** "….in a way, it doesn't happen and there is no discussion, so of course it is a big challenge"	Communication issues		
Interviewee 35: "This is done across organizational boundaries and every organization has its own operating culture." **Interviewee 40:** "Less often, there is an obstacle to cooperation that when, if possible, common ways are agreed upon…" **Interviewee 41:** "…what is the way in which way we start to work on things, and from which starting points everyone joins the conversation."	Different people, backgrounds and cultures		
Interviewee 31: "Well, of course, if not everyone knows how to use those tools in the same way, then it's quite challenging." **Interviewee 23:** "People also have bit different skills for using these different tools." **Interviewee 34:** "We can also have people of very different level, in terms of technology and readiness."	Does not know how to use digital tools, different level of competence		
Interviewee 57: "And it can be quite challenging…to activate and get people involved." **Interviewee 42:** "That participation can be at very different levels." **Interviewee 13:** "…that you really participate in that conversation and put yourself into it."	Engagement is challenging		
Interviewee 52: "...that everyone really gets to speak and that someone doesn't try to steal or steal it." **Interviewee 43:** "Too much to dominate or steer the conversation in a certain direction..." **Interviewee 25:** "And it's about equality that no one dominates."	Equal contribution		
Interviewee 51: "Well, would that be a risk of not creating anything." **Interviewee 2:** "Perhaps the challenge is whether we can form a common end result."	Not creating anything		
Interviewee 47: "I'm not fully aware where I am going." **Interviewee 7:** "…this whole thing is still a bit incomprehensible." **Interviewee 22:** "can I be sure to understand what we are doing and in which direction we are going."	Not fully aware what is happening		

Interviewee 49: "I don't see any risks." **Interviewee 52:** "I don't see any risks here and I have no reservations." **Interviewee 36:** "I don't see any risks."	Does not recognize any risks		
Interviewee 26: "…does not know how to use the work what has been created." **Interviewee 11:** "…as a challenge, I think its like not utilizing the work done."	Not using the created work		
Interviewee 32: "…how it is everyones' priority and how they can contribute to it." **Interviewee 57:** "Perhaps the biggest risk I see is the prioritization of time…" **Interviewee 44:**"…must be able to prioritize."	Priorities and contribution		
Interviewee 8: "…the challenge is, of course, arranging schedules." **Interviewee 34:** "The challenge can have been, questions with time." **Interviewee 42:** "The challenge is certainly when people have so much else going on."	Limited time		
Interviewee 5: "Here is a significant speeding risk." **Interviewee 34:** "Very intense work project."	Too fast project		
Interviewee 22: "…The subject is so broad and there are so many views." **Interviewee 60:** "Challenges, of course, whenever you are dealing with a large group of people." **Interviewee 39:** "I see as a threat how the quantity replaces the quality a bit."	Too many people with different perspectives		
Interviewee 55: "Creating and building such a trusting and safe environment is a fairly typical challenge." **Interviewee 46:** "..always a brings a little bit of risk, and that's also what can, that trust in that process, the formation of it or interfere with its development if there is a feeling of too many risks."	Trusting environment challenging to create		
Interviewee 3: "In my experience, that balance is a little different in an electronic or remote working environment than what it is when we are face to face." **Interviewee 28:** "...there is a challenge here, also with virtual tools in the sense that sometimes you feel that we are going with technology first and lose the process in it." **Interviewee 34:** "There may be technical challenges."	Virtuality issues		
Interviewee 20: "Another thing that bothers me is that quite a lot of text accumulates to the Howspace platform." **Interviewee 27:** "Controlling the amount of data in this case, I see that there is a risk there." **Interviewee 29:** "…the platforms have been filled with so much stuff."	Too much information on a digital platform		
Interviewee 3: "Very positive attitude." **Interviewee 24:** "So I have a really positive attitude, and it's always fun to learn a new platform or a new tool." **Interviewee 56:** "It is very positive and I think it creates new possibilities."	Positive attitude towards digital tools	**Experience and attitude in digital tools**	
Interviewee 33: "I approach everything with an open mind, as you would say, and I see them as opportunities." **Interviewee 2:** "With an open mind, if they are good for a certain purpose, then so be it." **Interviewee 32:** "…with an open mind.."	Open about digital collaboration tools		
Interviewee 4: "…curious about new possibilities"	Curious about digital tools		

Interviewee 21: "The current time has just increased the curiosity..." **Interviewee 34:** "Curiosity..."			
Interviewee 49: "I could say I am critically curious." **Interviewee 33:** "…in a way, I am curious about everything, whether it can be a possibility for us, but those criteria must be met before jumping into something new."	Curious but critical about digital tools		
Interviewee 13: "…the tools must be functional and the supporting work even when you are remote…" **Interviewee 39:** "But maybe that advance, after all, it enables you to divide into all groups and to have versatile activities." **Interviewee 37:** "I appreciate the openness and cooperation, and digital tools make it possible in a completely new way."	Digital collaboration platform supports online work		
Interviewee 42: "I think they provide a lot of opportunities." **Interviewee 46:** "…how they have worked specifically here, but I think it made it possible.." **Interviewee 43:** "…when there has been such platforms which have made it possible.."	Digitality provides possibilities		
Interviewee 39: "I don't avoid it." **Interviewee 9:** "I see them as a bit of a necessary bad, and I ready to take advantage of them." **Interviewee 16:** "I don't feel them strange and I dare to ask help, there is no threshold, not in that way."	Does not avoid learning new digital tools, neutral attitude		
Interviewee 51: "I am a man of the old union, I hate all platforms and all other things" **Interviewee 41:** "…the effect of age is that the head is no longer the third leg and goes along with everyone." **Interviewee 38:** "…over time, it has become like that, maybe a little bit of pessimism"	Negative or pessimistic attitude towards digitality due to age		
Interviewee 8: "I am the one who is maybe too excited about them." **Interviewee 38:** "…in a way, enthusiasm for technology has always been strong." **Interviewee 59:** "I'm interested in Howspace, how it works, I'm really excited and interested in them"	Excited and open to learn new digital tools and technology		
Interviewee 4: "In my work, I have always liked to use different digital tools in some way." **Interviewee 45:** "Yes, it's very basic, of course Teams and Zoom are in use, but I haven't been able to use Howspace to some extent." **Inteviewee 40:** "All of these. Of course these, Microsoft's. Tools, Teams. I've been using Skype a lot, then, Zoom."	Experience from virtual collaboration tools		
Interviewee 30: "Yes, they are familiar. I actually work virtually, one hundred percent of my working time." **Interviewee 60:** "Of course, for the last four years, we've been working together virtually for six hours a day." **Interviewee 54:** "Very familiar, yes. And this is close to my heart, and it has been my way of working for as long as it has been possible."	Experience from virtual collaborations		
Interviewee 1: "…there are rooms where you can go and talk with people." **Interviewee 45:** "…in a way, it has enabled communication." **Interviewee 26:** "But perhaps Howspace is the most interactive."	Digital collaboration tools supporting communication and interaction		

Interviewee 29: "I see it as important that I and others learn and use them." **Interviewee 55:** "Learning them and taking them forward are all really important things to me." **Interviewee 29:** "…I see it as a very important."	Important to learn new digital tools		
Interviewee 16: "Well it's probably interested." **Interviewee 44:** "…but I'm really interested in using all kinds of tools." **Interviewee 34:** "Interest. I'm like, an experimenter. Interesting in that sense."	Interested in digital tools		
Interviewee 12: "I like to learn new tools and have no prejudices, and no feelings of anxiety even if the tool is a bit newer." **Interviewee 21:** "…all these things, I'm really interested in all of them." **Interviewee 40:** "…plus in itself, I like it"	Likes to learn new digital tools		
Interviewee 4: "I don't have much experience from completely virtual work." **Interviewee 50:** "such a longer-term project where I would be virtually involved, that's not so familiar." **Interviewee 2:** "…but not terribly familiar of something that had been spun from beginning to end."	Not much experience from virtual collaborations of similar projects		
Interviewee 28: "…now that you have been able to, or had to, do it during the corona period." **Interviewee 37:** "Now, with the corona virus, the use of these different platforms has been forced, in a way, forced on many parties" **Interviewee 45:** "But they are more similar to those that have been born as a result of the corona crisis"	Digital transformation was due to Covid		
Interviewee 46: "I at least wait for that in the beginning we are guided.." **Interviewee 30:** "..the instructions are very important to have.."	Clear instructions needed and expected from organizers	**Interpersonal and institution-based trust to the organizing party**	
Interviewee 13: "…requires that the teams are well facilitated." **Interviewee 43:** "It takes a good leader, there needs to be someone who calls togethers and reminds" **Interviewee 50:** "…it also requires a facilitator or a director who then ties the views of different people together and perhaps suggests that common focus"	Dynamic facilitators needed		
Interviewee 51: "…good leadership, management, whatever it is…" **Inteviewee 52:** "Must be clear and strong management" **Interviewee 22:** "…in some way whoever coordinates or leads that project or holds the strings in their hands has, in that way, a pretty big meaning"	Good leadership		
Interviewee 30: "Kind of, the instructions are important to be there." **Interviewee 47:** "…what are the game chips and practical doings etc." **Interviewee 53:** "The rules of the games, the frames."	Common and clear instructions needed		
Interviewee 29: "It is very important that we know what is expected of us and that the goal is clear." **Interviewee 30:** "It needs to be crystal clear what is expected of us." **Interviewee 32:** "…understanding what is expected of them."	Need to be clear what is expected		

Interviewee 51: "A very positive feeling about the university", "LUT, it's cool, it's a small but spicy university. It has managed to market and brand itself really well." **Interviewee 9:** "This was, in my opinion, a theme what you have done there at LUT, so I have been following it with interest."	Trusts the organizing organization		
Interviewee 20: "I am pretty confident that this will work out. The start was good and Kirsimarja and her partners were very convincing, those who were talking" **Interviewee 60:** "Of course, I've known Kirsimarja for years and years, and have followed her work a lot"	Trust the organizing people and their competence		
Interviewee 26: "I trust the process." **Interviewee 45:** "…but I have faith that it will get off to a good start and move on from there."	Trust in process itself		
Interviewee 26: "it was really great to have this here, this helped me to structure my own thoughts as well, that thanks to you, you have thought about this whole thing very well." **Interviewee 56:** "I feel like I have a pretty good idea what's going to happen next and it was nice to talk" **Interviewee 7:** "…here when we are calling it is starting to clear up."	Phone interview with organizing person provided a good picture		
Interviewee 15: "..maybe a preventing factor could be whether such an in-group and out-group is created, if you come a bit as a new person and then you don't know others, then it could be the same, maybe it's a little difficult for you to get involved." **Interviewee 61:** "Yes, the in-group and out-group was a good example."	Feeling as an outsider, some knew beforehand	**Personal differences and relationships**	**EXPERIENCED TRUST INHIBITING FACTORS**
Interviewee 61: "..so perhaps for a person who is a bit more introvert, it can be a challenging environment to get to know people." **Interviewee 66:** "Maybe that we people are different, our roles are different and our interests are different.."	Personality differences		
Interviewee 26: "But in this way of working we did not learn to know each other." **Interviewee 43:** "I completely agree that at first perhaps getting to know others, because trust is only created through that."	Not spending much time to get to know others		
Interviewee 67: "Of course, building trust to an even deeper level would require seeing people live and having talk to them more freely." **Interviewee 15:** "...easily on a digital platform it can become into a certain kind of monologue, not everyone brings their own views, it is not a real dialogue"	Virtuality limits interaction and communication, to build deeper trust would need to see face-to-face	**Issues with virtuality**	
Interviewee 30: "The factors that undermined trust were perhaps the fact that there were so many people and at least in Howspace there was so much discussion" **Interviewee 10:** "...but the mass was so huge that somehow you couldn't really keep track whether there were any comments in my comments, when there were always so many new ones. It was a shame."	Information overflow on digital platform was disrupting		
Interviewee 41: "When it's pretty hectic, one half hour then, other that time, then you have to firmly stick to the point and you dare to loosen up a little more if you know the group better."	Limited time disturbed trust building and communication	**Limited time**	

Interviewee 62: "So maybe it becomes like ah, why doesn't he/she respond now, should we wait, in a way not directly to trust but concerns it anyway."			
Interviewee 30: "Then the commitment to this, the usage of times, as this was such a tight episode." **Interviewee 67:** "…I got so many then, in practice, I was not able to participate, so I was left a little empty, it's a shame this participation."	Limited time reduced commitment and activity		
Interviewee 62: "But also the scheduling issue, that when people get through many messages and so on, they somehow fall off the cart and this particular time was probably the busiest, one of the busiest times of the year.." **Interviewee 66**: "..,and there was very much conversation on Howspace. At least I did not have time to go through all that..."	Tight schedule overall, no time to participate in everything		
Interviewee 55: "I felt the role of the team leader wasn't always clear, which then brought a bit of uncertainty that I'm stepping on someone's toes", "..so in hindsight it could have made openness to the discussion and more build more trust." **Interviewee 15:** "Yes, and in a way a part of the groups' trust is the authorization related to the role, so you would have courage in a small team of people who don't know each other so say that's my role know. Dividing the roles effectively..."	Roles were unclear	**Unclear roles related to FET work**	
Interviewee 19: "...certain kind of clarity of roles..", "..So it might have strengthened the rust, if you could have been confident that someone is doing it and you can trust it" **Interviewee 63:** "…then I missed the role definition..it took a lot of time in the beginning with our Exit 2 team wondering who does what..."	Roles should have been more defined to strengthen trust		
Interviewee 21: "I could throw what immediately occurred to me is that very, expert and trustworthy leaders in this whole project." **Interviewee 64**: "I would also like to comment on this trust matter, that in my opinion the actions of Kirsimarja, Tuuli and Niina played a big role in building trust."	Professional and trustworthy leaders	**Trust in organizing people**	**PERCEIVING THE ORGANIZING PARTY AS RELIABLE AND COMPETENT**
Interviewee 67: "Who is asking from where, in my case Kirsimarja asked, who is someone I know and trust…" **Interviewee 10**: "…quite a lot is based on the fact that I trust Kirsimarja. I know Kirsimarja, I trust her. I have known her for a long time, I have followed her work."	Trusting the inviting person		
Interviewee 38: "First of all, the fact that the basic trust was born, in my opinion, by the organizers, and it was the framework, or the environment that inspired trust."	Organizers creating a trusting environment		
Interviewee 55: "…the fact that who gathered us, Kirsimarja and the team, you brought confidence that there was a similar feeling that someone has thought about why we are all here…" **Interviewee 26:** "So she had though that we are the right group, that gave me a lot of confidence, "I especially liked the fact that we were all hand-selected, that it was Kirsimarja who selected us, thus creating a third-party trust"	Trusting the chosen people were chosen by a trustworthy source		
Interviewee 41: "And of course at the network level, they are constantly trying to facilitate it further."	Facilitators helped build trust in network level		

Interviewee 15: "And the group dynamic starts to shape in certain way and the role of a facilitator is emphasized here, that everyone gets to participate and is equal", "Certainly the role of the facilitator, so that everyone somehow gets to participate equally, and everyone's views are equally valuable." **Interviewee 62:** "And it's really nice somehow that these experts have a common cause - the spirit was in this whole, it's the result of your role as leaders, I'm sure it was."	Facilitators building equal and trustworthy environment	**Normative actions from facilitators**	
Interviewee 67: "…named or pre-commited facilitators or responsible persons who bring confidence that this will stay in place and move forward" **Interviewee 66:** "Another factor which I think created trust is that this was a very well facilitated process"	Facilitators making sure everything goes well		
Interviewee 52: "...there was no reason or factor that would have prevented from trusting another person" **Interviewee 19:** "And as [name deleted] said, there was no reason not to trust"	Vulnerability, not hesitant to trust	**Propensity to trust**	**DEMONSTRATING APPROPRIATE BEHAVIOR AND COMPETENCE**
Interviewee 52: "And when there was no stronger bond than this, it was easy to bring it into it, because there was no risk of losing face or competence debate or authority debate or anything like that." **Interviewee 22:** "..and in particular, I didn't know the others in a way, we came from different organizations, so I think that it also has a big meaning that we are administratively from different places, so in a way (we don't have) like the same burdens, for example the work community may be connected or similar to certain tensions that can exist in the work community, so it freed that atmosphere and made that trust."	No reason to fear trust-destroying, new people		
Interviewee 27: "Somehow people just came with a good attitude, openly and confidently." **Interviewee 4:** "I think that also built trust that people get to tell openly…"	Open and trusting mindset		
Interviewee 4: "…we participants had the expertise which is used to build trust." **Interview 29**: "…and you noticed the expertise and different views which was a clear thing in the teamwork."	Competence of members building trust	**Participant reputation and competence**	
Interviewee 24: "...it's emphasized that we are looking for support from another person we know, so that we will be fine when we help each other.." **Interviewee 61:** "And of course, already knew someone else beforehand, and then we even got tighter in the small group."	Knowing someone before		
Interviewee 67:"…there are different people and everyone in their own way, you can definitely see that there are skills you don't have, different skills" **Interviewee 52:** "…because everyone was there through their own expertise and view"	Diverse and competent backgrounds		
Interviewee 65: "…it created that trust, that, all the time, I had the feeling that experts had been invited there, that is, that I was able to consider each and every one invited as an expert"	Positive competence categorization		
Interviewee 22: "we work on a virtual platform, so I think it felt nice when we went to like each other's comments or somehow reacted to them, and it brought that same good	Active participation on a digital platform, digital platform qualities enabled to build trust	**Positive and supporting team spirit**	

feeling that we notice each other in those texts, so it's surprisingly important and nice..” **Interviewee 4:** “Then this valuing of others rose there quite nicely, when we commented on each other's thoughts, gave thumbs up or sent hearts or something else soft, it again brought that feeling of "hey, we value each other" and it built that trust deeper again”			
Interviewee 22: “Some related to those, the kind of equal position in the team, we had the same feeling that we are in an equal position.” **Interviewee 43:** “In my opinion, the fact that we are all equally on the same line contributes to the building of trust.”	Equality		
Interviewee 63: “…that supporting spirit that everything will surely reach the finish line.” **Interviewee 21:** “…it was easy to come there that way because I felt like I belonged to the group any way.”	Supporting team spirit, sense of belonging		
Interviewee 41: “…probably something that has helped build trust at the team level, of course, getting to know a little better the individuals you are with…” **Interviewee 15:** “…it was the easiest that we saw each other a few times and as soon as people get to know each other and there is a good conversation, it's really easy to continue.”	Getting to know others on a personal level helped to build trust		
Interviewee 63: “…the lunch discussions were also apt to increase the confidence that you won't be able to splurge even more there.” **Interviewee 62:** “About the trust theme, I would also bring up the lunch discussions”	Lunch conversation helped as a relaxed way to get to know others		
Interviewee 63: “I believe that the trust was built by this positive spirit, which was absolutely absurd in this whole FET work.”	Positive team spirit		
Interviewee 43: “Just the fact that of having interest in that content, that theme is what unites, it does create it, it's very natural”,“it's not that everyone is interested in the same type of themes, that of course increases trust.”	Interest in the topic, common factor	**Interested in same topics**	**INTEREST AND MOTIVATION TOWARDS SHARED GOALS**
Interviewee 65: “As it was that kind of topic, that you didn’t have to build deep trust because people felt comfortable doing this and there was no competition at any point, so you didn’t need go two steps further in building trust.”	Interest to solve the topics and goals, thus no need to build deep trust		
Interviewee 66: ”…that everyone is interested in the same type of themes, but that of course increases confidence.” **Interviewee 43:** “It is precisely the interest in that content, that theme that unites.” **Interviewee 19:** “And then, of course, the unifying factor was the interesting themes, that is, everyone had a desire to solve or find similar perspectives for promoting or moving those themes forward.”	Interest in same themes		
Interviewee 52: “Actually, the big thing for me was that when we were in such a loose relationship, if you can say that, there was no such factor that would have prevented us from trusting another person.” **Interviewee 61**: “…and no one checked me along the way..”	Not too formal structure, trusting that everyone contributes	**Motivation to participate voluntarily**	

Interviewee 42: "Once this is voluntary, there is certainly no aspiration for the same people who now somehow came with nothing but with an open mind and trust first." **Interviewee 19:** "Everything was voluntary, no one was forced into this cooperation, that is, everyone already had an idea of exactly that expertise and sharing it."	Voluntarily participating helping to build trust and sense of community		
Interviewee 65: "…everyone gave something for free because the thing is good."	Voluntarily helping due to a meaningful topic		
Interviewee 41: "what in that team also drove it forward, all that shared wonder.." **Interviewee 22:** "…together we kind of worked on the material, so that kind of increased the trust in each other."	Solving an issue together and working together	**Shared goals and objectives, working towards joint tasks**	
Interviewee 62: "…experts with a common cause -the spirit was in this whole" **Interviewee 64:** "...but what I would like to emphasize is that where that trust comes from, I think a lot of it comes from common goals." **Interviewee 6:** "…the common goal which has been talked about, that definitely that"	Common goals		
Interviewee 67: "…this is whether we are doing a joint thing or whose thing it is and whether it is a matter of values or not." **Intreviewee 4:** "…so it already laid the groundwork that there is a large group of us in the background	Similar situation		