

Compiling In-house & External Design Capabilities:

# **Design Managerial Perceptions of Enabling Trust within In-house Design Teams**



Miika Lehtinen

2020

Master's Thesis for Master of Arts  
30 ECTS

Collaborative and Industrial Design  
Department of Design  
School of Arts, Design and Architecture  
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## Acknowledgements

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Many people contributed in making this possible.

I would like to thank my supervisor & advisor Oscar Person for all the academic guidance, advice and flexibility in this thesis process.

Thanks for all the participants who I had pleasure to interview as part of the study.

In addition, I want especially to thank Esko Kurvinen, Marjukka Mäkelä and Kimmo Ollikainen for their efforts in helping me during the thesis project.

Special thanks to the ones near for all the support & also for giving something else to think about along the way.

**Author:** *Miika Lehtinen*

**Title of thesis:** *Compiling In-house & External Design Capabilities: Design Managerial Perceptions of Enabling Trust within In-house Design Teams*

**Department:** *Department of Design*

**Degree programme:** *Collaborative and Industrial Design*

**Year:** *2020*      **Number of pages:** *149*      **Language:** *English*

## Abstract .....

Trust and team dynamics are at the core of successful design teams and collaboration of in-house and external designers. In-house design capabilities are often enhanced with external capabilities in organizations, and therefore the relationships and team dynamics need careful managerial approaches from the design management practitioners. Hence, this Master's thesis addresses how design management practitioners perceive the in-house design team dynamics when compiling in-house and external design capabilities in their organizations. Furthermore, the study focuses on the interpersonal trust of professional in-house and external designers.

The research is conducted in two parts: through a literature review on the topic and gathering primary data from design management practitioners. The empiric research was done as an interview study in two technology corporations. The interview study consisted of two rounds of semi-structured interviews with design management practitioners. Theoretically, the frameworks of structuring design capabilities in organizations and design management of in-house design, external design, and especially the combination, are covered.

There are three concrete outcomes from this study. Firstly, the identified elements design management practitioners perceive affect interpersonal trust in design team dynamics. Secondly, the identified means practitioners can have in establishing and enforcing trust between in-house and external designers. Thirdly, a tool that helps in enabling trust in the team by impacting on the onboarding process for a designer. The elements affecting trust between in-house and external designers are related to practicalities,

design culture and designers themselves. Within these categories are eight identified elements in total. Moreover, this thesis identifies seven means, which design management practitioners can have in enhancing design team dynamics.

As one of the outcomes, a concept for a design management tool is proposed. Team Integration Template is a tool that concretizes the findings and makes it easier to take action in actual design teams. This tool is designed for design management practitioners who are responsible for setting the premises and practices for the collaboration of in-house and external designers. The emphasis in the tool is on the onboarding and integration of a new designer to a particular design team.

In the end, this thesis aims to evoke discussion on the notion of trust within design teams of professional in-house and external designers. The study and its results should open eyes in organizations where external designers are used in enhancing in-house capabilities: design management practitioners can see how they are in a key role in defining the culture of trust in their design organization. Practitioners can utilize the key findings in their work and see how their actions affect the design team dynamics.

**Keywords** *design management, design capability, in-house design, external design, design team, team dynamics, trust*

**Tekijä:** *Miika Lehtinen*

**Työn nimi:** *Compiling In-house & External Design Capabilities: Design Managerial Perceptions of Enabling Trust within In-house Design Teams*

**Laitos:** *Muotoilun laitos*

**Koulutusohjelma:** *Collaborative and Industrial Design*

**Vuosi:** *2020*      **Sivumäärä:** *149*      **Kieli:** *Englanti*

## Tiivistelmä .....

Luottamus ja tiimidynamiikka ovat menestyksekkäiden design-tiimien sekä organisaation sisäisten muotoilijoiden ja konsulttien yhteistyön keskiössä. Organisaatioiden sisäistä muotoilukyvykkyyttä vahvistetaan usein ulkoisilla kyvykkyyksillä, ja siksi kyseinen yhteistyö ja tiimidynamiikka vaativat tarkkaa johtajuutta muotoilujohtamistehtävissä toimivilta. Tässä opinnäytetyössä keskitytään siihen, miten muotoilujohtamistehtävissä toimivat henkilöt kokevat sisäisen design-tiimin dynamiikan organisaation hyödyntäessä sekä sisäisiä että ulkoisia kyvykkyyksiä. Tutkimus keskittyy etenkin sisäisten ja ulkoisten muotoilijoiden väliseen luottamukseen.

Tutkimus toteutettiin kahdessa osassa: aiheeseen liittyvällä kirjallisuuskatsauksella sekä keräämällä ensisijaista tietoa muotoilujohtamisen ammattilaisilta. Empiirinen tutkimus toteutettiin haastattelututkimuksena kahdessa teknologiayrityksessä ja se koostui kahdesta puoli-strukturoitujen haastatteluiden kierroksesta. Opinnäytetyön teoriaosuudessa käsitellään eri tavat järjestää organisaatioiden muotoilukyvykkyksiä. Lisäksi esitellään in-house-, ja ulkoisen muotoilukyvykkyys, ja etenkin niiden yhdistelmän johtamiseen liittyviä viitekehyksiä.

Tutkimuksessa on kolme konkreettista lopputulosta. Ensiksi löydökset tunnistetusta elementeistä, jotka muotoilujohtamistehtävissä toimivien mukaan vaikuttavat henkilöiden väliseen luottamukseen muotoilutiimissä. Toiseksi tutkimuksessa tunnistettiin keinoja, joita muotoilutehtävissä toimivat henkilöt voivat käyttää luodessaan ja vahvistaessaan luottamusta in-house- ja konsulttimuotoilijoiden välillä. Kolmanneksi esitellään

konsepti työkalusta, joka helpottaa tiiminsisäisen luottamuksen mahdollistamisessa uuden muotoilijan sisäänottoprosessin kautta. In-house- ja konsulttimuotoilijoiden väliseen luottamukseen vaikuttavat elementit liittyvät käytännönasioihin, muotoilukulttuuriin tai itse muotoilijoihin, ja tutkimuksessa niitä tunnistettiin yhteensä kahdeksan. Lisäksi tutkimuksessa esitellään seitsemän keinoa, joilla muotoilujohtamistehtävissä toimivat henkilöt voivat vaikuttaa muotoilutiimin dynamiikan kehittämiseen.

Yksi lopputuloksista on konsepti muotoilujohtamistyökalusta. Team Integration Template on työkalu, joka havainnollistaa tutkimuksen löydöksiä ja helpottaa konkreettisia toimia design-tiimeissä. Työkalu on suunniteltu muotoilujohtamisen ammattilaisille, jotka ovat vastuussa in-house- ja konsulttimuotoilijoiden yhteistyöasetelmasta. Työkalu keskittyy uuden muotoilijan sisäänotto- ja tiimiäytämisen prosessiin.

Opinnäytetyön tavoitteena on herättää keskustelua design-tiimien sisäisestä luottamuksesta in-house ja konsulttimuotoilijoiden välillä. Tutkimus ja sen tulosten merkitys korostuvat varsinkin organisaatioissa, joissa hyödynnetään sekä sisäistä että ulkoista muotoilukyvykkyyttä. Etenkin muotoilujohtamistehtävissä toimivat henkilöt voivat huomata, kuinka oleellisessa asemassa ovat määrittäessään luottamuksen kulttuuria muotoiluorganisaatioissaan. Ammattilaiset voivat hyödyntää tutkimuksen tuloksia ja suunniteltua työkalua työssään ja nähdä miten voivat vaikuttaa muotoilutiimin sisäiseen dynamiikkaan.

**Avainsanat:** *muotoilujohtaminen, muotoilukyvykkyys, in-house design, ulkoistettu design, design-tiimi, tiimidynamiikka, luottamus*

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# 1

## Introduction

### 1.1 ..... Significance of design team dynamics

“Give a good idea to a mediocre team, and they will screw it up. Give a mediocre idea to a great team, and they will either fix it or come up with something better. If you get the team right, chances are that they’ll get the ideas right.” stated former president of Pixar Ed Catmull (2014, p. 315) on managing a creative culture. As in all collaboration, the premise for managing design capabilities successfully or leading design work in organizations lies within the establishing and enabling of well-functioning design team dynamics. Catmull’s notion of focusing on building a well-balanced and reliable team is at the core of the responsibilities of a successful design manager. It is especially emphasized when there are in-house and external designers collaborating in the organization.

Managing the organization’s design resources and leading the design team are described to be some of the primary tasks of a design manager (e.g., Borja de Mozota, 2011; Blaich & Blaich, 1993). Responsibilities are not just limited to internal capabilities; having outsourced designers in the mix brings a whole new dimension to design management as such. In addition to taking care of the general design responsibilities of the design function in the organization, it is also important to nurture the creative and collaborative environment in the designers’ everyday work. In general, those designers are likely to come from outside of the actual organization as well as from within. The ratio of these two capabilities just might vary from case to case.

This Master of Arts thesis seeks to convey these team dynamics from the perspective of in-house design teams in technology companies. A team is a basic unit in organizational settings, and taking care of the

dynamics between team members is at the core of managing the team. Relationships, dynamics and teams, which are in focus in this thesis, are those of professional designers with formal design education. Designers in these teams are either in-house designers or external designers, such as consultants or others with temporary employment.

In order to successfully manage the combination of in-house and external designers, one needs to understand the underlying phenomena around design team dynamics. One of the most impactful features in the dynamics of a team is trust or reliability, which, if not achieved, might stand in the way of a well-performing team (Costa, Bijlsma-Frankema & de Jong, 2009). Other elements prior studies have highlighted as affecting the general functioning of design teams are, for instance, sharing knowledge and communication (e.g. Uusitalo, Seppänen, Peltokorpi & Olivieri, 2019). To be able to rely on fellow designers affects these other features. As a feature of social capital, trust can be said to be "a central mechanism in the coordination of expectations, interactions and behaviors among individuals" (Costa et al., 2009, p. 200).

Furthermore, according to product development practitioners, the critical aspects considering success and failure in product development are "collaboration, communication, attitude, trust, motivation, autonomy, goals, time, and product development specific skills and knowledge" (Björklund, 2010, p. 519). Most of those factors are related to the relationships between team members (like collaboration and trust), and only a few are project management or technical matters (such as time, skills and knowledge). Moreover, in Björklund's study (2010) on the critical elements of successful knowledge-intensive creative project work, the factors of trust, motivation, attitude and collaboration were among the most critical ones in product development projects. In the same study, the question of how managers should seek to foster these qualities, is introduced. However, the

particular study was done in the context of product development teams, which are multidisciplinary, whereas this thesis focuses on design teams of formally educated designers.

Trust itself may be a rather vague concept and often challenging to verbalize, but there are some definitions commonly agreed on among the scholars. Trust can be said to represent the optimistic expectations about the motives and intentions of another party (Mcevily, Perrone & Zaheer, 2003). Concepts of trust and reliability are interconnected and many times used as synonyms for each other. According to Blaskova, Blasko, Kozubikova and Kozubik (2015, p. 73), reliability can be defined "as the characteristics, attribute, or feature of a social system", and also that "trust creates the basis for reliability and vice-versa".

Trust can be seen to have many positive causalities in organizations and teams. In organizations, trust acts as a motivating factor in contributing, combining, and coordinating resources towards joint endeavors, and it can create effectiveness "by conserving cognitive resources, lowering transaction costs, and simplifying decision making" (Mcevily et al., 2003, p. 92). Therefore trust is vital in successful relationships. Having mutual trust between in-house designers and consultants, in addition to having reliability in the dynamics of the design team, is significant for successful projects.

Lacking in the elements of trust, knowledge sharing or communication can lead to unwanted results and poor performance of a team. Establishing and maintaining transparent, open and reliable design culture in the organization is one of the responsibilities of design management practitioners. Like Catmull (2014) suggest in the context of creative organizations, there are multiple reasons why people are not open enough in the work environment, and finding those reasons and addressing them is the manager's job. One aim of this thesis is to uncover those reasons from the viewpoints of design managers and

seek means to address them.

Team dynamics are strongly tied to the design team's performance, as well as to the wellbeing of designers. In general, there are psychological needs which, when satisfied, contribute to a person's well-being and motivation, and these basic needs appear in the designer's work as well. In academic discussions, one defined set of needs is competence, autonomy and relatedness, and they are very influential also in the domain of work (Ryan & Deci, 2000). Recent studies on the future of design in organizations from designer's perspective and on meaningful moments in designer's work, indicate that these needs can be identified and fulfilled within the design practice as well (Keipi, 2019; Björklund & van der Marel, 2019). The actions and attitudes of design managers, creative team leaders and design leads are depicted to have a significant impact on how these needs are met in the design function, and therefore also how the dynamics of the team are functioning.

If the managed team or collaboration consists of in-house designers and external designers, some elements might have an impact on the relationship and the practices of the designers. These elements are usually due to the nature of being an employee of the organization or an outsourced consultant. It is important to understand the design managers' perceptions of the assumed differences in internal and external design capabilities in the field of design, but also the reasons behind acquiring those capabilities. More than that, the conventions of managing and structuring the design capabilities and resources need to be understood.

Literature has covered different design capabilities and the practice of design management to a certain extent. However, research is more limited on the perceptions of design management practitioners towards the joint internal and external design capabilities, especially with the focus of trust in those team dynamics of professional

designers. In particular, when the relationship between trust and performance appears to be so apparent, it is necessary to understand "how trust is established and maintained as individuals work together" (Costa et al., 2009, p. 201). Therefore the purpose of this thesis is to explore these themes related to design capabilities through literature review, interview study and development of a tool. Before exploring design management practitioners' perceptions of trust and team dynamics, the basics of design management concerning managing design teams need to be understood.

## 1.2 ..... Significance of design team dynamics

Although the evolution of design, and design management in relation to that, is under transformation, the basics remain more stable. Certain frameworks can be recognized in the everyday management of ever-changing design competence. For instance, when the tasks and duties of design management are looked into more carefully, there can be seen certain mutual activities discipline-wide. In order to underline that design management functions at both strategic and operational levels, those activities can be categorized into four main clusters of activities: "1) contributing to corporate strategic goals, 2) managing design process, 3) cultivating an information and idea network and 4) managing design resources" (Blaich & Blaich, 1993, pp. 13-14). In this thesis, the emphasis is on the last set of tasks, the management of design resources. Moreover, the focus is on managing both internal and external design capabilities in the context of individual design teams or design organizations.

Research regarding design management has been conducted for long



already and the number of studies is notable. In academia, research in design management tends to be rather practice-based and design concepts are elaborated in an organizational context through design theories (Borja de Mozota, 2011). Borja de Mozota (2011) divides those theories into design project management, design strategy and managing a creative team. Especially the last one, managing a creative team, is relevant considering this thesis' topic and scope. In particular, managing an in-house design team consisted of both in-house designers and consultants.

The study by Ravasi and Stigliani (2012) highlighting diverse research areas in design that would need further work by researchers, indicates possible research areas that are not only worthwhile but also interesting to look into, especially from the design management perspective. Ravasi and Stigliani (2012, p. 474) propose a promising research agenda for "enhancing understanding of the organizational and managerial side of design." Although they have conducted their research specifically on the field of product design, it does not limit similar research for other areas of design as well.

Ravasi and Stigliani's work (2012) indicates that by applying theories from management and organization studies could notably enrich the understanding of design in the organizational context and even revitalize established areas of design research such as design management. Issues for future research presented in the paper are divided into categories based on the areas of research and research topics. From the design management viewpoint, a relevant area of research that is showcased is Design activities, and related research topics there are the management of ordinary design activities and the organizational context of design activities (Ravasi & Stagliani, 2012).

As depicted, based on Ravasi and Stagliani's (2012) research agenda, the management of ordinary design activities and the organizational

context of design activities would be relevant to conduct further research on. Ravasi and Stagliani (2012, p. 475) go even so far that they formulate core research questions for those research topics, for instance, "How do 'design management' practices influence design capabilities?", "Under what conditions is in-house design preferable over outsourced design?", "How can organizations improve the management of design collaborations?" and "How do organizational leaders foster the development of design capabilities?" Especially the improvement of managing the design collaborations is an area this thesis attempts to elaborate from the perspective of trust within the design teams. In doing so, the outcomes of this thesis research provide means and tools for design management practitioners to take action for better management and collaboration.

When addressing design management, one needs to understand the essence of it as a practice. According to Cooper and Junginger (2011b), it can be stated that design management is a combination of two intertwining strands of research and practice. The first strand being about "managing the process and the people, and promoting the role of design in adding a substantial contribution to an organization's strategic goal." The second one concentrates on "creating an organizational capacity to adopt and use design approach in responding to change and external challenges" (Cooper & Junginger, 2011b, p. 27). As Cooper and Junginger (2011b) argue, the existence of those aspects is one of the most prominent indicators that design needs careful management. Following this, the research presented in this thesis is ideally resulting in enhancing both of these strands and conveying the careful design management Cooper and Junginger elaborated.

### 1.3 .....

## Thesis topic, aims and structure

The topic for the thesis can be traced back to the author's interests in design as a discipline and especially its strategic aspects. Design, in its most strategic form, and the strategic utilization of design in organizations, lead the way to venture the idea of design capabilities. The author's personal experiences of working in an in-house design team in a large global corporation have provided the possibility to see how design capabilities are built, and the maturity of design has been strengthened. Personal interests and experiences resulted in that the organizational aspects of design found their way to be the focus in the search for a thesis topic. Especially the dynamics of design teams and the utilization of both in-house and external designers sparked the interest to look more deeply into cases of design organizations formed of both internal and external capabilities.

Practically, this study seeks to find out how design managers perceive the different design capabilities and specifically the elements that affect trust and reliability in design team dynamics. Regarding those elements, this thesis will also explore the means that design managers have to establish and enable reliable team dynamics in the design organizations of the companies. Moreover, a design management tool aiding design management practitioners in developing their teams is introduced based on the findings of the study.

Theoretically, this thesis will cover the ways of structuring design capabilities of organizations and the frameworks which relate to the area of design management in the context of managing in-house design, external design, and especially the combination. While addressing design capabilities, also the design management

aspects of those will be elaborated to understand what lies under the perceptions of design managers. The scope of the study is about the trust and relationships between in-house and outsourced designers from the design management point of view; and design management practitioners' perceptions of the assumed differences between internal and external design capabilities.

The research of the thesis is divided into two parts: conducting a literature review on the topic as well as gathering primary data from practitioners in the field. Primary data is acquired through empiric research with an interview study, which is executed in two rounds. The first one consists of ten in-depth semi-structured interviews with design managers, design leads, heads of design, and others with design management experience and responsibilities. The interviews were executed in two technology corporations, ABB and Elisa. After the primary data gathering round, a second interview round was conducted. The latter round, smaller in scale, aimed to validate the findings and to get feedback for the design proposal, which was created based on the insights from the interview study.

The research started with a literature review to understand prior research and fundamental concepts within the topic. The literature review in this thesis covers the design management aspects of different design capabilities and design team dynamics. The review is conducted so that the theoretical viewpoints of the chosen field are described, and the demanded state of the knowledge in that area is achieved (Muratovski, 2016). In addition to gaining a thorough understanding of the topic to be researched on, the extension of current theories and themes discussed in the literature creates directions for future research (Webster & Watson, 2002). The themes from the literature are discussed later on with the emergent themes and findings from the primary data.

As part of the outcomes following the identified elements and means affecting trust in design teams, a specific design management tool is introduced to fill the gap between theory and practice. The development of this tool is complementing the empiric research and is supporting the results as a practical item to be used by design management professionals. Tool development was carried out complemented with the interview study, and the concept is based on the findings of the study. The development of the tool was conducted in three phases. Firstly, the tool was ideated based on the insights from the first round of the interview study. Secondly, the tool was iterated to the next version after receiving feedback and ideas through the second round of interviews. Lastly, it was tested with actual designers to see whether they see value in the proposal. The final proposal is the result of the design process of consisted of these three phases.

The practical contribution of this thesis is about opening the discussion on the notion of trust and reliability in design teams consisted of in-house and external designers. The study, and the results derived from it, should open eyes in organizations where external designers are used in enhancing the in-house capabilities: design management practitioners can see how they are in a critical role in defining the culture of reliability in their particular design organization. Practitioners can utilize the key findings in their work and see how their actions affect the design team dynamics. As a means of making a practical impact on design management practice, different tools can be introduced to aid the design manager's or leader's work as the facilitator of different design capabilities.

The thesis is divided into eight sections. The introduction sets the context and the topic for the research and introduces the basic frameworks of design management. The second section covers the literature review and highlights the argumentation behind different design capabilities, managing those capabilities, as well as addresses the

relationship between internal and external design capabilities. Thirdly, the research objectives are introduced, and the research gap is pointed out with defined research questions. The chosen methodology and methods, as well as the case companies, are introduced and explained in the fourth section, before going into the practices and processes that took place in the study, including the analysis. The fifth part showcases the findings, which are taken into action in the sixth section when the tool as the design proposal is introduced. In section seven, the discussion on the findings, limitations and further research is covered. Finally, the conclusions are stated in the eighth section.

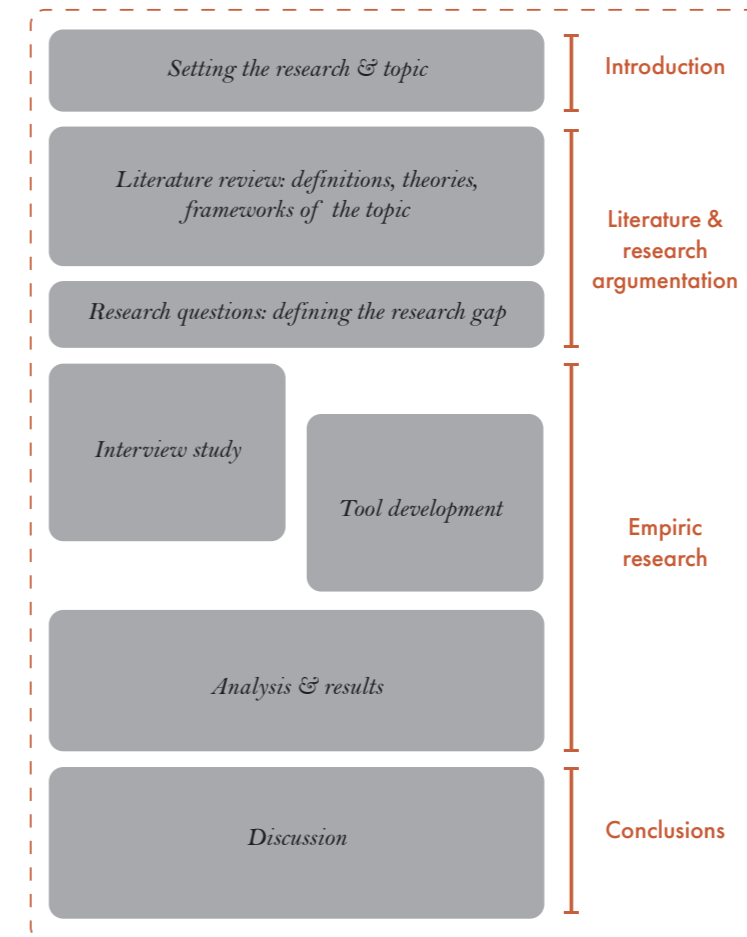


Figure 1. The outline of the thesis research.

# 2

## Literature review

To be able to develop an understanding of how design team dynamics and the cooperation of internal and external designers are discussed in design management practice and theory, it is important also to understand how design resources are structured and managed in organizations. Organizations have a certain amount of resources at their use, and to use those resources purposefully, there is a need to organize functions and their resources effectively. Through building knowledge on the different ways to organize design resources, the various features which are affecting the collaboration of in-house designers and consultants, and hence, the design team dynamics, can be defined.

Design can be seen as a prominent competence adding value for its organization, and it is structured through a particular framework to organize its capabilities most effectively. This framework elaborates design resources in the organization based on “the position of it as a competence: in-house design capability, external design capability and a mixture of the first two” (Bruce & Morris, 1998, p. 42). Furthermore, Junginger (2009) elaborates that design thinking and design methods might vary from external resources to being part of the organization to different degrees, the most extreme being the integration of design to all organizational aspects. Junginger (2009) concludes that these settings can exist simultaneously and are not ruling each other out: there might be external design in use, although the organization is maintaining in-house capabilities. From a design management perspective, Blaich and Blaich (1993) argue that one key issue is the management of all these various corporate design resources.

The purpose of this literature review is to understand the different viewpoints and definitions of internal and external design capabilities, and the basics of the design team dynamics and the matters affecting those. By clarifying the reasons behind acquiring either in-house design, external design, or both, also the design managerial aspects

which affect the design team dynamics should be understood to a certain extent as well. The combined design capabilities of in-house and external designers, the design team dynamics, and the relationships between those designers are especially in the focus when looking into the design organizations of corporations. Moreover, the discussion is richened by introducing organizational resource thinking from operations management with the design management perspective. The accumulated understanding will be the basis and the background for the interview study conducted after the literature review.

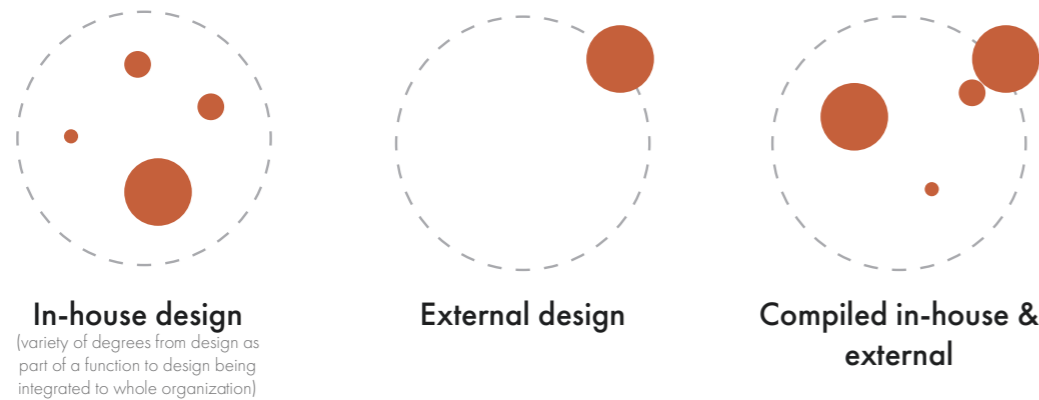


Figure 2. Structuring design capabilities in organizations. (Adapted from Junginger, 2009)

The structure of how design is positioned in the organization, assuming there are design resources in use in the organization, has been researched to some extent. There are multiple definitions in design management literature on structuring design in an organization, as well as discussions on the reasons behind acquiring in-house or outsourced design. However, combining internal and external design is described to be the usual way of approaching the capabilities in the organization, and it is indicated to have an impact on the collaboration and the relationships between the designers and the dynamics of

the team. All of these themes are elaborated further in the following sections.

As the management of design capabilities is at the core of design management literature, the sources and the literature for the review were collected by starting with academic journals, authors and scholars from the practice and academia. Gathering suitable and relevant literature began by searching sources related to specific themes. The search was conducted through the Finna system and Google Scholar by using combinations of terms such as *design management*, *design capability*, *in-house design*, *external design*, *design team*, *trust* and *team dynamics*.

From there on, the more specific and relevant literature was derived and reviewed by backward and forward chaining, to reach as comprehensive understanding as possible of the various design management perspectives on the design capabilities. In this process, the authors from the practical side of the design discipline were not neglected, although the thesis research is heavily relying on academic discussions on the topic. Practitioners have vast hands-on experience in design management issues, and therefore the design management textbooks are valuable in thesis research as well.

## 2.1 ..... Organizational resources and design management

When addressing different ways of structuring design in an organizational context, it is also beneficial to understand some of the

fundamentals in operations management. In general, organization's strategy is described to be formed when its internal resources and skills are combined with external opportunities and risks (Grant, 1993). Grant (1993) also concludes that since the resources and capabilities of the company are the key elements in formulating its strategy, they are also the primary sources of the firm's profitability. Regarding those organizational resources, there are a few different terms that vary in different contexts in the design management literature. In the context of this thesis, these terms might be overlapping, so there is a need for clarifying. For that reason, the concepts of capability, competence and capacity are defined next.

### 2.1.1 Design capability, competence or capacity?

Discussions in design management literature use organizational terms such as capacity, competence and capability, but definitions for these concepts usually come from other fields of research. Moreover, operations management is the field of research where terms capacity, competence and capability are examined in more detail. Therefore, specific definitions are derived from operations management literature to clarify discussions further on in this thesis.

*Capacity* is used as a term when referred to "the maximum level of value-added activity that an operation, a process or a facility is capable of over a period of time" (Slack, Chambers & Johnson, 2007, p. 322). Thus capacity is used to describe a quantitative feature, whereas the concepts of competence and capability are broader and used to describe qualitative notions in the organizational resource context. However, the difference between these two is not that obvious.

The term *competence* can be described to be "usually used in a strategic setting for achieving competitive advantage and includes core

competencies essential for business survival and company" (Zangiski, de Lima & da Costa, 2013, p. 78). In other words, competence is the ability to keep and maintain the coordinated usage of assets for the firm to realize its goals set in the strategy (Sanchez, 2004). The parts that a specific competence is consisted of are, for example, "skills, capabilities, knowledge, learning, coordination, organization and relationships" (e.g., Prahalad & Hamel, 1990; Schoemaker, 1999; Leonard-Barton, 1992; Dosi & Teece, 1993, as cited in Sanchez, 2004, p. 519).

On the other hand, Zehir, Acar and Tanriverdi (2006, p. 109) define the concept of *capability* as "more comprehensive than competence, since in addition to competence, it includes not only the strategy but also the linkage between organization's resources and abilities." Capabilities are also described to be "the repeatable patterns of action in the use of assets to create, produce or offer products to a market and that they arise from the synchronized actions of groups of people who utilize their skills in the usage of the organization's assets" (Sanchez, 2004, p. 519). Grant (1993) argues and adds to the definition that creating capabilities is not just putting together a team of resources, there are also complex forms of coordination between the people, as well as between the people and other resources.

Therefore based on these definitions, the term capability is later on used to describe the internal and external design activities, designers and the competence they bring to the organization in the scope of this thesis.

### 2.1.2 Design resources in organizations

In general, ways in-house capabilities are developed or reasons for acquiring external capabilities, can be derived from operations

management literature. As Slack et al. imply (2007, p. 73), “organizations that perform better strategically, have most likely developed their sustainable competitive advantage due to their core competences or capabilities, i.e., the ways an organization inherits, acquires or develops the operational resources will have a significant impact on its strategic success in long-term.” Slack et al. base this statement on the resource-based view (RBV).

Operations management view on whether to develop in-house design capabilities or acquire design capabilities externally, is addressed with the vertical integration decision. “Vertical integration is the extent to which an operation chooses to own the network of processes to produce a product or a service” (Slack et al., 2007, p.154). The take operations management has to vertical integration is about achieving strategic goals and performing better. Slack et al. (2007, p. 154) propose that managers should ask “does in-house or outsourced supply in a particular set of circumstances give appropriate performance objectives that it requires to compete more effectively in its markets?” In other words, it can be used as an argument for or against in-house and external design activities, depending on the situation. Of course, when there are both capabilities in use, the ratio between them is in focus.

There are also further criteria to help design management practitioners decide on acquiring internal or external capabilities. In operations management discussions, it is depicted that capability should not be outsourced if it has long-term strategic importance, or if its current operational performance is much higher in comparison to any potential supplier (Slack et al., 2007). Design management literature has discussions on similar approaches. One perspective is to observe how strong the design management capabilities are in directing either in-house designers or in recruiting and managing outsourced consultants, and usually, that is possible only by thoroughly understanding the company’s unique culture (Blaich & Blaich, 1993). There are distinctive

arguments against and for the three classic alterations of structuring design capabilities in the organization, and the vertical integration decision should be made carefully in each situation.

One of the main elements of design management is viewed to be the coordination of design resources at all levels of corporate activity to achieve the goals of the specific organization (Blaich & Blaich, 1993). Blaich and Blaich (1993) indicate, that a synergistic approach to design management involves not only managing the capital and financial resources and the corporate identity, but also the human resource management. They also suggest that managing human resources in the design management context is about recruiting internal and external designers, providing career growth opportunities, training and access to research information across disciplines, as well as developing and monitoring design policy (Blaich & Blaich, 1993).

Design capabilities can be structured in multiple ways in organizations, varying on the context, culture, maturity and size of the design organization. Not only can design capabilities be organized on the level of internal-external but also one of the essential dimensions in structuring design is considered to be the level of centralization (Maula, Björklund, Maula & Soule, 2019). The depicted division between organizations is that there is either a centralized design function, the design is part of some other organizational function, or the designers are working in different business units across the organization (Junginger, 2009; Maula et al., 2019).

Centralized design function is argued to enable a holistic approach and enhance the creation of strong design culture and coherent practices, whereas the decentralized model is said to give designers a closer connection to the actual business needs (Maula et al., 2019). On the other hand, there are portrayed to be also risks in both of the models. The centralized model might be too distant from the realities of the

business units to the clients and end-users, while in the decentralized model, the peer support might be limited and there might not be enough figures to push the design agenda and culture forward (Maula et al., 2019). Also, Maula et al. (2019) present two more ways to structure design capabilities: a project-based approach where cross-functional collaboration is at the core, and design or innovation centers that are providing internal training, facilities and support for design activities.

## 2.2 ..... In-house design capabilities in organizations

The first of the possible perspectives into the organization's ways of structuring design capabilities is having design in-house. In-house design refers to the capabilities that lie within the organization, "as an actual function in the organization or as a distributed competence area that is dispersed usually in R&D, production or marketing departments" (Bruce & Morris, 1998, p. 42). Von Stamm (1998) elaborates more on the options the organization might pursue when setting up an internal design competence of having a dedicated design team or design department in-house. According to the same study, "the capabilities can be located within marketing, as many times in fast-moving consumer goods, or within a technical domain (e.g., R&D or production)" (Von Stamm, 1998, p. 42) which is more often the case in engineering-based establishments, or what often is the reality, a combination of all or some of these three positions.

Having internal design capabilities is depicted to provide certain advantages over external design. Arguments for focusing on the integration of design in organizations are revolving around similar

notions in discussions across the design management literature. *Familiarity* is maybe the most notable argument for having an in-house design capability. Because being integrated into the organization results in being familiar with the organization, its products and services as well as the culture, practices, core competences and processes (e.g. Bruce & Morris, 1998; Hands, 2009; Lockwood, 2011). Alternatively, as it is said, "in-house staff lives and breathes the daily life of the company" (Blaich & Blaich, 1993, p. 171). Other discussed important reasons related to the closeness of the organization are the regulation of designer's ideas, optimized and standardized process for new product development, guaranteed confidentiality, and improved coherence of design decisions throughout the projects (Borja de Mozota, 2003).

Another key argument for having integrated design competence has to do with *the processes* in the particular organization. Having in-house design team or department can be seen to influence the new product development and manufacturing of the products through streamlining, optimizing and standardizing those processes to prevent or come over technical and manufacturing challenges or even to make those potential problems to surface in an earlier phase (Borja de Mozota, 2003; Hands, 2009; Von Stamm, 1998).

There are also indications for financial aspects in having integrated design in organizations. Hands (2009) argues that there are *financial benefits* of setting an internal design capability. Accordingly, design can achieve those benefits and strategic opportunities in innovativeness and originality in product development in the long-term by a thoroughly organized and coordinated design activities in the establishment. Innovativeness combined with the help of design in the manufacturing and R&D processes and also the familiarity with the technical and marketing aspects, significant cost savings can be achieved, hence increasing the profit for the organization (Hands, 2009).



On the other hand, in-house design capabilities are also seen to have some downfalls. For instance, an in-house designer's *creativity can be limited* for varying reasons within the organization. In-house designers might become too content and fail to produce novel ideas due to restricting hierarchy or limited product and service types (Bruce & Morris, 1998; Borja de Mozota, 2003). Although Lockwood (2011) concludes, based on case studies, that organizations that use internal design capabilities also feel that it enhances their internal creativity.

Not only the creative limits and restrictions but also *the routines and responsibilities* of an internal worker can have an effect. For example, in-house designers and design managers are described to have ongoing daily responsibilities they have to take into consideration on the expense of diving deep into a particular project (Bethge & Faust, 2011). Borja de Mozota (2003) points out other internal reasons that usually are HR-related or budgetary: recruiting might be time-consuming and complicated, and in-house designers create cumulative costs compared to outsourced design.

In addition to the various basic takes on in-house design, the recent discussions dealing with in-house expertise are stating that there indeed should be design within organizations themselves. For example, Turner (2013, p. 128) speculates that “design organizations are vital in every business out in the market.” It is quite a strong statement arguing that in-house design is more valuable over outsourced in many occasions. Turner (2013) also divides instances dealing with design in companies into two categories: Design Pushers and Pullers, where the in-house designers, as well as consultants, are referred to as Design Pushers. According to Turner's interpretation (2013, pp. 145), “Pushers are the ones who have the power to change the organizations with design.” It usually is less challenging for in-house designers to lead and conduct that change, although, as Turner also states (2013, pp. 145), “they are rarely in the position of having the

power to impact the discussion over the potential of design.” In-house designers can be further categorized to be roughly either specialists or generalists, whereas external design is depicted as talent or output (Watanabe & Kim, 2006). These roles showcase how different takes in-house design can have and where does external help come into the picture, depending totally on the role of the in-house design in the organization.

When it comes to the benefits of choosing in-house design over outsourced, many arguments speak on behalf of in-house design. For instance, according to Overkamp and Holmlid (2017), in-house designers can develop and enhance the (service) design competence in the organization and therefore influence the whole development process instead of just the object of design. Similar indications are provided by Czarnitzki and Thorwarth in their study (2012, p. 878), where they discovered that “the design activities that were conducted with internal knowledge had a vital role in creating product innovation's success with market novelties”. Other reasons are listed in Griffis and Choi's research (2013) to be decisions based on policy, staffing capacity, schedules, lack of expertise, need for innovation, risk management, quality and cost-effectiveness.

To conclude, organizations develop activities in-house for either the reason that they can execute those activities better than externals, or even if they can achieve high quality performance by outsourcing, it might not be worth the financial and administrable matters (Hagel & Brown, 2005 as cited in Lockwood, 2011, p. 249). Overall it can be argued that in-house design has experienced an increase in the organizational context during the past ten years, or as Cooper and Junginger (2011a) states in their observations on design management, there has been a return of in-house design.

Characteristics of in-house design	Author(s)
<i>Familiarity &amp; expertise (towards the organization, procedures, products, services)</i>	<i>Blaich &amp; Blaich, 1993; Bruce &amp; Morris, 1998; Czarnitzki &amp; Thorwarth, 2012; Hands, 2009; Lockwood, 2011</i>
<i>Power over internal processes</i>	<i>Borja de Mozota, 2003; Hands, 2009; Overkamp &amp; Holmlid, 2017; Turner, 2013; Von Stamm, 1998</i>
<i>Cost-efficiency in long-term</i>	<i>Griffis &amp; Choi, 2013; Hagel &amp; Brown, 2005; Hands, 2009</i>
<i>Restrictions in creativeness due to organizational reasons</i>	<i>Bruce &amp; Morris, 1998; Borja de Mozota, 2003</i>
<i>Responsibilities outside actual design work</i>	<i>Bethge &amp; Faust, 2011</i>

Table 1. Main characteristics of in-house design capabilities.

## 2.3 ..... External design capabilities in organizations

The other significant position to have design assigned to is outsourced design. Bruce and Morris (1998, p. 42) describe the external design as “the capabilities that lie outside the organization provided by design professionals that are selected and commissioned to execute the design activities required by the organization.” In other words, the consultants, freelancers, and other external designers who are not direct employers of the organization.

One key aspect of having outsourced design is to consider *the length and temporality* of the relationship between the provider of the design capabilities and the client organization. Two main approaches between the client and the external design provider are to have short-term or long-term relationships (Bruce & Morris, 1998). If design capabilities are required on a short-term basis, e.g., for a specific project, it can be argued that design consultancy might be the most reasonable option (Hands, 2009). The nature of a short-term relationship is often the reason for acquiring an external partner in design. According to studies (Hands, 2009; Borja de Mozota, 2003), successful short-term consultancies can manifest themselves into longer partnerships with the benefits of cutting costs (research, negotiation, control and insurance) as well as favoring the mutual exchanging of information and increasing the predictability of mutual behavior.

Other notable factors suggested to be considered when acquiring outsourced design is to take into account the managerial matters and also the criteria of choosing the partner in the first place (Oakley, 1990, as cited in Von Stamm, 1998, p. 45). Although in relation to that, a significant benefit of outsourced design capabilities is concluded by Oakley (1984). He points out that it is *easier* for the organization *to abort unsuccessful design projects* when they are organized externally. So in that sense, poor recruitment decisions can be tolerated more easily. Besides, Lockwood (2011) argues that outsourcing design is a way to achieve near-term savings in operations and is usually centered on transaction-cost economics.

Many recurring benefits result from acquiring outsourced design. Many scholars discuss *the inspiration and the fresh inputs* as well as exploring innovations the design consultants might provide (e.g., Blaich & Blaich, 1993; Bruce & Morris, 1998; Von Stamm, 1998; Lockwood, 2011), and *the avoidance of internal politics* and restricting

culture of the organization (e.g., Hands, 2009; Bruce & Morris, 1998; Von Stamm, 1998). Blaich and Blaich (1993) and Von Stamm (1998) also highlight one quite obvious but rather important reason of choosing external design capabilities over internal: the motivation is *the need for supplemental expertise* in a particular area that is not available in-house, whether it is a specific design skill or some technical proficiency. Similar notions are also expressed by Oakley (1984) and Lockwood (2011) about the reasons for choosing outsourced design: suitable resources might not exist, or if they do, they are entirely in use due to growing workloads. As the case study by Lockwood (2011) suggests, on many occasions, the companies let external partners handle the routine design activities and tasks. However, he argues that in those cases, strong internal design leadership is required.

On the contrary, there are also alleged disadvantages in utilizing outsourcing over integrated in-house design. Core disadvantages highlighted by authors and scholars are the opposites of the benefits of setting up internal design competence. *Lack of familiarity* when it comes to the organization, its products, services and procedures is seen to be creating challenges and the fear of leakage of confidential information (Bruce & Morris, 1998) might be enough of a cause not to choose external design providers. Furthermore, practical issues, e.g., difficulties in moving from a concept to the development, or the challenging coordination of external and internal design, might result in not integrating outsourced design to the mix (Bruce & Morris, 1998; Von Stamm, 1998). However, many of these challenges and obstacles could also be prevented. For instance, it is argued that through better communication and closer cooperation between the external design provider and the commissioning party, the challenges could be dealt with in the earlier phases, or those could even be predicted in the first place (Von Stamm, 1998).

When it comes to the management of external design, there are

certain differences depicted in the managerial role between traditional managers and design managers. One could argue that design managers are more accepting of taking care of outsourced capabilities. A clear indicator of that is one key difference between traditional managers and design managers described by Oakley (1984): design managers tolerate temporary relationships, whereas traditional manager values stable long-term relationships. On the other hand, this can be questioned in modern organizations, where the external workforce is used frequently by other competences in addition to design. Oakley (1984) and Lockwood (2011) also emphasize the importance of the design manager's role as a coordinator and collaborator. Notably, the matters of communications and administration are indicated to be vital in successful external relationships between design consultants and the client organization.

From the organizational perspective, external design can also be seen as something that is not strived for. For instance, regarding design transformation in organizations, several factors can be viewed as either organizational enablers or blockers. Among those organizational blockers Meyer (2011) lists, is the fact that when *ways of working are consultative* and not collaborative, the transformation might not go as planned. Therefore, it is vital for the success of the organization's design activities that the organization feels it owns the particular design and that the design is carried out with strong design leadership (Lockwood, 2011). Hence, the importance of careful design management is highlighted.

<b>Characteristics of external design</b>	<b>Author(s)</b>
<i>Temporality of the relationship</i>	<i>Borja de Mozota, 2003; Bruce &amp; Morris, 1998; Hands, 2009</i>
<i>Possibility for easier termination</i>	<i>Oakley, 1984</i>
<i>Cost-efficiency in short-term</i>	<i>Lockwood, 2011</i>
<i>Fresh ideas and outside-in perspectives</i>	<i>Blaich &amp; Blaich, 1993; Bruce &amp; Morris, 1998; Von Stamm, 1998; Lockwood, 2011</i>
<i>Avoidance of internal politics and restrictions</i>	<i>Hands, 2009; Bruce &amp; Morris, 1998; Von Stamm, 1998</i>
<i>Specific expertise or competence</i>	<i>Blaich &amp; Blaich, 1993; Lockwood, 2011; Oakley, 1984; Von Stamm, 1998</i>
<i>Lack of familiarity (towards the organization, procedures, products, services)</i>	<i>Bruce &amp; Morris, 1998</i>
<i>Consultative approach</i>	<i>Lockwood, 2011; Meyer, 2011</i>

*Table 2. Main characteristics of external design capabilities.*

## 2.4 ..... The combination and management of internal and external design capabilities

The third, and commonly depicted as the most common, practice of structuring design capabilities in the organization is the combination

of internal and outsourced design capabilities. This view to the design capability is a compilation of in-house and external design skills, where the external capabilities come from either a design agency, a general consultancy providing design capabilities, or a freelance designer. Outsourced designers are brought in for reasons that differ on the situation: either to provide additional resources, to ensure the project is completed on time, or to input fresh ideas of specific technological expertise (Bruce & Morris, 1998; Von Stamm, 1998). Typically, many scholars argue that a combination of internal and external design capabilities is preferred. Blaich and Blaich (1993, p. 172) even claim that “some kind of combination is undoubtedly the ideal solution.”

When compiling the organization’s design capabilities from internal and external, there usually is a need for something that the organization is lacking. As described earlier, there might be a lack of a particular type of resources, such as skills, or then there might be just merely not enough of workforce. As organizations draw upon fresh thinking from outside, certain aspects can play an essential role in the process: a project might need further help to be completed on time or within a specific budget, or there is insufficiency in knowledge or technical skills (Hands, 2009). It is stated, that in this type of mixture approach, there needs to be in addition to outsourced professionalism, correspondingly a profound existence of design in the organization itself, in order to successfully drive the design concept through the holistic development process (Hands, 2009).

Managing an integrated compilation of internal and external design capabilities is discussed to require careful planning and well-thought practices. Design managerial aspects involving the continuous relationship between in-house and outsourced design, are often the key factors of having a successful partnership. Although the creative output requires evaluation, there should not be any competitive aspects into it; furthermore, it should be an objective evaluation (Bethge & Faust,

2011). Bethge and Faust (2011) propose various managerial solutions for a successful in-house-outsourced design relationship: keeping the brief alive, genuinely integrated teams, collaborative workspaces, shared working experiences, objective audits and critiques, training, education and mentoring as well as socialization and celebration.

Not only should the practical characteristics be taken into consideration in the design management, but also the design culture within the organization. Design managers or in-house designers need to engage in attempts of incorporating design principles and awareness of the organization's design philosophy even beyond the design function and its closest stakeholders; to align also the external partners in the mix (Ravasi & Lojacono, 2005). Bruce and Morris (1998, pp. 43) claim that "in overall, the management of the integration of in-house and outsourced design capabilities has to be conducted carefully." This is to ensure having a fruitful and trusting partnership since there might be, e.g., fear of giving away potential commercially sensitive information.

Compiling the organization's design capability of both internal and external competency can lead to various issues that need to be solved. As Bethge and Faust (2011) showcase, that relationship might often be set up for failure if the following factors are not taken into consideration: motivation, culture and values, goals and objectives, skills and talent and various kinds of fear. Those factors need to be viewed not only through one of the two perspectives, but both, through the internal and the external. In many cases, challenges surface when the external provider is managed within certain constraints, and to come over those challenges, there are some key points to look at in situations involving external partners. Bruce and Morris (1998) point out a few management activities for those instances: work evaluation, intense level of contact in the initial stages of the relationship, specific purchasing criteria, well-balanced briefs and financial constraints.

As depicted so far, design management is argued to be at the core of successfully integrating design into the organization, whether it is a corporation, public sector instance or an NGO. This is highlighted especially when there are both in-house design and outsourced design represented. Challenges in those types of relationships are seen to more likely appear when the management is not up to its responsibilities. Design management can disturb the equation; for instance, when coordination of internal and external designers is handled poorly (Ravasi & Lojacono, 2005). The unsuccessful transfer of the externally developed design into the production and even the lack of ownership in the internal design organization might cause severe collisions in the partnership, and even harm the pushing of design into a commercialized outcome (Von Stamm, 1998). Moreover, Von Stamm (1998) describes that collaboration and exchange between internal and external designers also allow the consideration of constraints and problems as early as possible.

A case in point of issues on the management of internal as well as external designers is the case study that was conducted in the shipbuilding industry (Murto & Person, 2014). In their research, Murto and Person (2014) noticed that the challenges in design management are multiplied in the business network situation where a complex output (such as a ship) is developed, and multiple different disciplines are required, as well as internal and external designers. A portrayed example of challenge design managers face in related situations is the coordination of internal and outsourced design capabilities, particularly when some of the work is salient while some of it is silent (Murto & Person, 2014).

Design management practices can enable better collaboration and enhance the design team's performance in many ways. In the case of compiling internal and external design capabilities, one notable activity is choosing the correct partners to work with. Also, the context, the

problems to be solved, goals and budget, all are depicted to guide the successful selection of the external designer or consultancy (Maula et al. 2019). On the other hand, it can be argued that external designers need not only guidance but also the freedom to have possibilities to reframe the brief or even to come up with unexpected solutions (Maula et al. 2019). When these boundaries are set and flexible enough, the collaboration between in-house and external designers should be fluent.

## 2.5 ..... The relationship and dynamics between internal and external design capabilities

As the literature so far suggests, the integration of in-house designers and external designers has potential downfalls if not managed carefully. Design managers and designers in leading roles can be seen to possess great power with great responsibility, when organizing design resources and creating and leading teams. Having reliability and trust among the designers, is indicated to be one essential factor in successful design teams or in-house-external designer collaborations.

Trust is indicated to be connected to the dynamics of the design team, and therefore also on the team's performance. Sharing information, or the lack of it, is seen to have a direct connection to reliability within the team. Mcevily et al. (2003) explain that in organizations, trust enables cooperation and mutual problem solving by increasing openness in information sharing and by speeding the circulation of knowledge. Especially in the design practice, it may still be quite common to have the mentality of confidentiality. In other words, by refusing to share knowledge, competitive advantage is created

(Hamilton, 2011). Nowadays, it might be more of a problem for the more traditional, stiff and hierarchy-oriented organizations and not so much of a phenomenon in the more agile organizations. Sharing of knowledge and best practices is now considered as a sign of thought leadership, as can be seen from keynotes, seminars, blogs and articles all around the field of design. Hamilton (2011) also claims that sharing of information identifies the designer as a leader and an advanced practitioner in a particular field.

In addition to knowledge sharing, communication within the design team is closely connected to the concept of trust and reliability. Design management issues within the notion of communication arise from several studies. Uusitalo et al. (2019) summarize the prior research on the topic, and according to them, previous research has been focusing a lot, e.g., on information flows in the area of design management. Team leaders and managers can affect the formation of trust by encouraging communication within the team and, therefore, also influence the team performance (Boies, Fiset & Gill, 2015). Boies et al. (2015) highlight especially the role of trust in teammates.

There are indications in the prior research of how the team dynamics impact the team performance and which elements contribute to the wellbeing and meaningful work of designers in the work environment. According to Björklund and van der Marel (2019), meaningful moments in a designer's work vary to some extent, if the designer is in-house or external. In their study, it was identified that in general, the meaningfulness of a designer's work was heavily influenced by collaboration, and was connected to competence and relatedness. In Björklund and van der Marel's study, a significant finding was that external designers value mostly moments regarding relatedness, whereas in-house designers mentioned competence-related moments. Keipi (2019) elaborated more on the needs and articulates that the need for relatedness refers to a sense of belonging, and in the context

of design, it means the designer community and the multidisciplinary collaborative network. In the case of competence, the designer perspective is described to be closely linked to the availability and sharing of information and knowledge (Keipi, 2019).

When it comes to interpersonal reliability within design teams of in-house and external designers, the amount of prior studies is somewhat limited. The limited research done is evident at least when compared with other disciplines than design, or compared to relationships and trust between designers and other stakeholders. For instance, there have been studies of designer supplier relationships (e.g., Sariola & Martinsuo, 2016). They introduce also studies concentrating on customer-supplier relationships as an example of research on the relationships between different stakeholders in a project setting. In their study, Sariola and Martinsuo are focusing on the designer's perspective on the relationship and the feature of strength, especially in the relationship between designer and supplier.

In the end, some key definitions of design management contains aspects, which already point to the themes of handling design resources and relationships. For instance, Blaich and Blaich (1993) argue that the combination and means of how internal designers and consultants are used is a matter of sensitive judgment and constant adjustment. They even go so far to point out that it is "one of the most important tasks of design management to make and orchestrate these decisions" (Blaich & Blaich, 1993, p. 172), and that "regardless of the size of the in-house staff or the proportional mix between staff and consultant project assignments, there are relationships to manage and work to facilitate" (Blaich & Blaich, 1993, p. 174).

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## *Research objectives*

### 3.1 ..... Research gap

According to literature, research on design management can be argued to be important, especially regarding the compiling of the organization's design capabilities, whether there are internal, external or both of these approaches in use. There are indicators in the literature that further research can be conducted on the topic and, more specifically, on the coordination and mixing of in-house and outsourced design capabilities. Moreover, as Blaich and Blaich (1993) already have articulated concerning the management of a combination of internal and external design resources, providing clear direction to and integrating the efforts of that combination is a primary design task for design managers. The state of design management practices in the organization has a significant impact on the design team's performance. According to the literature review, design managers and design leads can influence the performance of the team through establishing and maintaining trust, and improving the dynamics of their team.

Although these aspects are significant, Uusitalo et al. (2019) reveal that the research is very limited in how the managers create joint trust in design teams among others, and what are the actual effects of trust in the design management context. In their study, their take on the issue is to utilize a lean design management framework in multidisciplinary projects. Also, they refer to a list of design management problems which includes mostly human behavior related issues. Despite the ratio of human behavior related issues, researchers are described to have paid limited attention to the soft skills, such as trust, between design team members in the design management setting (Uusitalo et al., 2019). Important to be noted is that these studies are done in the context of multidisciplinary teams, where designers with professional

education are representing just one part of the team. Although there have been a number of studies on these topics, in-house design teams consisted of only designers have not been in focus concerning design management and its implications on trust within the team.

Like prior research showcases, the design manager's role in successful team collaboration and, therefore, enhanced team performance is significant. However, as others have stated, the actual research on the topic has been quite limited so far. In addition, many of the studies regarding the topic of trust are revolving around the context of architecture, construction and building design, and research covering design teams in the fields of user-centered design (industrial design, service design, user experience design and user interface design) is somewhat limited. In order to give design management practitioners means to manage design teams of professional designers properly and lead design work, their perceptions towards the design capabilities and the dynamics of the team require further research.

### 3.2 ..... Research questions

As stated, studies made earlier have raised questions regarding certain issues in the context of design management and trust, and inquiries for further research and areas that could be studied more have been highlighted. As an exploratory study, the research in this thesis sets out to uncover features affecting the design team dynamics and to outline the impact design management and its practitioners have on establishing and enabling trust in design teams of internal and external designers.



To achieve these aims, specific research questions need to be formulated to guide the research towards the outcomes and conclusion of the project. The research questions are formed to be design management oriented with the focus on design team dynamics and especially the notions of reliability and trust. Hence, how design managers perceive the role of reliability in design team dynamics is at the core of the following research questions. Given the aims presented, the following research questions are set to steer the research further in understanding design management practitioners' perceptions of those features of team dynamics.

#### **RESEARCH QUESTION 1:**

*What elements do design management practitioners in technology corporations perceive to affect trust in the team dynamics of in-house and external designers?*

As depicted in the literature review, the discussions revolving around the combined internal and external design capabilities implicate that some issues affect the design team and the relationships between designers. Design managers and related practitioners are in a key role in their organization when it comes to design capabilities. Therefore, the first research question aims to uncover what these practitioners themselves perceive to be the essential elements affecting the dynamics of a design team. The context for the research is corporations in technology segments, although the aim is not to limit the findings to these specific settings. In order to answer this question, also the arguments for structuring design capabilities certain way needs to be understood as well.

#### **RESEARCH QUESTION 2:**

*How can design management practitioners establish and enable reliable team dynamics between the in-house and external designers in the design organization?*

Whereas the first research question aims to uncover the aspects that design management practitioners perceive to affect trust between internal and external designers in the team, the second research question is about discovering the actual means they have in establishing and enabling trust and reliability in the design team dynamics. As has been stated previously in the literature review, design managers and practitioners in related roles or with similar duties are the ones who set the course for the design organization and its ways of working. To emphasize the impact of design management practitioners, concrete means and actions are aimed to be uncovered with the second research question. When seeking to answer this research question, it is also important to understand when and how do issues of reliability and trust emerge in the collaboration of in-house and outsourced designers if these issues exist in the first place.

As these research questions are explorative in their nature, the aim is to gain an understanding of the perspectives of design managers about the assumed differences between internal and external design capabilities presented in the literature. Through answering these research questions, the purpose of the thesis is to provide an understanding of how design managers perceive the features affecting the reliability in the design team dynamics and what are the ways for them to establish and enable trust within their teams.

# 4

## Methodology

In order to address the introduced research questions, the research approach, methodology and methods need to be defined. Qualitative research is probably the most convenient research approach for exploring design phenomena in the area of design management. “Qualitative research can explore a variety of phenomena from the point of view of the individuals and the research focuses on existing real-life situations,” concludes Muratovski (2016, pp. 37). Organizations are complex and often layered instances, and therefore the research approach should also take that into notice. Qualitative research as an approach is suitable in looking into complex phenomena and contexts, by conducting it researcher can recognize the issue at hand, its layers and many dimensions that are on the focus (Leedy & Ormrod, 2010).

### 4.1 ..... Methodology: an interview study

Based on the scope of the research and the examples provided earlier, the main methodology in this thesis research is interview study. This methodology is used to gather data and insights as well as to aid in the tool development. Exploring the experiences and perceptions of actual design management professionals is at the core of understanding the addressed phenomena in the field of design management. The interview study consists of two interview rounds with a sample of informants, where the first round consists of five semi-structured in-depth interviews in each case company, adding up to ten interviews in total. The second interview round was conducted to validate the findings in the first round, and it included three selected informants from the previous round to represent each company. The sample for the interviews in each company consists of design managers or persons with similar relevant positions and duties in the company.

An interview study was chosen as the methodology to meet the data inquiry needs for answering the research questions. However, looking at the topic from the design management point of view and not from the perspective of designers themselves as such, the amount of persons with the right profile is quite limited, and it is more challenging to get the aspired amount of informants for the study. Also, for that reason, two case companies are included in the study. An interview study was chosen over conducting a case study due to it being a sufficiently effective way to gather insights and data in the research. In addition, neither of the companies in the study are commissioning the work, so that would make it challenging to get other sources of data (e.g., documents or records) from the companies to conduct a proper case study. At least considering the resources and schedule for a master's thesis.

There have been numerous interview studies done when approaching organizational aspects of design or matters regarding the processes or procedures of design practice. Interview studies on such topics in the design practice, design management and product development have been conducted by Uusitalo, Seppänen, Peltokorpi and Olivieri (2019), Björklund (2010), Ericsson, Gingnell and Lilliesköld (2015) and Park-Lee and Person (2018) among others. The study presented in this thesis will follow the basic practicalities and processes of interview studies conducted in the field of design research and research for design management in general.

## 4.2 ..... Case companies and informants in the study

Two case companies were selected for the interview study. Having two case companies, instead of just one, increased the sample for the research and provided a possibility for a broader spectrum of design management perceptions and practices to be studied. The companies included in the study were ABB and Elisa. These companies were selected due to the existence of internal and external design capabilities within the organizations, as well as to author's personal connections to the companies. The author worked at the moment of research in one of ABB's business unit's in-house design team as a service design trainee.

"ABB is a global technology company with a comprehensive offering for digital industries, operating in over 100 countries with about 147 000 employees" (ABB, 2019). ABB is divided into four businesses that serve different industries globally: Electrification, Industrial Automation, Motion, and Robotics & Discrete Automation. Numerous business units are organized under the businesses, including, for example, business units ABB System Drives in Motion and ABB Marine & Ports in Industrial Automation. ABB, in general, is mainly focusing on the B2B offering.

Elisa is the biggest Finnish telecommunications company. Also, Elisa is operating internationally, mainly in Estonia, and in 2018 it employed approximately 4800 people in total. In addition to traditional telecommunications offerings, Elisa has an extensive portfolio of digital services as well. For instance, the portfolio includes visual communication services, entertainment services and cloud-based IT services. The brands included in the company are Elisa, Elisa Viihde

and Elisa Saunalahti, among others. (Elisa, 2019)

The design capabilities and the maturity of design vary to some extent within the case companies, but also when compared to each other. A wide variety of fields of design are represented in both of the companies, and the specializations ranged from graphic design to industrial design and from service design to UI and UX design. In both companies, in-house design capabilities are supported by extensive utilization of external designers. To be specific, there are projects and design teams, where both of the capabilities are represented, and internal and external designers are collaborating. In both companies, design capabilities are structured both in a centralized design function (Software Services and their design capabilities in Elisa and, e.g., CommonUX Design Team in ABB) as well as in a decentralized way with designers in the business units (either in design teams or as individual designers).

Concerning the thesis topic and scope, already author's personal experiences working in one of the in-house design teams in ABB, as well as initial talks with one ABB design manager, proved that the relationship and joint interpersonal trust between in-house and external designers could be one aspect that is looked into in more detail from the design management point of view.

For clarification, the role of the companies in this interview study needs to be highlighted. The aim of the thesis is not to analyze in detail the state of internal and external designers' collaboration in these particular companies, and not to provide any detailed company-specific description of the results in this thesis. Informants are using examples from their respective organizations, but also previous experiences were discussed on a more general level. The companies serve primarily as the source for the interview sample, and the companies are not commissioning the work. Companies are presented here for the sake of

transparency and to give some context for the results.

The interviewee sample was defined based on the research scope and the topic. Research interests being in how the internal and external design capabilities' collaboration functions from the design management point of view, clearly set the boundaries for the types of person that needed to be interviewed. Experts on the topic in practice are the design managers, design leads and heads of design in the organization, and persons in those positions were, for that reason, targeted in this study. From each of the two case companies, five persons with those types of roles were contacted, and the interviews were organized accordingly.

Narrow framing of the interviewee sample and also the fact that there are not that many design management positions in the companies, caused challenges to the recruit process. Existing contacts in ABB and a contact person from Elisa were used as the basis for the interviewee sample. Interviewees were asked to suggest persons in their company who would be suitable for these interviews, and those persons were then contacted and included in the interview study. A list of the designers in the design community in one of the case companies was also used to sample possible interviewees. People and their positions collected from the list were then validated with a design lead who has a long history with the company and is actively maintaining the designer community in the respective company. To conclude, the sampling was the outcome of combining these different means.

Although all of the interviewees were not design managers as such, they had direct experiences in leading the design work and team of designers and hence also the internal and external design capabilities. The ones that did not fulfill the design manager role description, as such, had either a guiding or an organizing role for the internal and external design resources, and they were also higher on the seniority

level compared to other designers. Therefore, the relevance of those interviewees for this study was reasoned. The interviewees' perceptions of the themes of design management were based on their personal experiences from the current position or earlier similar situations. The focus was to get the design managers and others to describe their experiences and perceptions of the assumed differences depicted in the design management literature.

Informants in the study are later on referred to not by their direct title, but by a broader group they are categorized into (*Table 3.*). The informants are categorized into three groups based on their position and tasks in the organization. These groups are Design leaders, Design managers and Senior designers. Design leaders are typically the leaders of design function that is cross-organizational and have responsibilities across the company, whereas design managers have responsibilities on the individual function or business unit level. The third category contains informants who are not managers but have a guiding or an organizing role towards design resources and might work as leads of individual teams.

Company	Informants by title	Category according to position and tasks
ABB	UX Design Lead	Design leader
ABB	ID & UX manager	Design manager
ABB	Industrial Design Manager	Design manager
ABB	Head of UI/UX	Design manager
ABB	Global leader for Agile and User Experience	Design leader
Elisa	Head of Design	Design leader
Elisa	Service Design Lead	Senior designer
Elisa	Senior Service Designer, design lead	Senior designer
Elisa	Service Designer, design scrum master	Senior designer
Elisa	Head of Design Language	Design leader

*Table 3. Informants in the study.*

### 4.3 .....

## Method: semi-structured interviews

In order to carry out an interview study as the chosen methodology, certain methods are most often in use. The context or the topic does not necessarily have an impact on the choice of methods, but rather on the execution. The methods commonly used in interview studies are naturally different kinds of interviews. In this research scope, interviewing experts of the domain in an in-depth and semi-structured manner is used as the primary method for data gathering.

Previous research cases where interviews have been used as a method are, for example, Murto and Person's (2015) case study on the work of designers in a business network. Their research had the method of semi-structured interviews as the primary source of information (Murto & Person, 2015). Also, Bruce and Morris (1998) used interviews when they acquired information from persons responsible for design and product development in the organization. Another example of conducting interviews is the work of Dave, Pikas, Koskela and Liias (2015), in which the lead author interviewed several persons in the leading design offices in Estonia.

Interview as a method provides insights on individual's ideas, opinions and attitudes, and it can be used as the primary method in gathering data on a specific issue (Muratovski, 2016). For instance, Dave et al. (2015) uncovered the design processes of a certain design agency through interviews. Design processes being usually fuzzy, the data they gathered could not be understood in a detailed manner without discussing with the informants. In this thesis' interview study, the particular type of method is a semi-structured in-depth interview. An in-depth interview is more suitable in the context of studying a

specific phenomenon (the relationship between design capabilities in organizations in this case) thoroughly with the participant (Muratovski, 2016).

In-depth interviews would be conducted in person if possible and with enough time to dive deep into the issues that are under the scope. In the case of design capabilities in the organization and the management of those, the interviewees are ideally design managers and others higher in seniority with similar roles in order to acquire the correct insights. In the case of Murto and Person (2015), interviews covered the area of design in the shipbuilding project broadly, and different fields of design were included in the interviews to understand the design management issues in environmentally sustainable design. In the end, by doing in-depth interviews with their sample, they uncovered two main challenges that are relevant to design managers in environmentally sustainable design in network settings (Murto & Person, 2015).

Semi-structured interview as the method in this thesis follows the necessary steps that Muratovski (2016) displays in his book: before the actual interview preliminary preparations on the background of the interviewee and the organization is carried out and the interview process, questions and the documentation process are thoroughly planned, and finally, after the interview the reflection takes place. Bruce and Morris (1998) also elaborates on the process of having interviews as the method in a way that can also be applied in this case. They have used additional follow up interviews and accuracy checks with the interviewee after the original interview was conducted, transcribed and analyzed to some extent.

## 4.4 .....

### The first interview round

Preparations for the interview study were carried out, focusing on two aspects: the interview guide and the interviewee sample. Designing the interview guide for the semi-structured interviews was done well-ahead and went through a couple of iterations before the first interview took place. First of all, the defined research questions were steering the design of the interview guide (*Appendix 1*). Hence, the themes in the guide (*Table 4*) were aiming to uncover the perceptions interviewees had towards the team dynamics within the internal and external design capabilities in their organization. The themes and questions for the interview were first drafted based on the literature on design capabilities and on some issues and notions of trust which emerged from prior studies. Once the first draft of the interview guide was designed, it was iterated based on comments from the thesis supervisor. Also, initial discussions with representatives from the case companies affected the interview guide to a certain extent. These discussions with company representatives impacted, for example, on the choice of words used in the questions and what kind of background information would be possible to inquire.

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#### Themes in the semi-structured interviews

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*Background and position of the interviewee*

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*Design capabilities in the organization*

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*Design teams interviewee is involved with*

---

*Design management practices regarding in-house and external designers*

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*Experiences with design team dynamics and trust regarding the designers*

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*Table 4. Themes in the interview guide.*

The first interview was conducted with an acquaintance, so testing and trying out the interview questions and the structure was also on the agenda in the particular session. The interview guide and the questions were refined to some extent after the first interview. The interview guide consisted of five themes with pre-thought questions to get the insights needed and to keep the dialogue on point and fluent. The questions were open-ended enough in their nature to give the interviewees opportunities to introduce phenomena or ideas they thought were relevant in the conversation. The open-ended questions and the structure also allowed the interviewer to explore those introduced phenomena along the course of the interview.

Each interview started with a brief introduction of the interviewer and the topic and scope of the research. After the general introduction was delivered, the actual themes and topics for the interview were approached. First, the interviewee was asked to describe the position, role and tasks in the company. Following that, the second theme aimed to elaborate on the maturity and role of the design capabilities in the organization to get an understanding of the context. Thirdly, interviewees were asked to reflect on the design team they are working on or supervising. Also, more specific topics of design management practices in teams of internal and external designers, as well as the notion of trust in the team was addressed with the interviewees.

Some themes and the structure of the interview were altered based on the interviewee's position and seniority in the organization. Some interviewees were looking at the topics from a more strategic perspective, whereas some were clearly at the operational level and focusing on individual teams. For instance, the heads of design and lead designers were involved with designers and design teams across their organization, whereas some design managers and senior designers focused on their function and team. The interview guide was designed to have sections and themes that would be covered varying on which

type of interviewee was in focus. The interview guide was also developed to be open-ended in its question formulation, and it was not limited to the prepared questions.

Interviews were conducted as individual face-to-face interviews in most of the cases, and the meetings took place at the interviewee's workplace to make it as low-threshold and comfortable for them as possible. Two of the ten interviews were conducted via Skype due to the interviewees' location abroad. The language of the interviews was Finnish in most of the cases, exceptions for the last two that were in English. All the interviews were audio-recorded with the informant's consent, and afterward, all the relevant parts were transcribed for analysis. Also, there were a couple of accuracy checks with some of the informants in the interview study following the process Bruce and Morris (1998) presented. The ten semi-structured interviews in the first round lasted between 31 and 68 minutes. The majority of the interviews revolved around 50 minutes, the average duration lasting 51 minutes. The interview recordings added up in approximately 8,5 hours in total, and the transcribed parts resulted in approximately 21 900 words of text.

## 4.5 ..... The second interview round

In order to validate the findings that were uncovered in the first interview round, a second round was organized. In addition, these interviews were used to collaborate with the design management practitioners to develop the tool that resulted as one of the outcomes in the study. A smaller sample was used in the follow-up round due to restrictions in the schedules.

Practically the second interview round was conducted with a selection of three prominent informants, representing both case companies. Furthermore, the purpose of the new interviews was to develop a deeper understanding of the themes and topics that emerged in the previous interviews. Hence in these interviews, the analyzed results of the first interviews were presented and discussed with the selected informants. These interviews were also considered as a validation for the interpretation and analysis of the main interview round.

The execution of the second interview round followed the process used in the first one, the interviews were organized face-to-face and lasted for 45-55 minutes. On the other hand, these sessions were more informal, and there was no full interview guide as such in use, but the analyzed data from the first round worked as the catalyst for the discussion. The list of findings was gone through with the informants, and emerged changes and clarifications were done accordingly after the interviews. In general, informants agreed with the findings and considered them as valid from their perspective. After two rounds of interviews and the follow-up round, the number of interviews in the study was thirteen with ten different informants.

## 4.6 ..... Analyzing the interview data

In order to recognize recurring themes and capture the insights from the interview data into a practical format, the analysis in this study follows the concept of thematic analysis. Thematic analysis is a commonly used method in qualitative research, and many iterations on the basics of that particular method have been used in studies by many

scholars in the field of design, product innovation and management. For instance, thematic analysis was used by Micheli, Perks and Beverland (2018) to find out from the data they acquired how different practices in organizations can enable the elevating of design to a strategic level. An interview study was the principal methodology for collecting primary data also in their research, as it is here in this thesis project.

### 4.6.1 Thematic analysis

According to Nowell, Norris, White and Moules (2017), “thematic analysis is a qualitative research method that can be widely used across a range of epistemologies and research questions”, and it is commonly used in analyzing large qualitative data sets. Thematic analysis is based on coding in several stages and through a process to formulate themes from those coded sets of data. Nowell et al. present a process for conducting a rigorous and trustworthy thematic analysis. They have divided the process into six phases, and to an extent, those phases also serve as the structure for the analysis done in this thesis. The phases are “1) getting familiar with the data, 2) generating initial codes, 3) searching for themes, 4) reviewing themes, 5) defining and naming themes, and 6) producing the report” (Nowell et al. 2017, p. 4).

In addition, there are multiple alternations of the classic thematic analysis process. A simplified process of thematic analysis is presented by Ammeter and Dukerich (2002), among others, and they have also incorporated the data gathering steps from the qualitative research methods to the process. Their take on the thematic analysis is not the traditional way to use the method, moreover, they have compressed and streamlined the process. To be specific, Ammeter and Dukerich (2002) divided the process into five steps: designing interview guide, conducting interviews, developing theme list, coding data onto the



themes, and finally, reducing the theme list. The process for thematic analysis in this thesis can be traced back to both of these presented approaches.

#### 4.6.2 Analysis process

In order to be able to answer the research questions based on the gathered data from the semi-structured interviews, the following process took place. Before the analysis could start, interviews needed to be in a tangible form, and therefore each interview had all the relevant parts transcribed as soon as possible after the actual interview session. The principles of Nowell et al. (2017) of a trustworthy thematic analysis worked as the basis, and the following steps were taken to identify themes from the transcribed interview data.

Firstly, the acquired data was gone through multiple times in order to get oneself familiar with the data. In practice, this meant that each transcribed interview was first skimmed and then read through a couple of times while taking notes simultaneously. Naturally, the recordings of the interviews were first listened carefully in order to transcribe the relevant parts. All of these activities familiarized the data to make the analysis easier in the following steps.

Once the data was in documented form, and the familiarization was mature enough, the coding began. Coding is described to “allow the researcher to simplify and focus on specific characteristics of the data” (Nowell et al. 2017). In this and the following steps, a software called Atlas.ti was used, which is a tool commonly used in qualitative data analysis to analyze different kinds of data items. Data items in this study are the quotes of the informants, and those data items were coded initially based on the research questions before trying to identify any themes. This was done to keep in line with the framing of the

research, and not to lose the defined scope. The coding based on the research questions was the starting point for the next round of coding.

Within the coding related to the actual research questions, specific themes, issues and related patterns started to emerge. These themes and patterns were recognized across the data set, and the next round of coding was done to highlight those themes. The coding was quite intuitive, and there was a variety of themes at the end of the round. It turned out that some of the themes were quite similar, and those were then grouped and combined according to the similarity.

#### Category

*Elements of practicalities*

Main theme, occurrence (n)	Subthemes	Example quotes
<i>Level of sharing knowledge (8)</i>	<ul style="list-style-type: none"> <li><i>Active data sharing</i></li> <li><i>Providing the big picture</i></li> <li><i>Importance of silent knowledge</i></li> <li><i>Accesses to knowledge</i></li> <li><i>Regulations in sharing data</i></li> </ul>	<p><i>Basically, everything is told quite honestly, all the challenges of the organization and the business, because how else can people add the best kind of value and I think it has been understood here well</i> - Design leader / company B</p> <p><i>We shouldn't be afraid of people stealing something because consultants, trainees, in-house designers, everybody signs the same contracts that forbid that kind of activity</i> - Design manager / company A</p>

*Table 5. Example of how the themes and the groups were formed.*

The clustering and combining of the recognized themes were part of the reviewing of the themes. After the similar and redundant codes were combined, the remaining ones were looked into, and identification

of common themes started. Nowell et al. (2017) propose in their literature review that thematic networks and mind maps are useful in making sense of codes and themes. These tools were used in the analysis of the remaining themes, especially in organizing them in relation to their connections and linkages to each other. This way, the themes started to be stronger and more evident with all the data items backing up the specific theme. The importance of the themes was evaluated based on their occurrence in the qualitative data. The code book of the categories, main themes, subthemes and example quotes can be found in the Appendix.

After the data was organized and handled, and the coding was complete, followed a further definition of those themes. At this phase, themes were given names and official definitions. They were categorized according to their relevance towards the research questions, and from there, the themes were elaborated. Also, specific data items were chosen to serve as the evidence for the identified findings. "The process of analyzing the data ends in producing the report" (Nowell et al. 2017, p. 4), and in this study, the results are presented in the next chapters.

# 5

## Results

## 5.1 ..... About the findings & insights

The findings from the interview study are presented here as a list of themes, which were the result of the thematic analysis. The findings are reflected with the research questions and are therefore presented here in two parts. The first set of themes is explicitly connected to the perceptions design managers, and persons in similar roles, have of the elements affecting trust and reliability between internal and external designers. The latter set of themes is related to the means of how those team dynamics, and especially trust and reliability, can be established and enabled by design management practitioners.

The findings are elaborated one by one with supporting quotes from the interviews attached as examples to give evidence for the findings. The quotes from the interviews in Finnish have been translated into English, with paying attention in the translation process to the original meaning and content of the quotes. The results of the interview study are presented here in an anonymized manner. Due to the size of the interview sample and limited amount of these specific positions in each company, the results are listed as a combined set of findings instead of analyzing the companies separately. Therefore, the persons behind the statements cannot be directly pointed out, and the anonymity is secured.

The following findings are the result of both the primary interview round, as well as the second follow-up round. Findings following the same structure as presented here worked as the basis for the second interview round with three informants chosen from the previous interviewees. Although there were no significant new insights in the second interview round, the findings listed here have been validated and further defined after the first interview round.

## 5.2 ..... The aspects affecting trust as part of the team dynamics

The broader themes that emerged from the study were all related to the concept of trust within the design team when it comes to team dynamics. The findings are presented in two parts (elements affecting trust within team dynamics and means of enabling and enhancing the reliability within the dynamics) to address the research questions set earlier in the study (*figure 3*). However, there are specific broader themes identifiable within these elements that are affecting the dynamics indicated by the study.

There are three higher-level categories of themes for the set of perceptions towards the team dynamics and the elements affecting those, and these aspects of team dynamics are in focus in this thesis.

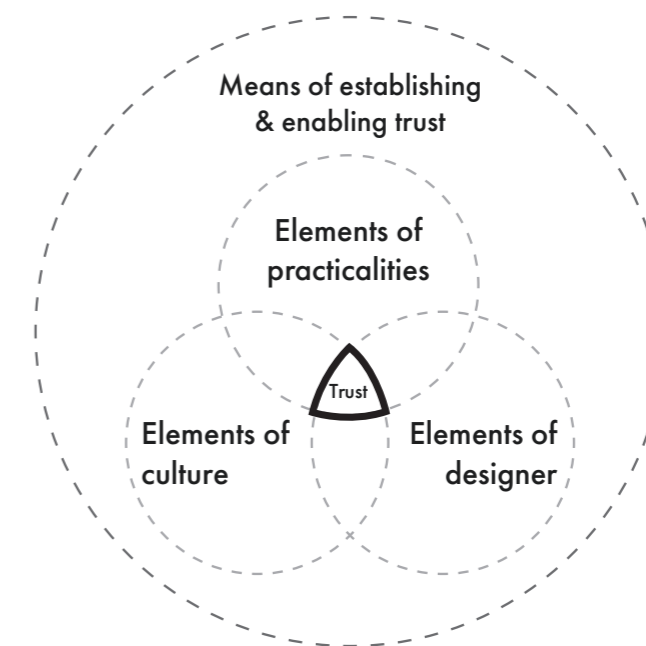


Figure 3. The aspects affecting trust in in-house design teams.

The results show that these aspects are actually elements related to 1) practicalities, 2) design culture, and 3) designer. Under these categories are in total eight actual elements that were identified as the ones affecting the reliable team dynamics. In addition to these, means of how design management practitioners can enhance the dynamics are presented in a separate chapter.

The elements or features related to practicalities are referring to all the practical elements that informants saw as something affecting the team dynamics and the trust between internal and external designers. Themes in this category are, for instance, how the information is shared among the designers, and how does the duration of the internal and external designers' relationship contribute to the experienced reliability in the design team.

In addition to practicalities, the results of the study show that there are some elements of the organization's design culture that have an impact on the design teams. Moreover, these themes related to the culture are, for instance, how designers are treated in the organization and how the maturity of design affects the dynamics between designers.

Thirdly, the results of the study point out some aspects that are related to individual designers. Informants discussed especially how the external designer's ways of working and characteristics impact the reliability and trust in the team. All of these themes are elaborated through exemplary citations by the informants.

The elements of practicalities, culture and individual designer, are all related to each other. The overall design culture in the organization is shown to set the boundaries for how the designers experience and see each other. The culture is based on the individual employees (designers in this case), and the overall community is creating the culture together in the end. On the other hand, the practicalities can be seen to reflect

the design culture and the ways of working, and design managers play an important part there. Practicalities also have a considerable impact on how these individual designers experience the employer and the organization, and therefore aid in creating the culture.

What needs to be noted is, as the focus is on the design team dynamics and the several aspects affecting the trust and reliability there, certain areas are scoped out in the results section. The usual reasons why organization relies on either in-house or external design capabilities, such as financial or bureaucratic reasons, are not addressed here since they have more to do with the standard practices of the whole organization and are not design specific reasons as such.

### **5.2.1 Elements affecting trust between internal and external designers**

The findings from the interview study indicate that there are certain perceptions among design management practitioners when it comes to the elements impacting the relationship between internal and external designers. According to the practitioners who have design management related tasks and responsibilities, the following eight elements are in a key role in the forming of reliable team dynamics. These elements are the level of sharing knowledge, differentiating between internal and external designers, proactivity of the external designer, the depth of the collaboration between in-house and outsourced designers, organization's design culture and the level of maturity of design, personalities and level of expertise of the designer, duration of the internal-external relationship and the recruitment procedure of the external designer. All the elements or features connect to broader themes within the design organization, either to the practicalities, to the design culture or to the individual designer.

## ELEMENTS RELATED TO PRACTICALITIES

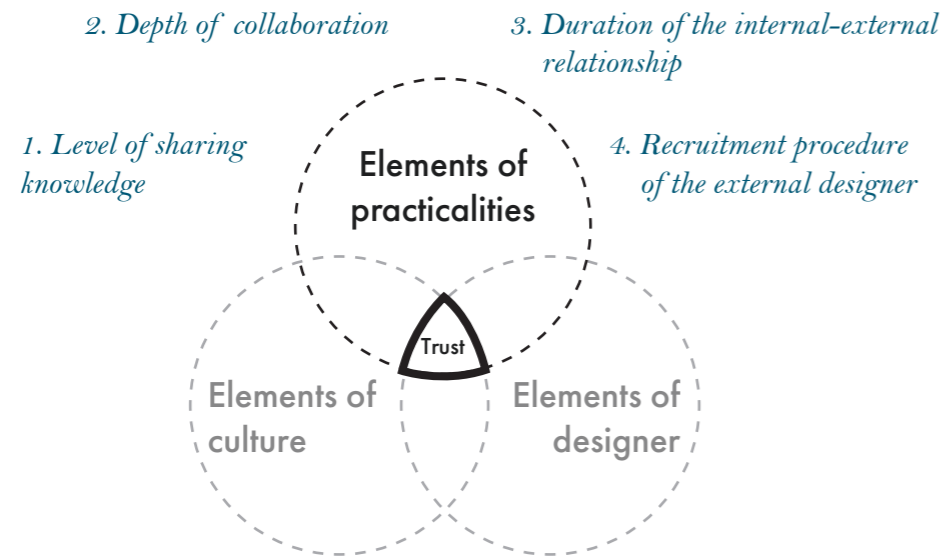


Figure 4. The identified elements of practicalities that affect trust.

### 1 Level of sharing knowledge

Sharing of all kinds of knowledge is crucial for innovations and successful design projects. The knowledge can be of various kinds and different qualities, depending on the case. Types of knowledge that might be necessary for the designers vary from insights on the customers and users of the company and its products, to statistical or other quantitative data that the organization possesses, or then to the silent knowledge that accumulates as the designers work.

A clear majority of the informants perceive sharing knowledge also as one of the most essential features, that has an impact on the team dynamics between internal and external designers in the organization.

As one informant described the vitality of sharing knowledge:

*Design work is typically holistic, so it is better to give too much [information] than too little -- I have seen situations where the external designer hasn't got necessarily all the information needed, and haven't had accesses to places, and then the designer is almost like a cripple*  
- Design leader / company A

The necessary information designers require to work successfully does not limit to just the crucial information for the item to be designed. The data can also include the accumulated understanding of the organization and its situation at the moment. To be able to be as valuable as possible, designers need to understand the big picture as well. One informant described how they see the concept of sharing knowledge for external designers:

*Basically, everything is told quite honestly, all the challenges of the organization and the business, because how else can people add the best kind of value and I think it has been understood here well*  
- Design leader / company B

A significant factor affecting the level of sharing knowledge is a rather technical one. Providing accesses and enabling the externals to share and see the information located in the organization's systems is an existing obstacle in many companies, also the case companies in the study to a certain extent. However, it is an obstacle that can be avoided. Many informants highlighted the importance of having access to the source or the storage of information and insight. It is not that easy to realize in practice always, but for example, the attitudes can be changed, as one informant expressed it:

*When nobody has access rights in Sharepoint to start with, and you need grant accesses all the time, I have tried to change the mindset so that*

*everything is for everybody and it should be specifically justified why something wouldn't be*

*- Design leader / company B*

Being able to trust the external partners is the cornerstone in also increasing the level of sharing information. Generally, this is rather evidently accomplished by having the externals sign a nondisclosure agreement (NDA). Signing NDA was one action that emerged multiple times in the discussions of preventing reliability issues, but it was also clear that the confidentiality issues also relate to the in-house designers:

*We shouldn't be afraid of people stealing something because consultants, trainees, in-house designers, everybody signs the same contracts that forbid that kind of activity*

*- Design manager / company A*

It was highlighted that the size of the team naturally affects the sharing of knowledge. The more there are designers, the more there is knowledge to be shared. One informant stated that ideally, the team would consist of 4-7 members, and beyond that, the information sharing gets stickier and more challenging as the team is more dispersed. It is also more challenging for one manager to keep up with all the team members and their activities if the team size is broader than that.

In addition, the concept of silent knowledge and keeping it within the organization was addressed by many informants. This topic will be elaborated further later on in the other set of themes related to the second research question.

## 2 *Depth of the collaboration between internal and external designers*

Naturally, the collaboration between internal and external designers was at the core of many of the informants' experiences. Concerning this topic, the theme of having a closer collaboration specifically between an in-house designer and the consultant emerged among many of the discussions.

The team dynamics and the reliability in the relationship between internal and external designers were perceived to be profoundly affected by the sharing of knowledge as depicted earlier. However, the closer the collaboration from the in-house designers' part and the more knowledge is shared, the more trustful environment for work is accomplished. Sharing information also from the external side to the internal is considered crucial, and the depth of that collaboration is in a key position in enabling it.

*Entirely new designs are not made without any in-house designer knowing what is happening*

*- Design manager / company A*

*Gathering the silent knowledge won't happen with PowerPoint presentations, there has to be someone from us involved in the doing or at least somehow following the work*

*- Senior designer / company B*

Due to in-house designers naturally having a close relationship and connection to others in the organization, in-house capabilities were considered to have more leverage in acting as a source for change. Also, in literature, the in-house designer's ability to have a stronger impact has been noted (e.g., Turner, 2013). In the study, the design management practitioners referred many times to the importance of being close in the collaboration of these two capabilities. Having a

closer collaboration between internal and external designers increases the impact on the organization itself as well through challenging the right instances and pushing the boundaries within the organization at hand:

*Designer with in-house status has a better mandate to question things  
- Design leader / company A*

*It is important also in commissions and in other similar kinds of projects that the consultant has an in-house designer as a pair, even with minimum input, but to have someone to throw ideas with and telling which in-house persons to interview  
- Senior designer / company B*

In many cases, the informants addressed the importance of having some concrete actions at the beginning of the collaboration. Some examples that were given in the interviews are providing and sharing guidelines, frameworks and materials. On the other hand, it was stated that not only giving material out but also having some concrete activities at the start of the collaboration was seen crucial:

*We meet the external designers, we talk to them, we show them our guidelines and rules, we share materials we might have and give them our frameworks. So we provide everything we can to enable them to work smoothly in the organization  
- Design leader / company A*

*Usually, we start the project with a kick-off workshop to get to know each other and then work remotely for a while, and then meet again and rearrange the team. It is working at the moment, but it would be good to work closer together  
- Design manager / company A*

In addition to the previous elements of collaboration, the existence of in-house capabilities in the first place was highlighted. For being able to utilize external design capabilities successfully, there need to be established and stable in-house capabilities. As in the case when one informant recalled some of the reasons for unsuccessful utilization of external design capabilities:

*The bad experiences [with external designers] have occurred earlier when there haven't been an in-house team. That's because there weren't the capabilities and know-how inside the company, so the external design was acquired with wrongly, with wrong reasons and in wrong points of time  
- Design manager / company A*

### 3 Duration of the internal-external relationship

The length of the relationship between in-house designer and consultant affecting the team dynamics emerged in many of the interviews. Basically, the longer the relationship goes on, the more trusted the external partners become, and the more their “externality” reduces in the eyes of their in-house collaborators. In fact, multiple informants described how the boundaries between an external designer and an in-house designer are blurring in cases of long enough collaboration relationships and partnerships:

*Especially in continuous work, the fact that who is a consultant and who is not will blur  
- Senior designer / company B*

Also, the duration of the relationship between in-house designers and the external partners is clearly correlating with the reliability issues in those collaborations. Reliable team dynamics can be strengthened either by having longer relationships or by increasing the stability of the

dynamics with clear indications for the duration of the relationship. In other words, the team dynamics are on more substantial grounds, if it is known for how long the relationship will last or all the stakeholders can at least estimate the duration. The predictability for the length of the relationship does not only limit to the external collaborator, there is also the possibility of the in-house designer to leave for multiple reasons.

*Some external partners have been with us for years, so there is a good, trusted relationship there, and we know each other, and we know what we get and that we get it on time. -- I would like to partner with externals for many years, I think it is the best way*  
- Design manager / company A

*It will affect [the relationship], if it is visible how long the work will continue with this combination, the leaving party can be either the external or the in-house designer*  
- Senior designer / company B

The context where the organization operates is an element that ties closely to the notion of reliability and trust in longer consultant relationships. The longer the external designer has worked with the company, the more reliable the consultant is considered to be by the in-house designers. The length of the collaboration also affects other features in the team dynamics, such as knowledge sharing. Through longer relationships, also information sharing gets more fluent, and usually, there has been enough time for forming reliable knowledge sharing means and habits.

*We try to have longer relationships with the consultants, because the context is quite complex. It is hard to get onboard. The environment is also a bit rough, for example, for people coming from consumer business. We want to keep people for longer if they have gotten into the context*  
- Design manager / company A

Sometimes even the complexity of the context might be an obstacle for acquiring new external capability. In these cases, instead of acquiring completely new external collaborators, it is usually preferred to rely on the existing partnerships and external designers who have worked with the specific company before.

*Many times it goes so that when there is a need for something, there should be longer consultancy relationships because the introduction takes more time than actually doing it. That might be the biggest challenge I have faced*  
- Design manager / company A

#### 4 Recruitment procedure of the external designer

In many organizations, it is not always possible to increase the amount of in-house design personnel due to a variety of reasons. The informants in the study also noted this, and there were examples of how the prohibition of hiring new in-house designers was bypassed. In those cases also the level of externality was considered lower, and the designer was thought to be just an in-house member of the team. As it was in the case of one team lead who described one external designer in the team, or in another case where the discussion was about freelancers working for the company:

*We are always looking for balance. The external can be a consultant coming from outside, or then there are cases where, for contract-related reasons, someone is as if our own designer but just comes from somewhere else. Sits with us and is just like an in-house designer, but for example, comes from a staffing agency*  
- Design leader / company A

*We also have at the moment a designer in the in-house team, who has*



*an external contract although is here every day and is part of the team. We just didn't have a permit to recruit, so the person is from a staffing agency, but I don't think that in this case, the externality as such affects the team*

*- Design manager / company A*

Usually, these types of situations are related to the usage of the so-called rented workforce. Basically, a suitable person is hired through an agency that provides a worker for the company but takes care of the HR procedures. These cases were also perceived to be even increasing the in-house capabilities rather than being counted as external ones.

*Having a sort of a rented designer who doesn't come from a design agency is a way to increase the in-house capability*

*- Design manager / company A*

*Now when there are these agile staffing agencies who provide the administrative layer, and I see a super good freelancer then, of course, we take them in, but it needs to happen through these staffing agencies - - It offers young talents a really good option, so they don't have to commit to a consultancy but still get big clients*

*- Design leader / company B*

Even the external designer's motivation related to working for the company can be higher in those cases than the motivation of traditional consultants from actual design agencies. It was often emphasized that the recruitment of the person, who is considered to be the correct designer to the team, should not be hindered by obstacles in hiring new permanent in-house personnel to the organization. For example, one informant described the recruitment of an external designer to the team to be different in these types of cases:

*When I selected the consultant, the person had worked for us before but*

*left to work under one's own trade name. I wanted to have the designer in the team purely for the reason that once you work for yourself and not for a big consultant company where the point you to a client, you are a hell lot more motivated.*

*- Design leader / company B*

## ELEMENTS RELATED TO DESIGN CULTURE

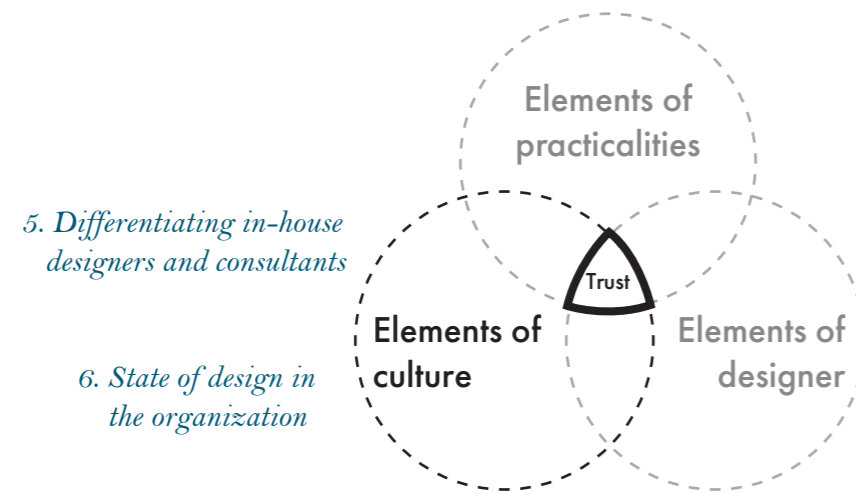


Figure 5. The identified elements of design culture that affect trust.

### 5 Differentiating in-house designers and consultants

A significant theme that emerged from the study is about whether to make a difference between internal and external designers. Furthermore, it is actually about the opposite: not making a difference in the first place. Most of the informants mentioned the notion of not making any differences between the two design capabilities positively affects the reliability in the design team dynamics. For instance, below are a few examples of informants referring to that:

*We have clearly been searching for the habit of avoiding to talk about “externals”, and the aim is that all are team members and we have common goals. Where someone comes from, shouldn’t be the most critical thing*  
 - Design leader / company A

*We haven’t divided between consultants and internals, there is no such drawing the line at all. It would already change that if we mentioned in conversations that “we have these consultants and then, on the other hand, these internals”*

- Design leader / company B

*I treat our consultants as if they would be our own employees because a satisfied consultant is a lot more productive and also recommend us*

- Design leader / company B

The importance of how people address other people or how they refer to external designers was perceived to have a substantial impact on the team culture and, therefore, also on team dynamics and reliability. When it comes to increasing trust between internal and external designers, past experiences also have an impact on the relationship. It was discussed that some in-house designers might not trust the consultants on matters such as sharing specific files and data, because there have been incidents in that area earlier in their career as an in-house designer. On the other hand, it is the leader’s responsibility to spread the attitude of inclusivity among the designers.

The differentiation affects the day-to-day working of the designers in addition to the team culture. According to one informant, it is also consuming for the internal designers to use cognitive resources to evaluate the external partner’s reliability when there are no indications of any issues:

*When the people are working, it would consume so much of the energy to start to think about who everybody is and so on. The cognitive load would increase, so in reality, it will be quickly left behind*

- Senior designer / company B

## 6 *State of design in the organization*

The state of design as competence or as a culture in the organization was considered to be a highly impactful element affecting trust and reliability among designers. The state of design was discussed from two aspects: the design culture in the organization and the maturity of design. Both of these areas were seen to be strongly impacting the overall establishment of trust towards the designers, internal and external.

Informants working in organizations, which they considered to have higher than average maturity of design, pointed out notions related to the design culture of the company. Some referred directly to the maturity of design being a feature also affecting the attitudes towards external design capabilities, and therefore also the dynamics between internal and external designers. According to them, the higher the maturity of design is in the organization, the better is also the treatment of outsourced designers.

*If design as a function would have been established for many years to be more than styling or add-on, and the processes were established as well, it would affect the usage of external designers as well, in a good way*

*- Design manager / company A*

*I say that it depends so much on the company's culture. In the end, you are working with people, and the role won't define that much how successful the work is, but how you react to external resources in the first place. So are they seen just as resources or is there willingness to take them in as reliable partners actively. I think that is more essential*

*- Design leader / company B*

*The own designers' attitudes towards the external designers are a great part of it, because they are the peers here*

*- Design leader / company B*

On the other hand, also some informants who described the maturity of design being not that high, indicated that higher maturity would affect the reliability of the team dynamics between internal and external designers. Regarding this element, one informant described projects that were not that successful:

*The in-house designer is put on a nasty spot if someone else has ordered the design and then it doesn't work, and then the in-house designer has to deal with the situation. A higher maturity of design would improve the situation*

*- Design manager / company A*

It was rather clear in the study that the design manager, design lead, or person in a similar position related to the practice of design management, has an essential influence in how the design culture is formed when it comes to utilization of external design capabilities. The key role and responsibilities of the manager or lead were identified to be in the center of enabling trust in the team dynamics. The significance of leading by example was highlighted in many cases, and it was acknowledged how the leader's attitude affects the feeling of trust between designers.

*I myself try to communicate in meta-level that these people are part of us*

*- Design leader / company B*

*Once the attitudes have been started to be built in a systematic way, the way how the head of design treats [externals] is building the culture*

*- Design leader / company B*

## ELEMENTS RELATED TO DESIGNER

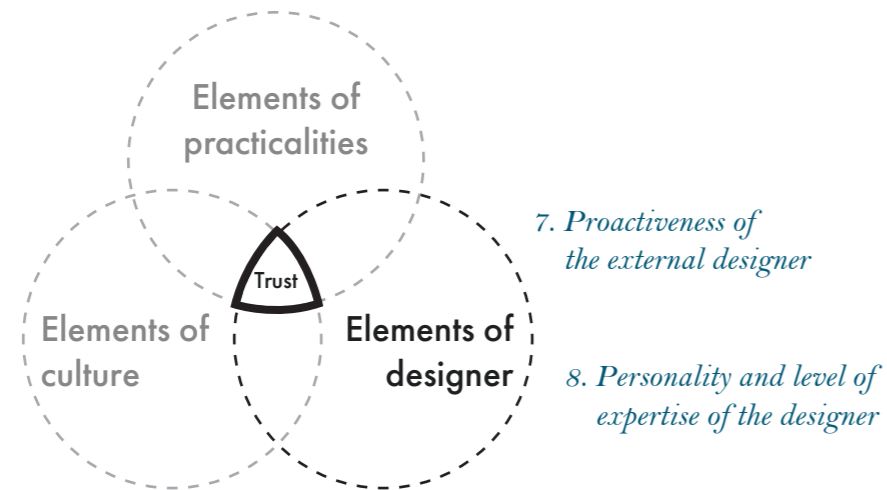


Figure 6. The identified elements of designer that affect trust.

### 7 The proactiveness of the external designer

Not only need the working culture and attitudes of in-house designers and the team to be in order, but informants saw also features at the external designer's side, which have an impact on the team dynamics.

Like the literature review indicates, one key argument for utilizing external design capabilities is to have inspiration and accelerated change from outside (e.g., Blaich & Blaich, 1993; Bruce & Morris, 1998; Von Stamm, 1998; Lockwood, 2011). This was also seen as something that increases trust towards the outsourced designers from the in-house perspective. Notably, the proactiveness of the external designer was mentioned by informants across the study. Consultant being proactive and seeking ways to challenge and change the organization

for the better was considered significant, and if that is not the case, the trust might be affected:

*I want that the consultants come to the teams to challenge us and to say that "hey now you should be awake when the markets are changing to that direction, and here would be this interesting technology", so it would be proactive*

*- Design leader / company B*

*And because the consultant comes from outside of the company, he/she does just like he/she is asked to do. The consultant won't dare to or can't influence in the organization if something is fundamentally wrong*

*- Design manager / company A*

*After a longer period of time also the consultants can say what they think. In the beginning, they are instead going along with the internal complaints*

*- Senior designer / company B*

There were also implications that the proactiveness of the consultant might not always be considered as an advantage. The eagerness to sell and the promotion of the consultancy company's agenda and services were raised by one informant as distracting when looking at team dynamics. The promotion was seen to affect the establishment of trust between in-house designers and consultants. Also, it might have an impact on the level of sharing data and information on issues within the organization.

### 8 Personality and level of expertise of the designer

There were multiple mentions of features which are not related to the organization itself or the managerial practices. Many informants also

addressed the individual designer's role in team dynamics and how that affects reliability. Those features that have to do with individual designers, especially related to external designers, were divided roughly into two categories: the personality of the consultant as well as the level of expertise.

First of all, it was considered that certain assumptions affect the designers' relationships within the design team. The assumption of the consultant being the expert was indicated to be one element that influences the team dynamics. Naturally, the consultant cannot always be the one who has the highest level of expertise, and in cases when this assumption is proven to be incorrect, the reliability of the relationship might be affected.

*The consultant should always appear to be an expert. If the consultant ends up to be the apprentice in the project, it might be challenging for the person to take in.*

*- Design manager / company A*

On the other hand, external designers having so-called T-shaped skills or being multi-talents were thought to have fewer challenges in getting on-board to the projects or the actual organization itself. Therefore the expertise was seen as a feature that is necessary for successful onboarding of an external designer and succeeding in the design work:

*Self-confidence and knowhow helps when a new person comes in, we don't really train the person to the doing, but actually he or she brings in the competence and complements us*

*- Design leader / company A*

The compilation of having a suitable personality and a certain level of expertise is something to strive for when acquiring external designers, according to the informants. Most of the informants mentioned that

trust and reliability in the team are usually the results of recruiting the "right persons" for the situation at hand. In many of the interviews, the choosing of that "right person" turned out to be all about finding the correct combination of suitable personality and expertise for the project and the team. Especially personality was emphasized by many of the informants, for example:

*The combination of personality and expertise is important, and that is why it would be good to work on a case together to see mutually whether this is a suitable environment for the designer and are the expertise or personality suitable here. From there the growth starts to become more a part of the team*

*- Design leader / company A*

*I have found some partners here, and trust is a big factor there. Of course, if they are not suitable or it is [not working] on a personal level, and we don't trust each other then it would have to be changed of course*

*- Design manager / company A*

## 5.2.2 Means of establishing and enabling trust between internal and external designers

This study also identifies actual means and ways of enabling more reliable team dynamics (figure 7), in addition to the key elements impacting the dynamics between in-house and external designers. From the design management perspective, certain means can be taken into action in order to establish and enable trust between internal and external designers. These means recognized in the study are: 1) providing clear setting for the design work, 2) choosing the design team members holistically, 3) enabling unofficial team building, 4) treating internal and external designers equally, 5) ensuring knowledge sharing, 6) clarifying roles and responsibilities and 7) enabling effective onboarding. All of the means identified here are referring to earlier presented elements affecting the trust. The area the means are connected is in parenthesis next to the headline.

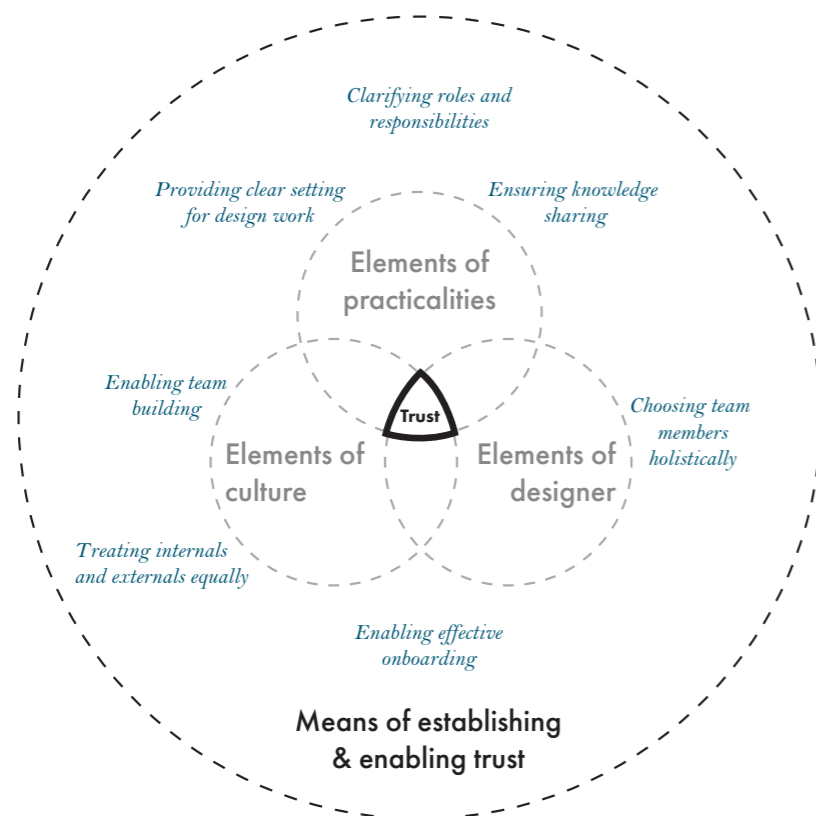


Figure 7. Identified means of establishing and enabling trust within in-house design teams.

### 1 Providing a clear setting for the design work (Practicalities)

Having a clear setting for the design work has a significant impact not only on the productivity of the team but also for the team dynamics. This is the case in any discipline, but the findings from this study show the significance especially in the field of design. Being able to concentrate on the design work and knowing how to work in the first place are fundamentals that will impact the reliability between the internal and external team members.

Providing design guidelines and frameworks are specifically significant in establishing successful external partnerships. Providing the means and tools for the external designers to succeed in collaboration projects were also mentioned in the interviews, as it is stated here by one of the informants:

*We meet the external designers, we talk to them, we show them our guidelines and rules, we share materials we might have and give them our frameworks. So we provide everything we can to enable them to work smoothly in the organization*  
- Design leader / company A

In addition to providing guidelines and frameworks, the importance of good design briefs emerged in many of the interviews. In order to have motivated designers, both internal and external, there should be as good starting point for the collaboration as possible. Hence, the creation of a decent design brief act as an important factor in the beginning. One informant pointed out the connection between team dynamics and meaningful briefs:

*Meaningful and challenging-enough briefs hold the mixed team together*  
- Senior designer / company B

The creation of the design briefs was emphasized in the interview study to be something that can have a dual agenda to it. Not only it serves as the starting point for the actual collaboration and design work, but it also can be a tool for creating conversations between the internal and external designers. In other words, better communication between internal and external designers can be achieved quite fast by having the designers to be involved in the creation of the brief.

Design managers can assist in creating better design briefs, but also in other managerial matters at the beginning of the internal and external collaboration. Managers can give support and freedom but also be demanding to a certain extent. Besides, managers have to consider the importance of keeping distractions and ad hoc tasks at minimum, which was mentioned by the same informant:

*Not always it comes from the people themselves, it also requires support and freedom as well as challenging at the right point from the supervisor*  
- Senior designer / company B

*Letting people have room for work is important - - there shouldn't be any ad hoc requests like "can you help with this and that" and so on*  
- Senior designer / company B

When providing the settings for the design work, it needs to be remembered that situations are different, and so should be the settings for the work. In other words, there is no one-size-fits-all solution in these kinds of matters. The iterative way of finding the ways of working was mentioned several times, as in these examples:

*One of the fundamentals is that we work together, and more and more try to search for the right ways of working, to be iterative*  
- Design leader / company A

*Immediately when people come in nowadays, they are integrated well as members of the team. And especially when the actual work starts, and we find the ways of work, there won't be anymore this us versus them arrangement*

- Senior designer / company B

Some even more practical elements occurred in the interviews. Issues of physical location and the working time are directly linked to the presence of the designer in the team, and therefore to the team dynamics and feeling of trust. The more the designer is present in the team, the easier it is for others to work with that particular designer, and hence the feeling of reliability is strengthened. One informant even stated that the dimension of working full-time or part-time is affecting more to the team dynamics and trust than the internal-external dimension:

*Although the designer would come from wherever and be employed by whoever, it is extremely important to be present, that is important in our job - - and if a designer is present just two days a week compared to a full-time consultant, it needs to be taken into account - - The full-time - part-time dimension has a bigger impact than the internal-external*  
- Design leader / company A

*On the other hand, it is easier to be in the same space. The more we are also physically apart, the more it required attention to the issue of where are the possibilities to meet*  
- Design leader / company A

## 2 Choosing the design team members holistically (Designer)

As in the recognized elements affecting the reliability and team dynamics, the implications of individual designers emerged in relation

to the means of establishing reliability. Because the personality and level of expertise are affecting the team dynamics, design managers and team leaders can influence it by trying to select the most suitable designers for the particular design team. All this should be done holistically by taking into account the designer's personality, expertise and level of motivation, as it was expressed by the majority of the informants:

*The consultancies can't clone their workers. No matter how well-developed the methods their consultants use, the defining factor is still the personality, especially in design-related work*

*- Design leader / company A*

*I have tried to say here that the agency don't do the work, it's the people. For me, it is important to have options and to ask people to come here to have a chat*

*- Design manager / company A*

*It's about the experience, you need to know that the partner can do this kind of work that you are looking for and this is of course based on personal experience*

*- Design manager / company A*

*Once the team is built, one needs to know many things. What are the drivers for people who come there, so not just to take a maker but an actually motivated person who does the things for the right reasons and wants to do stuff. When it is seen that they have the burning desire to do so, it is much more important than the expertise. People can learn things in the end*

*- Design leader / company B*

On the other hand, it was noted many times that the previous partnerships and history with external designers play a significant role

when choosing consultants. There might be good experiences with some design agencies or then with specific designers from an agency. The easiest way to avoid the search for a completely new and suitable external designer is to look for the ones that the company has worked with previously:

*The basis is to search for partners whom we trust, and we know that they provide the good guys*

*- Senior designer / company B*

*Usually, we have a company known to us, from where we ask if the pal we know would be free and would like to come to work with us for a while*

*- Design manager / company A*

The proactiveness of the external designer was mentioned as one of the elements impacting the reliability between the external consultants and in-house designers. Therefore being able to select people already with those kinds of characteristics in the recruitment phase is crucial:

*I want that the consultants come to the teams to challenge us and to say that "hey, now you should be awake when the markets are changing to that direction, and here would be this interesting technology", so it would be proactive. Some companies can do it, some can't. The consultancies who have the appetite and will to challenge and help, can cope with us*

*- Design leader / company B*

*The on-boarding might be easier for the consultants, since people who end up in agencies tend to be extroverts, and they blend in quite easily. That kind of people we want to have also, or not to have fluent small talk but to have designers who can argue for their opinions to the engineers*

*- Design manager / company A*



*I don't believe in any micromanagement or following on other people's work. We have agreed on aims for two weeks through sprint planning and review, and then they take responsibility. Of course, they have the right to bring up if they have too much to work on or if there are some surprises suddenly. So just as I don't watch over also our in-house designers. -- If the work has to be watched over, then there have been some poor choices in the recruitment and selection of consultants*  
- Senior designer / company B

### 3 Enabling team building (Culture)

Team spirit and team dynamics were recurring themes in most of the interviews when discussing the relationships between in-house designers and outsourced designers. Key elements in the building of team spirit are all the informal activities. The recreational activities with the team members or other events, sometimes happening outside of the regular working hours and responsibilities, were recognized as being significant for well-functioning design teams. Above all, inclusivity concerning those activities was highlighted in general throughout the study. Including all the design team members into all kinds of informal and recreational activities, and not excluding external designers, was considered highly significant.

*The more there are un-official activities like having lunch together or joining work planning meetings, it should include all -- When people get to know each other unofficially, they see that hey this consultant is a good guy and can also be trusted officially*  
- Design manager / company A

*We try to include these consultants to all of our own things, whether they are for fun or for planning the work -- one account manager was pleased of the fact that we had invited all of our vendors' representatives and*

*key consultants to our recreation days of the whole unit*  
- Design leader / company B

*Motivation is enabled by team spirit, the informal spirit when we are together in non-work-related activities*  
- Senior designer / company B

*[The external designers] are included in the events and summer parties, just as internals, there are no differences in treating them*  
- Design leader / company B

### 4 Treating internal and external designers equally (Culture)

The way design manager, design lead or head of design sees the external design capabilities will affect the other in-house designer's attitudes as well. Leading by example and not differentiating the designers on the basis of internal-external is in the core of building a functioning team culture in the design organization. Informants who discussed this in the interviews were all emphasizing that they are treating the designers equally:

*For me, the team is the group of people who occupies the team space, regardless of what the contract says, in-house designers, trainees, consultants, all welcomed*  
- Design manager / company A

*We have clearly been searching for the habit of avoiding to talk about "externals", and the aim is that all are team members, and we have common goals. Where someone comes from, shouldn't be the most essential thing*  
- Design leader / company A

*I try to keep my own way here and to justify also for others why I don't see it as a problem that these [external designers] are here and takes part [in activities]*

*- Design leader / company B*

*There are no differences here between internal and external designers apart from what is stated in the policies of the company, related, for example, to confidential information of the company. But no differences in the relationships.*

*- Design leader / company A*

In-house designers' previous experiences with the outsourced workforce were considered significant in relation to their acceptance of consultants to the design team. If there had been incidents in the past, it was thought to have an impact on the current behavior and culture towards external designers. Some informants elaborated more on the importance of the culture of the organization. The usage of language was seen to be in the core of the matter:

*When you think about it, it is the way you speak that builds the culture, it's all about how you talk about people and they are treated*

*- Design leader / company B*

*I say that it depends so much on the company's culture. In the end, you are working with people, and the role won't define that much how successful the work is, but how you react to external resources in the first place. So are they seen just as resources or is there willingness to take them in as reliable partners actively. I think that is more essential*

*- Design leader / company B*

## 5 Ensuring knowledge sharing (Practicalities)

In order to establish reliability within a team of internal and external designers, information must be available for everyone. Sharing knowledge has the dimension of transferring the information two ways, from internals to externals and other way around. Informants emphasized the role of sharing everything that can be shared within the limits of confidentiality:

*The culture of sharing is the basis. When a new designer joins, he/she is told that this is how we work, everybody helps everybody, and all the results are shared with everyone*

*- Design leader / company B*

*For me, it is all about radical transparency, so meaning the passing on all the information that come and potentially concern the team, so they share common understanding*

*- Design leader / company A*

*Basically, everything is told quite honestly, all the challenges of the organization and the business, because how else can people add the best kind of value and I think it has been understood here well*

*- Design leader / company B*

The traditional way of thinking that there is a risk of external partners impeaching the intellectual property rights or gaining some advantage of company details was seen unnecessary due to legal actions taken already at the beginning of any employment. These actions, such as signing NDAs, are not taken whether the new designer is internal or external. As an informant said, the fear of stealing is pointless:

*And giving access to folders and files for everybody. We shouldn't be*

*afraid of people stealing something, because consultants, trainees, in-house designers, everybody signs the same contracts that forbid that kind of activity*

*- Design manager / company A*

Some concrete actions regarding the sharing of knowledge were mentioned by the informants in the study. Many were emphasizing joint communication channels, and the role of everyday communication was evident. In addition to the ad hoc communication channels (WhatsApp, Trello, Mattermost, Slack, Teams, among others), sharing sessions and different kinds of events were used as examples:

*If not all can work together, then there are sharing sessions, where we share information and there is room for discussion*

*- Design leader / company A*

*We also have design gates, where learnings can be shared. And also externals take part*

*- Design leader / company B*

*The channels of communication and sharing files are shattered quite fast, and it is quite a mess and will be. They can discuss wherever, as long as they discuss*

*- Design leader / company B*

The knowledge which accumulates for the designers in the long-term was seen as one potential challenge in the forming of reliability in teams of internal and external designers. This particular challenge concerns the loss of that silent knowledge. It was also referred to even as a risk by some in the study. In many cases, it was stated that it is essential to have means to keep the silent knowledge inside the organization, no matter if it is the silent knowledge of an in-house designer or an external designer. In many cases, it turned out that even

identifying what is silent knowledge in the first place, was considered significant. Although consultants might leave the company quite fast at the point of ending the commission, there is the possibility of an in-house designer taking the silent knowledge away from the organization when changing employer, if not appropriately addressed. Also, the possibility of an in-house designer changing position inside the company was noted.

*If in a big corporation are all sorts of consultants, there usually is also the “rear lights” joke, meaning that if the knowledge hasn’t sunk in to the company, then it will disappear with the consultant. So if it is wanted to be as part of us, then it has to be invested on as well*

*- Design leader / company A*

*The silent knowledge is important to get also in long-term consultant and in-house relationships, so basically documentation is the key*

*- Senior designer / company B*

*Sure the in-house designers want to have change and circulate, but in those cases, the knowledge stays in-house, and you can ask things from those people if necessary*

*- Design leader / company B*

## 6 Clarifying roles and responsibilities (Practicalities, culture, designer)

One practical action that the design management practitioner can take to establish trust as part of the team dynamics is to make the roles and responsibilities of in-house and outsourced designers as clear as possible. In some examples pointed out by the informants, the roles were unclear and responsibilities were taken for granted, and this caused some issues between the designers. In general, the informants described the importance of clear definitions of roles and

responsibilities:

*The fundamental definitions of who concentrates on what and certain working routines [keep the team functioning]  
- Senior designer / company B*

*Next time it would be better to define the roles and responsibilities more clearly, you take care of this and you of that. That usually creates the friction, that the tasks and roles aren't defined clear enough. More effort could be put into that  
- Design manager / company A*

The clarification of roles between internals and externals also related to the position of the external designer. The responsibilities, accesses and benefits that the consultant has in the organization should be clear right from the beginning in order to avoid any issues along the way:

*The roles and accesses should be way clearer in the organization, which they currently are not. The introduction process should contain clear definitions and rules for consultants, that this and that you can access and these you don't. If these things would be defined clearer at the beginning instead of wondering during the way whether to have the access or not.  
- Design manager / company A*

*Sometimes there are lows, e.g., the rented service designer wanted to have training, but the agency said that the client should pay for it and our company said that we don't pay consultant's trainings.  
- Design manager / company A*

In addition to the clear roles, responsibilities and accesses, also other features should be clear for the internal and external designers from the very beginning. Knowing approximately the duration for the collaboration enables the designers to consider certain aspects in the

internal-external relationship, which might affect the actual design work:

*It will affect [the relationship], if it is visible how long the work will continue with this combination, the leaving party can be either the external or the in-house designer  
- Senior designer / company B*

## 7 Enabling effective onboarding (Practicalities, culture, designer)

The dynamics and the reliability in the team of internal and external designers start to build right from the beginning when the new designer joins. Whether the new person is coming in as an in-house designer or as a consultant, the onboarding process should be carefully planned. Onboarding of a new designer is one key element in the establishment of reliable team dynamics for the design team. Some of the informants highlighted that the onboarding should be the same for all of the designers, no matter where the designer comes from and on what basis the relationship is built:

*There shouldn't be any difference in onboarding a new in-house designer or a new external, although there surely are supervisory and administrative matters that don't need to be done with a consultant  
- Design leader / company A*

*Also when a new person is taken in, the process is the same for internal and external people  
- Design leader / company B*

The onboarding process should take into consideration the level of expertise for the newcomer as well as the company policies and routines. Onboarding the person to the company culture and values

was considered as one major challenge at the beginning of the employment. Onboarding was considered a challenge, especially when the new employee is a consultant with a temporary agreement and position in the team. Nevertheless, there is usually a lot to take in at the beginning of the employment, and the overflow of information should be taken into account already in the planning of those onboarding procedures. There were some examples mentioned in the interviews, where careful scheduling of the onboarding was designed in order to have a soft-enough landing for the new designer into the organization:

*We did a rough schedule for what needs to be gone through in which week, as if a new employer would have started*  
- Senior designer / company B

*There is a standardized list of challenges for the newcomer for day one, day two, first week, first two weeks, first month. It is a simple checklist on Trello saying, “now organize your first call” or “walk around the floor and hit high fives with five people”, so half fun, half serious. The sooner the hard work starts, the better, and only then you can say you’ve been introduced to the company*  
- Design leader / company A

As a new external designer joins the team, the onboarding might differ a bit when it comes to the managerial and HR-related issues of the employment. However, when the consultant comes from outside of the organization, and the duration of the partnership is not a long-term relationship, the importance of having close collaboration with in-house designers comes into the picture:

*It is important also in commissions and in other similar kinds of projects that the consultant has an in-house designer as a pair, even with minimum input, but to have someone to throw ideas with and telling which in-house persons to interview*  
- Senior designer / company B

# 6

## Design proposal: Team Integration Template

Based on the findings from the interview study, it was evident that certain features affects the trust and reliability in the design team dynamics. In addition to identifying these elements impacting on trust in the internal and external designer collaboration, there were also specific means identified in the study. The features and means that were elaborated earlier served as the basis for designing the tool that is one of the outcomes of the study.

This study and the results derived from it are targeted to design management practitioners, so this angle is going to be also in the design proposal for a tool showcased next. In general, managerial tools and methods exist to help managers build teams, organize capabilities and draft operations in order to ensure that the resources and capabilities needed are established, treated and allocated correctly. One example of a tool available specifically for design management practitioners is the Design Ops Canvas (figure 8) used by consulting agency XPLANE (created by Dave Malouf, Abby Covert, Kristin Skinner, Lou Rosenfield and Dave Mastronardi). The Design Ops Canvas is a tool for scaling design in the organization, and it is an example of a tool directed to design management practitioners to be used in the development of design as a competence. The purpose of this tool is described to be to provide a method to validate existing operations or to design new ones (XPLANE, 2017).

Moreover, the Design Ops Canvas is a template to be used with the members of the design team or design function, and it has specific themes and sections in it which contain supporting questions to help in filling those sections. When looked at closely, at the core of the tool is the chance to get meaningful conversations going about the state of the design organization at hand.

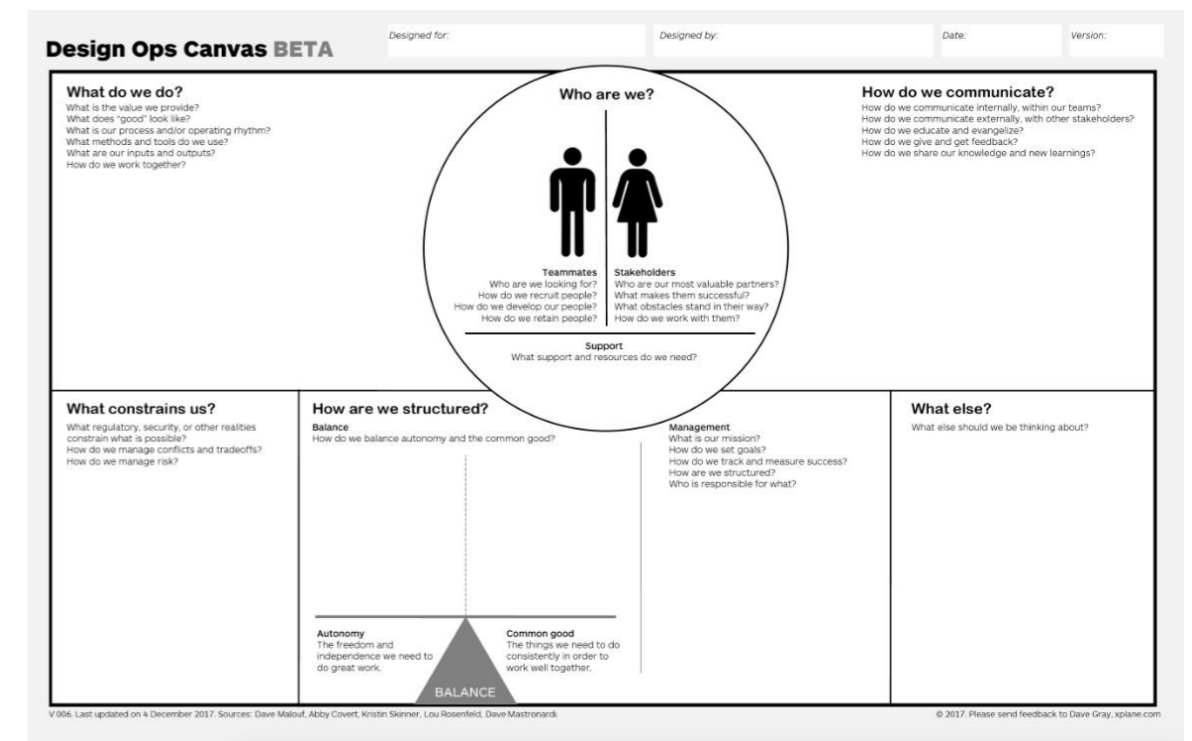


Figure 8. The Design Operations Canvas. (XPLANE, 2017).

In addition, there are certain methods and tools in use when a product development project is planned, not depending on the use of internal or external capabilities. Basics of the project are defined, the structure and schedule are developed, and decisions are made regarding the resources and deadlines. It is important to take into account that tools, methods and frameworks work just as a baseline for the activities, and the ones in use need to be altered and iterated depending on the situation. The context for the operation and the existing practices influence the way tools are used in organizations when it comes to project work and compiling internal and external design capabilities.

## 6.1 .....

### The process of designing the tool

#### 6.1.1 Implications from the first interview round

In order to make the findings of the study more tangible, a proposal for a tool to be used by design management practitioners is presented. The following tool concretizes many of the findings and makes it easier to take actions based on them in actual projects or design teams. There were some examples already in the interview study on how these matters are taken into account at the moment and what kind of actions are made when designers collaborate and the onboarding process starts:

*There is a standardized list of challenges for the newcomer for day one, day two, first week, first two weeks, first month. It is a simple checklist on Trello saying, “now organize your first call” or “walk around the floor and hit high fives with five people”, so half fun, half serious. The sooner the hard work starts, the better, and only then you can say you’ve been introduced to the company*

*- Design leader / company A*

*There are these social contracts from the software or scrum side, where we agree on how to work together. Then the rules are written on the wall, and everyone signs them*

*- Senior designer / company B*

*In one of the earlier projects, we agreed with my supervisor that the knowledge must be retained [when a consultant was changing] - - We did a rough schedule for what needs to be gone through in which week, as if a new employer would have started*

*- Senior designer / company B*

It was evident throughout the study that somehow the results and findings should also be concretized into a format that would help practitioners act towards more reliable and trustful design team dynamics when different types of designers are collaborating. To begin with, the second set of findings is covering the actions and means that design management practitioners can take to enable, establish or enhance trust and reliability within their design teams or organizations. Moreover, based on these identified actions, a rough concept for a tool was created.

Evidently, there can be seen different ways to influence the design team dynamics even before the designer is actually hired and has become part of the design team. What is important concerning all the new ways of recruiting talents who are considered almost as in-house designers but officially still are externals, is the procedures of establishing trust already in the recruitment phase. Design managers and team leads can influence the team dynamics by selecting the new designer, internal or external, carefully, to the team, which was mentioned in the study by some of the informants. Moreover, trust can be achieved already before the designer is hired through transparency in the process and open approach by the future manager towards the candidates.

Therefore, the idea behind this proposed tool is to provide a way for design managers (or others in similar positions) to make sure that when hiring and introducing a new designer to the design organization, the relationship would start with ideal conditions and as smoothly as possible. The tool is called Team Integration Template, and it is designed to be a combination of a template and a checklist to be used at the beginning of a designer’s employment. A rough concept of the tool was presented in the second interview round, and feedback and comments were collected.

INTEGRATING DESIGNER TO THE TEAM / PROJECT	
Items to go through	Supporting questions & things to take into account
<b>PRACTICALITIES</b> <input type="checkbox"/> working times <input type="checkbox"/> remote work procedures <input type="checkbox"/> tools & software <input type="checkbox"/> instructions for delivering work <input type="checkbox"/> ways of working in practice	<ul style="list-style-type: none"> <li>- What are the guidelines that and rules that needs to be followed?</li> <li>- How to get accesses and tools needed for the work?</li> <li>- What kind ways of working there are in use?</li> <li>- How to prepare for meetings, weeklies, dailies etc.?</li> <li>- How to document one's work?</li> </ul>
<b>ROLES AND RESPONSIBILITIES</b> <input type="checkbox"/> who are the team members and what are their roles <input type="checkbox"/> responsibilities inside the team <input type="checkbox"/> what are the responsibilities of a consultant	<ul style="list-style-type: none"> <li>- Are there some restrictions for external designers regarding benefits, accesses etc., if so what and why?</li> <li>- Have the responsibilities of other team members made clear to the new designer?</li> <li>- Who makes the design decisions, who is the design lead in different fields of design?</li> <li>- What is expected of an external designer?</li> </ul>
<b>COLLABORATION</b> <input type="checkbox"/> who is the in-house mentor/pair <input type="checkbox"/> means of communication in official matters <input type="checkbox"/> means of communication in unofficial matters	<ul style="list-style-type: none"> <li>- How is the information sharing handled regarding organizational details, are there any restrictions?</li> <li>- Where can the designer find necessary information and where to store new information?</li> <li>- Who to turn to in organizational issues?</li> <li>- Who are the important persons for designers to know in the organization?</li> <li>- What are the communication channels in different cases?</li> </ul>
<b>TEAM ACTIVITIES</b> (official & unofficial) <input type="checkbox"/> team lunch <input type="checkbox"/> breaks during the day <input type="checkbox"/> team meetings <input type="checkbox"/> team day <input type="checkbox"/> company parties <input type="checkbox"/> after-work activities <input type="checkbox"/> other team routines	<ul style="list-style-type: none"> <li>- Are there some restrictions for external designers for taking part in organization's events or activities?</li> <li>- How is the inclusivity taken into account when externals join the team?</li> <li>- Which meetings and sessions beneficial to take part in?</li> <li>- Are there any team routines the designer should be aware of?</li> </ul>
<b>TIMELINE FOR INTEGRATION</b> <i>Draft here the schedule for different tasks and items to be achieved in the onboarding process</i>	

Figure 9. Draft of the checklist designed after the first interview round.

## 6.1.2 Validation and implications from the second interview round

The second interview round acted as a collaborative session to develop further the design proposal, which resulted from the interview study. The informants were walked through the concept of the tool that is one of the outcomes in this study. As a prop in these interviews, a draft of that tool was shown (figure 9). In other words, the discussions revolved around both the findings of the study, but also the draft of the proposed tool. The second round of interviews was a key step in the development of the tool.

Especially in the second round of the interview study, the idea of personal development plan discussions was brought up. The proposed tool was considered as a possible solution to incorporate also the external designers in the team to those personal development discussions. What was seen important was not to craft a detailed plan for the consultant on how to develop oneself in the organization but to have means to have regular discussions on the course of the employment.

The topics in the tool are resulting from the themes that emerged from the study. The importance of making the roles and responsibilities clear from the very beginning of the employment is at the core of the new tool. Whether the designer at hand is a new in-house designer or an external consultant introduced to the team, it is crucial to make sure everybody knows what is expected of them and how they are supposed to fit the team. In addition, the setting for the daily design work needs to be as transparent as possible, and all the practical aspects need to be covered to achieve those settings.

These topics, among others, were included already in the first draft of the tool, which was shown for the selected practitioners in the second interview round. Some aspects of the tool were then refined and iterated based on the feedback from those interviews. Notable changes that were done to the tool were adding two categories for the team activities, the routines, e.g., weekly meetings and other activities, e.g., team building days and other rarer events. The notion of having a timeline in the tool was also emphasized to be valuable. It was seen as important to have an opportunity to visually draft and sketch an estimated timeline for the onboarding of a new designer.

In the discussions of the second interview round, the tool was seen as one of the means to clarify also the roles and responsibilities in the team. Informants considered it valuable to have a possibility to state



clearly what is the expected role of the designer at the beginning of the relationship between the team and the new member. In the interview rounds, evidently, both the expectations towards the new designer as well as the holistic perspective that the design manager has in the recruitment, were seen to affect the formation of trust in the design team. Hence, one feature that was added to the tool after the iteration round, was the possibility to draft also the profile of the new designer.

### 6.1.3 Evaluating the tool with designers

Team Integration Template is a tool to be used mainly by the design management practitioners in collaboration with the designers themselves. Therefore, the tool was also tested with two designers, who got the chance to give their opinion on the tool (figure 10) and provide feedback from their perspectives. Both designers were asked to look at the tool from the viewpoint of a new designer joining the in-house team, and give their impressions on the functionality and value the tool has.

One designer who was giving comments on the tool is working at the moment in an in-house design team but as an external designer. The designer was hired through an agency that provides external employees for companies. In other words, an ideal person to test the tool as one of the elements affecting trust was the recruitment procedures. The other designer involved in the iteration has been working both as a consultant and in an in-house design team so, therefore, has valuable experiences in evaluating the Team Integration Template. The designers were given the template in individual sessions where the feedback and comments were collected for further development of the tool.

Both designers felt that the tool had value and potential in it if it would be used in the onboarding process. Moreover, neither of the designers had prior experiences with similar tools in recruitment or onboarding processes. The main benefits of the tool were considered to be the clarity it brings to the roles, responsibilities and practicalities. Also, the possibility to draft the timeline and the profile for the designer was appreciated.

Some features were considered to be missing from the tool, at least from the viewpoint of the designer. Certain terms were changed to be

Team Integration Template		Designer: Team:	Manager: Mentor:	Creation date: Evaluation date:
<b>Designer</b> Title: Field of design: Seniority: Role in the design organization: Strategic Operational	<b>Practicalities</b> What are the design guidelines and rules to be followed? How to get accesses and tools needed for the work? What kind ways of working there are in use? How to prepare for meetings, weeklies, dailies etc.? How to document one's work?  <input type="checkbox"/> Working times <input type="checkbox"/> Remote work procedures <input type="checkbox"/> Tools & software <input type="checkbox"/> Instructions for delivering work <input type="checkbox"/> Other ways of working	<b>Role and responsibilities</b> Are there any restrictions for external designers regarding benefits, accesses etc., if so what and why? Have the responsibilities of other team members made clear to the new designer? Who makes the design decisions, who is the design lead in different fields of design? What is expected of an external designer in the daily work?  <input type="checkbox"/> Team members and their roles <input type="checkbox"/> Responsibilities within team <input type="checkbox"/> Responsibilities of external collaborator	<b>Collaboration</b> How is the information sharing handled regarding organizational details, are there any restrictions? Where can the designer find necessary information and where to store new information? Who to turn to in organizational issues? Who are the important persons for designers to know in the organization? What are the communication channels in different cases?  <input type="checkbox"/> In-house mentor/pair <input type="checkbox"/> Communication in formal matters <input type="checkbox"/> Communication in informal matters	<b>Team activities</b> Are there any restrictions for external designers for taking part in organization's events or activities? How is inclusivity taken into account when externals join the team? Which meetings and sessions are beneficial to take part in? Are there any other team routines the designer should be aware of?  <input type="checkbox"/> Routine activities: <input type="checkbox"/> Ceremonial activities:
<b>Timeline for the duration of employment/project</b> Draft here the schedule for different tasks and items to be achieved in the onboarding process. Map down activities, milestones, goals and aims for different phases. <input type="checkbox"/> Permanent <input type="checkbox"/> Temporary, end date: <input type="checkbox"/> Project, duration: 				

Figure 10. Iterated version of the tool after the second interview round.

more comprehensible and, e.g., an explanatory question was added to the definition of the designer's role in the organization. Furthermore, adding the external designer's agency and the contact person was a feature that was suggested in the evaluation session. Based on feedback from the designers, the tool was also re-structured to have a blank section for comments and questions that the designer might get after filling the template with the manager. The final version of the tool is introduced next.

## 6.2 ..... The tool: Team Integration Template

<b>Team Integration Template</b>	Designer: Team:	Manager: Mentor/contact person:	Consultancy: Contact person:	Creation date: Evaluation date:
	<b>Profile</b> Title:		Seniority: Field of design:	Role in the design organization: Strategic  -----  Operational <small>Is designer expected to have impact on the culture &amp; organization or to be focusing on design doing?</small>
<b>Practicalities</b> <small>What are the design guidelines and rules to be followed? How to get accesses and tools needed for the work? What kind ways of working there are in use? How to prepare for meetings, weeklies, dailies etc.? How to document one's work?</small>	<b>Role and responsibilities</b> <small>Are there any restrictions for external designers regarding benefits, accesses etc., if so what and why? Have the responsibilities of other team members made clear to the new designer? Who makes the design decisions, who is the design lead in different fields of design? What is expected of an external designer in the daily work?</small>	<b>Collaboration</b> <small>How is the information sharing handled regarding organizational details, are there any restrictions? Where can the designer find necessary information and where to store new information? Who to turn to in organizational issues? Who are the important persons for designers to know in the organization? What are the communication channels in different cases?</small>	<b>Team activities</b> <small>Are there any restrictions for external designers for taking part in organization's events or activities? How is inclusivity taken into account when externals join the team? Which meetings and sessions are beneficial to take part in? Are there any other team routines the designer should be aware of?</small>	<b>Other topics, questions, etc.</b>
<small>Tick boxes once covered:</small> <input type="checkbox"/> Working times <input type="checkbox"/> Remote work procedures <input type="checkbox"/> Tools & software <input type="checkbox"/> Instructions for delivering work <input type="checkbox"/> Other ways of working <input type="checkbox"/> _____ <input type="checkbox"/> _____	<small>Tick boxes once covered:</small> <input type="checkbox"/> Team members and their roles <input type="checkbox"/> Responsibilities within team <input type="checkbox"/> Responsibilities of external collaborator <input type="checkbox"/> _____ <input type="checkbox"/> _____	<small>Tick boxes once covered:</small> <input type="checkbox"/> (In-house) mentor/pair/contact person <input type="checkbox"/> Communication in formal matters <input type="checkbox"/> Communication in informal matters <input type="checkbox"/> _____ <input type="checkbox"/> _____	<small>Tick boxes once covered:</small> <input type="checkbox"/> Routine activities: <input type="checkbox"/> Other events or activities:	
<b>Timeline for the duration of employment</b> <small>Draft here the schedule for different tasks and items to be achieved in the onboarding process. Map down activities, milestones, goals and aims for different phases.</small>				
<input type="checkbox"/> Permanent <input type="checkbox"/> Temporary, duration: _____				
.....				

The Team Integration Template (*figure 11*) is designed for design managers, design leads, or anyone responsible for setting the premises and practices for in-house and external designers collaborating. The emphasis in the tool is on the onboarding and integration of the new designer to a certain design team. The tool is a template that contains several sections with checklists and supporting questions and remarks to cover specific themes and topics which will affect the design team dynamics if not handled correctly. There is also a possibility to draft a timeline and schedule for taking account of the needed matters in suitable periods. The sections and the structure of the template are reflecting on the identified themes from the results of the interview study.

The Team Integration Template is intended to be used in situations where a new designer is joining the design or project team. The tool can be used either with a new in-house designer or with a new consultant. When a new designer is hired and soon to join the team, one of the first things would be to fill the template and go through the themes and questions in it. Ideally, the template would be filled with the new designer by the design management practitioner leading the design team/organization. Optionally, the template could be used individually by the new designer as a way to get onboard by oneself in cases when there are no other options available.

Team Integration Template eases the onboarding process and lays solid grounds for trust and reliability to enhance the design team dynamics also when a new member is joining and the team growing. Besides, the tool helps the design manager or lead to visualize the actions and events that need to take place in the onboarding process and also to follow the goals set. The template also has the feature of defining the profile for the new designer on a higher level. The definition of the profile is related to the expectations of whether the designer is

Figure 11. The final version of Team Integration Template after the evaluation with the designers.

expected to act closer to the strategic level or then just to deliver the operational design work. All in all, the aim is to make the roles and responsibilities clearer and match them with the expectations, a significant element affecting trust in design team dynamics.

The sections in the template are reflecting to specific findings of the interview study that were presented earlier in chapter five. Team Integration Template aims to take into account elements and means that were identified in the interview study to be affecting interpersonal trust in in-house design teams. Sections Profile, Practicalities, Roles and responsibilities, Collaboration, Team activities and Timeline with related findings are described next.

**A) Profile**

Profile is mainly related to the means of (2.) *choosing team members holistically* and (4.) *treating internals and externals equally*, and to the elements of (5.) *differentiating the designers*, (7.) *proactiveness of the external designer* and (8) *personality and level of expertise*.

By defining the role, tasks and title and setting the expectations towards the new designer, all parties should be clear on what is expected and how the designer compares to others in the team.

**B) Practicalities**

Practicalities is mainly related to the means of (1.) *providing clear setting for design work* and (7.) *enabling effective onboarding*.

By going through the necessary practical matters, the new designer can concentrate on the actual work, and also others can rely on the new designer to know the ways of working and so on.

**C) Role and responsibilities**

Role and responsibilities is mainly related to the means of (1.) *providing clear setting for design work* and (6.) *clarifying roles and responsibilities* and the element of (2) *depth of collaboration*.

Introducing and defining the roles of all the relevant stakeholders and colleagues accelerates the formation of trust. By knowing who is responsible for what and how decisions are made, the new designer can meet the expectations better and be sure that everything gets done accordingly.

**D) Collaboration**

Collaboration is mainly related to the means of (5.) *ensuring knowledge sharing* and (7.) *enabling effective onboarding*, and to the elements of (1.) *sharing knowledge* and (7.) *proactiveness of the external designer*.

Making sure that the new designer knows who to turn to with certain questions and how to communicate in the team/organization, helps in enhancing trustful team dynamics. Deepening the collaboration is directly connected to the experienced trust within in-house team.

**E) Team activities**

Team activities is mainly related to the means of (3.) *enabling unofficial team building* and (4) *treating designers equally*, and to the elements of (1.) *sharing knowledge* and (5.) *differentiating the designers*.

This section aims to provide clarity from the very beginning to what activities should the new designer be aware of, and also which activities are available for externals.

**F) Timeline**

This section is supporting all the sections above, with special focus on the element of (3) *duration of the relationship* and the means of (7.) *enabling effective onboarding*.

Aim is in strengthening the onboarding process with visual management.

<b>Team Integration Template</b>	Designer:	Manager:	Consultancy:	Creation date:
	Team:	Mentor/contact person:	Contact person:	Evaluation date:
<b>Profile</b>	Title: <b>A</b> Seniority: Field of design:	Role in the design organization: Strategic ←————→ Operational Is designer expected to have impact on the culture & organization or to be focusing on design doing?		
<b>Practicalities</b> What are the design guidelines and rules to be followed? How to get accesses and tools needed for the work? What kind ways of working there are in use? How to prepare for meetings, weeklies, dailies etc.? How to document one's work?  <b>B</b>  Tick boxes once covered: <input type="checkbox"/> Working times <input type="checkbox"/> Remote work procedures <input type="checkbox"/> Tools & software <input type="checkbox"/> Instructions for delivering work <input type="checkbox"/> Other ways of working <input type="checkbox"/> _____ <input type="checkbox"/> _____	<b>Role and responsibilities</b> Are there any restrictions for external designers regarding benefits, accesses etc., if so what and why? Have the responsibilities of other team members made clear to the new designer? Who makes the design decisions, who is the design lead in different fields of design? What is expected of an external designer in the daily work?  <b>C</b>  Tick boxes once covered: <input type="checkbox"/> Team members and their roles <input type="checkbox"/> Responsibilities within team <input type="checkbox"/> Responsibilities of external collaborator <input type="checkbox"/> _____ <input type="checkbox"/> _____	<b>Collaboration</b> How is the information sharing handled regarding organizational details, are there any restrictions? Where can the designer find necessary information and where to store new information? Who to turn to in organizational issues? Who are the important persons for designers to know in the organization? What are the communication channels in different cases?  <b>D</b>  Tick boxes once covered: <input type="checkbox"/> ((In-house) mentor/pair/contact person) <input type="checkbox"/> Communication in formal matters <input type="checkbox"/> Communication in informal matters <input type="checkbox"/> _____ <input type="checkbox"/> _____	<b>Team activities</b> Are there any restrictions for external designers for taking part in organization's events or activities? How is inclusivity taken into account when externals join the team? Which meetings and sessions are beneficial to take part in? Are there any other team routines the designer should be aware of?  <b>E</b>  Tick boxes once covered: <input type="checkbox"/> Routine activities:  <input type="checkbox"/> Other events or activities:	<b>Other topics, questions, etc.</b>
<b>Timeline for the duration of employment</b> Draft here the schedule for different tasks and items to be achieved in the onboarding process. Map down activities, milestones, goals and aims for different phases. <input type="checkbox"/> Permanent <input type="checkbox"/> Temporary, duration:				
●-----● <b>F</b> -----●				

## 6.2.1 Using the Team Integration Template

The top part is for the basic information such as the names of the designer & manager. There is also the possibility to identify the team and the mentor for the designer at hand. In addition, the consultant agency and their contact person can be marked here. Here can also be defined the date of checking the goals set in the template.

These four sections are for covering certain themes and topics which are perceived to be important when considering team dynamics and enabling trust. The sections are following the same logic: first there are specific supporting questions to be gone through case by case. Secondly, there are few items that can be ticked once they have been covered with the designer.

The themes are:

1. Practicalities
2. Role and responsibilities
3. Collaboration
4. Team activities

Template is designed to be used as a conversation starter. The topics and sections are working as means to tackle certain aspects of the onboarding process or the integration to the team. Some elements can be ticked and others can be answered and filled with text. The white space is left for making notes, filling in relevant information or to doodle and sketch milestones or timelines.

Team Integration Template	Designer:	Manager:	Consultancy:	Creation date:
	Team:	Mentor/contact person:	Contact person:	Evaluation date:
Profile		Seniority:	Role in the design organization: Strategic ————— Operational	
Title:		Field of design:	Is designer expected to have impact on the culture & organization or to be focusing on design doing?	
<b>Practicalities</b> <i>What are the design guidelines and rules to be followed?</i> <i>How to get accesses and tools needed for the work?</i> <i>What kind ways of working there are in use?</i> <i>How to prepare for meetings, weeklies, dailies etc.?</i> <i>How to document one's work?</i>  Tick boxes once covered: <input type="checkbox"/> Working times <input type="checkbox"/> Remote work procedures <input type="checkbox"/> Tools & software <input type="checkbox"/> Instructions for delivering work <input type="checkbox"/> Other ways of working <input type="checkbox"/> _____ <input type="checkbox"/> _____	<b>Role and responsibilities</b> <i>Are there any restrictions for external designers regarding benefits, accesses etc., if so what and why?</i> <i>Have the responsibilities of other team members made clear to the new designer?</i> <i>Who makes the design decisions, who is the design lead in different fields of design?</i> <i>What is expected of an external designer in the daily work?</i>  Tick boxes once covered: <input type="checkbox"/> Team members and their roles <input type="checkbox"/> Responsibilities within team <input type="checkbox"/> Responsibilities of external collaborator <input type="checkbox"/> _____ <input type="checkbox"/> _____	<b>Collaboration</b> <i>How is the information sharing handled regarding organizational details, are there any restrictions?</i> <i>Where can the designer find necessary information and where to store new information?</i> <i>Who to turn to in organizational issues?</i> <i>Who are the important persons for designers to know in the organization?</i> <i>What are the communication channels in different cases?</i>  Tick boxes once covered: <input type="checkbox"/> (In-house) mentor/pair/contact person <input type="checkbox"/> Communication in formal matters <input type="checkbox"/> Communication in informal matters <input type="checkbox"/> _____ <input type="checkbox"/> _____	<b>Team activities</b> <i>Are there any restrictions for external designers for taking part in organization's events or activities?</i> <i>How is inclusivity taken into account when externals join the team?</i> <i>Which meetings and sessions are beneficial to take part in?</i> <i>Are there any other team routines the designer should be aware of?</i>  Tick boxes once covered: <input type="checkbox"/> Routine activities: <input type="checkbox"/> Other events or activities:	<b>Other topics, questions, etc.</b>
<b>Timeline for the duration of employment</b> <i>Draft here the schedule for different tasks and items to be achieved in the onboarding process. Map down activities, milestones, goals and aims for different phases.</i> <input type="checkbox"/> Permanent <input type="checkbox"/> Temporary, duration: _____				

This is the section to define the profile of the new designer. Profile is created by filling in the title, field of design and level of seniority of the person. In addition, the role can be defined here with the expectations of on which organizational level the designer is supposed to operate in and what kind of impact is expected.

There is also space for all the other topics, questions and comments that need to be covered depending on the case. This is also the space where designer can leave comments and questions which will be addressed in the evaluation session or some other time.

At the bottom section is the possibility to draft a timeline or a schedule for the duration of the employment. The aim is to roughly plan what kind of onboarding or personal development activities should take place at certain times. Here can also be defined time frame for the template, whether it is used for a permanent worker, or for certain period of time.

Figure 12. Instructions for the use of Team Integration Template.

# 7

## Discussion

In the following, the results and outcomes of the study are reflected and discussed in relation to the design management literature covered earlier. Also, in order to provide meaningful suggestions on how the presented work could be continued and what can be explored next concerning this topic, certain aspects are addressed. First, the contribution of the thesis is elaborated from both academic and practical perspectives. Second, the limitations of this study are addressed to point out what could have been done differently. Finally, the opportunities for future research, which emerged during the study, are presented.

### 7.1 ..... Academic contribution

The study started with a topic of how the design managers perceive the dynamics between in-house and external designers in the design teams, and furthermore, how they see the notion of trust in those team dynamics. By gaining understanding from design management and operations management literature, the following research questions were then formulated and which the research aimed to answer through the interview study in technology corporations:

1. *What elements do design management practitioners in technology corporations perceive to affect reliability in the team dynamics of in-house and external designers?*
2. *How can design management practitioners establish and enable reliable team dynamics between the in-house and external designers in the design organization?*

Therefore this study explored how design managers or designers with

design management responsibilities perceive the team dynamics of in-house and external designers and how to establish and enable reliability in those dynamics. As part of the outcomes, the presented findings were already divided into sections that referred to the defined research questions. Furthermore, as the study implicates, there are elements in the relationships of internal and external designers that have an impact on the trust and reliability of the team dynamics. In addition, the study identified the means for design management practitioners to establish and enable trust in the team dynamics when internal and external design capabilities are combined.

Already the literature review indicated that there are multiple scenarios where the joint design team of internal and external designers benefit over having just the other (e.g., Bruce & Morris, 1998; Von Stamm, 1998). In the present day, it is commonly accepted as a rule and not an exception to have both capabilities in the organization, as did the interview study results showcase as well. The results also show that whenever the two capabilities are utilized, they are collaborating, at least to some extent. That level of collaboration was seen as one of the key elements that affect the feeling of reliability in the team dynamics. The perceptions towards collaboration indicate that even little collaboration between the two increases the trust between in-house and external designers.

The importance of collaboration can also be linked to the design management literature, where it is widely argued that having in-house capabilities will help in powering the change in the organizations (Turner, 2013). Also, the closeness that in-house designers have towards the organization will result in effective ways of developing the products, services and culture (e.g., Hands, 2009; Lockwood, 2011). These notions were confirmed in the interview study, where informants elaborated on the importance of having in-house designers in strategic roles and being able to boost the external designers' impact by helping

to find the right people and by knowing the product development processes.

The depth of the collaboration between internal and external designers was emphasized throughout the study. The mindset of working closely together was an element that was highly appreciated as being at the core of affecting trust as part of the design team dynamics. Meyer (2011) points out that when the ways of working are consultative and not collaborative, the design might not have enough impact to change the organization. This notion is also applicable in the context of trust between outsourced and in-house designers. If the external designer is taken just as a consultant, the collaboration might not be as ideal as possible. Hence, also the formation of trust is affected.

Probable issues in the team dynamics between in-house and outsourced designers are, in many cases, related to trust and reliability. Reliability can be enabled and affected both ways, from inside the organization as well as from outside. This study focused on how design management practitioners perceive the team dynamics between different capabilities, and therefore the results are more from the perspective of external designers joining the in-house team. Moreover, how design managers can establish and enable reliability in those cases. The elements that have an impact on the reliable design team dynamics, in addition to the means of establishing and enabling reliability in the team, are both emerging from in-house personnel's perceptions. Thus the opposite point of view could have altered the way this topic was discussed in this study.

Earlier studies have identified various possible design managerial suggestions on how the relationship between in-house designers and consultants could be managed successfully. Among these are, e.g., keeping the brief alive, truly integrated teams, collaborative workspaces, shared working experiences, objective audits and critiques

and socialization (Bethge & Faust, 2011). These activities also emerged in this study, but specifically from the reliability point of view.

However, some notions these literature findings propose are more of high-level remarks than actual solutions. A case in point is Bethge and Faust's (2011) suggestion of having truly integrated teams. A truly integrated team does not explain its relevance as such, but the findings from this study lay the ground for more concrete ways to achieve trust and even the integration. For instance, the significance of the onboarding process and the different procedures of hiring an external designer are among the key findings of this study.

The duration of external-internal partnerships was mentioned across the interview study as an element that will also influence the establishment of trust within the design team dynamics. As literature also suggests, it is not irrelevant whether the partnership lasts for a month or a year (e.g., Hands, 2009; Borja de Mozota, 2003). According to the previous studies, there are benefits in turning the shorter-term relationships into longer ones, for example, by highlighting the accumulated silent knowledge and the predictability of mutual behavior. Not only are there benefits in having external designers getting familiar with the context the client organization operates in, but also, according to the results of this thesis, trust and reliability are affected by that as well. If the duration is known, the reliability is formed based on those assumptions, and it will affect the dynamics of the design team.

The importance of both informal and formal team building was evident in the results of this study. The correlation it has with reliability between the internal and external design team members is evident. Especially if the purpose is to integrate persons who do not come from within the organization, they need to feel that they still belong to the group. Design management practitioners in the study emphasized the significance based on their personal experiences as well as on their

team's dynamics. In literature, similar findings on the importance of relatedness among designers have been introduced recently (Björklund & van der Marel, 2019; Keipi, 2019) but they focus more on the individual designer's point of view and not on the whole design team and how that affects reliability in those relationships.

There is no doubt about the relevance of design culture in relation to design team dynamics. The results of this study explore the significance of the state of design culture in the organization, and what are the means it can be affected directly and indirectly. Equal treating, combined with the clarification of roles and responsibilities, will affect the design culture positively, and therefore also the day-to-day work with the design capabilities in the organization. The influence of the design culture has also been identified in studies focusing on external design capabilities (e.g., Ravasi & Lojacono, 2005). Regarding the state of design as such, the maturity of design was mentioned multiple times in the interview study, and its importance needs to be recognized.

Ravasi and Stagliani (2012, p. 475) presented a research agenda for the field of design management, and it included topics that this study has covered. They asked for instance "How do 'design management' practices influence design capabilities?", "How can organizations improve the management of design collaborations?" and "How do organizational leaders foster the development of design capabilities?". In addition, recent studies have implied the opportunities for future work in the matter of reliability among the designers. Uusitalo et al. (2019) suggested that the research is very limited in how the managers create joint trust in design teams among others, and Björklund (2010, p. 522) proposed a research agenda of finding out "how should managers seek to foster the qualities of trust, motivation, attitude and collaboration in product development projects." This thesis study provides grounds for those research implications and offers a perspective of what design managers perceive to affect the trust and

what are the means to establish it in design teams.

The different sets of elements (related to practicalities, design culture or designer) affecting the reliable team dynamics can easily be combined with the findings of what means design managers perceive they have at their hands to establish trust and reliability. These categories of elements with the means identified in the study, answer in their part to the prior highlighted research agendas and gaps. They can be applied to practice and theory to some extent, although some limitations need to be considered in the process.

## 7.2 ..... Practical relevance

Firstly, the practical contribution of this thesis is about opening the discussion on the notion of trust and reliability in design teams or organizations consisted of both in-house and external designers. The results already indicate that many elements on different levels will affect trust in the design team dynamics and reliability between in-house and external designers. All of these elements impacting on the team dynamics are matters that design management practitioners in the organization can influence. On the one hand, influencing these elements can be direct and concrete, like in the case of providing clear settings for the design work. Alternatively, on the other hand, practitioners can influence the dynamics through design activism and change management within the organization in the longer term, as it is in the case of improving the overall state of design and increasing the maturity of design.

Trust is a feature of the team dynamics that supports in contributing,

combining and coordinating resources towards joint endeavors (Mcevily et al., 2003) and, therefore, should be taken seriously by each and any one of design management practitioners. The elements affecting trust in design teams, the means of establishing trust, and the onboarding tool for the beginning of the employment are the outcomes of the thesis and provide possibilities for practitioners to do just so.

One way to influence trust in the dynamics is through the identified means of enabling trust between designers and taking action accordingly. The findings can be utilized directly by reviewing the current state of their design teams or design organization with the identified elements and then reacting consequently. Grounds for well-functioning design teams from the viewpoint of trust can be set already before building a design team or any other design organization. The tool proposed as one of the outcomes of this study is one way to influence design team dynamics and trust from the very beginning.

One of the main aspects of design management practitioners' work, in the end, is to manage the creativity, design and the resources attached to those in the organization (e.g., Borja de Mozota, 2011; Blaich & Blaich, 1993). In order to succeed in the task, it is essential to establish and enable trust among the ones who complement the design capabilities in the organization, the designers. As the design management literature and this empirical study indicate, whenever there are both in-house and external designers collaborating, trust is a crucial factor in meeting the set goals and aims.

An impactful feature in the team dynamics considering reliability is communication. This was raised by many scholars (e.g., Uusitalo et al., 2019) when addressing potential design team development areas. Matters of communications and administration were also introduced by Oakley (1984) and Lockwood (2011) as they emphasized the importance of the design manager's role as a coordinator and



collaborator. The findings from this study give more managerial methods and perspectives to be applied in practice to address the role of being either a coordinator or a collaborator.

The holistic point of view would be to take care of all of the identified aspects that affect the reliability and trust in the team dynamics within the design organization. On the other hand, it is not always possible to consider everything at once. Each of these three aspects (elements of practicalities, design culture and designer) would be important to look after, but even making changes for better in just some of them would help in enabling and enhancing trust. Especially for design management practitioners, all the aspects are usually within their reach and under their influence in the organization. However, by starting with small improvements and iterations in the current state, the actions would already have a notable impact on the trust and reliability in the design organization.

### 7.3 ..... Limitations

Certain limitations have to be taken into account in critically reviewing this study. Limitations regarding the choice of methodology, usage of methods, and the size and scope of the interview sample might have affected the results of the study. These limitations are reviewed next with proposals on how those limitations could have been dealt with.

The selected methodology in this thesis project was an interview study. This particular methodology was chosen over others due to time and resource restrictions in the course of the thesis project. Also, conducting an interview study suffices in the scope of a Master's

thesis. When thinking about alternative methodologies for a study like this one, conducting a case study would be ideal. It is one of the most recurring methodologies in the design management literature, especially in related topics.

A case study is described to be a qualitative research methodology that provides methods to explore a complex phenomenon in its context by using a variety of data (Baxter & Jack, 2008). Notable characteristics of a case study are its nature as an in-depth methodology that takes place in a set context within a defined period of time (Muratovski, 2016). Case studies have been used as a methodology in many prominent qualitative studies regarding the management of design and the organizational context of design. Ravasi and Stigliani (2012) propose in their research agenda that qualitative research based on a comparative case study would be a way to generate insights that would later be validated with various techniques.

By conducting a case study instead of an interview study as in this thesis, the topic of trust in the design team could have been studied from multiple different viewpoints and sources of information. Adding secondary methods and sources of data, such as reviewing documents, could have provided a richer look on how trust is depicted in these companies when it comes to designers. Especially studying different items in the recruitment process and other design team practices, might have uncovered underlying phenomena which did not come up in the interviews. These phenomena could have been addressed in the interviews later on in the case study.

Regarding the semi-structured interviews, the size of the sample would ideally be larger. Many of the interview studies referred to in this thesis have had a higher number of informants. On the other hand, it was the defined profile for the aspired informants in this particular study that turned out to be the actual challenge. Persons with positions

such as design manager, design lead, head of design or design leader are rather rare in individual companies, if those positions exist at all in the first place. The selection of the two companies for the study, ABB and Elisa, provided fortunately suitable interviewees to fit that narrow profile for the sample.

Although, in the course of the study, it was evident that there needed to be some flexibility in the selection of informants as well. The criteria of aiming to interview design managers and other comparable leaders were opened up to include also non-supervising designers higher on the seniority level with design managerial responsibilities. Nonetheless, the sample was still a selection of persons with direct experience of managing or leading design projects, which include the collaboration of internal and external design capabilities.

On that note, the study would have probably gained from including more than two case companies. The identified elements and actions of enabling trust between internal and external designers would be more generalizable if more organizations would have been included in the study. Having a broader sample would have probably contributed a more generalizable consensus on the design management perceptions on the elements impacting team dynamics of compiled internal and external design capabilities.

As discussed earlier, all the interviewees were representing in-house personnel. Although it was the very scope of the thesis to study the perceptions of those in-house design management practitioners, the results can be viewed to represent only the in-house understanding of enabling trust and what does the reliable design team dynamics stand for. So, the results of this study need to be reviewed with this angle in mind, since there might be other elements and actions which those external designers might comprehend to be at the core of trustful and reliable design team dynamics.

Also, when reviewing the proposed Team Integration Template and its development, certain limitations need to be taken into account. The tool was designed as part of the research in the thesis, and the main phases in the development were the first interview round, the follow-up round, and iterations between and after those. In its current form, the template is designed mainly to be used by the manager in collaboration with the new designer. However, the concept was tested with two designers in order to find out does the tool suit also the designer's needs. Still, further testing with more designers, such as external designers working in an in-house team and even piloting with a real case, would have provided more reliability to the research through the tool development. The iterations were now conducted in collaboration mainly with the design management stakeholders since the focus of the thesis was on them.

Concerning the theoretical approaches taken in this study, some limitations have to be taken into account. The theories utilized in the thesis are from design management and operations management. In addition to design management as the theoretical approach to study reliability and team dynamics in the context of designers, other perspectives for the research could be insightful to take in a more general perspective. For instance, human resources theories could be looked into regarding the onboarding processes and practicalities of recruitment to see how trust can be built already within those procedures. On the other hand, the sociological approach and theories would be a valuable addition regarding team building, whereas organizational studies would be in relation to the integration of external designers into in-house design teams.

The broadness of design as a discipline needs to be taken into account as well. This thesis covers the field of human-centered design in general, with informants working in the fields of industrial design,

service design and UI/UX design. There might be differences between these areas if focused in more detail, for instance, on how the practicalities and projects differ within different areas of design. As an example, the dimension of product development versus service development is not covered in the scope of this thesis, and the results could be viewed from another angle if this dimension was in focus.

To be noted is also the limited experience of the researcher in the area of qualitative research. As a master's thesis, the study should be considered as more of a practice in the process of academic qualitative research and the chosen methodology, rather than a professional work of an academic researcher.

## 7.4 ..... Suggestions for future research

Certain aspects emerged from the results which could be focused on in future research. Implications for further research are related to other stakeholders' perceptions of the team dynamics of compiled internal and external design capabilities and the possible differences within the field of design when it comes to these matters. In addition, the inquiry could be made on how practitioners perceive the recently emerged ways of acquiring external design capabilities in the field of design.

This thesis focuses only on the perceptions that design management practitioners have towards the team dynamics and reliability between in-house and external designers. To acquire more understanding on the topic, further research should be done to explore the experiences of designers and team members themselves. Actually, some of the informants in this study implied that they would need to go directly

to the designers to provide proper answers to some of the inquiries. This could be covered by organizing interview studies or case studies that would focus on the experiences of in-house designers and, on the other hand, consultants regarding establishing reliability and well-functioning team dynamics. In-house designers might have more to say on the topic than design managers, as the designers are directly working with consultants. The same applies to the opposite point of view, the external designers. Consultants' experiences of being incorporated to in-house design teams for shorter or longer periods might reveal relevant issues.

As was pointed out earlier, this study focuses on human-centered design in general. Therefore, further research could focus more on certain aspects within the field of human-centered design. For instance, design work related to physical products, and on the other hand, intangible items such as services, could be an interesting take for a future study. By focusing more on individual areas within the field of design, certain patterns specific for those disciplines would be easier to identify and generalize, although there might be no significant differences in the first place.

An interesting phenomenon that emerged from the study was the different recruitment procedures to acquire external designers. Traditionally, the external designers are considered to come from design agencies or consultancy companies specified in certain fields and areas, but there are also other ways to increase design capabilities externally. Nowadays, it is more and more common to hire designers to the organization through recruitment and staffing agencies, instead of traditional consultancies. In those cases, as the study indicates, the level of externality is considerably lower, and the designer is immediately considered as more of an in-house designer. There is potential for research within these topics, and studying these cases would provide possibilities for discovering new insights and findings which could be

applied to design management theories as well.

In addition to new ways of acquiring designers externally, also the role of the design management practitioner could be inquired further. More specifically, inquiring cases where there are no official design management practitioners. There are organizations where there are no actual design managers or other management level persons with a design background, but there are still some design capabilities, either in-house or external. These situations where design work is supervised or led by people with no design education nor background could be valuable to look into. In relation, also the individual project teams where design is just one part of the product development team, could be studied from the perspective of trust and reliability in the dynamics between internal and external team members. Instead of design management practitioners, there might be product managers, project managers and others who are responsible for their teams' dynamics.



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# Conclusion

This study was done to identify how design management practitioners perceive the design team dynamics in cases of joint in-house and external design capabilities in their organizations. Furthermore, the study focused on the notion of trust between the internal and external designers who are collaborating. There are three concrete outcomes in the study this thesis is reporting. Firstly, the elements design management practitioners perceive affect trust in design team dynamics. Secondly, the study identifies means the practitioners can have to enable and enforce that trust between internal and external designers. Thirdly, the study results in a tool which helps in enabling trust and reliability in the team by impacting on the beginning of the onboarding and introduction process for the new designer.

The significance of trust and team dynamics is at the core of successful design teams and collaboration projects of in-house and external designers. Both internal and external design capabilities are usually in use in established organizations, and therefore the relationships and team dynamics that combination includes need careful managerial approaches from the design managers, design leads, design leaders and heads of design. Many elements in the reliable team dynamics are perceived to make a difference for better collaboration, whether they are related to the design culture, practicalities or designers in the organization.

These sets of elements play a prominent role in the team dynamics between in-house and external designers, and it has been recognized by scholars and practitioners across the field of design. There are also actual means to establish and enable reliability in teams like these. These means elaborated in this thesis are applicable for common designers as well, although the scope in this study has been the design management practitioners.

This research contributes to the literature as well as to the practice

by identifying the elements and means related to trust as part of the design team dynamics. This thesis offers insights on how to establish reliability and how to manage internal-external design capabilities successfully from the design team dynamics perspective. Understanding of the managerial implications this study provides has been derived from the perceptions of practitioners with responsibilities in design management in two case companies in the field of technology. This research suggests that design managers have an important role in creating trust as part of the design team dynamics, and the presented results could work as a discussion opener in many organizations with in-house and external design capabilities.

The way the design management practitioner builds the team and the choices made within the boundaries of building design culture, are the key elements in successful internal-external design collaborations, especially when thinking about trust and reliability. However, as the results showcase, it is essential to understand that the team dynamics, in the end, are all about the people and the reliable settings in the team. Like Ed Catmull (2014, p. 318) puts it: “Trust doesn’t mean that you trust that someone won’t screw up – it means that you trust them even when they do screw up.” If design management practitioners concentrate and act accordingly on the elements of practicalities, design culture and individual designers, designers can trust each other and have better chances in contributing to joint endeavors. No matter if they are in-house or external.

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# Appendix



## Appendix 1. Interview guide for the semi-structured interviews.

### 1 Background & position of the interviewee

- Would you describe your role, tasks and responsibilities in the organization?
- What kind of tasks you're undergoing at the moment?
- Would you describe the organization structure that design is belonging to?
- Who are you answering for in your role?
- Would you describe your experiences in your current role, what kind of challenges are you facing?
- How long have you been in the current position?
- What is your history in the company prior to the current position?
- .....
- What kind of work history have you had before the current company?
- What is your education?

### 2 Design capabilities in the organization

- How do you see the maturity of design in the organization?
- Has design been recognized on the strategic level?
- Is design an independent function of is it a part of some other function? If so, what function?
- How is the design work organized in the organization? In what kind of ways do the designers work? (Individually in projects, design teams?)
- .....
- How has design evolved in the company from your perspective?
- What do you think will happen in the field of design in your organization in the future?
- .....
- What kind of in-house design is there at the moment and what is the role of it?
- What kind of design teams are there in the organization and how many?
- How many designers are there in the teams and what fields of design are they representing?
- What is the seniority level of the designers in the organization?
- .....
- Are there external design capabilities in the organization?
- How many consultants are working for the company at the moment?
- In what kind of situations is external design utilized?
- How long are the consultant relationships or employments?
- .....
- What is the ratio between in-house designers and consultants/external designers?
- What are the reasons for acquiring new in-house designers, or in what kind of situations is in-house design needed?
- What are the reasons for using external design/consultants?
- .....
- How many projects there are where in-house designers and consultants are working together? Examples of those projects?

### 3 Design teams the interviewee is involved with

- Would you describe your current (design) team? (How many designers, what fields of design, in-house/external?)
- What were the reasons for building the team to be as it is at the moment?
- .....
- What is the process of introducing and onboarding a new member to the team?
- .....
- How has the design team functioned from the team leader/supervisor's point of view?

- How would you describe the team spirit?
- How has the collaboration worked between different designers?
- How has the collaboration worked between in-house designers and consultants?

### 4 Design management practices when working with in-house and external designers

- What kind of design management practices there is or has been in use in teams of both in-house and outsourced designers?
- What kind of matters has been taken into consideration when outsourced designers have been integrated into the in-house design team?
- Have there been any challenges in teams of both internal and external designers, if so what kind of?
- When do the challenges emerge and how are they dealt with?
- .....
- Is there some development areas in current practices when an outsourced designer is integrated to the in-house team?
- .....
- Are there any design management practices that you would like to still try out in teams of in-house and external designers?
- Are there any needs in managing design or design teams that are yet not supported?

### 5 Experiences with reliability between internal and external designers

- Are there any issues of trust in teams of in-house and outsourced designers?
- If so, when do those issues emerge?
- Have you experienced any trust issues between in-house and external designers from your perspective?
- If so, how has it been shown, and how has it been managed?
- If there are no issues of trust in the team, what kind of practices there are regarding trust, establishing it, or maintaining it?

## Appendix 2. Main themes, subthemes & example quotes.

The following presents how the main themes were formed, and how many times those themes occurred in the first interview round (n).

### Category

#### *Elements of practicalities*

Main theme, occurrence (n)	Subthemes	Example quotes
<i>Level of sharing knowledge (8)</i>	<ul style="list-style-type: none"> <li>• <i>Active data sharing</i></li> <li>• <i>Providing the big picture</i></li> <li>• <i>Importance of silent knowledge</i></li> <li>• <i>Accesses to knowledge</i></li> <li>• <i>Regulations in sharing data</i></li> </ul>	<p><i>Basically, everything is told quite honestly, all the challenges of the organization and the business, because how else can people add the best kind of value and I think it has been understood here well</i> - Design leader / company B</p> <p><i>We shouldn't be afraid of people stealing something because consultants, trainees, in-house designers, everybody signs the same contracts that forbid that kind of activity</i> - Design manager / company A</p>
<i>Depth of the collaboration between internal and external designers (8)</i>	<ul style="list-style-type: none"> <li>• <i>Information sharing both ways</i></li> <li>• <i>In-house contact person or mentor</i></li> <li>• <i>Providing material &amp; guidelines</i></li> <li>• <i>Level of in-house capabilities</i></li> </ul>	<p><i>Gathering the silent knowledge won't happen with PowerPoint presentations, there has to be someone from us involved in the doing or at least somehow following the work</i> - Senior designer / company B</p> <p><i>Designer with in-house status has a better mandate to question things</i> - Design leader / company A</p>

### Category

#### *Elements of practicalities*

Main theme, occurrence (n)	Subthemes	Example quotes
<i>Duration of the internal-external relationship (6)</i>	<ul style="list-style-type: none"> <li>• <i>Long-term reduces externality</i></li> <li>• <i>Predictability of the duration</i></li> <li>• <i>Correlation of time and the complexity of the context</i></li> </ul>	<p><i>Especially in continuous work, the fact that who is a consultant and who is not will blur</i> - Senior designer / company B</p> <p><i>Many times it goes so that when there is a need for something, there should be longer consultancy relationships because the introduction takes more time than actually doing it. That might be the biggest challenge I have faced</i> - Design manager / company A</p>
<i>Recruitment procedure of the external designer (5)</i>	<ul style="list-style-type: none"> <li>• <i>Rented workforce to increase in-house capabilities</i></li> <li>• <i>Organizational restrictions in hiring new in-house designers</i></li> <li>• <i>Freelancer's / rented person's higher motivation compared to consultant</i></li> </ul>	<p><i>Having a sort of a rented designer who doesn't come from a design agency is a way to increase the in-house capability</i> - Design manager / company A</p> <p><i>When I selected the consultant, the person had worked for us before but left to work under one's own trade name. I wanted to have the designer in the team purely for the reason that once you work for yourself and not for a big consultant company where the point you to a client, you are a hell lot more motivated.</i> - Design leader / company B</p>

## Category

### Elements of culture

Main theme, occurrence (n)	Subthemes	Example quotes
<i>Differentiating in-house designers and consultants (7)</i>	<ul style="list-style-type: none"> <li>• <i>Equal treating</i></li> <li>• <i>Impact of past experiences</i></li> <li>• <i>Impact of how designers are addressed in communication</i></li> </ul>	<p><i>We have clearly been searching for the habit of avoiding to talk about “externals”, and the aim is that all are team members and we have common goals. Where someone comes from, shouldn’t be the most critical thing</i> - Design leader / company A</p> <p><i>I treat our consultants as if they would be our own employees because a satisfied consultant is a lot more productive and also recommend us</i> - Design leader / company B</p>
<i>State of design in the organization (7)</i>	<ul style="list-style-type: none"> <li>• <i>Design culture in the organization</i></li> <li>• <i>Maturity of design in the organization</i></li> <li>• <i>Leading design by example</i></li> </ul>	<p><i>If design as a function would have been established for many years to be more than styling or add-on, and the processes were established as well, it would affect the usage of external designers as well, in a good way</i> - Design manager / company A</p> <p><i>Once the attitudes have been started to be built in a systematic way, the way how the head of design treats [externals] is building the culture</i> - Design leader / company B</p>

## Category

### Elements of designer

Main theme, occurrence (n)	Subthemes	Example quotes
<i>The proactiveness of the external designer (7)</i>	<ul style="list-style-type: none"> <li>• <i>Actively challenging the organization</i></li> <li>• <i>Promotion of the consultancy’s agenda</i></li> </ul>	<p><i>And because the consultant comes from outside of the company, he/she does just like he/she is asked to do. The consultant won’t dare to or can’t influence in the organization if something is fundamentally wrong</i> - Design manager / company A</p> <p><i>I want that the consultants come to the teams to challenge us and to say that “hey now you should be awake when the markets are changing to that direction, and here would be this interesting technology”, so it would be proactive</i> - Design leader / company B</p>
<i>Personality and level of expertise of the designer (7)</i>	<ul style="list-style-type: none"> <li>• <i>Assumption of consultant being the expert</i></li> <li>• <i>Multi-talented external designers</i></li> <li>• <i>Suitable personality for the team</i></li> </ul>	<p><i>The consultant should always appear to be an expert. If the consultant ends up to be the apprentice in the project, it might be challenging for the person to take in.</i> - Design manager / company A</p> <p><i>Self-confidence and knowhow helps when a new person comes in, we don’t really train the person to the doing, but actually he or she brings in the competence and complements us</i> - Design leader / company A</p>

## Category

Means to affect trust

Main theme, occurrence (n)	Subthemes	Example quotes
<i>Providing a clear setting for the design work</i> (9)	<ul style="list-style-type: none"><li>• <i>Providing design guidelines and frameworks</i></li><li>• <i>Providing the means and tools</i></li><li>• <i>The importance of good design briefs</i></li><li>• <i>Managerial matters at the beginning of the collaboration</i></li><li>• <i>Physical premises</i></li><li>• <i>Working time</i></li></ul>	<p><i>Letting people have room for work is important - - there shouldn't be any ad hoc requests like "can you help with this and that" and so on</i> - Senior designer / company B</p> <p><i>On the other hand, it is easier to be in the same space. The more we are also physically apart, the more it required attention to the issue of where are the possibilities to meet</i> - Design leader / company A</p>
<i>Choosing the design team members holistically</i> (9)	<ul style="list-style-type: none"><li>• <i>Taking into account the designer's personality</i></li><li>• <i>Taking into account the designer's expertise</i></li><li>• <i>Taking into account the designer's level of motivation</i></li><li>• <i>History with the provider</i></li><li>• <i>The proactiveness of the external designer</i></li></ul>	<p><i>I have tried to say here that the agency don't do the work, it's the people. For me, it is important to have options and to ask people to come here to have a chat</i> - Design manager / company A</p> <p><i>The basis is to search for partners whom we trust, and we know that they provide the good guys</i> - Senior designer / company B</p>
<i>Enabling team building</i> (8)	<ul style="list-style-type: none"><li>• <i>Recreational activities with team</i></li><li>• <i>External's access to activities</i></li></ul>	<p><i>Motivation is enabled by team spirit, the unformal spirit when we are together in non-work-related activities</i> - Senior designer / company B</p>
<i>Treating internal and external designers equally</i> (8)	<ul style="list-style-type: none"><li>• <i>Leading by example</i></li><li>• <i>In-house designers' previous experiences</i></li><li>• <i>The usage of language</i></li></ul>	<p><i>We have clearly been searching for the habit of avoiding to talk about "externals", and the aim is that all are team members, and we have common goals. Where someone comes from, shouldn't be the most essential thing</i> - Design leader / company A</p> <p><i>I try to keep my own way here and to justify also for others why I don't see it as a problem that these [external designers] are here and takes part [in activities]</i> - Design leader / company B</p>

## Category

Means to affect trust

Main theme, occurrence (n)	Subthemes	Example quotes
<i>Ensuring knowledge sharing</i> (8)	<ul style="list-style-type: none"><li>• <i>Sharing within the limits of confidentiality</i></li><li>• <i>The role of everyday communication</i></li><li>• <i>Silent knowledge</i></li></ul>	<p><i>If not all can work together, then there are sharing sessions, where we share information and there is room for discussion</i> - Design leader / company A</p> <p><i>The channels of communication and sharing files are shattered quite fast, and it is quite a mess and will be. They can discuss wherever, as long as they discuss</i> - Design leader / company B</p>
<i>Clarifying roles and responsibilities</i> (6)	<ul style="list-style-type: none"><li>• <i>Unclear roles and responsibilities (in-house &amp; external)</i></li><li>• <i>Knowing the duration for the collaboration</i></li></ul>	<p><i>The fundamental definitions of who concentrates on what and certain working routines [keep the team functioning]</i> - Senior designer / company B</p> <p><i>Sometimes there are lows, e.g., the rented service designer wanted to have training, but the agency said that the client should pay for it and our company said that we don't pay consultant's trainings</i> - Design manager / company A</p>
<i>Enabling effective onboarding</i> (5)	<ul style="list-style-type: none"><li>• <i>Same onboarding for all</i></li><li>• <i>Tailored onboarding</i></li><li>• <i>Importance of scheduling the onboarding</i></li></ul>	<p><i>We did a rough schedule for what needs to be gone through in which week, as if a new employer would have started</i> - Senior designer / company B</p> <p><i>There shouldn't be any difference in onboarding a new in-house designer or a new external, although there surely are supervisory and administrative matters that don't need to be done with a consultant</i> - Design leader / company A</p>

