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Optimization of information sharing in entrepreneurial heterogeneous teams

by

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Abstract

Research has shown that the heterogeneity of entrepreneurial teams, in terms of educational background, has a positive impact on venture performance as a result of the access to diverse skill sets and perspectives. However, the heterogeneity of the team can also lead to communication inefficiencies due to the diverse viewpoints and cognitive differences. Forewarning methods, understood as the preparation in advance of the meeting or discussion, are one way of enhancing information sharing within entrepreneurial teams. Therefore, the aim of this study is to explore whether a specific forewarning method, such as a meeting agenda, might impact on the 'Hidden Profile Paradigma' and on information sharing factors, such as exchange, elaboration, and integration.

The research implemented a mixed methods approach based on a simulation experiment and individual interviews where six heterogeneous entrepreneurial teams participated. This study has found that the active use of a meeting agenda has a positive impact on information exchange and elaboration as the agenda provides a structure where the teams spend more time discussing each topic to a higher extent. In addition, the agenda helps participants to remember more information which they did not possess before.

Keywords: Hidden Profile Paradigma, information sharing, meeting agenda, information exchange, information elaboration, information integration, heterogeneous entrepreneurial team, forewarning methods.

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1. Introduction

Although entrepreneurial teams are generally more likely to be homogeneous in terms of the individuals' aptitudes (Wasserman, 2008), in recent years the focus has been put on heterogeneous entrepreneurial teams. This is a product of research demonstrating that in turbulent environments, and situations that include novel problems (such as ventures creation), heterogeneous team composition leads to superior team performance (Hambrick and Mason, 1984). The simple combination of individual team member characteristics and abilities provides the team with more resources that are beneficial for team and venture performance (Stewart, 2006).

Researchers have used different approaches to categorize team heterogeneity: deep-level and surface-level heterogeneity (Harrison et al. 2002), visible and non-visible differences (Jackson et al. 1995), or a multifaceted approach which utilizes several clusters of categories: social-category heterogeneity, informational heterogeneity, and personality heterogeneity (Jehn, Northcraft, & Neale, 1999). Among the many approaches that will be discussed in the following section, we will focus on heterogeneity in terms of educational background (surface-level, visible or informational heterogeneity). This is based upon the findings of previous studies, which have shown a positive association of team educational-level heterogeneity with positive outcomes within external assessment of start-up ideas in a business plan competition (Foo, Wong, & Ong, 2005), sales growth in a new venture (Amason, Shrader, & Tompson, 2006) and breadth of networks (Hellerstedt, Aldrich, & Wiklund 2007).

On the other side, research has also shown that different educational backgrounds within a team may be viewed as a source of conflict in task content, goals, and task processes (Jehn, Northcraft & Neale, 1999). The very nature of these teams' heterogeneity makes it difficult for team members to communicate, coordinate their work, and perform (Edwards, 1954). As a consequence, they experience communication inefficiencies such as the 'Hidden Profile Paradigm', which is a theory that states that team members tend to share common information rather than new information (Stasser and Titus, 1985). Thus, the decision-making process is less efficient as not all the team members have the same information available at the same time. In the past, theorists have shown interest in information sharing within teams and its relationship with conflict, since effective

information sharing enhances the competitive advantage of the company (Dahlin, Weingart and Hinds, 2005; Stasser, 1999). Information sharing refers to communication with other team members related to the coordination of activities, task details, task progress, and reasoning for task decisions (Jehn & Shah's, 1997). Information sharing is generally studied through three factors: information exchange, elaboration and integration (Van Knippenberg, De Dreu, & Homan, 2004). Exchange is understood as the simple mention of an item of information during discussion. Elaboration is defined as the discussion of information in depth. And integration is the ability to understand and remember the information after the discussion. These concepts will be further developed within this study.

Previous research in top management teams argues that forewarning techniques are defined as the opportunity for members to prepare for their expert roles. Forewarning techniques promote the encoding and retention of items in the expert domain (Stasser, Wittenbaum and Stewart, 1995), improving communication sharing. Based on this we proposed a meeting agenda as a forewarning method.

In this study, we aim to explore how to improve information sharing in heterogeneous entrepreneurial teams, in terms of educational background, with the application of a meeting agenda that outlines the topics that should be discussed during the meeting. With that purpose we implemented a mixed method approach that includes a simulation experiment and interviews. Our goal is to understand how the agenda impacts on the Hidden Profile Paradigma and the information sharing factors, exchange, integration, and elaboration. This study is motivated by the aim to answer the following research questions:

Main research question: What effect does a meeting agenda have in heterogeneous entrepreneurial teams during the information sharing process?

Sub-Research question 1: What effect does a meeting agenda have on information exchange, elaboration, and integration in heterogeneous entrepreneurial teams during the information sharing process?

Sub-research question 2: What effect does a meeting agenda have on the Hidden Profile Paradigma in heterogeneous entrepreneurial teams during the information sharing process?

The following part of this paper moves on to describe the theoretical framework in greater detail.

2. Theoretical framework

2.1 Entrepreneurial teams and team characteristics

While entrepreneurship has typically been studied from the individual perspective in the past (Watson et al. 1995), the focus has shifted towards the entrepreneurial team (Gartner et al. 1994). Most studies define the entrepreneurial team as an entity of at least two individuals (Schjoedt & Kraus, 2009). However, further definitions from several researchers have been diverse. Schjoedt and Kraus (2009) asserted that the team forms a social unit and has a shared commitment in terms of accountability and ownership while constantly searching for opportunities to develop the venture (Shepherd & Krueger, 2002). However, Cooney (2005) describes that individuals in entrepreneurial team share equal financial interest and actively engage in the formation of the new venture. Harper (2008) further highlights that entrepreneurial teams share a common goal which does not necessarily have to be in financial terms. Within the team, each individual possesses certain financial, social, and human capital, which collectively influences the decision making (Cooney, 2005).

Compared to top management teams in larger organizations, entrepreneurial teams are formed by individuals that share a common interest and create their own policies and values for the team (Chen, Chang, & Chang, 2017). In addition, Chen, Chang and Chang (2017) describe that unlike top management teams, entrepreneurial teams have to constantly deal with risk and uncertainty, which can influence the survival of the venture. According to Zhou and Rosini (2015) members in entrepreneurial teams differ in two levels: (1) visible or surface level differences and (2) non-visible or deep level differences. Visible differences are described as the characteristics such as: gender, age,

race, and ethnicity. Non-visible differences on the other hand are described as education, values, beliefs, personality, or skills. While these differences describe a limited set of variables, Jehn, Northcraft and Neale (1999) have provided the multifaceted approach, which describes three different categories of team characteristics. First, (1) social-category heterogeneity refers to differences in demographic membership, including race, gender, and ethnicity. Second, (2) personal heterogeneity is described as the entrepreneur's traits, such as (over) confidence, self-esteem, locus control. The final category, which this study will be based on, is (3) informational heterogeneity. This refers to educational-level heterogeneity, educational background heterogeneity and functional heterogeneity. Informational heterogeneity and prior experience can improve the human capital of a team as a whole. However, it might cause conflict between individuals with different levels of experience and so negatively influence team performance.

Prior research has shown that certain team characteristics, in terms of visible and non-visible characteristics, can influence venture performance (Beckman & Burton, 2008; Hsu, 2007; Vissa & Chacar, 2009). For example, prior professional or industry specific experience can help individuals in strategic decision making and enhances knowledge about markets, customers, or suppliers (Jin et al. 2017). Jin (2017) further describes that characteristics, highlighting how past and current experiences also increases social capital and enables the team to access crucial contacts for the venture development. There is evidence that heterogeneity may have both positive and negative effects on entrepreneurial team performance (Jin et al. 2017). One needs to further understand the conditions and mechanisms under which different types of heterogeneity affect performance, such as the possible impact of moderators, venture novelty, environmental dynamism. Within the research of team composition, publications from Finkelstein and Hambrick (1996) as well as Hambrick and Mason (1984) have found that heterogenous team composition can have a positive impact on venture performance due to the diverse set of social and human capital. However, a heterogeneous team composition can also lead to conflict among team members due to different backgrounds and opinions (O'Reilly, Caldwell & Barnett, 1989). Therefore, the following section will discuss homogenous and heterogenous team compositions.

2.2 Heterogeneous and homogeneous teams

According to Byrne (1971) most of the entrepreneurial teams are homogenous as individuals tend to team up with others similar to them. While homogenous teams perform better at routine tasks (Cantner, Goethner & Stuetzer, 2010), heterogeneous teams tend to perform better in strategic decision making, creativity, innovation, flexibility, and adaptability. On the other hand, Jin (2017) adds that higher team coherence, lower turnover, and higher team performance is witnessed in homogenous teams.

Heterogeneity provides the team with more (and more diverse) human, social and financial capital. Another positive effect of heterogeneous teams is information processing (Jin et al. 2017). With their diverse knowledge and skills, they can create a greater range of opportunities and perspectives which helps when the team is dealing with unusual tasks and problems. As entrepreneurial teams are usually facing rather unpredictable problems, the diverse pool of information can be of high benefit (van Knippenberg, De Dreu, & Homan, 2004). The study also describes that heterogeneous teams are more likely to experience increased levels of conflict which then negatively affects the venture performance. In addition, team heterogeneity can decrease interpersonal liking, impede effective communication, undermine team cohesiveness, and create conflicts (Cantner, Goethner & Stuetzer, 2010). Successful heterogeneous teams must overcome these issues in order to develop cohesion, trust, and a ‘common language’.

2.3 Educational background diversity

As described in the previous paragraph, in general, heterogenous and homogenous teams have several positive and negative effects on team performance. To separate the positive and the negative effects, scholars have suggested dividing heterogeneity into different types. Educational background is one of the types of heterogeneity more likely to bring benefits to the team in terms of information pooling (Faems & Subramania, 2013; Ostergaard, Timmermans & Kristinsson, 2011). Past studies have shown that heterogeneity in educational background can have an impact on venture performance (Zhou, & Rosini, 2015). For example, a study conducted by Henneke and Lüthje (2007) have found certain effects of educational heterogeneity in teams. While the study is not

supporting a direct link between educational heterogeneity and innovativeness, there has been a weak support for the association between educational heterogeneity and the depth of environmental scanning activities. The strongest relation was found between educational heterogeneity and the openness of strategic planning. Even though there was no direct link to innovativeness, there is a significant correlation between the variables environmental scanning and strategic planning, with innovativeness.

Based on the following statements we further believe it is relevant to focus on educational background diversity instead of experience diversity. Entrepreneurship education is receiving increased attention since it moves the economy through new inventions (Edmondson & McManus, 2007). Therefore, universities and governmental institutions are trying to create entrepreneurial environments in order to stimulate student entrepreneurship (Potter & Storey, 2007). Shane (2004) refers in her book “Academic entrepreneurship: University spinoffs and wealth creation” to several examples of companies that were founded by students. A study from the GUESSS (Global University Entrepreneurial Spirit Students’ Survey) Project (Sieger et al. 2019) shows that there has been a positive trend towards student entrepreneurship since 2013. While 9% of the students surveyed showed intentions for an entrepreneurial career after studies, almost 35% are intending to be an entrepreneur five years after their studies. Here, the university context plays a big role as the ecosystem around the university influences the intention of students of being an entrepreneur. In addition, the study shows that 30,7% of the sample are nascent entrepreneurs, who are in the process of creating their own business. Around 23,2% of these students have created their founding team with fellow students or through university related activities. This relates to the phenomenon that these founding teams mainly refer to their educational background and experience. While there is a trend from universities and governments towards entrepreneurial education and encouraging student entrepreneurship (Jansen et al. 2015; Morris, Shirokova & Tsukanova, 2017), the field of entrepreneurial teams based on educational background is understudied. There is a research gap within student entrepreneurial teams and team composition based on educational heterogeneity.

2.3 Conflicts and heterogeneous entrepreneurial teams

Conflicts are very usual in entrepreneurial teams because the roles and tasks of the members have yet to be properly defined, and collective norms for working together and making joint strategic decisions have not been well established (Jong et al. 2013). Research has identified the fact that conflict in entrepreneurial teams is inevitable as a result of initial incompatibilities or cognitive differences between entrepreneurial members (Chen, 2006), complex environments, market dynamics, competitive threats in the process of new venture creation (West, 2007) and diverse viewpoints (Amason, 1996). Historically, theorists have focused on the negative effects of team conflict (Wall & Callister, 1995) because empirical evidences supported the negative impact of conflict on team productivity and satisfaction (Saavedra, Earley, & Van Dyne, 1993) and the competitiveness of the company (Amason, 1996). However, it has been also proved that low levels of conflict could be beneficial since it encourages the discussion and confrontation of problems, team members learn to take different perspectives and to be creative (Deutsch, 1973). Without conflict, teams might not realize that inefficiencies exist. Schulz-Hardt, Jochims and Frey (2002) showed that teams make better decisions when there is disagreement rather than agreement. In previous studies two distinct forms of conflicts have been clearly defined: relationship conflict (interpersonal incompatibilities between team members) and task conflict (disagreements about the content of the tasks that are being performed) (Jehn & Mannix, 2001; Jehn and Bendersky, 2003). Teams that experience task conflict tend to make better decisions because such conflict encourages greater cognitive understanding of the issue being considered. Galbraith (1973) adds that *“the optimal degree of communication is contingent upon the nature of the subunit's task: the more complex the task, the greater the unit's work-related uncertainty, and the greater its communication requirements”*. In contrast, relationship conflict limits the information processing ability of the group because group members spend their time and energy focusing on each other rather than on the group's task-related problems (Deutsch 1973).

Therefore, unlike relationship conflicts, task conflicts are necessary for the development of the team and the venture (Deutsch, 1973; Frey, 2002). The way teams share information can either trigger or make task conflicts efficient within entrepreneurial

teams (Fussell et al. 1998; Dahlin, Weingart & Hinds, 2005). A more detailed account of information sharing, and heterogeneous teams will be described in the following section.

2.5 Information sharing in heterogeneous teams with different educational background

The literature refers to information sharing in different ways, such as information exchange, information pooling or communication dynamics. With simplicity in mind we will refer to all such terms as information sharing. Theorists have shown interest in information sharing within teams and its relationship with conflict, since effective information sharing enhances the competitive advantage of the company (Dahlin, Weingart & Hinds, 2005; Stasser, 1999). Previous research has shown that groups inefficiently use their informational resources with the result of poor decision-making (Fussell, 1998). In this chapter the existing literature will be reviewed with regard to information sharing among heterogeneous team members.

Generally, information sharing refers to communication with other team members related to coordination activities, task details, task progress, and reasoning for task decisions. This concept has been defined by theorists as making statements to other group members about tasks (Jehn & Shah's, 1997), specifically referring to disclosing factual, task-relevant information to other group members (Stasser, 1992), offering opinions, suggestions and information relevant to the task (Bales, 1951), including keeping other group members informed about task progress (Andres & Zmud, 2002). It has been also defined as “*conscious and deliberate attempts on the part of team members to exchange work-related information, keep one another apprised of activities, and inform one another of key developments*” (Bunderson & Sutcliffe, 2002). It is important to highlight the fact that all information sharing is communication but not all communication is information sharing, since communication does not imply sharing opinions, suggestions or information relevant to the task and its coordination or completion (Moye & Langfred, 2004).

Past research has examined diverse factors that tend to undermine information sharing in groups. Sun and Scott (2005) defined seven different barriers to information sharing: (1)

personality differences: traits, preferences and character, (2) organizational relationships; team structuring and skills of communication and persuasion that involves expressing effectively any thoughts or information in your mind, (3) alienation: team confidence and acceptance in the individual, (4) Individuals' values, (5) divergent objectives and/or hidden agenda, (6) fear of loss of ownership, fear of loss of control of knowledge, and fear of loss of individual's competitive edge, and (7) fear that knowledge may be inadequate or unimpressive. Stasser and Titus, (1985) claim that member's heterogeneity, informational interdependence, and information distribution affect groups' information sharing and reflect some variant of the extent to which team members are redundant in their informational contributions to the team. Therefore, communication inefficiencies arise from the team.

Even though there is evidence about heterogeneous teams' effective performance (Stewart, 2006), prior research also suggests that group members are less willing to share information with individuals they perceive to be different from themselves (Stasser et al. 1995). In heterogeneous teams, members have different levels of understanding, opinions, skills and rates of adoption of the available communication tools, as well as preferences for specific means of communication (Gorse, 2002). Research shows that the teams' heterogeneity effect on team performance is not uniform. O'Reilly (1998) concluded that different types of heterogeneity have different effects in information processing and social categorization. In heterogeneous teams (in terms of educational background) members struggle to access and use new information from other colleagues, since every member of the team has different mindsets, organizational processes, and information incorporation strategies (Bunderson & Sutcliffe, 2002). Education is one of several sources of knowledge that contribute to one's expertise. Expertise provides team members a framework for considering what information is important to the task their team is to perform, which in turn influences what information they incorporate into decisions (Bunderson & Sutcliffe, 2002). Dahlin (2005) concluded that teams with a high level of educational heterogeneity exhibited more depth of information used, but only up to a point; at the highest levels of educational heterogeneity, teams obtained poor results because they were less able to organize the information they identified. Educationally heterogeneous teams were less able to connect topics within issues. Drawing connections requires knowledge of each relevant content area and the most heterogeneous teams have more difficulty making links because they have to bridge from one team member to

another. Even when unshared information possessed by only one team member is shared, groups often fail to recognize its relevance and focus more on information known to all members before the group discussion (Winqvist, Nand & Larson, 1998). Failing to share members' unshared knowledge when information is distributed within the group results in plenty of unshared information remaining (Stasser, 1999). The following part of the study moves on to describe the shared-unshared information concepts and paradigms in greater detail.

2.6 Hidden Profile Paradigm

Stasser and Titus (1985) define shared information as information already known by all group members, and unshared information as information uniquely held by one member of the group. They demonstrated that teams spend more time discussing shared information rather than unshared. This is known as the Hidden Profile Paradigm and is supported by a wide sum of studies that have found that groups rarely discover the hidden profile and discuss proportionally more shared than unshared information (Cruz, Boster, & Rodriguez, 1997; Franz & Larson, 2002; Kelly & Karau, 1999; Lam & Schaubroeck, 2000; Larson, Foster-Fishman, & Franz, 1998; Larson, Foster-Fishman, & Keys, 1994; Lavery, Franz, Winqvist, & Larson, 1999; Parks & Cowlin, 1995; Savadori, van Swol, & Sniezek, 2001; Stasser et al., 1989; Stasser & Titus, 1987; Stasser, Vaughan, & Stewart, 2000; Stewart & Stasser, 1995; van Hiel & Schittekatte, 1998; Winqvist & Larson, 1998; Wittenbaum, 1998, 2000). One of the reasons why shared information is mentioned so often during discussion is because its accuracy and relevance can be confirmed by the group, and as a result, communicators of shared information are viewed as competent and knowledgeable. Conversely, unshared information, when mentioned, cannot be validated by other members, and therefore acquires an uncertain level of importance in the group (Festinger, 1954). However, effective information exchange does not only require unshared information to be mentioned during discussion, it must be actively considered to influence a group's decision.

The process of considering information involves exchange, elaboration, and integration factors (Van Knippenberg, De Dreu, & Homan, 2004). Mentioning an item of information during discussion, even if it was unshared information, does not imply consideration. It must be exchanged, elaborated, and integrated. Exchange is defined as the simple mention

of a piece of information. Elaboration is defined as discussing the piece of information in depth by all team members. And integration is the ability to understand and remember the information by each team member. It has been found that highly demonstrable tasks, structured group discussions and cooperative group discussions, increase members' in-depth processing and elaboration of information. (Van Ginkel & van Knippenberg, 2008).

Therefore, we believe it is interesting to study information sharing in heterogeneous teams. Thus, in the following section diverse strategies suggested by previous literature will be analysed to tackle information sharing inefficiencies.

2.7 Strategies to enhance exchange, elaboration, and integration of information

Stasser, Stewart, and Wittenbaum (1995) reasoned that the forewarning and public role-assignment would impact information sharing in different ways. The literature suggests that in heterogeneous teams, roles and responsibilities assignment improve information sharing practices. Emmitt and Gorse (2007) highlighted the importance of assigning a team manager. They suggest that team managers should facilitate, stimulate, and motivate their members to communicate effectively as a team. Further research suggests that individuals specialize in roles, tasks and responsibilities to provide the idea of status, and other team members should be more willing to listen to unshared information (Katz & Tushman, 1979). Oppositely, other studies suggest that teams in decision making should find a common ground to enhance elaboration of information (Van Ginkel & van Knippenberg, 2008). In the literature we find three examples of common ground: shared task representations, shared leadership, and shared cognition. Shared task representation is defined as *“any concept, norm, perspective, or process concerning the team task that is held in common by team members”* (Van Ginkel and van Knippenberg, 2008). Additionally, research has demonstrated that shared leadership leads to innovation, creative problem solving, and decision making (Hoch, 2014). Carson (2007) defines shared leadership as *“an emergent team property that results from the distribution of leadership influence across multiple team members”*. Shared cognition is another critical mechanism that binds entrepreneurial team members together at an early stage (Foo, 2011) allowing them to communicate more efficiently, providing better team performance and improving members coordination. Shared cognition manifests itself in

how well entrepreneurial members understand each other, by sharing the same language and mutual goals. Even if shared cognition has been proven as an effective factor for information sharing, we do not take it into account as an enhancing strategy since it is developed prior to the venture creation. Those characteristics are given and cannot be controlled or modified. We regard shared cognition as homogeneity characteristics.

The other factor that Stasser (1995) reasons can improve information sharing is forewarning, also mentioned in the literature as planning in advance and structuring the meeting (Hoch, 2014). Stasser (1995) defines forewarning as the opportunity for members to prepare for their expert roles, promoting the encoding and retention of items in the expert domain. Whereas forewarning does not significantly increase exchange of unshared items during discussion, it did have other beneficial effects. Most notably, forewarned groups were less likely to omit unshared items that came up during discussion from their written protocols. Moreover, pre-discussion activities should enhance the accessibility and retrieval of expert information during discussion (Hoch, 2014). Compared to less diverse teams, heterogeneous teams have access to a more varied set of knowledge and thus will be more likely to already possess relevant frameworks when encountering new information. These multiple relevant frameworks allow them to analyse a larger portion of information in depth (Dahlin, Weingart & Hinds, 2005).

While defining specific tasks, roles, leaders or having a common ground within a heterogeneous team at a very early stage of the start-up might be unrealistic, we believe it is worthwhile to study how forewarning structures have a positive impact on information exchange since it is easy to apply at any stage or situation. In this study we implement Stasser's (1995) forewarning approach in the form of a meeting agenda because, according to Louis et al. (1995), the use of structured meeting agendas during discussions is associated with the emergence of reflective dialogue. The meeting agenda gathers all the relevant topics that should be discussed during the decision-making process. This will be discussed in detail in the methodology chapter.

To summarise, heterogeneous entrepreneurial teams in terms of educational background are more likely to face task conflicts with a negative impact on the company. As it has been stated, conflicts should not be regarded as something negative, but an opportunity to discuss and bring value and knowledge into the company. Effective information sharing is key to manage and control conflicts. In this study we propose a forewarning

approach in the form of a meeting agenda to enhance information sharing and disclose unshared information in order to improve the performance of the team and therefore the performance of the company.

3. Methodology

3.1 Research approach

Empirical data for this study have been collected via a simulation experiment and interviews with the participants. To analyse the complexity of the data generated by these methods we implemented a mixed method approach.

Mixed research methods are defined as the integration of qualitative and quantitative approaches (Creswell & Plano Clark, 2007). We decided to apply this method in our thesis because according to José et al. (2011), mixed research methods facilitate the study of entrepreneurship, understood as a complex phenomenon, since it can be studied from different perspectives. Creswell and Plano Clark (2007) support this fact stating that *“the use of quantitative and qualitative approaches in combination may provide a better understanding of research problems and complex phenomena than either approach alone”*. The integration of qualitative and quantitative approaches can be applied with different purposes (Greene, Caracelli & Graham, 1989): as complementary, development, initiating or expansion approaches. Additionally, it facilitates generation and verification of a theory in the same study (José et al. 2011). Mixed methods also provide stronger inferences (José et al. 2011) and it compensates the disadvantages of single methods.

Based on the previous information, we decided to combine both research approaches' strengths. On one hand, the quantitative collection method allowed us to accurately measure information elaboration, information integration and information exchange during the interview and experiments with and without the agenda. However, since we aim to explore why and how the agenda impacts on exchange, elaboration, integration and the Hidden Profile Paradigma, we believe the quantitative approach is not appropriate for this aim. For that reason, we considered the implementation of qualitative techniques necessary to explore new phenomena and study participants' behaviour (José et al. 2011). The qualitative approach allowed us to explore the particular impact of the agenda and how participants interact with it.

Through the experiment and subsequent interviews, we studied information sharing through three factors: information exchange, elaboration and integration (Van Knippenberg, De Dreu, & Homan, 2004). Information exchange is defined as simply

mentioning a piece of information during the discussion by its holder. Elaboration is the discussion of a piece of information by any member of the team. And integration is the understanding and remembering of the piece of information by team members after the meeting (Van Knippenberg, De Dreu, & Homan, 2004).

Based on the previous information we believe this method, in addition to the simulation experiment and the interviews, that will be explained in the following section, will allow us to address our hypothesis:

Hypothesis:

Hp. 1: We believe that the implementation of a meeting agenda during the discussion will enhance information exchange in heterogeneous entrepreneurial teams with different educational backgrounds.

Hp. 2: We believe that the implementation of a meeting agenda during the discussion will enhance information elaboration in heterogeneous entrepreneurial teams with different educational backgrounds.

Hp. 3: We believe that the implementation of a meeting agenda during the discussion will enhance information integration in heterogeneous entrepreneurial teams with different educational backgrounds.

Hp. 4: We believe that the implementation of a meeting agenda during discussion will decrease the Hidden Profile Paradigma effect.

3.2 Method

As mentioned before, the research was conducted in the form of a simulation experiment and interviews with the participants. Three teams participated in the experiment with the agenda (experimental group) and three without it (control group). Thus, the meeting agenda is the manipulation of the experiment. In this section we will first explain the experiment and the meeting agenda in detail, and then we will move to describe the interviews.

3.2.1 Experiment design

Simulation experiments have become increasingly established as a research method in the social sciences over the previous years (Lorscheid, Heine, & Meyer, 2012) because it aims to bridge the gap between the descriptive approach used in the social sciences and the formal approach used in the natural sciences, by moving the focus toward the processes/ mechanisms/ behaviours that build the social reality (Takahashi et al. 2007). Social simulation is defined as a research field that applies computational methods to study issues in the social sciences (Takahashi et al. 2007). We believe that a simulation experiment is the best option to answer our research questions based on the following advantages (Takahash et al, 2007). Firstly, this type of experiment perfectly adjusts to our research problem as they are highly flexible and allow us to adjust the case study to answer our research questions. Secondly, because simulation experiments allow us to adopt an explorative approach in which we aim to find casual findings and initial confirmation of our hypotheses, setting the yardstick for future research. Furthermore, the implementation of a meeting agenda to enhance information exchange, elaboration and integration in heterogeneous entrepreneurial teams has not been studied before. Therefore, we believe it is the right approach to handle the studied research question in an explorative way, where we try to identify some sort of groundwork in this area, establishing and confirming internal validity before this specific field of research can be generalized.

Based on Van Ginkel, and van Knippenberg's (2008) work, we created the following experiment. In the simulation experiment, three participants per team with diverse educational backgrounds aimed to solve the following problem:

They are founders of Smartime, a startup that offers smartwatches. They recently received a large order from a new distributor and to meet the demand, the venture needs to scale up. They have two options: outsourcing to China or scale up their own facilities. They should come up with the solution within this meeting.

Participants received the details of the company and information regarding the problem on paper five minutes before the meeting (Appendix 2). This summary includes both common information shared by every member and information specific to their roles in the company. They were not aware they had different information. The roles in the company matched participants' real background.

During the meeting they had 20 minutes to come up with the solution. Three teams were provided with an agenda with general topics that should be discussed regarding the problem (Appendix 3). Before the meeting they were asked to organize the information in the instructions according to the agenda. The other three groups carried out the discussion freely. The experiment took place via Zoom, an online platform that allowed us to record the video to help us analyse the data.

In order to test and improve the experiment, we conducted two pilots. We realised that when just revealing facts regarding the problem in a neutral way, participants agreed too fast. Without conflict there is no debate, and therefore lack of information sharing. Participants were personally biased by actual trends towards sustainability and as a result they all chose to scale up in Sweden in the first pilot. That is why in the final instructions we decided to create a conflict of interest between the roles. We provided information so the participant with the business background wanted to scale up in China, the participant with the humanities background wanted to scale up in Sweden and the participant with the engineering background was initially neutral. We also clarified the instructions and learned how to better prepare for the interview. We revised the questions to make them clearer and learned when to probe further. We conducted a second pilot experiment with the agenda. We realized that the information provided was very superficial. As a consequence, information was simply brought up during discussion but not to elaborate upon. When the other participants asked the person that just provided the piece of information to elaborate more, they could not do it because of the lack of information provided in the case study. For this reason, we decided to incorporate more technical

information to encourage elaboration, since not all the participants would understand it as easily.

3.2.2 Meeting agenda

We believe that the implementation of a forewarning approach in the form of a meeting agenda during the discussion will improve information sharing between team members, based on multiple studies (Stasser, Stewart, & Wittenbaum, 1995; Louis, 1995 & Huber, 1984). As it was stated in the last chapter, and based on Stasser, Stewart, and Wittenbaum's (1995) work, we define forewarning approach as the notice in advance of the topics that should be discussed during the meeting. In our experiment, the topics were presented in a written agenda (Appendix 3) that was available before and during the discussion. The agenda also stated the objective of the discussion, since according to Halpern (1997), the initial definition of goals is essential in the decision-making process. The objective of the implementation of the agenda is that team members can organize the information (both shared and unshared) in advance, and therefore, be aware of all the information they should share. By keeping the agenda during the meeting, they kept the goal in mind, and were encouraged to follow the structure and not forget anything. Since most information is usually unknown before the meeting, the agenda reflected the general dimensions that impact most decisions. During this study we assigned different colors to each dimension and the pieces of information connected to them for analysis purposes. We defined these specific subjects of the agenda as the main topics that should generally be discussed in meetings, based on Ghani's (2010) work about strategic planning:

A. Financial situation.

The financial situation refers to the information provided for the experiment that deals with the cost and potential profitability of the two production alternatives. This involves loan conditions, production cost and marketing budget. Information pieces regarding the financial situation can be seen in blue on table 1 in the quantitative research methods chapter.

B. Environmental, legal and ethical aspects.

The environmental, legal, and ethical aspects on the agenda relates to the pieces of information that deal with the environmental, legal and ethical advantages and disadvantages of the two alternatives. These pieces of information can be seen in green on table 1, and includes pollution, footprint, and work conditions.

C. Employees situation.

The orange pieces of information on table 1 refer to the employees' situation on the agenda. This point is about the situation of the current and potential future employees including their knowledge, relationships, and efficiency.

D. Production and technical processes.

This point in the agenda is about the advantages and disadvantages regarding the production and technical processes of both alternatives. Table 1 shows these pieces of information in purple and involves production time, communication, and influences of product quality.

E. Market.

The final point in the agenda describes the market situation, the competitive landscape, the relationship and dependency on the suppliers, the branding campaign and client's sensibility. Table 1 shows this information in red.

We suggest that new ventures teams should design these agendas and follow the structure during meetings to improve information exchange, elaboration, and integration. We selected this forewarning approach among others, such as the definition of tasks and roles (Katz & Tushman, 1979), or leadership to guide the meeting (Emmitt & Gorse 2007) for the following reasons:

Firstly, because we understand that entrepreneurial team members normally have the same status level at the creation of the new venture, and they make decisions together. Therefore, we needed a tool that avoids hierarchy, since in hierarchical teams there is a single person that makes the final decision (Wasserman, 2008; Ch. 5). We believe

meeting agendas perfectly adapt to the circumstances since they do not require anyone to take the lead and therefore, they lend themselves to entrepreneurial teams.

Secondly, according to Louis (1995) this structure promotes exchange of ideas, problem-solving, reflected dialogue and decision making. This is especially important nowadays because heterogeneous entrepreneurial teams spend a great deal of time in meetings where people possess different facts, opinions, expertise and understand, share, and integrate information in different ways (Huber, 1984). Huber (1984) states that the downside of this system is the fact that it entails preparation time before the meeting. Which from our point of view, is actually an advantage since the team members have to revise the information they possess in advance, and therefore be more aware of it during the discussion. In addition, the increase of time spent in the preparation of the meeting that is required, decreases in the time spent in the meeting (Huber, 1984).

3.2.2 Interview design

After the experiment, a short individual interview was conducted as an additional data collection and measurement tool. The interview not only complements and confirms the results collected from the experiment, it also adds valuable information and allowed us to explore a different perspective, such as the participants' point of view. The information gathered from the interview was essential to understand participants' behaviour during the discussion and towards the agenda. We decided to conduct a semi-structured interview because it allowed us to formulate general and open questions and the researcher is able to ask further questions if needed (Bell, Bryman & Harley, 2019). Due to the variability of the semi-structured interview, it enables the researcher to create more accurate outcomes. The interviews were conducted individually, via Zoom, immediately after the experiment. Only one of the researchers was present during the interviews as we divided the participants in order to speed up the process. We recorded the interviews to allow both researchers to analyze the answers in detail later on. All the questions of the interview were asked to all the participants, with the exception of the final question, that was only asked to the participants that used the agenda during the experiment.

The interview included the following questions:

- a) What did you find out during the discussion that you did not know before?
- b) What were the concerns of the other departments?
- c) Do you think every piece of information was equally discussed in terms of time and details?
- d) Were you able to share all the important information of your role? Why?
- e) To what extent do you feel the information you shared was considered?
- f) What is your opinion about the agenda?

With the two first questions we aimed to study integration. With the following three, elaboration and exchange, and with the last one the specific effect of the agenda according to the participants. In the data collection methods section, we will describe the questions in detail.

3.3 Sampling

The simulation experiment made use of a purposive sampling technique as it allowed the researchers to create six similar teams with the same set of educational diversity. This was necessary in order to create a sample that corresponded to the research aim and research questions. Therefore, the study was conducted on six different simulated entrepreneurial teams in which each team member was assigned to the team randomly, as long as the team fulfilled the educational background diversity. Each group consisted of three individuals with different educational backgrounds in Business, Engineering/ IT and Social Sciences. We selected these specific roles in terms of educational background for two reasons. First, because the labels *business, engineering and social sciences* are wide enough to include many disciplines within that background. As a result, it facilitated the gathering of participants. Secondly, because we considered that these specific roles would allow the participants to analyse the problem from completely different perspectives. We are aware of the fact that conducting only six experiments does not provide statistical validity or significance, however with our study, in the form of a mixed method approach, we rather aim to understand whether an agenda helps entrepreneurial teams to increase information sharing or not, and why it happens. In addition, we aim to set the bases for future research.

We consider entrepreneurial teams as those compounded by participants with a close relation with entrepreneurship, such as students of the field or founders of start-ups. For this, we selected students from the Lund University Entrepreneurship & Innovation, New Venture Track, Masters programme and the Lund University incubator, Venture Lab. The sample involved current students coming from different educational backgrounds, who are actively pursuing entrepreneurship. The sample from the masters programme, as well as the incubator from the university, provides the study with the essential setting. This is because both accept and include students from diverse educational programs as long as they possess a great motivation and intention towards entrepreneurship. Finally, three groups participated in the experiment using a provided meeting agenda while the other three did not have it.

3.4 Data collection methods

The following part of this study moves on to describe the mixed method approach in greater detail based on both the qualitative and quantitative data collection methods used in the study.

3.4.1 Quantitative collection method and data analysis

In this study we considered the implementation of a quantitative approach essential to collect objective data in order to analyse exchange, elaboration, and integration in detail. Quantitative research is appropriate to answer the questions “*how many*”, “*how often*”, and useful for establishing cause-and-effect relationships (José et al. 2011). In addition, it allows to compare the experiments without the agenda to the experiments with the agenda. The aim of the quantitative analysis is to compare the level of exchange, elaboration, and integration of both shared and unshared information between the teams with the agenda and without it, in order to answer the hypothesis of this study. We also aimed to study how the agenda affects the Hidden Profile Paradigma.

In total there were 34 pieces of information, 14 shared and 20 unshared (Table 1). Shared information is understood as common information to all the participants and unshared information as specific information for each role. We also counted extra information as information that participants brought up during discussion that was not provided in the

case study. These pieces of information will be counted as unshared information in the analysis. The case study had 34 pieces of information per team (plus extra information) to enable a sufficient discussion within an approximately 20-minutes meeting. The number was defined based on the first pilot experiments where lower numbers led to short meetings without conflict of interest which led to less discussion and quick decision making. Based on the second pilot we included more role specific, and technical information to further foster information elaboration.

Variables	Possessor	Information pieces
Shared information	All the participants	<ul style="list-style-type: none"> ● History of the company. ● Investment. ● Environmental values of the company. ● Close relationship with employees. ● Number of employees. ● New collaboration agreement. <p><u>Production China</u></p> <ul style="list-style-type: none"> ● Production cost. ● Time to start production. ● Communication inefficiencies ● Inability to provide fair labor conditions. . ● No-one speaks chinese <p><u>Production Sweden</u></p> <ul style="list-style-type: none"> ● More profitable long term. ● Production cost. ● Time to start production.
		<p><u>Production China</u></p> <ul style="list-style-type: none"> ● Fire current employees. ● Import and quality certifications in time. ● Increase of the footprint. ● Repercussion in the brand image. ● Efficient worker. ● Pollution regulations.
Unshared information	Humanities background	<p><u>Production China</u></p> <ul style="list-style-type: none"> ● Affect product quality. ● Customers sensibility. ● Control loss of the production process. ● Batteries <p><u>Production Sweden</u></p> <ul style="list-style-type: none"> ● Lack of knowledge to scale up in Sweden. ● Hire more employees.
	Engineering/IT background	

		<ul style="list-style-type: none"> ● Afraid to be excluded.
	Business background	<u>Production China</u> <ul style="list-style-type: none"> ● Dependence on one supplier. ● Competitors moving fast. ● They have to return the bank loan. ● They have to act fast. ● Can't lose the client. ● Simplify work for the team. ● Marketing campaign
Extra information	All the participants	Unknown

Table 1: Total pieces of shared and unshared information.

Quantitative data was collected through observation in the simulation experiment and the answers to the interview. We move to describe exchange, elaboration, and integration measures:

Exchange measures:

Exchange is defined as the mention of a particular piece of information (shared or unshared) during the discussion. Exchange of a specific piece of information was measured from 0 for “not exchanged” to 1 for “Exchanged”. Thus, the maximum punctuation for each experiment is 34 points + extra information. This information was collected from the experiment.

Elaboration measures:

Elaboration is a dependent variable of exchange. It is defined as the total number of times teams mention a specific piece of shared or unshared information (Table 1) during discussion. The first time the piece of information was mentioned it was counted as both exchange and elaboration, but the following times it was brought up it was only counted as elaboration. Asking to repeat the information provided, or the repetition of the last words was not considered as elaboration. Therefore, the elaboration measure is either “0” if that piece of information was not exchanged and consequently not elaborate upon, “1” if that piece of information was only exchanged and “1<” for the times the piece of information was mentioned. This information was collected from the experiment.

Integration measures:

Integration is also a dependent variable of exchange. Unlike the previous measures, it was collected during the interview. Integration is defined as those pieces of unshared or extra information (Table 1) from the other members, that participants in the team can remember after the discussion. Data was collected by asking the following questions:

1. What did you find out during the discussion that you did not know before?

With this question we aimed to measure the units of unshared and extra information participants remembered after the discussion. When participants recalled one piece of unshared or extra information it was counted as integration.

2. What were the concerns of the other departments?

This is a follow-up question asked from a different perspective to encourage interviewees to remember.

The integration measure is “0” when no pieces of unshared information, that was exchanged, is remembered by the interviewees. The maximum count of the integration measure is the number of unshared and extra information that was exchanged in the experiment.

To answer our hypotheses, we use bivariate analysis through contingency tables where the experiments with the agenda are compared to the experiments without the agenda. The counted data is collected and visualized on a contingency table which was created on Excel and which is the basis of the data analysis. Contingency tables were used because it is the most flexible method for analysing and comparing the quantitative outcomes of the experiment with and without the agenda (Bell, Bryman & Harley, 2019).

To analyse the data from the contingency tables, the totals of the exchanged, elaborated, and integrated pieces of shared and unshared information of each role were listed for each of the six experiments. Further, to compare the data of the experiments with and without agenda, the total of all exchanged, elaborated, and integrated information of the three different roles were listed in an overview table. To include different perspectives in the

analysis, we added a comparison of the means of the three variables as well as the increase or decrease in percentage on the experiments with the agenda.

Hidden Profile Paradigma measure:

We measure the Hidden Profile Paradigma based on the previously described exchange and elaboration measures. For this, initially, the total number of the exchanged and elaborated shared information is compared in relation to the total number of exchanged and elaborated unshared information (including the extra information). After that, the relative frequency of the exchange and elaboration of the shared information is compared within the teams without the agenda to the teams with the agenda. The comparison of the relative frequencies will show whether the agenda influenced the Hidden Profile Paradigma.

In the next section that follows we will explain how we complemented the quantitative results with a qualitative approach.

3.4.2 Qualitative data collection method and data analysis

Based on Greene, Caracelli and Graham's theory (1989), we combined the qualitative and quantitative approaches in a complementary way. The qualitative analysis allowed us to complement the quantitative information obtained during the experiment and interviews. Qualitative research is useful for exploring new phenomena or for documenting participants' internal perspectives. As simulation experiments, a qualitative approach can provide details about human behaviour and dynamics and it is flexible since it is based on observation (Silverman, 2016).

Data was gathered through observation during the simulation experiment and the last four questions of the interview. The quantitative analysis allowed us to answer the question whether participants exchange, elaborate, and integrate information or not and how often they elaborate on a piece of information. With the qualitative study approach, we were able to find out how the participants interact with the agenda and to what extent it enhanced information sharing dynamics within the team. In the following, the interview questions are described:

1. Do you think every piece of information was equally discussed in terms of time and details?

With this question we aimed to study the succession of topics during the meeting and to what extent the agenda impacts on the structure of them so they can be equally discussed in terms of time and detail.

2. Were you able to share all the important information of your role? Why?

With this question we aim to find out whether the agenda contributes to share more information during the meeting. This gives an input of the interviewees' perspective of whether they consider all the important information having been shared. In addition, if they did not share all the important information, we aim to understand why they did not.

3. To what extent do you feel the information you shared was considered?

By asking this question we aim to gather insights to support the elaboration data collected during the quantitative analysis.

4. What is your opinion about the agenda?

In this question we directly addressed their personal perception about the agenda to further understand its impact on the discussion process. Only the teams with the agenda were asked this question.

4. Results

4.1 Quantitative results and analysis

In the following table (Table 2) one can see the overview of the quantitative data collection from the experiments without agenda (left) and with agenda (right). The table indicates the total sum of the times all the participants of each experiment exchanged, elaborate, and integrated each piece of information.

Overview		WITHOUT Agenda									WITH Agenda								
		Experiment 1			Experiment 3			Experiment 6			Experiment 2			Experiment 4			Experiment 5		
		Ex.	Ela.	Int.	Ex.	Ela.	Int.	Ex.	Ela.	Int.	Ex.	Ela.	Int.	Ex.	Ela.	Int.	Ex.	Ela.	Int.
Shared information	Company story	0	0	0	0	0	0	0	0	0	1	1	0	1	1	0	1	1	0
	Investment	1	5	0	1	6	0	1	2	0	1	4	0	1	5	0	1	7	0
	Sustainability	1	4	0	2	13	0	0	0	0	1	6	0	1	7	0	1	3	0
	Employee relationship	1	3	0	1	4	0	0	0	0	1	1	0	1	2	0	1	3	0
	Number of employees	1	3	0	0	0	0	1	1	0	1	3	0	1	1	0	1	5	0
	Collaboration agreement	0	0	0	1	1	0	0	0	0	1	1	0	2	5	0	1	2	0
	Production cost China	1	4	0	2	3	0	1	2	0	1	6	0	1	3	0	1	4	0
	Production time China	1	5	0	1	1	0	0	0	0	1	6	0	1	1	0	1	4	0
	Communication inefficiencies	1	3	0	0	0	0	1	4	0	1	9	0	1	2	0	1	3	0
	Fair labor conditions	1	4	0	1	4	0	1	1	0	1	2	0	1	7	0	1	3	0
	Sweden is more profitable	1	5	0	0	0	0	1	2	0	1	6	0	0	0	0	1	2	0
	Production cost Sweden	1	4	0	1	1	0	1	2	0	1	6	0	1	3	0	1	5	0
	No one speak chinese	1	1	0	1	3	0	0	0	0	1	2	0	1	2	0	1	2	0
Production time Sweden	1	5	0	1	3	0	1	2	0	1	6	0	0	0	0	1	3	0	
Unshared information Engineer	Product quality China	1	11	2	3	4	1	1	3	1	1	2	1	1	5	0	1	3	1
	Customer sensibility	1	8	0	1	2	0	1	2	1	1	2	0	1	1	0	1	1	0
	Control lost of production	1	4	0	1	1	0	0	0	0	2	4	0	1	1	0	1	1	0
	Batteries	0	0	0	0	0	0	1	1	0	0	0	0	1	4	2	1	1	1
	Lack of knowledge to scale	1	2	0	0	0	0	0	0	0	1	2	0	0	0	0	1	3	0
	Hire more employees	1	4	0	1	2	0	0	0	0	1	8	1	0	0	0	1	6	1
	Afraid to be excluded	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
Unshared information Social	Fire current employees	1	3	0	1	5	1	1	1	0	1	5	1	1	1	1	1	16	2
	Certifications	1	1	0	0	0	0	0	0	0	1	4	0	0	0	0	1	4	1
	Footprint	0	0	0	1	2	0	0	0	0	1	3	1	1	2	1	1	1	0
	Brand image repecusion	1	5	0	1	2	1	1	4	0	1	7	0	1	1	2	0	1	1
	Efficient workers China	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pollution regulations	1	1	0	0	0	0	1	2	0	1	4	1	0	0	0	1	1	2	
Unshare information business	Dependance on 1 supplier	1	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
	Competitors	1	7	2	1	2	0	0	1	0	1	8	1	1	2	1	1	4	2
	Marketing	1	3	1	1	5	0	1	2	2	1	3	1	1	1	0	1	3	1
	Return of the bank loan	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1	0
	Act fast	1	4	2	1	3	0	1	1	2	1	2	1	0	0	0	1	2	1
	Can't lose the client	0	0	0	0	0	0	0	0	0	1	4	1	1	2	0	1	1	0
	Simplify work for the team	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Extra information		10	15	2	3	3	0	1	2	0	4	7	0	2	2	0	4	16	1
TOTAL		38	118	9	27	70	3	17	35	6	34	125	9	26	62	7	34	113	14

Table 2: Experiment outcomes - data collection overview.

The numbers in the table 2 refer to the quantities of the exchanged information (Ex.), elaborated information (Ela.) and integrated information (Int.) per team. In the next sections the results referring to the information exchange, elaboration and integration

measures and the hidden profile paradigm measure will be further discussed. In addition, the next section compares the quantities between the control group (without agenda) and the experimental group (with agenda) by the totals, average and the standard deviation.

4.2 Information exchange, elaboration, and integration measures

The quantitative results are split into two parts to cover exchange, elaboration, integration, and the Hidden Profile Paradigma measures. First, to analyse the influence of the agenda in information exchange, elaboration and integration, the total outcomes of the experiments without the agenda are compared to the total outcomes of the experiment with the agenda. Table 3 and 4 categorize the findings according to the three teams with and without agenda respectively and show the total number of information exchange, elaboration, and integration per team. The total numbers represent, as explained in chapter 3, the total counts of information exchange, elaboration, and integration of shared and unshared information. In addition, the total numbers of information exchange, elaboration and integration are summarized for all teams as a total. To further be able to compare the findings, the average and standard deviation is calculated for the information exchange, elaboration and integration measures for both experiments, with and without agenda.

At first, one can see that for the experiments without agenda, the teams exchanged on average 27,3 pieces of information with a standard deviation of 8,6 between the three teams. In addition, these teams elaborated on the exchanged information on average 74,3 times with a standard deviation of 34 which indicates a rather high deviation between the three numbers. Finally, the three teams were able to integrate on average six pieces of information which they did not possess before the meeting. The standard deviation for the integration measure was rather low at 2,5.

For the experiments with the agenda, the teams exchanged on average 31,3 pieces of information which is 15% more, compared to the experiments without agenda. The standard deviation for the exchange measure was rather low at 3,8 which indicates a rather stable number of exchanges between the teams. Furthermore, the teams with the agenda elaborated on exchanged information on average 100 times which is 35% more compared to the experiments without the agenda. The standard deviation of 27,3 of the elaboration measures is mainly caused by the outlier of team 4 which elaborated on the exchanged

information 62 times while team 2 and 5 elaborated 125 and 113 times, respectively. Finally, the teams with the agenda were able to integrate on average 10 pieces of information which they did not possess before the meeting, with a standard deviation of 2,9. This is 66,7% more compared to the experiments without the agenda.

Overall, the total numbers for information exchange, elaboration and integration were higher for the teams with the agenda. Specific outliers within the teams, from the experiments without and with the agenda will be further explained with the complementary qualitative analysis. Furthermore, one can interpret that the agenda had a rather small influence on the number of information exchanges but a rather big influence on information elaboration and especially on information integration.

Results of the experiments WITHOUT Agenda			
Experiment	Exchanged pieces of information	Elaborated pieces of information	Integrated pieces of information
Team 1	38	118	9
Team 3	27	70	3
Team 6	17	35	6
Total pieces of information	82	223	18
Average	27,3	74,3	6,0
St. Deviation	8,6	34,0	2,5

Table 3: Experiment outcomes - without agenda.

Results of the experiments WITH Agenda			
Experiment	Exchanged pieces of information	Elaborated pieces of information	Integrated pieces of information
Team 2	34	125	9
Team 4	26	62	7
Team 5	34	113	14
Total pieces of information	94	300	30
Average	31,3	100,0	10,0
St. Deviation	3,8	27,3	2,9

Table 4: Experiment outcomes - with agenda

4.3 Hidden Profile Paradigma measure

In order to evaluate the effect of the agenda on the Hidden Profile Paradigma we divided the results in two parts. The first part covers the comparison between the total sum of exchanged shared information to the total sum of exchanged unshared information per team (Table 5). We should bear in mind that extra information is considered and counted as unshared information. In the second part, we compared the total sum of the elaborated shared information to the total sum of the elaborated unshared information per team (Table 6) with the aim to complement the previous results as the Hidden Profile Paradigma contemplates both exchange and elaboration. These total numbers are further analysed by comparing the ratio of the shared information for the experiments without agenda, to the ratio of the shared information for the experiments with agenda. Therefore, if the ratio of unshared information is lower than the shared information, the Hidden Profile Paradigma is confirmed.

Table 5 shows the findings of the first part where the numbers represent the total count of the information exchange of shared and unshared information for the experiments without and with agenda. One can see that the teams without agenda generally exchanged less shared information. While team 3 and 6 exchanged 44% and 47% shared information from the total amount of information exchange, team 1 exchanged far less shared information with 32%.

Comparing it to the teams with the agenda, one can see that the agenda did not have an influence on the Hidden Profile Paradigma, when it comes to the exchange measures. While team 2 and team 5 exchanged 41% of shared information to the total amount of exchanged information, team 4 exchanged as much shared information as unshared information during their meeting.

On average, the teams without agenda exchange 41% shared information while the teams with agenda exchange 44% shared information from the total amount of exchanged information. This indicates that the agenda does not have an influence on the Hidden Profile Paradigma when it comes to the amount of exchanged information.

Hidden Profile Paradigma (Exchange measures)					
Without Agenda	Shared information	% of total	Unshared information	%	Total
Team 1	12	32%	26	68%	38
Team 3	12	44%	15	56%	27
Team 6	8	47%	9	53%	17
Average		41%		59%	
With Agenda	Shared information	% of total	Unshared information	%	Total
Team 2	14	41%	20	59%	34
Team 4	13	50%	13	50%	26
Team 5	14	41%	20	59%	34
Average		44%		56%	

Table 5: Hidden Profile Paradigma (Exchange measures)

The findings on table 5 show that teams 1 and 6 (experiments without agenda) elaborated less on shared information than on unshared information, with 39% and 46% respectively. With 56% on elaboration of shared information, team 3 elaborated more on shared information than unshared information.

However, comparing the ratios of the experiments without agenda to the experiments with the agenda, one can see that there is no large influence of the agenda on the Hidden Profile Paradigma. Teams 2 and 5 elaborated less on shared information with 47% and 42% respectively. Meanwhile team 4, with 63% elaborated much more on shared information than on unshared information.

On average the teams without the agenda elaborated 47% on shared information while the team with agenda elaborated 50,7% on shared information. Even though the teams were provided with 20 pieces of unshared information and only 14 pieces of shared information, they elaborate on shared and unshared information rather equally. This indicates that the agenda did not have an impact on the Hidden Profile Paradigma within the experiments. Specific outliers will be explained with the complementary qualitative data.

Hidden Profile Paradigma (Elaboration measures)					
Without Agenda	Shared information	% of total	Unshared information	%	Total
Team 1	46	39%	72	61%	118
Team 3	39	56%	31	44%	70
Team 6	16	46%	19	54%	35
Average		47%		53%	
With Agenda	Shared information	% of total	Unshared information	%	Total
Team 2	59	47%	66	53%	125
Team 4	39	63%	23	37%	62
Team 5	47	42%	66	58%	113
Average		51%		49%	

Table 6: Hidden Profile Paradigma (Elaboration measures)

4.4 Qualitative results and analysis

The following part of this paper moves on to describe the results from the qualitative analysis of the experiment and the interview. These results are essential to understand the impact of the agenda during the discussion because it allows us to deepen into the quantitative results, confirm and complement the information. Results were collected by observation; both researchers watched the video of the experiment together.

Initially, we categorized teams in terms of teams with agenda and without agenda. However, after the experiments we realized some groups with agenda did not stick to it, therefore, we categorize three types of teams regarding the way they interacted with the agenda; teams without agenda, teams with agenda and teams that only followed the agenda partially.

4.5 Qualitative results from the experiment through observation

During the experiment, qualitative data was collected by observation with the purpose of studying how the agenda impacts on elaboration, exchange, and the Hidden Profile Paradigma. It was noticed during the experiment that the agenda had a clear impact on the structure of the meeting, which refers to the succession of topics. Thus, we analyse the effect of the structure on the discussion; elaboration, exchange and in the next chapter (Qualitative results from the interview), integration.

First, we analyse the structure of the meeting since it proceeds differently with and without the agenda. On one hand, the teams without the agenda followed a structure of three steps. First, they shared, one by one, all the information they believed was relevant. Then they discussed and elaborated upon different topics. Finally, they came up with a solution. On the other hand, the teams that followed the agenda, exchanged the information and elaborated at each bullet point of the agenda. Once they had revised all the points, they started the discussion about the solution. The teams that followed the agenda only partially combined both structures. The order of the succession of topics discussed during the meeting and the time for exchange and elaboration also varied with the agenda. We analysed the moment when teams stopped exchanging and elaborating information to start discussing for the final decision. And finally, we looked into further insights regarding elaboration and exchange.

In the following table (Table 7) we analyse the succession of topics discussed by every team and compare them to the expected succession according to the agenda. We also include the agenda in the table to compare whether teams with the agenda followed it or not. We call topics to the subject registered in the agenda that includes all the pieces of information registered in table 1, that is why we will stick to the same colours system. We considered that a topic was discussed and therefore registered in the table when at least two people elaborated on the same piece of information belonging to that specific topic successively.

Team 1 (Without agenda)	Team 3 (Without agenda)	Team 6 (Without agenda)	Team 2 (With agenda)	Team 4 (With agenda)	Team 5 (With agenda)	Agenda
Quality	Brand image	Solution discussion	Marketing	Investment	Investment	Financial situation
Communication inefficiencies	Employees		Communication inefficiencies	Brand image	Employees	Ethical, legal, environmental aspects
Market	Solution discussion		Investment	Collaboration agreement	Labour conditions	Employees
Brand image	Employees		Labour conditions	Labour conditions	Certifications	Production
Marketing	Investment		Certifications	Communication inefficiencies	Brand image	Market
Investment	Communication inefficiencies		Time	Control of production	Employees	
Quality	Investment		Employees	Sustainability	Solution discussion	
Time	Employees		Production cost	Quality	Employees	
Employees situation			Investment	Brand image	Investment	
Solution discussion			Brand image	Investment	Employees	
Quality			Solution discussion	Solution discussion		
Time						
Customers sensibility						

Table 7; topics sequences

As we can observe in the table, the teams without the agenda did not mention all the topics and did not organize the information as they moved back and forth from one topic to another. The first team mainly discussed production and the market and the second team mainly the employees and financial situation. The third team did not discuss at all, they simply exchanged information without considering each other's comments. When there is not a supporting system to organize the meeting, such as an agenda, one of the members of the team instinctively takes the lead to guide the conversation. As a consequence, his

or her concerns are further discussed. In the case of the first team the CEO, whose main concerns were financials, the market and time, took the lead. As a result, these topics were more discussed. In the second team, even though the CEO initiated the conversation, the other members were very active at exchanging and elaborating, therefore they elaborated more equally. The third team did not elaborate because the CEO led the meeting in a way that only the exchange of information was important as he moved fast between topics. In addition, we could observe that the team was quickly convinced by the argumentation of the environmentalist.

On the other hand, the teams with the agenda discussed all the bullet points, even if it was not in the order suggested. We observed that the teams that completely stuck to the agenda (Team 5) followed the suggested order during the discussion, as a consequence they elaborated in order as well. In the discussion of team 2, the CEO started the conversation by sharing his concerns, as we can observe in the table. After a few minutes they decided to follow the agenda, therefore we can see that the color order matches the agenda's. In the case of team number 4, only one of the members used the agenda, the CEO. As a consequence, she had to lead the conversation, but at least most of the topics were elaborated upon. They did not elaborate on one topic; employees' situation, because the person that possessed the relevant information about that topic (the engineer) was not completely active during the discussion.

Therefore, we conclude that during the discussion without agenda, there will be instinctively a leader guiding the conversation. Therefore, the fact that team members decide or not to exchange and elaborate information depends partially on the leader's performance. On the other hand, even if not all the team members follow the agenda, they were more likely to elaborate on every topic. And if all of them follow the agenda, in addition to being more likely to elaborate on more topics, the discussion will be more equal in terms of hierarchy since there is no need to take the lead.

We recognized that it was difficult for the teams with the agenda to strictly stick to one topic at a time because many pieces of information overlapped. As a consequence, they deviated from the main topic. Other teams, on the contrary, were aware when they were deviating and they addressed this problem with sentences such as: *"I just wanted to mention this, but I will further elaborate on the next bullet point"*. We realized for some

teams it was easy and natural to stick to the agenda in a rational way. However, for other teams, involved in a more intense discussion, following the agenda seemed more difficult.

Regarding elaboration and exchange time, we observed that the teams with the agenda spent more time exchanging and elaborating the information before they started looking for a solution as it is represented in the table below. We realised that when teams stick to the agenda, they need more time to exchange and elaborate.

TEAMS	EXCHANGE AND ELABORATION TIME
Team 1 (without agenda)	13.30´
Team 3 (without agenda)	10´
Team 6 (without agenda)	5.30´
Team 2 (with agenda)	12´
Team 4 (with agenda)	15´
Team 5 (with agenda)	17´

Table 8: exchange and elaboration time

In regard to exchange and elaboration, we noticed that in the experiments without the agenda, participants spent a great amount of time exchanging information, but not elaborating upon it. When someone finished exchanging information, the other members of the team, instead of elaborating on the information they just received, began sharing their own information. In most cases they started the sentences with “*I understand what you are saying, but.....; I see your point, but...*” The teams that followed the agenda were more likely to ask questions to understand each other’s perspectives: “*What do you mean?*”, “*can you elaborate on that?*” It seems like the agenda delimits time during the meeting to discuss certain topics and as a consequence, team members are more active in the discussion.

4.6 Qualitative results from the interview

The last four questions of the interview were essential to understand participants' perception and behaviour towards the agenda. Through these questions we explore the possibilities of the agenda and future improvements. We also aimed to corroborate exchange and elaboration results from the quantitative and the previous analysis.

We answer the two first questions together as we believe they complement each other and as a consequence the responses overlap. From the questions "Do you think every piece of information was equally discussed in terms of time and detail?" and "Where you able to share all the information of your role? Why?" we obtained the following results:

The teams without the agenda answered that most of the topics were discussed equally in time, but superficially in detail. We know they did not elaborate equally in time according to our analysis based on observation, but they were not aware of it because they did not have any reference with the topics. On the other hand, the teams with the agenda were more aware of the information they did not share; they stated that they spent more time talking about the first topics of the agenda and less about the lasts due to the time limitations of the experiment. They believed they exchanged in detail, but they were also aware of the topics they did not reflect upon, unlike the teams without the agenda.

Therefore, with the answers we collected from these questions, we confirm that the agenda helps to elaborate in detail during discussion. The fact that the information was not equally discussed in time must be a consequence of the fact that they did not control the time, the researchers controlled it. We now believe the agenda should implement a time frame.

Participants also answered in both of the experiments that they did not share all the information for two reasons. First, because they assumed the others knew it, and second, because they considered it was not relevant for the decision. Since both teams, with and without the agenda made similar statements, we assume that the agenda has no impact on how people perceive the relevance of each piece of information. The perceived importance of a topic impacts directly on the time and details spent on a specific piece of information. In addition, the more people that find the same piece of information important, the more likely that piece is to be discussed. We observed that in the experiment, where there were usually two participants against one. They also regarded

the information pieces as arguments to support their goal (outsourcing in Sweden or China) and to convince the others. Therefore, they kept these pieces from the others in case they would need more arguments later during the discussion. One of the participants stated *“No, I didn't, because I was short in time. I tried to focus on a couple of arguments that were more important and pressing. I would have used those additional arguments if I would have thought I needed them”*

In response to the question “To what extent do you think the information you shared was considered?” the participants answered that the other team members understood the information exchanged, but they did not elaborate on it. One team argued that it was the responsibility of the person that exchanged the information to elaborate as well. We observed that, in general, they did not elaborate as much on the topics that were against their personal goals in the company. Some of them stated during the interviews that they did not share the information that could have damaged them somehow. We observed that the same piece of controversial information was not always ignored, some teams discussed it regardless of the agenda. Therefore, we presume that the agenda is more effective at encouraging exchange and elaboration when the team members are willing to collaborate and share, nevertheless, the agenda itself cannot promote this attitude. We assume that the agenda is an enhancing tool. Additionally, most of the teams agreed they would have elaborated more if they had had more time.

Regarding the last question of the interview “What is your opinion about the agenda?”, there were different opinions. Some interviewees claimed that it was helpful to organize the information and the meeting. The agenda forewarned them about the topics that should be discussed during the meeting, increasing their interest about aspects they initially did not even consider and allowing them to prepare in advance, even if they did not follow the suggested order. On the contrary, other interviewees stated that it was difficult to follow the agenda since most of the bullet points overlap, because the information was interrelated. Regarding this aspect, we wonder whether it would be possible to avoid this problem by improving the agenda.

4.7 Summary of results

In this section we proceed to summarize and reflect on the combination of both results from the quantitative and qualitative analysis.

As the quantitative study revealed, the level of information exchange was not influenced by the agenda. We explain this fact through the qualitative analysis, that indicates the agenda does not impact on the willingness of the participants to exchange certain pieces of information. Participants have different reasons to exchange information such as their perception of the relevance or the persuasive power of the specific piece of information. Regarding elaboration and integration, the quantitative analysis indicated that the agenda has an impact. The qualitative analysis showed that the agenda encourages a specific structure during discussion that allows all the participants to focus at the same time on a specific topic for an extended period of time. In this situation all the members of the team are forced to listen and as a consequence they elaborate and integrate more than the teams without the agenda. In addition, the fact of having the agenda in sight all the time made them aware of the topics they should discuss, and therefore more willing to bring them up during discussion.

The quantitative analysis showed that the agenda does not impact on the Hidden Profile Paradigma for similar reasons it does not impact on information exchange: personal perceptions of the relevance and persuasive power of the pieces of information. These perceptions were motivated by their personal goals and preferences in the company and general attitude. Teams with a collaborative attitude disclosed more unshared information for the good of the company than the teams that regarded the discussion as a fight. However, the agenda cannot control participants' attitudes and perceptions.

In addition, we discovered from the qualitative analysis that the proper use of the agenda allows the team to decrease the hierarchy level during information sharing as the CEO does not need to lead the conversation anymore. However, we also found that the effectiveness of the agenda requires active efforts from the team since discussion naturally flows back and forth because topics usually overlap.

5. Discussion

In this chapter we review our findings based on the existing literature and validate whether our results can confirm the theories that guided this study. In addition, we will discuss how our study extends and supports existing research.

While existing research in the field of communication within teams has mainly focused on top management teams, we aimed to focus on heterogeneous entrepreneurial teams in our study. The current literature in the field of communication and team dynamics mostly study communication inefficiencies, the way they originate and arise. That is why we decided to focus on ways to overcome these communication inefficiencies instead, as we believe there is a gap of research in this issue. The objective of this research was to study how heterogeneous entrepreneurial teams can overcome communication inefficiencies with the implementation of a meeting agenda. We created a structured meeting agenda based on forewarning theories (Strasser, 1995).

Our findings are aligned with the theories of Strasser (1995) and Hoch (2014), who suggest that forewarning and planning in advance improve information sharing within teams. Our results confirm these theories since the teams that made use of the agenda in the experiments had better information sharing results, as they were able to elaborate and integrate more information than the teams without the agenda. Our results also confirm that the use of structured meeting agendas during discussions is associated with the emergence of reflective dialogue as Louis et al. (1995) claimed.

Regarding the Hidden Profile Paradigma, theory supported by a wide body of research (Cruz, Boster, & Rodriguez, 1997; Franz & Larson, 2002; Kelly & Karau, 1999; Lam & Schaubroeck, 2000; Larson, Foster-Fishman, & Franz, 1998; Larson, Foster-Fishman, & Keys, 1994; Lavery, Franz, Winqvist, & Larson, 1999; Parks & Cowlin, 1995; Savadori, van Swol, & Sniezek, 2001; Stasser et al., 1989; Stasser & Titus, 1987; Stasser, Vaughan, and Stewart, 2000; Stewart & Stasser, 1995; van Hiel & Schittekatte, 1998; Winqvist & Larson, 1998; Wittenbaum, 1998, 2000), our results confirm this theory as we failed to increase the number of unshared information over shared information through the implementation of a meeting agenda. Festinger (1954) claimed that one of the reasons why the Hidden Profile Paradigma happens is because individuals decide not to exchange unshared information as it cannot be confirmed by others. This leads to uncertainty

between the members about the importance of that piece of information. We further develop this theory as we discovered that team members decide not to reveal certain pieces of unshared information for personal reasons or their perceptions about the relevance of that piece of information. We realized during the study that teams with a collaborative attitude during discussion exchanged more unshared information. This aspect supports van Ginkel & van Knippenberg's (2008) theory that claims that teams with shared cognition are more likely to exchange more information. However, a shared cognition or common attitude is something we cannot promote with the agenda since we understand it as a homogeneity factors, which is distinct of the team (as we stated in the theoretical framework) and therefore previous to the meeting.

With the implementation of the agenda we aimed to support Carson's (2007) theory about shared leadership. He defines shared leadership as "*an emergent team property that results from the distribution of leadership influence across multiple team members*". We confirmed this theory as we observed that the proper use of the agenda promotes a flat hierarchy and improves information sharing at the same time. However, as soon as the team members stop following the agenda, the role of the leader emerges. Emmitt and Gorse's (2007) study suggests that the assignment of a team manager during discussion should facilitate, stimulate, and motivate team members to communicate effectively as a team. While the agenda facilitates and stimulates information sharing, it does not promote motivation. But, according to Carson's (2007) theory, motivation should be intrinsic in the team members as they shared leadership. As we stated before, a common collaborative attitude within the team leads to better results. Therefore, we encourage future research to study and compare the impact on information sharing with the implementation of an agenda in combination with a leader.

6. Conclusion

The aim of this study was to explore how a meeting agenda, as a forewarning method, influences information sharing factors such as information exchange, elaboration, and integration as well as the Hidden Profile Paradigma in heterogeneous entrepreneurial teams in terms of educational background. We studied how the agenda helps to improve information sharing and why. In the study we made use of a mixed method approach to achieve the research objective. We conducted a simulation experiment on six heterogeneous entrepreneurial teams and individual interviews after the experiment. For the quantitative approach, we counted the information sharing factors through observation of the experiments and the interviews, for each experiment in a contingency table. In addition, the qualitative approach included the outcomes of the individual interviews as well as qualitative data produced through the observation of the experiments. Furthermore, we adopted an explorative approach to seek emergent findings and understand the repercussion of the agenda.

Based on the mixed methods analysis, we concluded the following results and answer our main research question: *what effect does a meeting agenda have in heterogeneous entrepreneurial teams during the information sharing process?* We can conclude that the active consideration of a meeting agenda during information sharing has a positive effect on information elaboration and integration, because it encourages a specific discussion structure where all the team members focus on the same topic at the same time. However, the meeting agenda did not appear to improve information exchange and the Hidden Profile Paradigma as these aspects depend on the general attitude of the team (collaborative or competitive) and personal goals and perceptions of the relevance of the information. In addition, we conclude that the agenda helps to avoid hierarchy during discussion as there is no requirement for a leader to guide the meeting.

We are aware that the sample size does not provide statistical validity or significance, however, our intention was to create the groundwork in this field for future research.

7. Limitations

We are aware of the limitations of this study within the sample and the methodology. Due to the limitation in time and the course framework, the sample only consists of six teams with a total of 18 participants. Moreover, the experiment is conducted with entrepreneurial student teams of which the team members were assigned for this research purpose. This means that the teams are not real entrepreneurial teams from a real start-up. It could affect the study in a way that the participants cannot fully represent their roles. Also, a simulated start-up team does not represent the relationship and the team dynamic of a real entrepreneurial team. This might have an influence on the study as team dynamics and relationships might also have an impact on information sharing factors. In addition, the sample is limited to the students from the Entrepreneurship & Innovation, New Venture Creation Masters programme at Lund University and the student incubator Venture Lab which may influence the representativeness of the sample. Furthermore, due to the corona virus outbreak, the simulation experiment had to be conducted in the form of an online meeting instead of a face-to-face meeting between the team members. This has the limitation of a different and rather unusual situation for a meeting where an important decision is being made. In addition, we relied on online meeting video recordings which can be disturbed at times due to the internet connection.

Our research approach and design are a valid representation of the research problem that we intend to analyse. The sample consists of current students with an entrepreneurial intention or students who are currently involved in an early stage startup. Our experiments will represent a heterogeneous team as it includes three members from different backgrounds. In addition, the teams will represent a fictitious venture in which a certain decision needs to be made based on shared and unshared information.

8. Future research

This study explores heterogenous entrepreneurial teams in terms of educational background and how a meeting agenda enhances information sharing. Through the mixed method approach, including the simulation experiment and interviews, we obtained the conclusions previously presented that we consider a starting point for future research in this area, to identify additional patterns or significance. Therefore, we suggest that researchers in the future can further elaborate on the following topics:

First, having in mind the limitations of our study regarding the sample size, we believe it is worthwhile to carry out a quantitative approach with a larger sample size to further confirm the findings with significant numbers, that shows how much the agenda can enhance information exchange, elaboration and integration. While the studied sample has indicated initial patterns or directions, a larger sample size would identify the significance of the agenda.

Second, an in-depth qualitative approach would support this study with an understanding on how the different roles with the diverse educational background have used the agenda. In addition, this could also indicate why those different roles have different numbers of exchanged and elaborated information.

Third, the content of the agenda has been based on a strategic planning method discussed in several studies. However, it would be beneficial for future research to identify different ways of designing the agenda, so that the content does not overlap, and different teams can adjust it to their needs. Based on the results from the qualitative analysis, we realized the agenda should also incorporate a timeframe.

The sample of this study was limited to students from the Entrepreneurship & Innovation programme and Venture Lab from Lund University, where simulated heterogeneous teams were created for the purpose of the study. Therefore, we recommend for future research to take this groundwork and apply the research on real heterogenous entrepreneurial teams.

Finally, we believe it would be interesting to study information sharing impacts from the combination of different kinds of forewarning methods. Therefore, we would propose future research investigates the combination of the agenda with a leader role and so can identify differences and potentials.

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Appendices

Appendix 1: Experiment instructions (Pilot 1).

Simulation experiment: business background.

With two other co-founders, you founded a company in Sweden called Smartime, dedicated to the production of smartwatches. Even though the company is growing fast, the founders of the company have a close relationship with their employees and care about their welfare. They aim to maintain this work philosophy in the future.

You hold the position of CEO, but you are also in charge of marketing. (NAME) is the engineer in charge of product development and production. And (NAME) is in charge of the ethical, environmental and legal aspects of the company. After three years of hard work, you have got a new collaboration with a large retailer. At this point, the company needs to scale up in order to supply the demand because your current production capacity is not enough. You have two options regarding the new production facilities. First, you outsource the production to China and second is to build up new facilities in Sweden. You just got a bank loan of 50 million SEK. But you already planned to spend 10 million on marketing campaigns.

Outsourcing production to China would cost 2.5 million. No-one in the team speaks Chinese and the information exchange until now (phone calls and emails) was not 100% efficient and accurate. Additionally, your company will not know all the employees anymore and won't be able to have a direct influence on fair labor conditions. On the other hand, they will be able to start with production within two months. You are aware that working with them will mean completely dependence on one company.

Building up new facilities in Sweden would cost 30 million, but it will be more profitable long term and you will be able to fully control the process. You and your co-founders have estimated that setting up the new production line will take at least 5 months. You know there is another company in Sweden making smartwatches as well, and they are

also growing very fast. You are afraid your new client will go to the competition if you are not fast enough.

Bearing in mind the information given, you and your team should come up with a solution regarding the future of the company in 20-minute meeting.

Simulation experiment: humanities background.

With two other co-founders, you founded in Sweden a company called Smartime, dedicated to the production of smartwatches. Even though the company is growing fast, the founders of the company have a close relationship with their employees and care about their welfare. They aim to maintain this work philosophy in the future.

You are in charge of the ethical, environmental and legal aspects of the company. (NAME) is the CEO and is also in charge of marketing. And (NAME) is the engineer in charge of product development and production. After three years of hard work, you have got a new collaboration with a large retail company. At this point, the company needs to scale up in order to supply the demand because your current production capacity is not enough. You have two options regarding the new production facilities. The first one is to outsource production to China and the other is to build up new facilities in Sweden. You just got a bank loan of 50 million SEK.

Outsourcing production to China would cost 2.5 million. No-one in the team speaks Chinese and the information exchange until now (phone calls and emails) was not 100% efficient and accurate. Additionally, your company will not know all the employees anymore and won't be able to provide fair labor conditions. In fact, you will have to fire employees in your current facilities because they won't be needed anymore. On the other hand, they will be able to start with production within two months. However, you are not sure if you will get all the import paperwork and certifications by then. Additionally, you are concerned about the increase of the footprint as a result of the imports and its repercussions on the brand image.

Building up new facilities in Sweden would cost 30 million, but it will be more profitable long term and you will be able to fully control the process. You and your co-founders have estimated that setting up the new production line will take at least 5 months.

Bearing in mind the information given, you and your team should come up with a solution regarding the future of the company in 20 minutes.

Simulation experiment: engineering background.

With two other co-founders, you founded in Sweden a company called Smartime, dedicated to the production of smartwatches. Even though the company is growing fast, the founders of the company have a close relationship with their employees and care about their welfare. They aim to maintain this work philosophy in the future.

You hold the position of product developer and you are in charge of the production. You created the patent of the product. (NAME) is the CEO and is also in charge of marketing. And (NAME) is in charge of the ethical, environmental, and legal aspects of the company. After three years of hard work, you have got a new collaboration with a large retail company. At this point, the company needs to scale up in order to supply the demand because your current production capacity is not enough.

You have two options regarding the new production facilities. The first one is to outsource production to China and the other is to build up new facilities in Sweden. You just got a bank loan of 50 million SEK.

Outsourcing production to China would cost 2.5 million. No-one in the team speaks Chinese and the information exchange until now (phone calls and emails) was not 100% efficient and accurate. Additionally, your company will not know all the employees anymore and won't be able to provide fair labor conditions. On the other hand, they will be able to start with production within two months. You are not only concerned about the communication inefficiencies, but also about not having full control over the production. You believe they will use low-quality materials and it will affect the quality of the final product.

Building up new facilities in Sweden would cost 30 million, but it will be more profitable long term and you will be able to fully control the process. You and your co-founders have estimated that setting up the new production line will take at least 5 months. However, you doubt you have the knowledge to design the new production line on your own, therefore you will have to hire more employees than initially expected.

Bearing in mind the information given, you and your team should come up with a solution regarding the future of the company in 20 minutes.

Appendix 2: Experiment instructions (Final)

Simulation experiment 2.0: engineering background.

With two other co-founders, three years ago you founded in Sweden a start-up called Smartime, dedicated to the production of smartwatches. Even though the company is growing fast, the founders have a close relationship with their 5 employees and care about their welfare and opinions. They aim to maintain this work philosophy in the future. Your success was triggered by your commitment with environmental and sustainable practices. You hold the position of product developer and you are in charge of the production. You created the patent of the product. (NAME) is the CEO and is also in charge of marketing. And (NAME) is in charge of the ethical, environmental, and legal aspects of the company. Even though the three founders have different responsibilities in accordance to their backgrounds, they still manage to be informed and coordinated with other departments.

Current situation of the company:

After three years of hard work, you have got a new collaboration with a large retail company. At this point, the company needs to scale up in order to supply the demand because your current production capacity is not enough. You have two options regarding the new production facilities. The first one is to outsource production to China and the other is to build up new facilities in Sweden. You just got a bank loan of 50 million SEK.

Outsourcing production to China would cost 20 million. No-one in the team speaks Chinese and the information exchange until now (phone calls and emails) was not 100% efficient and accurate. Additionally, your company will not know all the employees anymore and won't be able to provide fair labor conditions. On the other hand, they will be able to start with production within two months.

Building up new facilities in Sweden would cost 40 million, but it will be more profitable long term. You and your co-founders have estimated that setting up the new production line will take at least 8 months.

From your point of view scaling up in China will not only bring communication inefficiencies, but it will also affect the quality of the product, having a negative impact on the reputation of the company. In China they still work with Nickel batteries, while you prefer having Lithium instead. You operate in a very competitive market and you know customers are very sensitive when it comes to materials and software quality. You are also concerned that you will lose control on the production process.

However, scaling up in Sweden is not attractive for you either. You don't have the necessary knowledge to design the new production line on your own, therefore you will have to hire more employees than initially expected. You are concerned that the new employees would be more knowledgeable than you and the co-founders might set you aside, while outsourcing to China you would have more authority.

Bearing in mind the information given, be aware that you can also incorporate your own opinions, ideas and previous experiences. The final decision doesn't have to be black or white. You and your team should come up with a solution regarding the future of the company in a 20 minutes meeting.

Simulation experiment 2.0: ethical environmental background.

With two other co-founders, three years ago you founded in Sweden a start-up called Smartime, dedicated to the production of smartwatches. Even though the company is growing fast, the founders have a close relationship with their 5 employees and care about their welfare and opinions. They aim to maintain this work philosophy in the future. The

success of the company was triggered by the commitment with environmental and sustainable practices. You are in charge of the ethical, environmental and legal aspects of the company. (Name) is the CEO and is also in charge of marketing. And Daniel is the engineer in charge of product development and production. Even though the three founders have different responsibilities in accordance to their backgrounds, they still manage to be informed and coordinated with other departments.

Current situation of the company:

After three years of hard work, you have got a new collaboration with a large retail company. At this point, the company needs to scale up in order to supply the demand because your current production capacity is not enough. You have two options regarding the new production facilities. The first one is to outsource production to China and the other is to build up new facilities in Sweden. You just got a bank loan of 50 million SEK.

Outsourcing production to China would cost 20 million. No-one in the team speaks Chinese and the information exchange until now (phone calls and emails) was not 100% efficient and accurate. On the other hand, they will be able to start with production within two months.

Building up new facilities in Sweden would cost 40 million, but it will be more profitable long term and you will be able to fully control the process. You and your co-founders have estimated that setting up the new production line will take at least 8 months.

You are concerned about the current situation of the employees. You know that by outsourcing the production to China, you will have to fire some employees because they won't be needed anymore. Even though the new suppliers are very efficient workers, you won't have a close relationship with employees anymore and you won't be able to provide fair labor conditions. Additionally, you are not sure if you will be able to get the certifications and import paperwork within two months.

You are worried about the increase of the footprint as a result of the imports and its repercussions on the brand image. You are also concerned about the lack of pollution regulations in China.

Bearing in mind the information given, be aware that you can also incorporate your own opinions, ideas and previous experiences. The final decision may not be black or white. You and your team should come up with a solution regarding the future of the company in a 20 minutes meeting.

Simulation experiment 2.0: business background.

With two other co-founders, three years ago you founded in Sweden a start-up called Smartime, dedicated to the production of smartwatches. Even though the company is growing fast, the founders have a close relationship with their 5 employees and care about their welfare and opinions. They aim to maintain this work philosophy in the future. Your success was triggered by your commitment with the environmental and sustainable practices. You hold the position of CEO, but you are also in charge of marketing. (NAME) is the engineer in charge of product development and production. And (NAME) is in charge of the ethical, environmental and legal aspects of the company. Even though the three founders have different responsibilities in accordance to their backgrounds, they still manage to be informed and coordinated with other departments.

Current situation of the company:

After three years of hard work, you have got a new collaboration with a large retailer. At this point, the company needs to scale up in order to supply the demand because your current production capacity is not enough. You have two options regarding the new production facilities. First, you outsource the production to China and second, you build up new facilities in Sweden. You just got a bank loan of 50 million SEK. But you already planned to spend 10 million on marketing campaigns.

Outsourcing production to China would cost 20 million. No-one in the team speaks Chinese and the information exchange until now (phone calls and emails) was not 100% efficient and accurate. Additionally, your company will not know all the employees anymore and won't be able to have a direct influence on fair labor conditions. On the other hand, they will be able to start with production within two months.

Building up new facilities in Sweden would cost 40 million, but it will be more profitable long term and you will be able to fully control the process. You and your co-founders have estimated that setting up the new production line will take at least 8 months.

From your point of view, outsourcing to China is the best alternative. You are aware that working with them will mean completely dependence on one supplier, however you have no other option.

You know that there is another company in Sweden making smartwatches as well, and they are also growing very fast. You are afraid your new client will go to the competition if you are not fast enough. You cannot risk this new client because you already obtained the bank loan. Outsourcing to China will also simplify the work for your team since you won't be so involved in the production.

Bearing in mind the information given, be aware that you can also incorporate your own opinions, ideas and previous experiences. The final decision don't have to be black or white. You and your team should come up with a solution regarding the future of the company in a 20 minutes meeting.

Appendix 3: Agenda.

In this meeting you will be given a structure on how to approach your discussion. The structure will be based on the different topics that you should consider within your meeting. Make sure you go through all the topics within your meeting and keep in mind that you have 20 minutes to discuss and come up with a final decision. Here are the topics to consider:

1. Financial situation.
2. Environmental, legal and ethical aspects.
3. Employees situation.
4. Production and technical processes.
5. Market.

Appendix 4: Interview questions.

- a) What did you find out during the discussion that you didn't know before?
- b) What were the concerns of the other departments?
- c) Do you think every piece of information was equally discussed in terms of time and details?
- d) Were you able to share all the important information of your role? Why?
- e) To what extent do you feel the information you shared was considered?
- f) What is your opinion about the agenda?

Appendix 5: Interviews transcripts.

Group 1

a) Business role

1. What did you learn during the discussion? Pieces of information.

I learned that we did not have the same information. Andreas did a good approach by starting to gather the different information we had, because based on that information we have to decide. Without that piece of information, the final decision wouldn't have been as good as it could have be.

2. What were the concerns of the other departments?

Christian was concerned about the environment and fair-trade stuff, and the working conditions there. Andreas about production quality.

3. From your background perspective, did you understand every piece of information and why were these pieces of information important?

Yes. I could understand that quality has an impact because the customer is sensitive to it. Nowadays it is important for the brand to be sustainable and to know the product's source. not like old companies, because that is what the customer demand.

4. Do you think every piece of information was equally discussed in terms of time and details?

We waste some time trying to find a solution that fits in between, even though it wasn't mentioned in the case, so maybe we should have just said from the beginning that this is a black and white decision and stick to that. But that is the only point there. I think we discuss equally other topics.

5. Were you able to share all the important information about your role? Why?

Yes.

6. To what extent do you feel your unshared information was considered?

Every point that I brought up was discussed in the group and well received and discussed.

b) Ethics and environmental role

1. What did you learn during the discussion? Pieces of information.

Transparency is always good. I feel like cheating the game when to talk about what your document says. Open discussion, to come to a decision.

I did not know about the fact that we had a competitor in Sweden, that was close to hitting the market. I did not know about the quality of the chinois parts and production line.

1. What were the concerns of the other departments?

Simon: that we wouldn't hit the market fast enough cut out a piece of market share. Those 3 months of difference would let us far behind and potentially affect the business entirely if we don't get those sales.

Andreas: by outsourcing to china the lack of communication would affect the quality of the watches, not being as good as produced in china.

2. From your background perspective, did you understand every piece of information and why were these pieces of information important?

Yes because there wasn't technical language being spoken up. If Andres would have said anything about plastic or materials it would have been different.

3. Do you think every piece of information was equally discussed in terms of time and details?

Simon's side was less discussed. The situation, the case study calls for an alliance between him and Andreas. Just naturally. In that situation, two thirds against one, that person's information is less discussed. All parts shared fairly equally.

4. Were you able to share all the important information of your role?

Yes, some points came up too late from the others. He did share everything and expected the same from the others.

5. To what extent do you feel your unshared information was considered?

They did take it in. My information wasn't a pressing factor as quality and time. The document didn't say that sustainable or fair trade is a core value of the company, It wasn't clear how would it impact the brand image. While production quality did have a repercussion in the instructions and not hitting the market fast enough as well. It wasn't a convincing issue so they didn't consider it too much.

c) Engineering role

1. What did you learn during the discussion? Pieces of information.

I learned about the importance of the marketing department, that we had the marketing budget and not too much about the ethical department but at least that it there was something. But not too much. Only that there was someone responsible for the ethical, environmental and legal aspects. So I don't think i ganen much more than the importance. SO Mainly market. Through discussion I guess seeing think from a different perspective. The fact that we discussed something in between. Some thoughts about alternatives.

2. What were the concerns of the other departments?

Importance of going to market fast being able to keep up with the other swish alternative. Something else was that we were five employees. And then they talked about how we

could send a few people to China. So I didn't even think about that. I mean the ten million budget and the fact that we needed to go to market fast. That was kinda it. I know what we had a ethical environmental consideration but I cannot recall any number so concrete information about the ethical department.

3. From your background perspective, did you understand every piece of information and why were these pieces of information important?

We did not go much into detail s yeah, I understood everything.

4. Do you think every piece of information was equally discussed in terms of time and details?

No I don't feel that we . we did not really expand on the ethical aspects. The business and production were more in focus. We talked a lot about money. We did not talk about ethical as much. We talked about brand which also goes into marketing, but we did not talk about the things behind and the values that we hold.

5. Were you able to share all the important information about your role? Why?

Yes, I think so.

6. To what extent do you feel your unshared information was considered?

I mean it was about the quality the fact that it was very important with the quality. I believe my information was highly considered. I did specifically talk about the quality because that really set it apart.

Group 2

d) Engineering role

1. What did you learn during the discussion? Pieces of information.

Nothing

2. What were the concerns of the other departments?

Christian was concerned about the environment and fair-trade stuff, and the working conditions there. Andreas about production quality.

3. From your background perspective, did you understand every piece of information and why were these pieces of information important?

Yes. I could understand that quality has an impact because the customer is sensitive to it. Nowadays it is important for the brand to be sustainable and to know the product's source. not like old companies, because that is what the customer demand.

4. Do you think every piece of information was equally discussed in terms of time and details?

We waste some time trying to find a solution that fits in between, even though it wasn't mentioned in the case, so maybe we should have just said from the beginning that this is a black and white decision and stick to that. But that is the only point there. I think we discuss equally other topics.

5. Were you able to share all the important information about your role? Why?

Yes.

6. To what extent do you feel your unshared information was considered?

Every point that I brought up was discussed in the group and well received and discussed.

b) Business role

1. What did you learn during the discussion? Pieces of information.

The key points were that I did not know that we had to fire people and I did not have any additional info about the ethical aspects. And that we would have to hire extra people as well for the production side. Plus, that we needed regulations to get approval from China for the production and that it would also take time.

2. What were the concerns of the other departments?

For Melissa it was a lot of ethical concerns and environmental ones. And then Tobias was kind of like in between us. It was like me against Melissa and Tobias was a bit divided in

between. Because he could not handle it for his own in Sweden and would need some support. And he likes the support in China, but the quality is really bad which is a risk for him. And Quality wise Tobias was worried about China.

3. Were you able to share all the important information about your role? Why?

I think all of it probably not but the most important once I tried to summarize in the beginning. I think I covered all the relevant information.

4. To what extent do you feel your unshared information was considered?

Well I think from my feeling, Tobi really understood them but felt like by Melissa as the environmentalist she only had like on care and she did not care about the financials. It seemed like because I had some arguments about why it is reasonable with the marketing budget. Especially when you produce in Sweden where it taking a bit longer that we should cut on the marketing budget but I think especially then you cannot.

e) Ethical and environmental role

1. What did you learn during the discussion? Pieces of information.

Well, I mean, the good thing is like, I think there were especially our technical guy was really clear on trying to get us to share what you like, unique, like what information we had on our different tables, which was good because for example, we didn't know like, for example, our CEO had some market information that we didn't know. I'm trying to remember what it was like, but I don't remember exactly. No one mentioned in summary, some market formation. I know I had nothing on the market on my side. In that sense, except like how long it would take to go to market. Like it also like the retailer like about losing him or losing that retailer. I didn't really have that information. So, I think that was good. That he shared. And obviously then, I mean, we had similar information, with information issues with the technical guy, but it was good that he shared it.

2. What were the concerns of the other departments?

Yeah well, our CEO or both of them I feel really cared so much about like making profit, which of course, like I get it, we're a company we have to make profit. But yeah, so they were really focused on that, especially our CEO, I think was very focused on like, it should be cheap and fast. That's like, it seemed to me like that's all he cared about. And

then he mentioned like, sure, ethics is important, but I don't really think he took it because then he would have taken a different decision. Also, our technical guy, It was also like talking about being able to experiment and stuff, which you could do in China. And I'm like, What? Like, I do not know. Yeah, why he thought that was so important. But um, yeah, it seemed we did not really have exactly same thinking. But obviously, we have different roles.

3. Do you think every piece of information was equally discussed in terms of time and details?

Um, I mean, I try to know, I think we focused a lot on like the financial point. And like really this whole going to market and not losing the retailer, which is I mean, I think that the CO lead and I did try to talk more about like the ethical part or environmental, but I also didn't have so much information about it because I feel like on my environmental sheet I had like a lot of information that wasn't necessarily like just focus on environment, so

I feel maybe I was gonna be able to share as much. I feel like we didn't talk so much actually. Our technical guy like he was sharing a little bit about like the production but more like, how long it would take him really talking about like the production process if I'm even the one who was raising like, like setting up the supply chain and like not having an answer would be like dangerous there. And I expected him as our technical to you know, give us more information about that and didn't say anything, so I'm not confident with their decision.

4. Were you able to share all the important information about your role? Why?

I think so. I think I did like some of them. They had already repeated for example, like how much it costs to produce. I didn't really share that but I was really trying to bring in like, what they don't really think about. So maybe I forgot something. I don't know. But I think I tried to Share. Yeah, and especially when we're at the end like proof like compared to like, what are the bad parts? I think we all really try to bring in like all the information that we had on the button

Group 3

a) Business role

1. What did you learn during the discussion from the other participants?

I was expecting the environmental guy would be against the production in China. I was a bit irritated because Andre (IT) first said he wanted to go to China, and then he said all of a sudden that no-one speaks chinois. so that concerns came a bit late. That was surprising. And other than that Gustav was very insisting first on going to China and then to Sweden. But in the end, I thought the best solution was in between. Employees: The other roles wanted to include them in the decision making process.

2. What were the concerns of the other departments?

Gustav (Env) his main concern was that we lose the values we built the business on, we were not sustainable anymore, and people are not gonna buy it. He was also a bit concerned about the quality. And then that the production manager first seemed to be in line with what I wanted, but then he was more concerned with the communication with the chinois. Not sure if it was him that brought the employees issue.

3. From your background perspective, did you understand every piece of information and why were these pieces of information important?

Yes, I understood everything.

4. Do you think every piece of information was equally discussed in terms of time and details?

We talked a lot about the ethical issue, but I think it was a very key element in the discussion. I think it was a very, good discussion because we were switching between each other, Pretty equally.

5. Were you able to share all the important information about your role? Why?

Yes, competitors, we need to act quickly, go to market quickly, which is highly competitive. I wanted to be pretty clear from the start.

6. To what extent do you feel your unshared information was considered?

It was important that I shared the discussion and let them talk first and then try to mediate a little bit and try to understand both positions. If I would have gone full ahead with mine It wouldn't have been so valuable I think.

7. Extra

It was good to take the lead and address the others asking what their opinion was. Important to generate an in-between solution. I took the lead because I was the CEO. Maybe in real life, I like taking the lead too. But it was valuable in this case to achieve an in-between solution. As well as I started, I finished the meeting by organizing all the information at the end.

b) Ethical environmental rol

What did you learn during the discussion from the other participants?

I learned that there are a lot of perspectives. It wasn't that expensive to produce in Sweden as expected. I didn't think the proposal of carrying out production in Sweden was a good option. I thought It was interesting hearing about the product development side; communication problems, quality. It seems like production in China and selling in Sweden is more complicated than just sending the design and having them produce it. Broaden my perspective about product development.

I also learned about all the legal implications; patterns also in China to be able to produce.

2. What were the concerns of the other departments?

The main concern was the price; both for the CEO and engineer, both knew the loan for the option in Sweden wouldn't be enough, no flexibility, no room for errors, longer time of production. The main concern was the price.

3. From your background perspective, did you understand every piece of information and why were these pieces of information important?

I did understand it and took it into account for my decision. They did a good job representing their roles, asking the right questions, and providing the right information.

4. Do you think every piece of information was equally discussed in terms of time and details?

Yes, we all shared the time to talk. Felix asked the right questions to lead the meeting.

5. Were you able to share all the important information about your role? Why?

Yes. It was difficult to include in the conversation some points because there were other concerns on the table. But we talked about labor conditions, employees that will be well-treated and will be surrounded by environmental and sustainability values.

The legal aspects were the least discussed.

6. To what extent do you feel your unshared information was considered?

To a good extent. Both Felix and Andre, even they were more on the production side of the company they definitely took in my recommendations and agreed that the employees in the company should have a promotion. But I think it was because we all knew that the right decision was outsourcing to China. So we wanted to make it as good as possible.

c) Engineering role

1. What did you learn during the discussion from the other participants?

Yeah, I think the new information was maybe to take into account what it means For our employees to, to be affected by this and not just treat them as like subordinates, but we should just like they should just follow our directives. Because obviously, we want to have a have a close connection to them and value their opinions. They might be more Yeah, looking more emotionally into this decision than much. That was an insight and I think Gustav saw the highlighted that's pretty good. Yeah. And, of course, just making it more like, of course, there's pros and cons and the discussion between the long term and the short term benefits. I didn't get that, like, there was aspects prior to just reading, but once we started talking about it, what would happen if there and also if there's a possibility to make a compromise I think that was because then we could sort of take the, good parts from each, and then just like, come up with a new, like, third alternative that we found was more suitable for all.

I think just the insight maybe that different needs can be really conflicting. Of course, if I have the product in mind, how we should develop it, while some other person might be more driven and interested in the building the marketing aspects around sustainability such that those conflicts

Because it basically I couldn't completely like value points. And what we sort of think is important. What drives us also, maybe as a product developer, I'm more driven about just making profit and making it like seamless to produce the more logical aspect. Well, then the other the other more Yeah. Let's say softer values are concerned about other people, and they will fight equally hard, if not even harder to appeal to those.

2. What were the concerns of the other departments?

Yeah, for them, they're Of course, having it like taking into account how this will have affect our branding so how will actually our, our our employees look at us, because we're a pretty small company. So of course we like the internal atmosphere, let's say, it's really important that everything everyone feels like the values and the decisions we make. We can have our vision and printed like in nice words, but our actions have to be in correspondence to our values and vision. So I think that they highlighted those aspects quite well. While I was smoked, focusing on the profit aspect and like the ability.

Yeah, I think it's a good bit like a dilemma, I think this case is it feels like a pretty common especially from a Swedish standpoint, because we have Also interesting relationship to China and different politics.

3. Do you think every piece of information was equally discussed in terms of time and details?

Maybe I would say maybe the authority aspect wasn't discussed. Because I took notes on that. And it said in the in the case, description like, we might have like less sense of control with the China option, but still a bit more authority. We're in the Swedish aspect, it was like shifted. I think that's interesting. Like that's also how we as persons and how our leading style is. If we would be more authoritative and just telling people what to do. Or We want to have this discussion and and are more like, we maybe expect that our supplier in this in this case puts demands on us and not just like, accept everything we

want to start the discussion being a few developers even further than this. That would be an aspect also to discuss.

4. Were you able to share all the important information about your role? Why?

Yeah, I think so. It might be the thing regarding quality it wasn't that much discussed that might be that the quality of the product might be a bit compromised if you go with the Chinese option. but I think we discussed that a bit. Because for some cases regarding ethical and such.

Yeah, I think we were more into discussing the, how this will affect us, brand wise, and, and the cost of just getting into production quickly. Because the Chinese option is a bit more short term with a faster development approach. So then the long term quality, let's say, didn't get through the agenda. I think if we were more inclined to choose the Swedish option, and more refined arguments.

5. To what extent do you feel your unshared information was considered?

I first thought that the piece of information that we were given were equal, but that might not be the case.

Yeah, I actually thought at first, but okay, that I know that I was given some information that no one else had. Maybe the Development aspect. And of course, if we could, there is we have to put money into hiring more more staff in Sweden. So because obviously we're taking a bank loan so the money aspect is always there when we do this to make profits. And we're also in the aspect of or in the mental state of wanting to expand because it's been growing fast. So maybe keeping this roller coaster going. I think that was the one that I felt was my main argument points regarding the information I was given.

Yeah. All good. Hope you go. Well, as long as the project.

Group 4

d) Engineering role

1. What did you learn during the discussion? Pieces of information.

I think the marketing part that they needed 10 million for marketing. I did not have that information. Also, the environmental part that it is really important f to stay sustainable. That it is a big part of the product. I did not realize that it was that important.

2. What were the concerns of the other departments?

I think from the business perspective it felt like she really wanted to go to China. For them, it was important for the financial. Maybe we could not survive if we went to Sweden and that we kind of have to go to China. And for the environment, they were kind of skeptical with China and wanted to stay in Sweden to continue on the same path with sustainability. Maybe the environmental department was a bit overrun by the business department. He agreed but it felt like he was not on the same page. It seemed like he still wanted to go for Sweden.

3. Do you think every piece of information was equally discussed in terms of time and details?

Yeah, I think so. We talked about pretty much everything. Maybe I should have talked about that if we stay in Sweden we needed to employ more people. I think I did not mention that.

4. Were you able to share all the important information about your role? Why?

Yeah not really because I wanted to talk about that we needed to employ more people. But it felt like they wanted to talk about their points a lot. Like they also had a lot to bring up. Everyone wanted to say their thing, but maybe it was due to the time constraint. Also I think it felt like everyone wanted to say what they thought is important. It was like a clash.

5 To what extent do you feel your unshared information was considered?

Yeah it felt like the me and the environmental guy was a bit of the same news. But we were kind of like that at the end the business department's view was more important which led to the decision. I think it was considered but it was kind of views in the same

way as the environmental guy. It felt like it was a bit important but the financial part was more important.

e) Business role

1. What did you learn during the discussion? Pieces of information.

I did not know if one of the guys would be in a role of not going to china. So I was a bit hesitant I think with promoting going to china. The battery for example or that we had to fire people was also new. So the battery was a surprise. I am not sure if Jonas knew more about the customer segment than I did or that he could translate already that indeed that the people who cared about the environment also have a strong voice for example. I would agree with him but I did not know if that was our main target market I think.

2. What were the concerns of the other departments?

I think from Jonas's point of view it was keeping the market segment and not losing our customer bases but also our employees it think. And the fact that we don't have a say how the employees in China will be. But I think for Daniel it was the batteries. But also I had the feeling that Daniel had the same goals as I did. I think he preferred China too because he was less involved in the discussion I think.

3. Do you think every piece of information was equally discussed in terms of time and details?

I think the market we did not really do it. We went into the customer a little bit but we did not discuss our competitor and our future goals. That was not on the agenda. Furthermore, the finances we started off with that. I think that was our first agenda point that made us discuss it. But it was also hard to discuss the finance part due to so many other sides.

4. Were you able to share all the important information about your role? Why?

I think I did. I did share the fact that I wanted 10 million for marketing. I expected some discussion there but they just accepted it actually. We did talk about the competitor but only really shortly. I did not really speak about the simplifying of the work for us as a team but yeah for the rest everything was there.

5. To what extent do you feel your unshared information was considered?

I think they considered it.

6. What did you think about the agenda?

The agenda was helpful. It felt more that we had to have the responsibility that we had to go through the points. So it felt less like I was taking the role of a leader. So yeah it was helpful.

I think we started off with the first two points and then we just discussed everything else.

f) Ethical and environmental role

1. What did you learn during the discussion? Pieces of information.

About our production that we prefer to have lithium battery instead of nickel. That we need 10 million SEK to be able to do marketing. I was surprised by kiki saying that the product was more or less ready developed and therefore we did not need such a close contact anymore. I kind of feel that's it mainly.

2. What were the concerns of the other departments?

That there are a lot of financial concerns. And that we will not be able to deliver to our customers. The language barrier was not so much of concern as I would have expected maybe. Tere I would have expected more. Aso how we communicate it to our community was not such a big concern. I would say it was mainly financial.

4. Do you think every piece of information was equally discussed in terms of time and details?

The product part was discussed quite shortly. I thought we need a better reason they're better in Sweden but we still produce in China. WE talked about the ethical aspects quite long. At the same time, it was kind of difficult because you kid of know producing in Sweden would be ethically better. but then we looked for a way to get along with it

anyway. We almost did not discuss the employees I would say. I think It was my role to push but I had a hard time to picture this.

4. Were you able to share all the important information about your role? Why?

I would say so. I realized quite late that I had information that the others did not have. So that was a little problem for me. For example I did not talk anything about the papaerwork that we cannot get it done in two months. Becuase I did not realize until now that the others did not have this information. I talked a little about the brand image so I brought this on the table but I think I was little redundant there. Because I thought Kiki is the marketing person so that is her field so I did not want to push it too much because it's not my area of expertise. Or when she said we can handle it differently.

5. To what extent do you feel your unshared information was considered?

I think just partly. I think we kind of tried incorporate environmental or ethical aspects but we quite cheaply bailed out of it. So in that sense maybe not a 100%. Like the ethical part was more of a minor topic. Even though we discussed it majorly, in the end, the final decision was influenced by the financial aspects.

Group 5

g) Business role

1. What did you learn during the discussion? Pieces of information.

Did not know we will have to hire more people in order to set up the production in Sweden. For the production and technical processes, I didn't know about the other battery. I wasn't aware about the less quality.

2. What were the concerns of the other departments?

For Max it was the quality and transparency of the production. Not losing control of the production.

For Lid ait was the fact that we need to fire someone. She wanted to find a solution to include them, the consultancy. In general, she was concerned about the ethical problems

in China and the environment. She wanted to support the local economy as it is her responsibility.

3. From your background perspective, did you understand every piece of information and why were these pieces of information important?

Yes. Not the impact of the material of the batteries. I wasn't clear about the employees. How many we need to fire. What skills we have or we need, can we teach the team.

I didn't understand because we did not have the time to explain and because I generalized the problem.

4. Do you think every piece of information was equally discussed in terms of time and details?

No. We did not spend a lot of time on the market aspects. And I don't know if the others had more information about the competitors and how dangerous they are.

I can't be sure about the other information because they agreed to fast on going to China. So I assume we had similar information.

We discussed a lot of employees and the legal ethical aspects, more than the market and production. Because Max provided the information very fast so we just jumped to the next topic. I would have liked to go more into detail in that aspect as well.

5. Were you able to share all the important information about your role? Why?

No, I didn't share that we would be dependant on China as our only supplier. We plan to set up our production in Sweden. It was against the goal. I didn't share that because It was not contributing too much on the decision since we already had the china production facility in mind. It is difficult to include the information some points in the agenda.

6. To what extent do you feel your unshared information was considered?

They considered my information faster and easier than expected. At the beginning we were all pro Sweden, then I remembered I was pro-China. Since we were on the same page

all the time, they took in my last point about the competitor and understood my decision of going to China.

7. Agenda

Very helpful. Since it is related to the responsibilities to the participants make sure everyone can include their perspectives. room to speak and consider all the aspects. Ideally, this agenda should be created with the whole team so they can contribute to their backgrounds and experience.

h) Engineering role

1. What did you learn during the discussion? Pieces of information.

Because I was the tech guy I didn't know about the marketing budget. I learned from Lida about the ethical aspects, like the certifications in china, but I didn't really understand that.

I learned about the employees we had to fire if we had to go to China. Melany mentioned that we had a competitor doing something similar and growing fast. We had to be sure we were faster.

2. What were the concerns of the other departments?

Melany as the CEO was concerned about being successful in being sustainable and loyal to our brand. And that we should be fast and better than the competitor.

For Lida, she was concerned about the well being and the relation of the employees. Also about the ethical points. Work labor and conditions and the environmental impact in China.

3. From your background perspective, did you understand every piece of information and why were these pieces of information important?

The certifications. I wasn't clear about that. I didn't know the current situation of the employees. If they work in the production facilities and if in the case of moving to China they would keep working with us. Lida said we had to fire people if we go to China but didn't say how many.

I would have like to have some information on what functions they have and decide if they can keep on working. It is a shame to let these people go with their knowledge.

4. Do you think every piece of information was equally discussed in terms of time and details?

Time-wise we went through some points slightly fast, mainly because we already mention them in other points. We tried to stick to the agenda. We mixed up because some things were interlinked. We might have stayed a little bit too long in the financial situation because it involved many other points. But we could have made it shorter.

5. Were you able to share all the important information about your role? Why?

In the production part, I summed up my info as soon as possible. For that the agenda helped since I had time to elaborate on my notes. However, we did not elaborate on them because of the time constraints. And because in the financial part we also talked about production somehow.

6. To what extent do you feel your unshared information was considered?

Not completely due to the time constraints in the meeting. We didn't discuss the technical implications. Lost of quality wasn't discussed. As the tech guy, I agreed with the final decision of going to China.

If we had enough time I would have put more emphasis on quality and communication and ask about my role decisions.

7. Agenda

It was helpful to structure the info in categories. But all the information overlapped.

i) Ethical and environmental role

1. What did you learn during the discussion? Pieces of information.

I did not know about the 10 million for the marketing campaign.

Max had info about the technical process.

2. What were the concerns of the other departments?

Melany was interested in the market.

Max talked about technical production. We were not especially concerned about anything. We were just bringing our opinions and information together with the knowledge from our role.

3. From your background perspective, did you understand every piece of information and why were these pieces of information important?

Yes. It wasn't clear the certifications. There was not enough information about the legal perspective.

4. Do you think every piece of information was equally discussed in terms of time and details?

Yes. We went through everything, but the market because it overlapped with the final decision.

5. Were you able to share all the important information about your role? Why?

I think so. It looked like we had similar information.

6. To what extent do you feel your unshared information was considered?

I think the process of sharing was equal, so we all have time to share opinions and information. The final decision was conscientious, there wasn't a need to vote.

7. Agenda

Without it, there is no structure to discuss, It would have been messier.

Group 6

j) Ethical and environmental role

1. What did you learn during the discussion from the other participants?

The main learning was that it was me and Royce against Michael.

I learned about the competitor that is a big threat.

2. What were the concerns of the other departments?

I think Royce was concerned with the quality and control of the production and maybe China would be less regulated fewer protocols and norms. There is more security in Sweden.

Michael was mostly concerned about being fast in production to answer the competitor in Sweden. So it was to get the product out there as soon as possible. He did not care whether it was in China or somewhere else.

3. From your background perspective, did you understand every piece of information and why were these pieces of information important?

I think so. Even I don't know anything about China or smart watches production, I think it made sense and we all knew environmental regulations are not really a thing in China, or control. I think it all made sense I could see myself defending the standpoint it is more important going for the long term competitive advantage and for the sustainability advantages for the environment and the brand. My main going was to convince Michael because he wanted to go to China.

I understood Michael's perspective. As CEO he is responsible of the overall wellbeing of the company. On the other hand, he should have focused on the long term and long terms growth instead of on acting fast.

I felt like Royce was on my side, and as a consequence, I wasn't as critical with him as I was to Michael. I understand that he was more concerned about the production going well. I understood the batteries. Sweden batteries were better.

4. Do you think every piece of information was equally discussed in terms of time and details?

I think we could have talked more about the competitor that Michael mentioned. I didn't know much about that and I think it was important. I would have liked to know more, how big it is, why is it a threat... We spent a lot of time talking about my concerns because Michael was generous letting me talk about employees etc. I was busy getting my view through.

We discussed my concerns the most. Even more than Royce's. That was my perception at least.

5. Were you able to share all the important information about your role? Why?

No, I didn't share the certifications and paperwork things, because I was short in time. I tried to focus on a couple of arguments that were more important or pressing. I would have used those additional arguments if I would have thought I needed them. I didn't mention those pieces of information because it wasn't stronger arguments. I discussed the risk of having to fire employees had to go to China and we talk about it but briefly. But it wasn't a really important point of discussion. The others didn't put a lot of thought into that. Not even Michael that as a CEO should feel responsible for the team.

I didn't mention that we cannot guarantee proper labor conditions in China. I don't talk about it for the same reason.

6. To what extent do you feel your unshared information was considered?

I think it was considered a lot. I could say what I wanted to say and I still have more arguments. The arguments I used to impact on Michael's opinion. I did not feel the pressure to have to convince Royce because we were on the same page.

It was considered a lot because I repeated it many times because Michael was reconducting the direction of the conversation.

7. Why do you agree so easily?

I felt weird in the beginning going against to the CEO. It went fast because Michael felt it was two against one and was looking for consensus. Royce and Me wanted all or nothing so he didn't have other options.

k) Engineering role

1. What did you learn during the discussion from the other participants?

Apart from the company, Michael also has obligations with his wife. We learned that the company is operating in a competitive environment, and to achieve revenue quicker we need more options.

The final decision was to start in Sweden and if that doesn't work we will focus our efforts in China. I don't think they shared anything I didn't know.

2. What were the concerns of the other departments?

Michael from the financial point of view was concerned about having a fast return of the investment. Mathjis looked from the sustainability point of view; stakeholders, the consequences of our decisions.

We all agreed on Michael's decision since we believe it was the best course of action since we compromise.

3. From your background perspective, did you understand every piece of information and why were these pieces of information important?

Everything was discussed high level, so everyone could be on the same page.

Mathjis and I were towards Sweden in the beginning and then Michael brought up the market and the competitor environment. We didn't know that. He mentions that we had to get revenue a lot quicker, we added our clients' concerns about quality. Going to china would affect this and be a bad investment. We organized the information at the end.

4. Do you think every piece of information was equally discussed in terms of time and details?

Yes, equal turn, no one was interrupting each other. Mathjis started recommending Sweden in terms of sustainability labels, impact on the environment. I did from the product development point of view and the client's perceptions of the product. We talked about pros and cons, like on one in the team speaks Chinese and bad communication with China will increase long term costs. Michael talked from the revenue point of view, and also from his personal circumstances.

6. Were you able to share all the important information about your role? Why?

Not all of them, I think I didn't mention the control part. No one talked about control during the conversation, so I didn't have the opportunity to mention it.

7. To what extent do you feel your unshared information was considered?

We discussed points linked to each other points and content. We gave objective considerations (pro and cons) in most cases.

1) Business role

1. What did you learn during the discussion from the other participants?

I learned about environmental concerns. What the customers like, better if it is made in Sweden.

2. What were the concerns of the other departments?

Royce said that customers prefer production in Sweden.

Mathijs concern. For the long terms strategy, it was better in Sweden. And short term China but there were environmental impacts.

3. From your background perspective, did you understand every piece of information and why were these pieces of information important?

I learned that the customers are really important (the four C's). The customer information came from Royce, but I understood thanks to my previous knowledge.

4. Do you think every piece of information was equally discussed in terms of time and details?

Yes, I think so. It is hard to say. It was quite equal.

More benefits in the short term and not in the long term. Lack of information in China and communication inefficiencies.

7. Were you able to share all the important information about your role? Why?

yes

8. To what extent do you feel your unshared information was considered?

My information wasn't the most relevant in the final decision. Because then we would have gone to China.