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The current status of Service Design for Servitization in Industry 4.0

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Hopefully does this paper about the current situation of service design in the servitization process opens the door to new research possibilities within the service design field.

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Abstract

Problem

Servitization is an appealing trend for manufacturers, due to the creation of more revenue, retained customer loyalty and it is considered more sustainable than product-oriented organizations (Spring & Araujo, 2017; Zhang & Banerji, 2017). According to Boeve (2018) both industry 4.0 (i4.0) technologies and service dominant logic (SDL) are considered positive influences with regard to the servitization process. However, this is a working paper that is not published. Moreover, until this moment no academic paper discusses both these phenomena at the same time when discussing servitization.

Goal

Therefore, this paper aims to close this gap, while researching service design instead of service dominant logic, as service design is a practical approach with SDL as its theoretical foundation (Wetter-Edman et al., 2014). Moreover, the role of service design within servitization is already discussed multiple times. Then again, without considering the role of i4.0 technologies. Even though this may be true, when comparing the amounts that technologies were mentioned in the servitization process and when service design was mentioned, it can be concluded that service design is underrepresented (Lee, Kao & Yang, 2014; Huxtable & Scheafer, 2016; Frank, Mendes, Ayala and Gezzi, 2019). As a result, the main focus will be on service design and its status regarding servitization. To meet this goal, the following research question was developed;
What is the status of service design for servitization in industry 4.0?

Method

To answer this research question, both a literature review and interviews were conducted. Within the literature review the topics: service design, servitization and industry 4.0 were explored. This led to a basic understanding of the concepts and the relationships between the phenomena. Accordingly, the literature review contributed to the more theoretical side of the research question by showing what effect service design and i4.0 technologies can have on each other and the servitization process. Moreover, the results of this literature review were the basis for the interview guide. In order to get an understanding of the current application of service design and thereby the status of service design, 12 service design experts were interviewed. Thereby, the purposeful sampling method was used. Finally, the interviews were coded and further organized according to the Gioia method (2013).

Results

As discussed earlier, the research question has a theoretical side and a practical side. Theoretically, service design has a positive effect on the servitization process, as it contributes to a more customer-centered mindset needed within a service-oriented organization (Kurtmollaiev et al., 2017; Costa et al., 2018). Several interviewees confirmed this. Moreover, Service design researcher B claimed that service design could make the servitization process easier, because the service design way of working is seen as more creative. This increases emotional engagement, which leads to more commitment to the servitization process and to change current behaviour. Industry 4.0 technology is seen as an enabler of both servitization and service design by interviewees. One interviewee even stated that digitalization and servitization were the same thing. Technology can create all kinds of possibilities and is with that an inspiration for service design ideas. However, some interviewees mentioned that it cannot replace the service design process and a service design mindset is required in order to make the best use of current technologies.

With regard to the practical side of the research question, a timeline is created based on all the stories and experiences of the interviewees. First of all, there is traditional design, where design is used to create product and services. The next phase was the premature service design phase, within this phase organizations became enthusiastic about service design and started organizing service design workshops. However, workshops are just a tool in the service design process. Consequently, Service designer F stated that service design became simplified. Nowadays, service design is in the service design for organizational transformation phase, where service design starts to be applied

completely and correctly to facilitate organizational change. In other words, the current status of service design is that it is increasingly used in organizational transformations, such as servitization. Based on both the theoretical and practical implementations, it can be concluded that using service design in the servitization process has all kinds of advantages, but that it is only used correctly very recently.

Theoretical implications

This study gave insight into the relationship between service design, servitization and industry 4.0 technologies. Additionally, the current application of service design was sketched. Because of this, this research covers both theoretical and practical ground. Based on this research, real world application of service design falls a bit behind on all the possibilities investigated in academic papers. This insight leads to all kinds of directions for future research such as; further testing/validating the status of service design with additional (quantitative) data, researching the role of service design in the new purpose economy and investigating the future value proposition of the service designer.

Practical implications

One of the insights of this paper is that a service design mindset is required in order to truly benefit from technology, as within service design both the customer- and employee capabilities are taken into account. Therefore, organizations should first invest on gaining a service design mindset before implementing technology. Moreover, next to both service design and i4.0 technologies other factors came to light that could influence the servitization process. Many service design experts mentioned several organizational transformation factors (urgency, mindset and organizational structure) that determine the capabilities and drive of an organization to change. When considering these factors and implementing a service design mindset, it will improve the success rate of an organization to undergo an organizational transformation, such as servitization.

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1. Introduction

This thesis discusses the current status of service design for servitization in industry 4.0. In recent years, due to fierce competition from emerging markets, manufacturers begun to transform their product-centric business models into service-oriented propositions, (Huxtable & Schaefer, 2016). This transformation of business models is called servitization (Kowalkowski, Gebauer, Kamp & Parry, 2017). A service-centric business model has many advantages: it creates more revenue, retains customer loyalty and is seen as more sustainable than product-centred business models (Spring & Araujo, 2017; Zhang & Banerji, 2017). As a result, servitization is an appealing trend for manufacturers.

Industry 4.0 (i4.0) is the fourth industrial revolution that is currently happening, where emerging technologies such as the internet of things and big data are being used in the development, production and use of products (Fuchs, 2018). These technologies could also contribute to the servitization process. With this in mind, Boeve (2018) created a roadmap for manufacturers to transform their business model towards a service-centric one using i4.0 technologies and a service dominant mindset.

Within this paper, service dominance logic (SDL) is seen as the inclusion of stakeholders through cooperation and coordination activities in the production of value (product/service design and evaluation) and recognizing them as value co-creators within the service ecosystem (Vargo & Lush, 2004, 2008 and 2016). As a result, SDL shifts the mindset of the company from firm-centered to focussing on value for customers and other actors. At the same time, other papers mention service design as a way to change organizations mindset towards a more customer-centred mindset (Wetter-Edman, Sangiorgi, Edvardsonn, Holmlid, Grönroos & Mattelmäki, 2014; Calabretta, De Lille, Beck & Tanghe, 2016; Kurtmollaiev, Fjuk, Pedersen, Clatworthy & Kvale, 2017; Costa, Patricio, Frias, Morelli & Magee, 2018).

Service design (SD) is a holistic way of thinking that has an outside in approach focused on customers in order to create customer value (Andreassen et al., 2015; Yu & Sangiorgi, 2017). Within this paper, a design for services standpoint is taken on SD. Design for services is a pragmatic and exploratory version of SD, where services are continuously improved due to interaction between customers and designers (Garud, Jain & Tuertscher, 2008; Kimbell, 2011). Therefore, value co-production with customers both in the design process and when using the service is an important aspect of design for services. In this way, it could be argued that design for services is a practical approach with service dominant logic as its theoretical foundation (Wetter-Edman et al., 2014). Additionally, design for services is associated with innovation, due to its exploratory nature (Wetter-Edman et al., 2014). Therefore, design for services could contribute to business model innovations such as servitization. A manner in which this type of SD could contribute to servitization is in how it can change the mindset within an organization through customer centred workshops and the use of visualization tools to make a service more tangible. This reduces the feeling of uncertainty regarding servitization and creates commitment within the firm (Calabretta et al., 2016).

While both SDL and i4.0 technologies could be considered as enablers of the servitization process, until this moment only Boeve (2018) makes this connection in his unpublished working paper. With this in mind, there is a gap in investigating both enablers at the same time. For this reason, the goal of this paper is to detect how both SD with its SDL background and i4.0 technologies contribute to the servitization process. As SD is underrepresented when comparing to papers mentioning i4.0 in the servitization process (Lee, Kao & Yang, 2014; Huxtable & Scheafer, 2016; Frank, Mendes, Ayala and Gezzi, 2019), there is a larger focus on the role of SD in the servitization process. Consequently, the following research question is developed:

What is the status of Service Design for servitization in industry 4.0?

To answer the research question, both a literature review and interviews with service designers were conducted. Based on the theoretical foundation the literature review provided, a conceptual framework was created. This conceptual framework served as a visual representation of the three phenomena (SD, servitization and i4.0) and relationships between the phenomena acted as sub questions. The sub questions formed the key subjects of the interview guide. In this way, the answer to the research question is both theory and practice substantiated.

The theoretical contribution of this paper is that it closes the gap between SD and i4.0 in the servitization process. Thereby, it sketches a more complete overview of the enablers of servitization. The practical contribution of this paper is that the successful implementations of SD for servitization could inspire designers and managers to use them as well. Therefore, this paper provides hands on SD implementations that manufacturers could use. As a result, these implementations contribute to the servitization process of firms and could increase the servitization success rate.

This thesis starts with explaining the foundational theory in chapter two. Secondly, the research design is discussed including; methods, sample selection, data collection and analysis in chapter three. In the fourth chapter the results of the qualitative research is discussed. Lastly, in the conclusion and discussion section the results will be translated to a conclusion in which the research question is answered. Moreover, the limitations of the study and recommendations for future research are given.

2. Theory

2.1 Different Service Design approaches

Most of the Service Design literature is focused on the understanding of SD or displaying a SD related framework. Kimbell (2011) discusses 4 ways to approach SD. First, there is engineering with an understanding of SD as problem solving. In addition, SD is used as a way to design new products and services with the use of systematic procedures. Within engineering, distinctions between goods and services are maintained (Kimbell,2011). An example of this is the service blueprint by Shostack (1982), as the service blueprint is a way to systemize and map services in order to make it more explicit (Shostack, 1982).

Secondly, there are the "non-engineering design desciplines" with an emphasize on art and see SD as an exploratory inquiry to design furniture and interiors with the use of interaction design (Kimbell, 2011). According to Holmlid (2007) SD cannot operate on its own as it lacks analytical processes that interaction design has. Another difference is that SD focuses on the entire service around the interactive artefact, while interaction design focuses on the design of the interactive artefact (Holmlid, 2007). Despite their differences, Teixeira et al. (2017) found a way to incorporate both SD and interaction design in the MINDS method. The Management and Interaction Design for Service (MINDS) uses both a management perspective and an interaction design perspective in order to create innovative technology-enabled services (Teixeira et al., 2017).

Third, there is service engineering. Just like in the engineering approach, SD is seen as a way to solve problems. However, the approach towards service is different as service engineering takes a service-dominant logic standpoint (Kimbell, 2011). This standpoint underlines the importance of the whole process of consumption with a large emphasize on the customer as co-producer in order to create value (Vargo & Lusch, 2004). In 2016, Vargo and Lush updated the service dominant logic (SDL) concept and added an eleventh foundational premise, which results in a fifth axiom. All the foundational premises and the premises with an axiom status are presented in table 1.

Number	Foundational premise	Axiom status
FP 1	Service is the fundamental basis of exchange.	X
FP 2	Indirect exchange masks the fundamental basis of exchange.	
FP 3	Goods are distribution mechanisms for service provision.	
FP 4	Operant resources are the fundamental source of strategic benefit.	
FP 5	All economies are service economies	
FP 6	Value is co-created by multiple actors, always including the beneficiary.	X
FP7	Actors cannot deliver value but can participate in the creation and offering of value propositions.	
FP 8	A service-centered view is inherently beneficiary oriented and relational.	
FP 9	All social and economic actors are source integrators	X
FP 10	Value is always uniquely and phenomenologically determined by the beneficiary.	X
FP 11	Value co-creation is coordinated through actor-generated institutions and institutional arrangements.	X

Table 1 The foundational premises of Service dominant logic by Vargo and Lush (2004, 2008 and 2016)

In this latest version of the work of Vargo and Lush (2016) a broader perspective is taken that involves the entire service ecosystem. Therefore, FP 6 changed from value co-production with customers to value co-creating with multiple actors in the ecosystem. According to Vargo and Lush

(2016) the difference between co-production mentioned in their 2004 paper and value co-creation is that co-production refers to the creation of a value proposition. On the other hand, value co-creation is the (unintentional) actions of different actors that improve one another. As a result, involving customers in the value proposition is optional, whereas value is always co-created as the actions of actors are always present, sometimes even unintentional. Moreover, the involvement of institutions is also included in this version. In the paper of Vargo and Lush (2016), institutions are understood as human made rules, norms and believes that shape social life and thereby influencing the actions of actors, which is based on the paper of North (1990). According to Vargo and Lush (2016) institutions have an essential role within SDL as institutions provide building blocks for cooperation and coordination activities, which are at heart within SDL. In summary, service dominance logic is understood as the inclusion of actors (including customers) through cooperation and coordination activities in the production of value (product/service design and evaluation) and recognizing them as value co-creators within the service ecosystem.

 The last approach to SD is designing for services, with both a SDL and an exploratory view of SD (Kimbell, 2011). Correspondingly, a service is approached in a more pragmatic way where the service is never "finished", but due to interaction between designers and consumers constantly improved (Garud et al., 2008). In other words, value co-production with customers in the design process and recognizing customers as co-creators of value when using the service are important aspects of design for services (Wetter-Edman et al., 2014). This is in line with the multidimensional new service development (NSD) model of Yu and Sangiorgi (2017). This model is a round ongoing value-supporting process where value cocreation with users is a centerpoint (Figure 1).
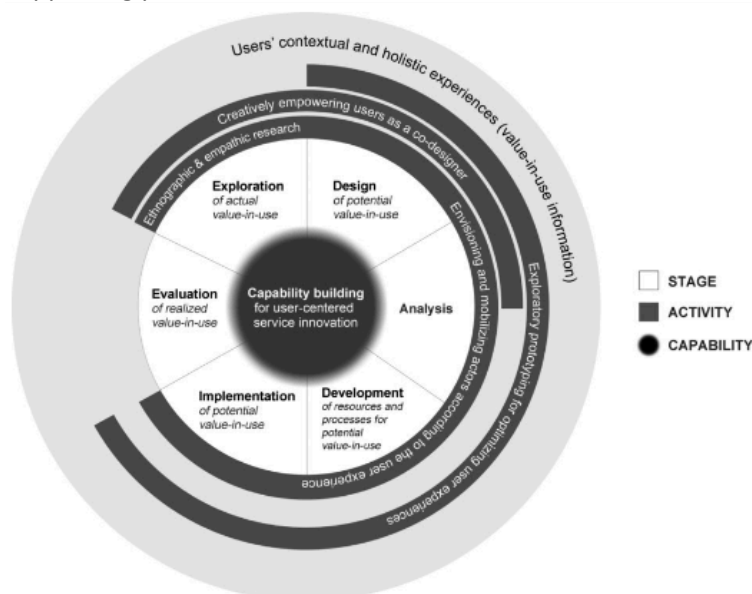

Figure 1 The Multidimensional NSD model for Value Creation By Yu and Sangiorgi (2017)

Out of the four different ways to approach SD, this paper will focus on the designing for services approach. The designing for service approach is seen as the most modern way to look at SD. The more recent papers mention the development of SD, from a tool used at the beginning of an NSD process to a customer centred and holistic way of thinking (Andreassen et al., 2015; Yu & Sangiorgi, 2017; Costa et al., 2018). Andreassen et al. (2015) add that SD has an outside-in approach with a focus on customer value creation. As a result, SD in light of design for services is understood as follows; *service design is a holistic and service dominant way of thinking that creates customer value using an outside in approach.* To illustrate the different stages of SD, the multidimensional NSD model is selected as this model depicts all the stages when developing a service plus the different SD activities to create customer value (Figure 1). This more holistic view is also used in research on the impact of SD within an organization. Moreover, design for services is also often associated with

innovation as it is exploratory (Wetter-Edman, et al., 2014). Therefore, SD could contribute to innovative initiatives such as servitization. The relationships between SD, servitization and i4.0 are discussed in the next paragraphs.

2.2 Service design within Servitization

As mentioned earlier, SD could be of use in the servitization process of organizations. Kowalkowski et al. (2017) created the following definition for servitization: "The transformational processes whereby a company shifts from a product-centric to a service-centric business model and logic" (p.8). When this transition is well adopted it could lead to higher profits and retain customer loyalty (Zhang & Banerji, 2017). Moreover, a service-centric business model contributes to environmental sustainability as it encourages dematerialisation and by providing (repair) services it closes loops needed for a circular economy (Spring & Araujo, 2017).

However, the transition towards a service-centric business model could be seen as challenging as this requires a different more customer-centred mindset. Another issue in the servitization process is known as the service paradox. The service paradox defines the small revenues in comparison to the high cost of changing the business model (Gebauer, Fleisch and Friedli, 2005). Often, managers lack the motivation to work through the service paradox, due to services being intangible and associated with high risks. Therefore, the increase of service awareness and faith in the service-centric business model are required in order for a successful adoption of servitization (Gebauer et al., 2005). According to Calabretta et al. (2016) design professionals can assist in gaining the right mindset, with the use of customer centred trainings and visualization tools, such as the customer journey map. As a result, it reduces cultural resistance and firms were more committed to the servitization process (Calabretta et al., 2016). Hence, design professionals contribute to both a more customers-centred mindset and overcoming the service paradox.

Kurtmollaiev et al. (2017) agree with this and add that when implementing SD, managers should focus on changing the mindsets and routines of employees in order to diffuse the customer-centric mindset. Although this may be true, Junginger and Sangiorgi (2009) state that the level of the SD inquiry also matter in the amount of impact SD has on organizations. The framework of Junginger and Sangiorgi (2009) has three different levels. First, there is service interaction design with the purpose of designing service interactions. Even though in this level there is a need for new/improved artefacts, the norms and values stay untouched (Junginger & Sangiorgi, 2009). The second level is service design intervention. Within this level, small or larger changes take place that requires organizations to question their norms and values. However, this change is not experienced as a radical one (Junginger & Sangiorgi, 2009). The last and most deep level is organisational transformation. This is an intense transformation were fundamental assumptions come to light. Consequently, the change of the assumptions could cause strong resistance.

Overall, organisational transformation requires commitment and long-term collaboration with the designer. Correspondingly, a SD project on the organisational transformation level causes the most impact (Junginger & Sangiorgi, 2009). In summary, SD stimulates the servitization process by changing the organizations mindset to a customer centred one, whenever the SD project is on the organisational transformation level.

2.3 Servitization and industry 4.0

For manufacturers to adopt servitization, Costa et al. (2018) created the product-service system (PSS) approach that combines the service dominant logic of SD and an organizational-oriented approach of PSS design. Using this PSS approach enables the transition from a product-centric to a service mindset and contributes in the creation of new product-service systems that have value to

customers (Costa et al., 2018). According to Tukker (2004) a product service system is the combination of product content (tangible) and service content (intangible) for value creation. Tukker (2004) distinguishes 3 main categories of PSS. The first category is product-oriented PSS. The sales of the product is still the main focus of the firm, but to support it service is added. As a result, the product remains the most important component for value (Tukker, 2004). Secondly, there is user-orientated PSS where both product and services are equally important. Within user-orientated PSS the company owns the product and makes it available for the users. Product leasing is an example of user-orientated PSS (Tukker, 2004). The last category is the result-orientated PSS, in which the client and provider discuss a certain result that the provider must deliver without mentioning a pre-determined product. To illustrate, outsourcing facility management so the company can focus on their core business (Tukker, 2004). Looking at these categories, it could be stated that the PSS approach of Costa et al. (2018) could contribute to the transitioning from a product-orientated PSS towards a user-orientated PSS. What point of view Costa et al. (2018) take on SD is not described. However, in the paper SD is understand as a holistic approach with the customer as value co-producers. Therefore, it could either be system engineering or design for service, as SD being a (ongoing) process is not mentioned.

According to Boeve (2018) the most common form of servitization within the manufacturing industry is PSS, but he believes that with the help of industry 4.0 technologies servitization could be lifted to a next level. The term industry 4.0 (i4.0) originated from Germany and is seen as the fourth industrial revolution. This revolution revolves around different technologies currently being used/developed, such as big data, internet of things and artificial intelligence in the production, distribution and use of physical products (Fuchs, 2018). Another concept related to i4.0 is the upswing of cyber-physical systems (CPS), in which physical information enters the digital world with the use of sensors and networking technologies (Sniderman, Mahto and Cotteleer, 2016). According to Sniderman et al. (2016) the key objectives of i4.0 are; productivity improvement, risk reduction, incremental revenue and new revenue. In the first place, Frank et al. (2019) see servitization and i4.0 as two separate trends, but admit that the technologies of i4.0 could be integrated in a service. The most integrated technologies in the servitization process are; CPS, internet of things and analytics (Weking, Stocker, Kowalkiewicz, Böhm & Krcmar, 2018). On the other hand, servitization could also contribute to i4.0 as services can be used to gather data and information from customers. This data could be used to train artificial intelligence systems. To illustrate, Artificial Intelligence for Disaster Response used data from twitter to classify crisis-related communication (Imran, Castillo, Lucas, Meier & Vieweg, 2014). When both these trends are implemented correctly within an organization, it will bring customer value (servitization) and at the same time contribute to the firm's internal processes (i4.0) (Frank et al., 2019).

In the working paper of Boeve (2018), a roadmap of servitization success was created that both implements a service dominant mindset and i4.0 technologies. This roadmap guides manufacturers through three stages, starting with the value-added manufacturer. Within this phase the organization stay product-centric and see services more as an add on to their product to boost value (Boeve, 2018). An example of this is PSS. Boeve (2018) recommends to hire employees that possess soft skills in order to detect the desires of the customer more easily, which leads to a more customer-oriented service. As this phase requires a lot of information from the customer, data analytics would be the right focus in the sense of i4.0 (Boeve,2018). The second phase of the roadmap is the full-service provider. Within this phase the manufacturer transforms its product-orientated mindset towards a user-orientated one. Therefore, leaving the firm-centric view behind. Another important aspect of this phase is that the manufacturer provides value propositions, instead of delivering value. In other words, recognizing the customer as a co-producer of value and focussing on the customer interacting with the service (Boeve, 2018). I4.0 applications that could support this cocreation mindset are digital distribution channels to communicate with customers and advanced pricing model for pricing based on the value perceived of the service (Boeve, 2018). According to

Huxtable and Scheafer (2016) advanced pricing model is a service resulted from big data technology. The last phase of the roadmap is the integrated experience & interactions provider. As the name already suggests, it focuses on experience management. This is a step further in regarding the customer as a co-creator, as within this phase the customer is not only involved in the provided service, but in creating their own personal spin on it (Boeve,2018). This is in line with the work of Jiang, Ding and Lang (2016) on social manufacturing that underlines the importance of customization. Technologies as cloud computing make it possible for customers to design their own products, which results in customers improving their own experiences (Huxtable & Scheafer, 2016; Boeve, 2018). When comparing the roadmap of Boeve (2018) to the PSS approach of Costa et al. (2018), Boeve is taking servitization to the next level, as the product does not play a significant role anymore and the focus is more on the whole experience of the customer. Thereby, Boeve (2018) set the first step in innovating the servitization field even further. However, it might be that servitizations is not yet applied that far. Therefore, to be on the safer side, servitization in this paper can both be the PSS approach of Costa et al. (2018) and the holistic version of Boeve (2018).

2.4 The missing link between service design and industry 4.0

Even though this may be true, the paper of Boeve (2018) is a not published working paper. As a result, it could not be checked by other researchers, which leads to questionable credibility. When looking at published papers, SDL is mentioned in a few servitization papers. However, servitization in these papers is implementing PSS (Smith, Maull and C.L Ng, 2014; Costa et al., 2018). Within the paper of Costa et al. (2018) SD is seen as an adoption of service dominant logic. Therefore, it could be argued that SD has measurable actions such as the organization of workshops and the use of visual tools that brings the cooperation activities needed for SDL in practice. To illustrate, these activities contribute to co-producing value and finding the needs of actors in the service ecosystem. As a result, by implementing SDL a customer centered mindset is gained, which is needed for servitization (Calabretta et al., 2016).

There are also papers mentioning the role of i4.0 in servitization (Huxtable et al., 2014; Kowalkowski et al., 2014; Frank et al., 2019). The relationship between SD and i4.0 is not well defined at this moment. One of the few papers that mention SD and i4.0 together is the paper of Rennung, Luminosu and Draghici (2016). Rennung et al. (2016) explain that SD is a core component of the engineering process in a i4.0 context, but do not make an explicit connection between SD and industry 4.0. Moreover, their view of SD is not design for service, because SD is seen as a phase of a process in this paper. Ruohomaa and Salminen (2017) mention that in order for i4.0 to work, a multidisciplinary and cooperative business environment is required. Not only organizations, but also universities and government are mentioned in this environment. As a result, cooperation activities and stakeholder management are needed to facilitate this. SD could contribute to this by providing practical activities such as a knowledge sharing workshop and the use of visualization tools to maintain the relationships between different actors and keep them aligned towards the same vision (Costa et al., 2018).

Boeve (2018) adds that within a company SDL is required in order to use i4.0 technologies to its true potential, which can even lead to company growth. With SDL, industry 4.0 technologies will be applied not only to optimize daily operations but also on a broader perspective to produce value for all actors involved (Boeve, 2018). As expected, there is no paper yet addressing what i4.0 delivers to SD, but one can argue that i4.0 technologies could improve activities and characteristics associated with SD. Frank, Dalenogare and Ayala (2019) mention smart working and smart value chain as forms of i4.0 with underlying technologies that could be of use within SD. Smart working provides technologies that improve visualization such as augmented reality and virtual reality (Frank et al., 2019). Using these technologies would make it easier to show different stakeholders the possibilities, which will make co-production easier and will make services more tangible. Smart supply chain

provides digital platforms for both suppliers and customers (Frank et al., 2019). These platforms could be used to communicate with these parties more easily and gain insights from them. In addition, could these platforms serve as places to co-produce value with stakeholders.

Until this moment, Boeves paper (2018) is the only paper that connects SDL and i4.0 with the servitization process together. As a result, this paper aims to close the gap between SD practices and i4.0 technologies in the servitization process. This means that service dominant logic through service design and i4.0 technologies are both considered enablers of the servitization process (Boeve, 2018; Costa et al., 2018). Figure 2 is a visualization of this. Even though both SD and i4.0 stimulate the servitization process equally, a larger emphasize will be put on SD, due to SD being non-existent in current servitization papers with a i4.0 context (Huxtable et al., 2014; Boeve,2018).
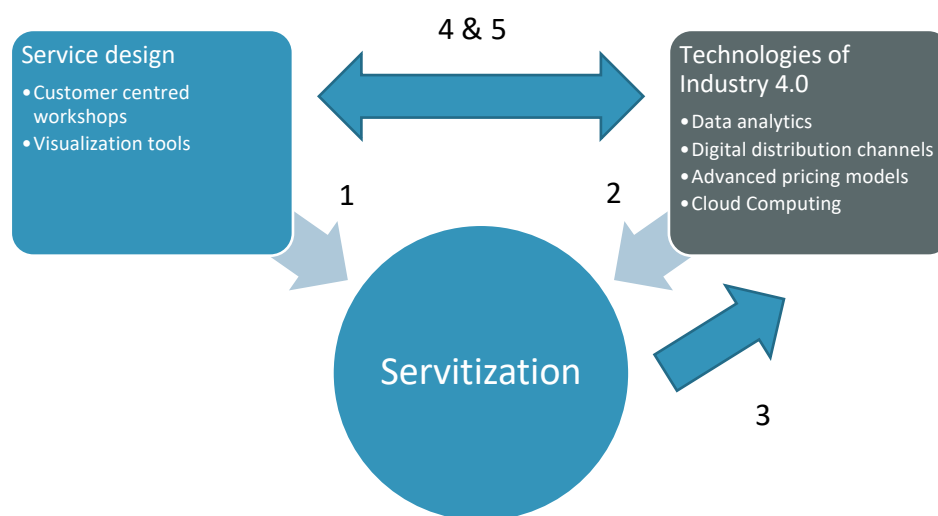

Figure 2 Conceptual model of the phenomena affecting servitization based on Boeve (2018) and Costa et al. (2018)

Based on this conceptual model sub questions are formulated. As no paper mentions the contribution of servitization to SDL or SD, it is assumed that this relation is not present. The formulated sub questions could be answered with the help of the insights from the literature review, which is seen down below.

1. What is the contribution of service design to servitization?
Service design has the ability to create a more value centered mindset through customer centered workshops and visualization tools. Thereby, it contributes to the shift in mindset (from firm centric to value centric) needed for servitization (Kurtmollaiev et al., 2017; Costa et al., 2018). Moreover, with SD practices the organization could overcome the service paradox (Calabretta et al., 2016).

2. What is the contribution of industry 4.0 technologies to servitization?
Industry 4.0 technologies contribute to servitization in providing ways to collect customer data, customization possibilities and pricing based of value (Huxtable & Scheafer, 2016; Boeve, 2018). In this way, i4.0 technologies enable the manufacturer to base its service on customer needs and general value. In addition, gathered data could also find possibilities to improve and innovate services, which will lead to more value production and efficiency (Sniderman et al., 2016; Frank et al., 2019).

3. What influence does servitization have on industry 4.0 technologies?
Services could provide data from customers used in i4.0 technologies (Frank et al., 2019). This data could train systems run on artificial intelligence (Imran et al., 2014). As a result, i4.0 technologies could be even developed further.

4. What influence does service design have on industry 4.0 technologies?

SD provide practical co-production activities needed to maintain relationships with multiple actors in the i4.0 business network (Ruohomaa et al., 2017). As SD is seen as a practical adoption of SDL, SD also assists in providing a more holistic way of thinking that assists companies in using i4.0 technologies in more areas than just optimizing processes (Boeve, 2018). Thereby, SD enables firms to use i4.0 technologies to its full potential.

5. What influence do industry 4.0 technologies have on service design?

I4.0 technologies optimize SD co-production sessions and provide new ways to co-produce. Examples of these technologies are; augmented reality, virtual reality and digital platforms for both supplier and customer (Frank et al., 2019).

3. Research design

3.1 The type of study

The first decision that needs to be made is whether quantitative research or qualitative research is more fitting. According to Verhoeven (2014) quantitative methods make use of numeric information about the unit of analysis, which will be statistically analysed to test hypothesis. Therefore, this way of researching is viewed as objective and assumes that everything can be measured. On the other hand, qualitative methods use people's experiences and the value people give towards a certain object or situation as an indicator to understand reality as a whole (Verhoeven, 2014). As a result, this type of methods is more holistic and about meaning giving. Instead of numeric information, qualitative research analyses everyday language (Verhoeven, 2014). This paper is about the current status of SD for servitization in i4.0. The current status can be identified in both numbers and words. However, the goal of this paper is to create a deeper understanding of how SD is used in the servitization process. Therefore, meaning giving through words would be a more appropriate way to analyse this. Accordingly, qualitative research will be used to answer the research question. The type of qualitative research used in this paper is a basic qualitative study as this paper aims to detect SD implementations in servitization, with no intention to create a theory or to critique the current situation (Merriam, 2009). Next to a qualitative method, a literature review is conducted as well. In this way, there is a good theoretical foundation to answer the research question and it provides useful frameworks that could be of use during the qualitative research.

3.2 Sample selection

When looking for literature, criteria were used to examine the usefulness and value of the literature. First, the literature has to mention or build on one of the main topics; SD, servitization or industry 4.0. Secondly, the literature has to be in English. Third, the more recent papers (max 10 years old) are favoured as the newest developments on the topic are mentioned here. However, some older papers were used as well as these were the first papers on a certain topic and provide a detailed view on the original framework. Examples of old papers are Shostack (1982) on the service blueprint and Vargo & Lush (2004) on service dominant logic. Number of citations were also considered as it shows the reliability of the paper.[1]

In the qualitative research, non-probability sampling is the sampling strategy of choice (Merriam, 2009). In this paper the following non-probability sampling strategy is chosen; purposeful sampling. Within this strategy, the goal is to select information rich cases/persons in which the researcher can learn most from. Therefore, the unit of analysis of this paper is service designers. Service designers work on a regular basis with visualization tools and have a customer centric mindset in order to develop new services or innovate them. These designers are an expert in service design and should be able to tell the current status of service design in the servitization process. Moreover, Calabretta et al. (2016) argue that these design professionals are the enablers of the servitization transition. Service designers could both work within an organization or consultancy firm. For a successful adaption of purposeful sampling there should be selection criteria (Merriam, 2009). The first criterion is that the service designer should be aware of the servitization trend. This criterion is met when for instance, the organization that the service designer works for went through a servitization transition or the service designer worked on a servitization project. The second criterion is that the service designer should be aware of the different technologies of i4.0 such as big data and the internet of things. Again, this could either be because their company incorporated i4.0 technologies or service designers had a project regarding implementing these technologies.

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[1] https://libguides.rug.nl/c.php?g=470628&p=3218102

3.3 Data collection

Regarding the literature review, the main topics (SD, servitization and industry 4.0) were the common thread through researching. Therefore, the researcher started out with using the main topics as keywords. As the research continues more specific key words were used regarding the main topics, such as SDL and PSS. Based on this, it could be concluded that for the literature review an inductive method was used. Another method used is the snowball method, in which new literature is found in the reference lists of the papers that are read.[2] Google Scholar was used to find literature. For the qualitative research, knowledge is gained from service designers. To get access to the knowledge of service designers on the current status of SD for servitization in i4.0, it would make more sense to interview them than to observe them. Therefore, service designers are interviewed to answer the research question. According to Merriam (2009) the number of interviews to conduct depends on the research question and the amount of resources that are available for the study. The time to find interviewees, conduct the interviews and analyse them is 9 weeks (week 16 until week 24). Due to factors as the current situation (Covid pandemic) and a small network it is expected that finding service designers to interview will be difficult. With this in mind, the number of interviews are on the smaller side, but the interviews will be longer to still get enough material to analyse. Based on this, it should be possible to conduct 12 interviews with a duration between 35 minutes to one hour. The next aspect to consider is the type of interview. According to Merriam (2009) there are the following types of interviews; highly structured interviews, semi structured interviews and unstructured interviews. Semi structured interviews would be the most beneficial type, as it both provides support with a premeditated set of questions and flexibility to change the phrasing of questions to match the background of the interviewee (Ponelis, 2015). With this in mind, semi structured interviews are conducted to answer the research question. For semi structured interviews an interview guide should be created with a mix of more and less structured interview questions (Merriam, 2009). The insights obtained from the literature review will be the foundation of this interview guide, which is displayed in Appendix I.

3.4 Data analysis

The literature found for the literature review were read in dept and compared to each other. Based on this, a general view on the topics emerged and the different variants within a topic. For example, the different ways in understanding SD (Kimbell, 2011). This resulted in a good theoretical foundation of the main topics. Consequently, based on the literature a view for each topic could be determined in this study. Moreover, sub questions were formulated that serve as main topics for the interview guide.

To analyse the qualitative data, the Gioia methodology will be used. Within this methodology in-vivo codes are labelled into first order categories. Secondly, the researcher looks for patterns between the different first order concepts. Concepts that share a certain theme will be put together in second order themes. At the end, these second order themes form an aggregate dimension (Gioia, Corley and Hamilton, 2012). In this way, the Gioia method creates a visual pleasing data structure that attributes to answering the research question (Gioia et al., 2013).

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[2] https://www.scribbr.nl/scriptie-structuur/hoe-doe-je-literatuuronderzoek/

4. Interview results

Within this section the results are discussed. In Appendix II the various dimensions with its categories are displayed in a table according to the Gioia method (Gioia et al., 2013). A summary is given of each aggregate dimension, with an illustration how they are related at the end.

4.1 Understanding service design

In the interviews the definitions, characteristics and goals of SD were discussed in order to gain a general understanding of what service design is in practice. As expected the overall definition differed quite a lot across interviews. Eight interviewees stated that giving a single definition of service design is difficult. Six of the interviewees saw service design as the process of designing a service. Service design researcher B added that service design could also be the process of organizational transformation or changing the culture of the organization. Service designer H saw service design as designing the relationship between an organization and its customers, whereas service designer I stated that service design is a human centered business analysis. Three service designers also mentioned that design thinking is the mindset that is required, which will lead to a service design result.

Regarding characteristics, 17 characteristics of service design were mentioned during the interviews. The five most mentioned characteristics will be discussed. These characteristics are displayed at figure 3. First of all, the majority of the service designers stated that within service design there is a great awareness of the bigger picture. According to Service designer G, service designers take the outside world and the context very much into consideration, which means that there is eye for the whole customer journey and even bigger ecosystems. Another characteristic that was mentioned frequently is the customer centered attitude of service design. Service designer A stated that the customer is always put first in service design. By focusing on the customer needs and wishes it is believed that it will lead to valuable solutions for both customer and organization. With this in mind, it is no surprise that the most mentioned characteristic of service design is its iterative design process, which starts from researching/emphasizing with the customer. Many service designers mentioned the importance of first looking into the problem and needs of customers before ideating solutions. Service design C even called it the most important phase. On the other hand, Service designer A thought the continuously testing in the prototyping phase at the end is the most important phase.

Within this whole process, several stakeholders are involved. Therefore, the fourth characteristic of service design is the involvement and education of people. By involving employees of the organization and customers, they both feel heard. Moreover, according to Service designer F the involvement of employees results in gaining more support from within the organization. According to both Service designer B and Service designer G the iterative process of service design is another way of working than organizations are used to. As a result, education and explanation is needed. The organization Service designer E works for takes it to another level and educate an employee to fill in a service design position within his/her organization. The last characteristic is working with people from different disciplines and departments, which is linked to involving people. Both Service designer B and Service designer J stated that they often work in multidisciplinary teams. Service designer C is a supporter of multidisciplinary teams as the combined knowledge, networks and different views will lead to a better result.
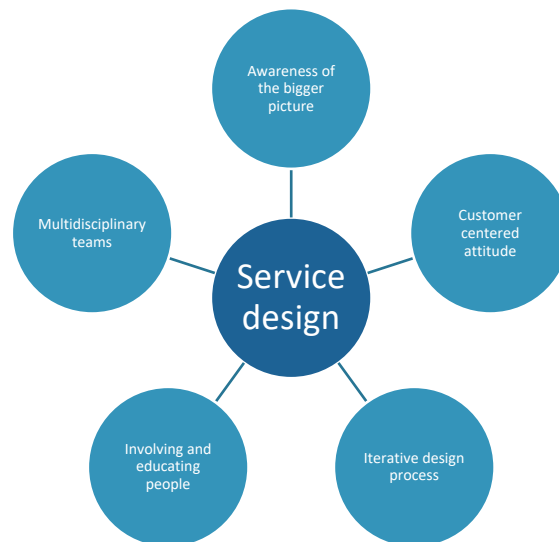
Figure 3 The five most mentioned characteristics of service design

The service design result can contribute to a certain goal of the organization. The most mentioned goal of service design is to optimize processes, which will lead to an improved and consistent overall customer experience. Accordingly, Service designer A described that there should be a good flow between applications in order to create a good experience. Another goal that was mentioned by halve of the interviewees is that service design provides a way to innovate and expand. Service design researcher A explained that the project approach of service design will lead to continuous innovation. The third most mentioned goal is to find a combination of value for customers and the organization. According to Service designer E the desired value for both customers and the organization get translated to a product or value proposition. Service designer F adds that technology is also a factor that needs to be taken into account, when deciding if a solution is valuable for all parties.

Process optimalization

To innovate and expand

Combining customer and organizational value
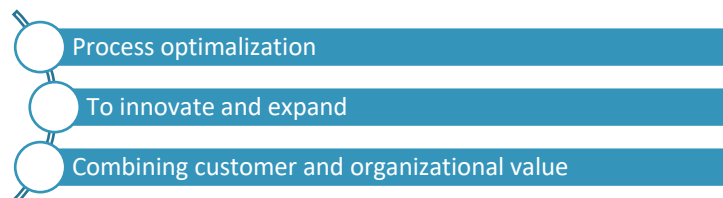
Figure 4 Three most mentioned goals of service design

4.2 Status of service design

The status of service design is determined by; its development, application within organizations and the future of service design. The first topic is the development of service design. Three service designers stated that design in general moved from making tacit things towards being applied for organizational transformation. Thereby, service design is applied in a broader way then just creating services. A reason for this is that due to tools it has become easier for people without a design background to design. Service designer F remarked that although this is a good development regarding creating awareness, the consequence is that design becomes simplified. Moreover, service designer H and service designer I saw that people within the organization with a business background become head of design, due to the lack of design experience their application of service design can be superficial as well.

This links to how service design is applied within an organization. As expected from the "everyone can design" development, three service designers have experienced a rather superficial application

of service design within an organization. Service designer E explained that a lot of organizations in the past held a customer journey workshop with post its and neglected other phases within the design process. As a consequence, this application of service design led to no results/change. According to service designer G this application of service design was the premature phase of service design. This is now changing as it get more recognized that the way of thinking needs to change as well. As a result, nine service designers saw that service design is applied more to facilitate organizational transformation. Accordingly, three service designers stated that service design is applied increasingly within organizations in general, while service designer D and service designer F found it difficult to estimate whether SD is applied more nowadays.

Within organizations, four service designers experienced that service design connects the different layers and departments. This could possibly be because of service designs involving and multidisciplinary characteristics. Overall, four service designers claimed that there is more demand for service design. Similarly, three service designers experienced that within organizations they are more open towards the service design approach. However, for service design to have a lasting impact the design thinking should be in the DNA of the organization. Service designer C explained that after a service design project is finished the organization still needs to implement service design activities. Therefore, a service design project is only the start of it and service design principles should be incorporated in the core of an organization. Several service designers also mentioned that service design can change the mindset within companies, but it costs time. On the other hand, there are also service designers who are not particularly focused on changing an organization. To illustrate, Service designer B and Service designer F state that their role is mainly to inspire the organization and to show the possibilities. The whole organizational transformation should be an initiative of the organization themselves. Accordingly, the answers on the duration of a collaboration between designer and organization were not straight forward. Two service designers stated that it depends on the project, while three other service designers claim that they work with organizations for a long period of time. On the other hand, service designer D only provides an introduction towards service design and not a long-term solution with service design jams.

While those developments and applications of service design are happening at this moment, there is also the future of service design. There were two service designer who spoke about this topic. Service designer E is optimistic about the future and expects that increasingly more service designers will work on the strategic level of organizations. As a consequence, there will be service designer in the board of directors. Service designer J thinks this is also possible, but that there is also a negative consequence of being involved in organizational transformation on a strategic level. According to Service designer J the service designer can become redundant, due to the fact that at some point most organizations will work according to design principles. This will decrease the individual value a service designer brings to an organization. Moreover, service designer J sees that increasingly more business schools are teaching design thinking and thereby taking a component from the design discipline.

Based on the above information, a timeline is created with the different developments discussed in the interviews (Figure 5). At the moment, service design for organizational transformation is the current phase.
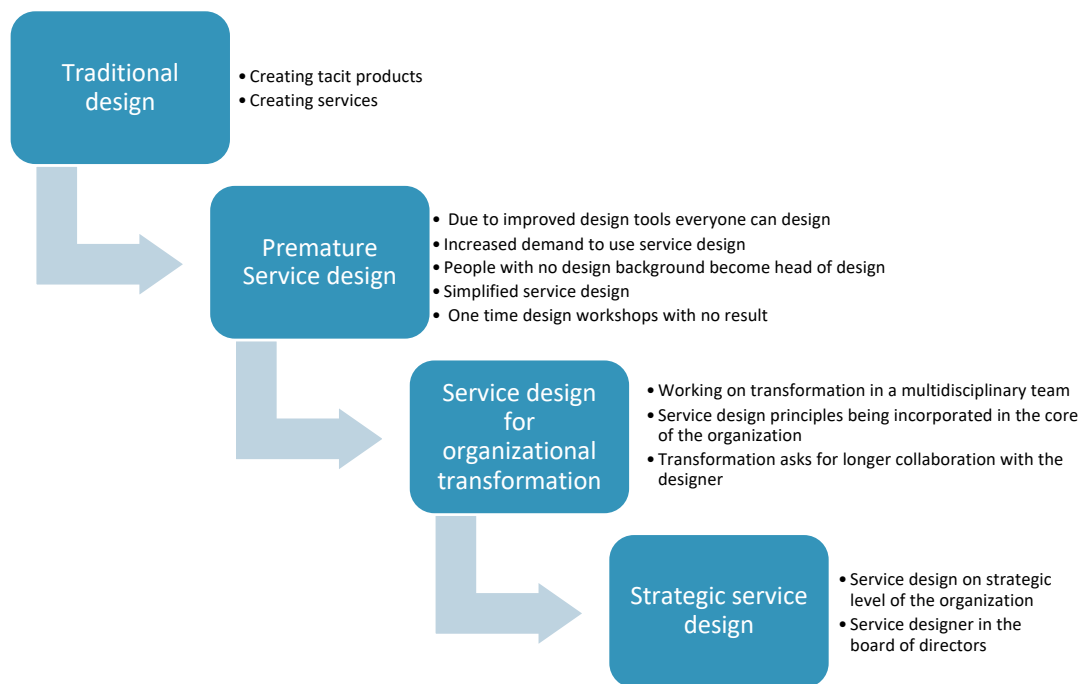
Figure 5 Timeline service design developments according to interviewees

4.3 Difficulties of organizations to apply service design

In order to understand the current situation of service design, also the difficulties of applying service design should be discussed. A summary of the difficulties is given in table … All difficulties mainly have to do with a difference in workings and values between design and business. According to seven interviewees, the first difficulty has to do with service design mainly using qualitative methods. In contrast, halve of the service designers explained that most organizations put great value to quantitative methods. Service designer F added that in order to gain budget for the team hard data is required. For this reason, Service designer J made sure that the qualitative results get verified using quantitative methods, such as surveys. With this, service designer J underlined the importance of triangulation.

Another hinderance is the organizations focus on commercial gain. Service design researcher A explained that due to the current capitalist society, there is a consumerist attitude to create business value out of everything. To illustrate, Service designer H stated that especially digitally oriented companies have the commercial incentive to sell as much and fast as possible, while service design has the customer incentive to help people. On the other hand, Service designer A believed that consumer value and business value go hand in hand.

Then again, this commercial view is also seen in the attitude of obtainable resources and time of the company. Three service designers experienced that some organizations did not want to spend too many resources on the service design project. Accordingly, Service designer C experienced that a company wanted to rush the implementation phase, because it would otherwise cost too much money. On that note, time in general was an issue according to five service designers. Transforming an organization with the use of service design is experienced as a time-consuming process. For example, the organizational transformation projects of service designer E take at least two to three years. According to Service design researcher B the reason for this is that service design is still not well understood within organizations. As a consequence, explaining the service design principles takes a lot of time.

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Another factor that makes the application of service design difficult for organizations is that organizations require to work differently than that they are used to. Four service designers stated that in some companies, especially those with an engineering mindset, there is a larger focus on implementing technology than on the needs of people. In contrast, Service designer E believed that using service design will result into a customer lead company. Thereby, there needs to be a shift in focus from technology to people. In addition, nine interviewees see that a lot of organizations work assumption based. Based on experience, people within the company assume that their target group want a certain product/service without speaking to them. According to Service designer B talking to their customers is for some companies a big step. Another phase that is therefore neglected is the testing phase. Testing is done far too little within organizations according to Service designer C. Based on this, it can be concluded that organizations tend to focus on solutions, which is different from the focus on the problem within service design. Seven interviewees underlined the importance of fully investigating the problem before ideating solutions. In general, the design way of working with the different phases is rather intuitively, which can bring a feeling of uncertainty. Service design researcher B stated that companies need to accept this uncertainty, but it will be an obstacle. Especially because organizations tent to work with tasks and transactions according to four interviewees. As a consequence, three service designers mentioned that organizations find it hard to trust the design process. This could also be a result of not possessing sufficient design expertise inhouse, which is the case according to four service designers. Consequently, Service designer F experienced a kind of split in co-creation sessions as on the one hand involving people is important, but on the other hand do these people not have the skills to design.

	Service design	Traditional organizations
Type of methods	Mainly using qualitative methods	Preferring quantitative methods
Main goal	Creation of customer value	Commercial gain
Focus	Focus on customer needs	Focus on implementing technologies
Way of working	Working intuitively	Working with tasks and transactions
When encountering a problem	Focus on problem	Focus on solution
When creating a new business concept	Interacting with the outside world (Outside-in)	Assumption based (Inside-out)

Tabel 2 Differences between service design and organizations

4.4 Servitization

Before determining the contributions of service design to servitization a general understanding of how servitization is perceived is needed. A starting point is how services are understood in general by the interviewees. In general, three interviewees explain that it is hard to define services. A reason for this could be that services and products go hand in hand (Service designer I). Service designer I explained that products need channels, which can be seen as services and that services need some kind of physical touch point. Thereby, they are connected. Service design researcher B adds that it would not be wise to remove a product or physical touchpoint as these are the enablers of a coherent brand experience.

Similarly, three interviewees described services as not tangible and service design researcher A found services therefore complex. This complexity could also have something to with the scale, as three interviewees stated that whole world is made out of services. Service design researcher A explained that our physical reality connects to human thoughts and needs, which results in organizations providing services to fulfil those needs. From this starting point, it is a logical consequence that

services have multiple customer types that it serves. Three service designers confirmed this. Service designer H used an example of an elevator provider who is also responsible for maintenance. Within this case, there were multiple parties involved who are some kind of customer. To illustrate, there is the project developer who build the building, there is a housing association who sells apartments in that building and the people in the building who use the elevator. Based on this, Service designer H explained that a big difference between selling a product and providing a service is that when selling there is one customer and when providing a service there are multiple customers/users.

This leads to the whole transition from a product-oriented to a service-oriented value proposition called servitization. Within all 12 interviews, only 2 interviewees gave a definition of servitization. According to the 2 service designers, servitization is a customer-inspired process where services are developed around a product to create value. In order to do that, Service designer G explained that different types of services should be evaluated on what fits the company the best. These types of services could be product oriented, such as a maintenance service, but there are also services that could change entire business models and finance models. Service designer C added that most organizations often have a service component and that building this out is also a possibility. However, service designer C also remarked that servitization goes further than a good service concept and there should be a focus on maintaining customer loyalty by being a partner for life.

As a result, according to two interviewees, servitization processes take years. Nonetheless, there is not one precise way how such a change should come about. Service designer F stated that organizational changes should be top-down. On the other hand, Service designer G explained that change does neither come top-down nor bottom-up, but there should be a sponsorship between the different layers of the organization. Consequently, Service designer G tried to involve all effected target groups and make a roadmap regarding servitization. Within this roadmap the organization starts with simple changes, which will be built on in the next step. As a result, service innovation and organizational change will run parallel of each other. Other components that should complement each other in order to become customer oriented are skills of employees and systems. Service designer E illustrated that an organization could have old systems, which undermines the customer experience. Another factor could be the lack of skills of employees. When becoming a service-oriented organization, employees get a more advising role towards the customer, which requires different skills (Service designer E). For this reason, the entire picture including people, systems and products should be taken into account when optimizing the customer experience through servitization. With this in mind, it is no surprise that it is a big step for product providers to become service-oriented, according to three interviewees. Service designer G and Service designer H added that organizations are often not ready for servitization, as they do not have the capabilities or/and have not developed an open mindset.

4.5 Service design contributions to servitization

In the light of mindset, service design can contribute to changing the mindset of the organization. Service designer C explained that by focusing on the customer during the entire service design process, it will create the mindset required to become service-oriented. Service design also contributes to servitization by making the servitization process easier and creating commitment to it. Service design researcher B stated that service design introduces another more creative way of working, which is considered emotional engaging. As a result, service design not only makes it easier to change the mindset but also the behaviour of employees. As mentioned earlier, a characteristic of service design is also to involve and co-create with different stakeholders. Because of this, Service design researcher B claimed that including different people from outside and within the organization creates greater commitment for the servitization process. Furthermore, service designer D added that service design could as well be applied as a tool or strategy to imbed within the entire organization to enable service innovation. All of these contributions are displayed in Figure 6.
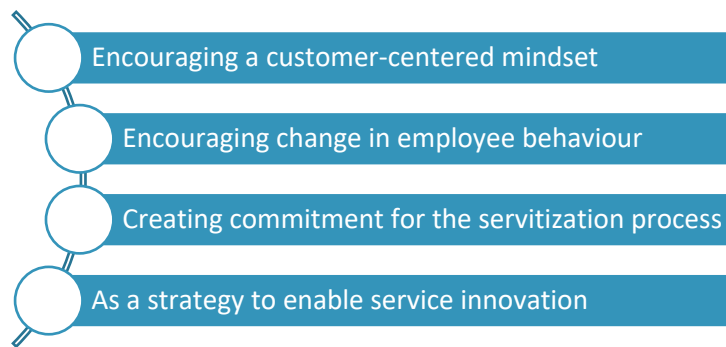
Figure 6 Service design contribution to servitization

When comparing this section to the previous sections, it is seen that this paragraph is much shorter. A reason for this could be that the term servitization is not used a lot in the Dutch language and 10 of the 12 interviews were in Dutch. Therefore, many service designers spoke about organizational transformation and implementing services, but did not used the term servitization. Also, as discussed previously, three service designers found it difficult to define services in relation to products. This could also be a reason why the term servitization was not used a lot by the interviewees.

Another aspect that needs to be taken in account is what kind of companies the interviewees work for. Both of the Service design researchers work for universities in two different countries. They were both familiar with servitization. Most service designers work either for a consultancy firm or design agency. The firms where Service designer E and Service designer G work focus more on the strategic level and thereby the value proposition of an organization. As a result, they were familiar with the transformation towards a services-oriented organization. On the other hand, the firms of Service designer A and Service designer B mainly focuses on finding ways to implement technology with the use of service design, where creating services could be an option. Consequently, a servitization process is not a big part of their work activities. In like manner, the companies of Service designer C, Service designer D, Service design F, Service designer H and Service designer J mainly focus on creating services and showing the possibilities from a service design perspective. As a result, they were not actively involved into servitization processes. Service designer I currently works as a service design lead within a company, but used to work for an university and as freelancer. Service designer I did one servitization project for a car manufacturer. In conclusion, not all service designers experienced how service design could be implemented in the servitization process, as some lacked experience.

4.6 Organizational transformation factors

Even though this was not originally included in the interview guide, many service designers spoke about different organizational transformation factors that also influence organizational transformation processes, such as servitization. All of the factors are mentioned in Figure 7. According to four interviewees, an organization should recognize some kind urgency before an organization is willing to change. Three interviewees argued that technology could create a sense of urgency. Service design researcher B explained that new technologies often challenges organizations, which results into a need for organizational change. Three service designers added that nowadays there is also a certain service standard a customer expect. When this standard is not met, the customer will go to the competitor. However, the service standard and the pace of changing needs might depend on the industry. Service designer B stated that B2C markets develop much faster than B2B markets, as within B2C customer needs develop continuously. As a result, Service designer B would expect a more customer-centered and innovative mindset within the B2C industry.

Furthermore, Service designer E explained that B2B organizations rely heavily on long-term business relationships. As a result, a customer is less likely to switch to the competitor. Although this may be true, Service designer E admitted that things are also slowly changing within B2B. Therefore, Service designer C and Service designer D stated that developments such as servitization and digitalization are relevant for every industry. Also, external factors and bigger ecosystems could create a sense of urgency. Three interviewees mentioned that external changes, such as the arrival of Covid-19, could change the believes of individuals and organizations, which changes the society. Service designer J added that also the whole economy is changing from an experience economy to a purpose economy. Within the purpose economy, organizations broaden their view from focusing only on the customer to focussing on the society. Thereby, topics as sustainability and corporate social responsibility become increasingly important. Four other service designers confirmed this.

Another aspect that can influence organizational transformation is the mindset within an organization. Halve of the interviewees stated that a service design mindset would make an organization more successful. Service designer D explained that when the service design approach is applied seriously it will lead to better results than when using traditional target group and management methods. In addition, three service designers mentioned that everyone within the organization should support the idea and should understand the value proposition. When this is the case, the whole value proposition will circulate throughout the company, which leads to alignment and increased understanding of what everyone is supposed to do (Service designer E). Similarly, Service designer H stated that if there would be no understanding, a value proposition or service idea is doomed to fail. Another mindset which would make organizational transformation difficult is when an organization does not feel the need to change. Four service designers mentioned this. Service designer E explained that an organization has a kind of ego, which leads to a way of thinking that the regular manner of working is fine. As a result, the organization does not feel the need to innovate, while there would be smarter and better solutions according to Service designer F. Service designer H added that some managers do not want to take the risk of failing with a big innovation and would rather implement small changes.

Next to mindset, can the organizational structure also have influence on organizational transformation and implementation of service design. The most mentioned issue is the presence of silos within an organization. According to three service designers, employees and departments lose the ability to learn from each other in a heavily siloed company. As a consequence, it is increasingly difficult to gain an overview of the whole picture covered by the siloed organization. Correspondingly, it will be more difficult to incorporate service design principles according to two service designers. In order to change this, four service designers mentioned that responsibility is needed in order to work across silos on one customer journey. With responsibility, taking responsibility for a certain phase in the customer journey is meant, instead of a certain task (Service designer F). Another organizational structure characteristic that may cause difficulties is hierarchy. Two Service designers mentioned that having lots of layers within the organization will not encourage bottom-up innovation. Moreover, Service designer D stated that these organizations also have the tendency to be bureaucratic and a flatter organization is preferred, due to a more open mindset. With this intention, Service designer J added that a way to get rid of both silos and hierarchy is an organizational transformation where employees from different departments are responsible for a certain product or customer group. In this way, the employees are seen as knowledge suppliers within these different teams to improve both the product and overall customer experience.
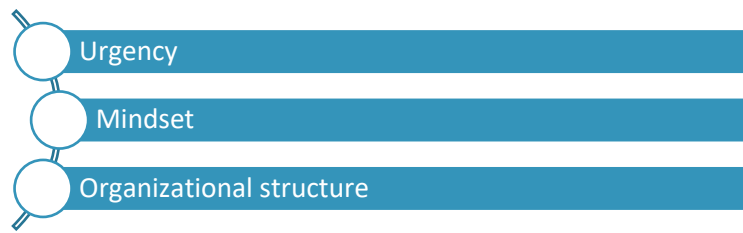
Figure 7 Organizational transformation factors

4.7 Industry 4.0 technologies

As mentioned earlier, the i4.0 technologies can create a sense of urgency needed for organizational change. Within this section these technologies are discussed in more detail. According to three interviewees, the development of technologies becomes increasingly important, which leads to more application of these technologies nowadays. In addition, Service designer F stated that everything digital becomes the norm and that due to the presence of these technologies, customers expect more innovative products. On the other hand, Service designer F also mentioned that industry 4.0 is still not as big as is claimed during conferences as implementing the technologies takes time. I4.0 technologies can also contribute to certain goals. Three service designers stated that implementing these technologies can lead to automation. Service designer D added that these technologies can also be seen as a form of innovation. Service design researcher A explained that technology can be used to control a certain situation and Service designer F claimed that industry 4.0 technologies is a means to solve customer problems.

There are also other benefits regarding the development of industry 4.0 technologies. Two service designers stated that these technologies can improve digital touchpoints in the customer journey. Furthermore, Service design researcher A claimed that technologies have a positive influence on quantitative development. To illustrate, Service designer A saw that, due to these technologies the amount of readable data from digital sources increase. However, monitoring everything and gaining lots of data can lead to privacy issues according to two interviewees. Furthermore, both Service designer D and Service designer F stated that the implementation of technology does not always lead to an improved customer experience, as some target groups are not open for it. Two other service designers confirmed that the needs and demand regarding technology differs per target group. Moreover, in some branches human contact is essential and taking this away with technology would be detrimental. As earlier discussed is the B2B market completely dependable on human contacts and relationships. Service designer D and Service designer F stated that human contact is also important in the healthcare and hospitality industry.

Under those circumstances it is still possible to apply industry 4.0 technologies. To demonstrate, Service designer E implemented technologies within an airline, by outsourcing simple tasks to technology and customers being able to contact employees for more difficult tasks/orders. Consequently, employees should gain the skill to assist in these more difficult cases. Another component that needs to be innovated when applying technologies are work processes. Service designer G explained that this is required, because digitalization makes the processes more transparent and open. As a result, both benefits for the customer and the components where the company falls short are visible. Service designer I added that when implementing technologies, there should be a focus on the horizontal customer- and employee journeys. As a result, organizations need to work horizontally instead of vertically, which is difficult, especially for older organizations.

4.8 Manufacturing industry

As I4.0 is about the third industrial revolution in the manufacturing industry, also this industry is taken into account. Bothe Service designer F and Service designer H claimed that it is hard to

innovate within this industry. According to Service designer F there is risk aversion in the manufacturing industry, because when the production stands still it will cost lots of money. As a result, Service designer H saw that those companies take more small incremental changes than big innovations. Service designer F explained that the nature of innovations in this industry are in general more focused on the technical level with the goal to increase production numbers, safety or prevent malfunctions. In like manner, Service designer J stated that manufacturers also focus on product optimization, where the product gets more technical advanced. Consequently, the overall experience of the customer gets neglected. While, according to three service designers, becoming customer centered is required, especially at product-driven companies, in order to survive the current market.

On the other hand, Service designer G claimed that increasingly more manufacturers realize that just delivering a product is not enough, which leads to a larger emphasis on delivering overall value. As a result, Service designer G experienced servitization processes within the manufacturing industry quite often. With a lot of respect and understanding of which standpoint they come from, the company of Service designer G is able to change the manufacturers mindset and integrate services into their business. Within latter aspect a service design approach is taken, which results in a service portfolio for the manufacturer. Service designer D also saw servitization as a way to incorporate the principles of the purpose economy within the manufacturing industry. To illustrate, by implementing the product as a service concept, the manufacturer stays the owner of the product. As a consequence, the manufacturer takes responsibility for its product and the waste of the product, which could drive sustainable and circular initiatives.

4.9 Servitization and industry 4.0 technologies

According to both Service design researchers, I4.0 technologies are the driver of servitization. Researcher B explained that the servitization process is a transformation triggered by digitalization. However, Service designer A added that a design thinking mindset is required in order to implement I4.0 technologies in the servitization process. An argument for this is that there are different technologies available, but people still need to interpret the data of those technologies into suitable solutions for both the customer and the organization. In like manner, Service designer E underlined that the role of technologies depend on the purpose it is given in the service innovation.

Another interesting finding is that some service designers mention the closeness of servitization and digitalization. According to Service designer G different developments, such as servitization, digitalization and sustainability are all in line with each other as it will add value for the customer. Especially servitization and digitalization are closely related, due to the presence of product-service systems, according to Service design researcher B and Service designer I. Service designer D stated that another way to incorporate both is by developing a platform. Service designer I took it a step further and claimed that servitization is the same as digitalization, due to services always needing an interface or screen for customers to interact with.

4.10 Service design and industry 4.0 technologies

Based on the interviews, both service design and I4.0 technologies contribute to each other (See figure 8). As stated earlier, Service designer A thought a design thinking mindset is required before implementing technologies in services. Accordingly, six interviewees mentioned that by using service design principles and having a design thinking mindset contribute to finding the best use of a technology within an organization or service. In other words, only those technologies get implemented that solve the problem or improves the overall customer experience, due to service designs customer centric view. As a result, four interviewees stated that service design brings a human perspective to technology. Moreover, by focussing on customers and employees, service design is able to only make the needed information visible, which makes certain technologies easier to understand. In general, Service designer A added that due to the mindset of service design,

technologies are implemented in a broader way as service design puts things in a bigger context than just process optimization.

As mentioned before, I4.0 technologies could also contribute to service design. Two interviewees believed that technologies improve visual tools used in service design. Thereby, technology reinforces the service design process according to Service designer C. Next to this, digital touchpoints can also be improved by technology. Service designer A mentioned the website as an example of a digital touchpoint. By improving tools and touchpoints, Service designer C concluded that technology can contribute to service design, but cannot replace the whole process and entirety of service design. As a result, three service designers see industry 4.0 technologies as an enabler and inspiration for service design ideas.
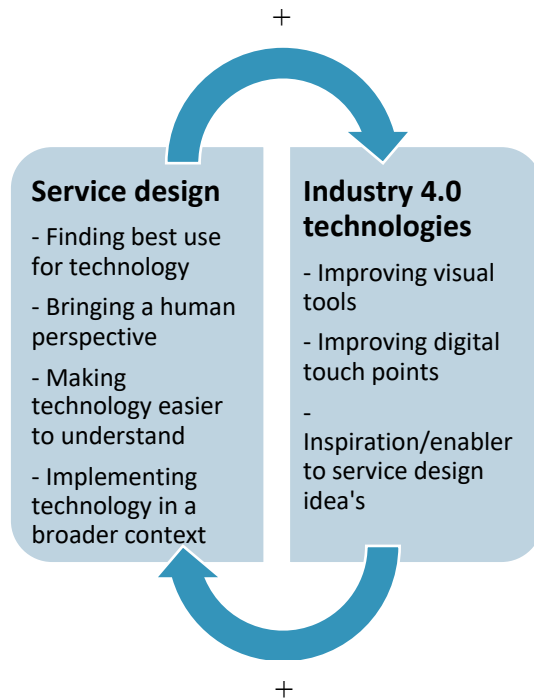
Figure 8 Service design and Industry 4.0 technologies contributing to each other

4.11 Relationships between aggregate dimensions

Based on the descriptions of each dimension above, a figure is created that connects the different dimensions.
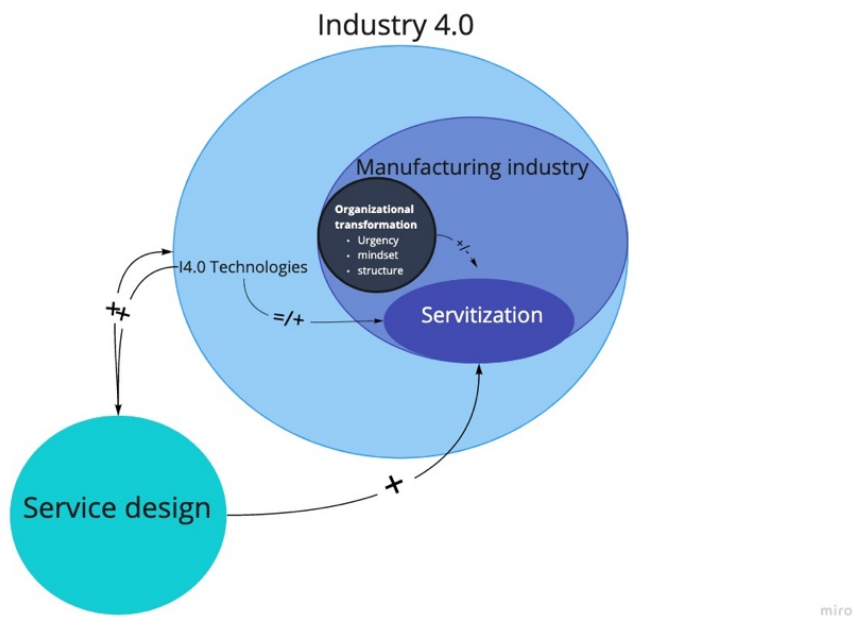
Figure 9 Relationships between aggregate dimensions

Industry 4.0 is a big circle that both connects I4.0 technologies and the manufacturing industry. As mentioned before, this paper focuses on servitization within the manufacturing industry, which is the reason servitization is within the manufacturing circle. Organizational transformation factors could be either a positive or a negative influence depending on; if there is a feeling of urgency, if there is an innovative mindset present within the company and if the organization has a favourable structure (flat, without silo's). Another arrow pointing towards servitization are the I4.0 technologies. As earlier stated, interviewees saw either technologies as a positive driver of servitization or digitalization and servitization as the same thing. As service design can also be applied outside industry 4.0 it is a separate circle. Between service design and industry 4.0 technologies there are positive arrows both way, as both entities have a positive influence on each other. Next to this, there is a positive arrow from service design towards servitization, as service design makes the entire servitization process easier by creating commitment and promoting a customer-centered mindset.

5. Conclusion and discussion

5.1 Conclusion

This paper aims to sketch the current status of service design within the servitization process of manufacturers, while also taking I4.0 technologies into account. Until this day, there is no academic paper that considers both the role of SD and I4.0 technologies into the servitization process. Although this may be true, Boeve (2018) explored the possibilities of service dominant logic and technologies in his working paper. According to Wetter-Edman et al. (2014) SDL is the theoretical foundation of service design. By using Boeves paper (2018) as an inspiration, a literature review and 12 interviews with service design experts are conducted to investigate the status of both SD and I4.0 technologies in servitization. In this way, both the theoretical implications of both phenomena and the practical implications are taken into account, while determining the status of service design. Within this paper there is a larger focus on service design than i4.0 technologies, as there are currently more papers about the relation between technology and servitization (Lee et al., 2014; Huxtable & Scheafer, 2016; Frank et al., 2019).

Theoretically, can service design transform the mindset of an organization to a more customer-centered one needed for servitization (Kurtmollaiev et al., 2017; Costa et al., 2018). This is confirmed by some of the interviewees. Service design researcher B added that due to service designs co-creative nature, service design can create more commitment to servitization. This is in line with Calabretta et al. who claim that SD could contribute to overcome the service paradox by creating commitment and reducing uncertainty. In like manner, the results of the relationship between i4.0 technologies and servitization were relatively similar in both analysis. In the literature it was stated that technology could contribute to servitization by providing ways for customization possibilities and improve services by data (Huxtable & Scheafer, 2016; Sniderman et al., 2016; Boeve, 2018; Frank et al., 2019). Similarly, in the interviews i4.0 technologies were seen as a driver for servitization. However, some interviewees admitted that servitization and digitalization were close related, as both developments create value for the customer. Service designer I even stated that servitization and digitalization are the same thing, as services need interfaces/screens to interact with. This is in contrast with the view of Frank et al. (2019), who see servitization and digitalization as two separated trends. On the other hand, Imram et al. (2014) claim that service could contribute to technology, as the data gained form services could be used to train artificial intelligence. However, this is not confirmed by the interviewees. Another aspect that was added by the interviewees that can influence the servitization process as well are the organizational transformation factors; urgency, organizational mindset and structure.

Of course, service design and i4.0 technologies also have an effect on each other. Boeve (2018) argues that due to the holistic perspective of service design, the possibilities of technologies are considered in a bigger context. Service designer A confirms this and even states that in order to find the best use of technology, a design thinking mindset is required. Halve of the interviewees agree with this statement. Some interviewees also argue that service design brings a human perspective to i4.0 technologies. Consequently, the customer centered view within service design helps making technology easier for users by only showing them the needed information/functions. I4.0 technologies on the other hand improve service design tools and thereby reinforcing the service design process (Service designer C). Moreover, digital touchpoints, such as the website, get improved as well. Based on this, three service designers stated that i4.0 technologies are an enabler or inspiration for service design concepts, but cannot replace the whole service design process.

Next to this theoretical section of service design and industry 4.0 technology, the usage of service design in practise is investigated as well, through the interviews. In order to make sense of the stories of the interviewed service design experts a timeline is made based on their service design

experiences and the time of those experiences (Figure 5). First of all, some interviewees talked about design being traditionally the creation of products and services. Nowadays, service design is used more often in organizational transformation. Organizations were enthusiastic and organized service design workshops in the premature service design phase. According to Service designer F service design became simplified, as by only organizing the workshops, the other phases within the service design process get neglected. As a consequence, these workshops did not reach the aimed result. Service designer G experienced that more servitization processes take place by manufacturers nowadays. Here service design is used to investigate what type of service would fit both the organization and customer. The implementation of those services and thereby the transformation of the organization takes a lot of time. As a result, the collaboration with a service designer will be for a longer period of time (Service designer E and Service designer G). This is in line with the work of Junginger and Sangiorgi (2009) describing the moment when service design has the most impact within organizations. However, this might not always be the case as some service designers do not aim to transform the organization, but only create services and inspire them (Service designer B and Service designer F).

As industry 4.0 is the third revolution in the manufacturing industry, this industry will be briefly discussed as well. In general, Service designer F stated that manufacturers focus on more technical goals than goals in regard to customer experience. Examples of these technical goals are; increase in production numbers, safety or prevent malfunctions. Thereby, this is in line with the key objectives of industry 4.0 according to Sniderman et al. (2016). Additionally, Service designer F mentioned the risk aversion within the manufacturing industry, as there is a lot of money involved. As a consequence, Service designer H experienced that these organizations prefer small incremental changes over big innovations. Under those circumstances, it is hard to innovate within the manufacturing industry. However, as earlier mentioned, Service designer G claimed that more and more manufacturers are starting to focus the overall value they deliver. Thereby, bigger transformations, such as a servitization process are inevitable.

In the long run, there may be a point in time were most organizations have implemented the service design way of working and its holistic view on value creation. Service designer E expected that the future of service design will be on the strategic level with a service designer on the board of directors. At the same time, Service designer I feared that due to organizations and business schools adopting design thinking the individual value of a designer becomes in danger.

Based on both the theoretical and practical implementations, it can be concluded that using service design in the servitization process has all kinds of advantages, but that it is only used correctly very recently. Reasons for this are the implementations of only service design workshops, instead of the whole design process and the risk aversion within the manufacturing industry. Although this is slowly changing. Thereby, all the service design and servitization possibilities described in literature this century are only recently adopted by organizations (Service designer G). As a result, the last step of Boeves (2018) rather innovative roadmap of servitization success might become reality in the future, but not any time soon, as most manufactures are currently still in the first phase (value-added manufacturer). In summary, the status of service design in the servitization process is that it is currently applied increasingly to facilitate organizational change needed for servitization. Even though this happened very recently. Thereby, service design has a more facilitative role in changing the organizational mindset and creates commitment, which makes the servitization process easier. The service design mindset also helps to implement i4.0 technologies in a broader context and only applies those technologies that improve the overall customer experience. As a result, i4.0 technologies are an inspiration and bring possibilities in regard to servitization, but a service design mindset is needed to truly benefit from them.

5.2 Practical implications

This last insight is also very useful for organizations wanting to implement technologies. In other words, organizations should focus on implementing service design principles and its mindset within the organization before applying technology. This would prevent issues, such as the target group not being open to use this technology or employees not having the capabilities to interpret certain data. Thereby, service design brings a human factor to i4.0 technologies. In addition, do organizational transformation factors also play an important role when changing an organization. Therefore, the company should recognise some kind of urgency. Several factors that could feed this sense of urgency are; constantly changing customer needs, the presence of service standards among the target group, innovating competitors and new possibilities due to technology. Next to this, on the topic of mindset, organizations should step away from their ego and should look for ways to improve. When this is not sufficiently done, again, the organization will not see the urgency to change and an innovation is doomed to fail. The last organizational transformation factor is more on the practical side, which is the organizational structure. In order to see the bigger picture of the customer journey and to anticipate faster on change a flat organizational structure with no silo's is desired. In reality, older organizations have a more siloed and hierarchical structure. This could be changed by seeing the different silo's as expertise's and putting different expertise's in one team responsible for one product or type of customer. In this way, employees will take more responsibility for the overall customer journey, instead of a certain task. By taking all these factors into account, insights from this paper contribute to an increased success rate when undergoing organizational transformations, such as servitization and when implementing i4.0 technologies.

5.3 Limitations and directions for future research

Nevertheless, this paper has also some limitations. First of all, this is a qualitative study. According to Verhoeven (2014), some researchers claim that qualitative results are not trustworthy and precise. Thereby, this study has the same issue as service design with its mainly qualitative methods (Holmlid, 2007). As a solution, Service designer J mentioned that within service design projects, the qualitative results are tested using quantitative approaches, such as surveys. Thereby, the first direction for future research is to test/validate the result of this study by some quantitative analysis. The next limitation is the unit of analysis. Within this study, service design experts were interviewed to determine the current state of service design. This choice was mainly, because of limited time. However, by only speaking to these experts there may be a biased view on the amount of application of service design. It could be that service design is not as often applied as it could be, but as service design experts conduct service design projects they only see the times that service design is applied. Therefore, another direction for future research could be to conduct interviews with manufacturers as well to get a clearer view on how often service design is applied within servitization processes in that industry. Next to these directions for future research created by the limitations of this study, there are also some other interesting directions for future research. Several interviewees mentioned the role of service design in organizations that want to adopt the principles of the purpose economy. Exploring this path further might lead to new insights in the application of service design in transforming organizations. Furthermore, two interviewees spoke about the future of service design. One interviewee was very optimistic about the future and assumed that service designers would become in the board of directors. On the other hand, Service designer I feared that by organizations and business schools becoming familiar with design thinking, the individual value of the designer becomes in danger. Thereby, researching the possible future of service design might be interesting as well. Especially when the latter story is true. Because when this is the case, there need to be development in the design field that would result in a new value proposition for the service designers themselves. In conclusion, the insights from this paper created some interesting research possibilities that can further develop the service design field.

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Interview guide – Service designers

Introduction
Good morning/afternoon, thank you for your time.

My name is Melissa Foss and I am currently writing my Business Administration master thesis at the University of Twente. This master thesis aims to discover the current status of service design in servitization; that is, transforming a company from product centered to service- and value centered. Next to service design are different technologies such as IoT and big data considered as well. Therefore, these industry 4.0 technologies will be briefly discussed as well.

To gain knowledge on service design and technologies within a service-oriented business, different service design experts, such as yourself will be interviewed. The interview will take 40-50 minutes. The audio of the interview will be recorded. You can withdraw at any point of the interview. When transcribing the interview all personal information will be anonymized and with private matters you can be as specific as you find comfortable. Quotes from the interview can be used as research outputs. The anonymized transcripts can be used for future research purposes, but will not be used for commercial use.

Do you (NAME) consent to be interviewed under these conditions?

Topics

1. Service design
1.1 Definition
First of all, we will discuss your view on service design.

What is service design?
- Service dominant logic (co-creation)

Key characteristics
- Visual tools
- Value co-production
- Holistic

How does service design distinguish itself from other design disciplines such as interaction design?
- Explain
- Less analytical
- SD focusing on the entire service

What benefits does service design bring to the project?
- Gaining a more value centered mindset
- Making services tangible

What are the main problems/limitations of service design?
- Yes/no explain

Does the service design field develop over time?
- Yes/no explain

- Expanding or decreasing interest?

2. Servitization

A current trend for manufacturers is servitization, in which manufacturers transform their business model from product centered towards service oriented. An example of this is the product-service system, but it could also go further than that by completely abandoning the product by focussing on experience management.

2.1 Opinion on servitization

What is your view on servitization?
- Good/bad explain
- Income/profit
- Focus on value creation
- More sustainable

Do you have any experience in servitization?
- If not ask expectation
- Use of service design
- B2B or B2C
- Single service or entire company

Which issues occured when implementing your servitization projects?
- Service paradox

2.2 Servitization and service design

Could service design in your opinion minimise these issues?
- Yes/no explain
- Using visual tools
- Gaining a customer centered mindset

(*When saying yes to previous question*)
How should a company adopt service design?
- Hiring somebody
- Consultant
- What activities

To your knowledge, are service design principles currently used during the servitization process?
- Why do you think that is?

3. Industry 4.0 technologies

Another emerging trend is the incorporation of industry 4.0 technologies in the entire business model. For examples, smart manufacturing machines becoming key resources and the digitalization of customer contact.

3.1 i4.0 technologies and servitization

Do you believe that these technologies could contribute to servitization?

- yes/no explain
- How?
- Data analytics
- Digital distribution channels
- Advanced pricing model
- Customization

Could servitization contribute to the development of these technologies?
- Yes/no explain
- Services and data

3.2 i4.0 technolgies and service design
Is there a way in which service design could contribute to industry 4.0 technologies?
- Yes/no explain
- Open mindset to use technology to full potential

And the other way around, do i4.0 technologies have a positive influence on service design in your opinion?
- Yes/no explain
- Visualization tools
- Co-production/customization possibilities

Ending
Thank you for the information, I have gained sufficient knowledge on service design and its implementations to this point.
Do you have any questions for me?
If you may have any questions in the future you can always contact me. Thank you for this interview and I wish you a nice day.

Appendix II

1st order concepts	2nd order themes	Aggregate dimension
• One definition of service design is impossible • The process of designing a service • The process of organizational transformation or changing the culture within an organization • Designing the relationship between organizations and its customers • Human centered business analysis • Design thinking is the mindset needed to use service design and service design is the result	Definition	Understanding service design
• Aware of the bigger picture • Holistic approach • Customer centricity • Focus on value creation • Can be explorative or solving problems • Outside-in approach • co-creation with stakeholders • multidisciplinarity • Simplifying things • Critical view • double diamond design process • Involving and educating people • Strategy scope • Human perspective • Accessible • Learning by doing • Making things tangible/visual	Characteristics	
• Optimizing processes for a better and consistant user experience • Finding a valuable solution for the customer that both fits the organization and the technology	Goals	

• Finding the combination of customer value and value for the organization • learning how to work differently • Service design as a way to differenciate yourself • Service design to innovate and expand • Service design as a way to deal with organizational change • Using services design to improve/create services to become future proof • Service design creating a place to put all information • Service design as a driver to change society • Service design to create behavioural change needed for a sustainable world	40	
• service design has developed • Broader application • Design moves from tacit products to organizational transformations • Not much has changed, except for extra tools • Service design is getting commercialized and simplified • Due to tools and models, everyone can design • Greater role for service design in ecosystem innovation • Recently design and brand became closer together • Service design is now more associated with digital transformations and efficiency • Nowadays the process is more important than creating things • Designing services based on deeper values of customers	Development service design	Status of service design

• Managers without design experience become head of service design		
• Increasingly more used in organizational transformation • Only doing a design/journey workshop, with no results • Service design's role gets expanded by also assisting in implementation • More and more companies are using service design • Difficult to estimate if organizations use service design for organizational tranformation • Both young and older organizations use service design • At this moment not many organizations work according to service design theory • Makes connections between different layers of the organization • Collaborating with a service designer to enable change • Using a linear design process is not possible anymore • There needs to be a mindset shift within companies in order to use service design • In smaller- and family owned companies they tend to work with intuition instead of an methodological approach as service design	Service design within organizations	
• Nowadays more demand for the service design mindset • Companies are more open towards the service design method	Service design demand	
• Contact after project depends	Duration Collaboration	

• Via a contact person we stay updated with the organization and the project • Working with organizations for a longer period of time • Service design jams/workshops are an introduction of service design and not a structural solution • Instead of projects, use programs as building blocks for an organizational transition	42	
• Instead of changing behaviour, showing the possibilities • By inspiring them, organizations continue using the service design methods • Biggest impact is that organizations start listening to their customers • In order for service design to have impact, service design should be in the DNA of the company • Impact by training people within the organization • The impact of service design within an organization depends on which techniques are used • Service design can change the way of thinking within an organization	Impact service design	
• Service designers in every board • By promoting service design and let organizations work according to its principles, could lead to the designer being redundant	Service design in the future	
• Service design mainly using qualitative methods	Qualitative difficulties	Difficulties of organizations to apply service design

• After doing qualitative research, verifying it with quantitative data • Organizations want hard/quantitative data • Hard to generalize qualitative data	43	
• An organization is convinced when a service design solution fits into the goals of the company and leads to/ saves money • Businesses want commercial gain	Commercial gain	
• When applying service design in transforming a company it takes a lot of time • Educating people on design thinking methods is a time consuming process • Co-creating not always practical as it takes time and money • Organizations are not willing to spend too many resources on a service design project • External designer/consultant is expensive • Coming to a good design takes time	Takes a lot of time and resources	
• Designers work intuitively with uncertainty involved • Hard to understand for some organizations • Greater focus on technology than people • Focus on the problem, before looking into solutions • Organizations work with tasks and transactions • Organizations work based on assumptions without testing it in the real world • Organizations think in solutions • Organizations tend to react on situations instead of anticipation	Other way of working	

• Becoming a customer driven company requires another way of working		
• No successful example on organizational transformation through service design • Lot of convincing needed before key stakeholders join • People within an organization do not have the skills to use design methods • Some organizations do not see the neccesity of testing phase • Some companies have a hard time trusting the service design process • Some organizations do not see the what service design adds	Doubts on the effect of service design	
• Multiple persona's who receive the service • Problem with defining services • Attempt to build a performance to satisfy a need • Same as product, but spread over time • Not tangible • Everything that takes place in the relationship between an organization and its customers • World is made of services • Service framework being the driver of tacit things • Interaction between actors and agents • Services cost money • Services have higher margins than products • Without purpose/deeper value, services can become flat	Understanding of services	Servitization
• Services and products go hand in hand • Products and services are equally important • Products provide a coherent brand experience	Services need tangible products/touch points	

• Services need physical qualities too, such as touchpoints		
• Within servitization, the already excisting service componant is build further • Servitization goes deeper than a good service concept • Servitization is a customer-inspired process where services are developed around a product to create value • Within servitization, you look what type of service (product oriented, business model oriented etc.) fits the organization	Understanding of servitization	
• The process takes years • Should be top-down • Not top-down and also not bottom-up, but with sponsorship between the two • Lead users give input for servitization process • The servitization process as a roadmap by starting with simple changes first and building on them	The servitization process	
• Culture change required, as employees get a more advising role towards the customer • To become customer centric, the skills of employees and the quality of systems should match/complement each other • Let service innovation and organizational change run parallel • Servitization asks for a different view in opportunities and innovation arise	Servitization within an organization	
• For product providers, moving towards services is a big step • Often, organizations are not ready for servitization	Difficulties regarding servitization	

• Companies find it a challenge how to be service-oriented • Difficulties of the transition to service depends on the organization	46	
• Service design contributes to servitization by changing the mindset • Moving the attention from a technological product towards a service componant	Mindset	service design contributions to servitization
• Achieving behavioral changes in making it easier to adopt new processes • Service design's co-creative nature creates commitment for the servitization process • Service design makes the servitization process easier	Making it easier and create commitment	
• Service design is a tool that enables service innovation • Service design as a renewal or innovation strategy	As a tool/ strategy	
• Technologies can create a sense of urgency to tranform a company • There needs to be a certain urgency in order for an organization to start a transformation process • Business model under pressure, so looking for new ways to create value • When the expected service level is not met, people go to competitor • Needs and demands change over time rapidly, especially now • One should concider the competitors develop over time as well • It can go wrong when not interacting/focussing on the customer	Urgency	Organizational transformation factors

• Silo's are a real problem, due to not learning from each other • When having a heavy silo'd company, it will be harder to look at the whole picture and use service design principles • Responsibility is needed to work across silo's on one customer journey, needed for service design • A possibility to remove the silo's is to work on a certain product or for a certain customer group with a team with different disciplines • Hierarchy is a disadvantage as there is no chance for bottom-up innovation • Organizational structure is changing within organizations in different industries • By changing the culture, an organization can create a flatter and desired structure • Within a flatter organization is a more open mindset • With hierarchy there is a bigger chance of becoming bureaucratic than efficient • In order to flatten the organization, you need people that you can trust with extra responsibility • Education will help as well to give people more responsibility needed for a flatter organization • As lower rank employees are busy, they don't feel the need to make management decisions in a high hierarchic company • Within larger organizations quantitative / hard data is more important then	Structure	

in smaller companies in order to convince		
• Gaining a service design mindset makes organizations more successful • Some managers do not want to take risks and only want to implement small changes • In industries with similar products they have a more open mindset as both user experience and innovative products are key • Product owners originally from another function often lack the mindset, due to their extensive experience • When it is going well, companies don't feel the need to improve • Everyone within a company should support the idea and should understand the value proposition • Not everyone within a company wants to put a lot of afford in solving the problem • When there is a form of uncertainty, people are more likely to think along actively • When there is a lot of pressure due to being busy, companies "don't have time" to innovate • Vulnerability is needed to critically look on what to improve within an organization • Increasing the operation employees self-esteem so they dare to speak up	Mindset	
• Due to faster change in B2C, they need to be more innovative/adaptive than B2B • Within B2C it is easier to switch to the competitor	Industry	

• Trends like servitization, digitalization and sustainability are relevant for all industries • Having a customer centered/innovative mindset is more often in the B2C market than B2B • B2B relies heavily on long term relationships, so personal contact is important here • Within B2B expectations are slowly getting higher as well • More commercial industries have the money and culture needed to gain a customer centric mindset, which is not present at non-commercial sectors		
• External change is changing believes of individuals and organizations • Organizations react on external change and look if it is valuable for them • Value and purpose economy is upcoming, with a great emphasis on the "why"	Larger ecosystem	
• Servitization as a way for the manufacturing industry to take responsibility for their product and its waste • Seeing services as value would help manufacturing companies • Experiencing servitization processes quite regularly in the manufacturing industry • Especially product-driven companies need to be customer centered in order to survive • Sometimes it takes a while before manufacturers realize that a customer is buying more than a product	Manufacturing industry and servitization	Manufacturering industry

• Creating service portefolio's with service design	Service design within the manufacturing industry	
• Sourcing locally to become more sustainable • Shifting from ambition of growth to ambition of improvement to create social impact • The manufacturing industry can save a lot of money with smarter solutions • Manufacturers should focus more on what the actual problem is	Other opportunities for the manufacturing industry	
• In the manufacturing industry often the easy but bad choices are made regarding social impact • Not easy to innovate in the manufacturing industry, due to the perception of change being scary as there is a risk • Within the manufacturing industry hard financial data is far more important than general experience, as this gives certainty • Within the manufacturing industry it is all about production numbers, the prevention of malfunctions and safety • Manufacturers think in technical solutions and not so much from a customer centric perspective • When succeeding with the current budgets, manufacturers don't see urgency to change • Manufacturers realizing that just delivering a product is not enough, larger focus on value • Changing the mindset of a manufacturer by understanding where	Situation and mindset of the manufacturing industry	

• they are coming from and step in at their level • At this moment manufacturers only think about product optimalization and not the overall value the optimization has for the end user		
• Prototypes are more often digital • Digitalization skyrocketed this past year • Everything digital becoming the norm • Because of digitalization, customers expect more innovative products • Industry 4.0 is not as big as trade fairs claim it to be	Important development	Industry 4.0 technologies
• Automation • Being a form of innovation • Using technology to control the situation • Industry 4.0 is just a means to solve customer problems	Goals of using these technologies	
• Needs and wishes regarding technology differs between different target groups • A technological solution should be sustainable • When digitalizing an organization, employees need to learn new skills • technology assists in simple tasks, but complex matters asks for human contact • Technology implementation requires the reframing of all work processes • With digitalization you have to evaluate your role in value creation • Digitalization requires working horizontally, instead of vertically • With technology and data, sometimes less is	Conditions and requirements regarding technology	

• more to make it understandable		
• Having a positive influence on quantitative development • Improves digital touch point in the customer journey • Can improve the readable data from digital touchpoints	Pro's regarding 4.0 technologies	
• Privacy issues, due to monitoring everything • Not every digital innovation leads to an improved customer experience • Can limit personal human contact, which can be a missed opportunity	Con's regarding 4.0 technologies	
• Due to product-service systems, digitalization and servitization are very close to each other • A platform is an example of incorporating both technologies and servitization • Servitization is the same as digitalization • Customer centricity, digitalization and sustainable innovation are all in line with each other	Servitization and digitalization are very close related	Servitization and industry 4.0 technologies
• Technology is driver of servitization • Technology can contribute to servitization, but a design thinking mindset is needed first • Role that technology plays within servitization depends on the purpose that you give it within your service experience	Technologies contribute to servitization	
• Service design can help in finding the best use of technologies • Makes technology easier to understand by simplifying it for better experience	Service design contributes to implementing technologies	Service design and industry 4.0 technologies

• Because of the design thinking mindset technologies are implemented in a broader way • Service design adds a human touch to technology • Service design contributes to digitization and digital optimization	53	
• Technology improves visualization tools • Technology improves different digital touch points in the customer journey • Technologies contribute to the service design process, but cannot replace it • Development in technologies lead to opportunities regarding experience	Technology contributes to service design	
• Technologies as inspiration/enabeler for service design idea's • You cannot do service design without taking digitalization into account	Role technology to service design	

1. Understanding service design

1.1 Definition
One definition of service design is impossible
I: Could you explain your few words, you find what you think is service design definition.
RA: is like asking, what is the nature of God. So it's almost impossible. RA.1

I was saying that getting a definition design is almost impossible. I think if you search literature you could find a lot 1000. RA.2

Yeah, so it's again, it's also difficult for me to define as is one thing RB.1

According to me there is even a definition that says if you ask 10 people you will get 11 different definitions, according to me it was once written that way and that is correct, SDD.1

I thought you were going to ask that question. It is indeed a difficult question because many people give a different answer. SDE.1

There are many definitions of service design, SDF.3

Because for me, service design is very broad. SDG.1

Yes, of course there is a reason why that is not certain. SDH.1

So there is no definition of service design, SDH.7

The process of designing a service
because I look at it as it basically as a process where it can be just. It can be a process you can look at it as a process can be used for different purposes, we can be used for the purpose of actually designing a service or for the nominal purpose. RB.2

Okay, I see service design as designing a service. So, actually what the word says. SDB1

yes, as far as I'm concerned, service design is a methodology, so an approach, actually a process that contributes to the creation of more customer-oriented services or products and therefore where you start from the experience world and thus actually through the wishes and needs of the customer comes to better services, better products. SDD.2

but really it's just the design process applied to service delivery. SDF.4

So in all those years not much has changed, except for a few extra tools here and there, but in fact it is the design of a product or service. SDF.7

Because if you put it very simply, service design is designing services. But in presentations I often say that we were once commissioned to design a service. That's actually a bit of a paradox. SDH.2

We're even at a point where I may not always identify with service design, where it's going. Which means I'd rather say we're a design agency and we're in the business of designing services. SDH.5

Yes service design is, in my head it is a collection of techniques to eventually design a service SDJ.2

The process of organizational transformation or changing the culture within an organization
It's also a process that can be used for organizational transformation or for changing that for changing the culture the way of doing, and a way of acting of organizations. So, at the core of my view on service design there's a process view you know a set of steps and practices. RB.3

Designing the relationship between organizations and its customers
just a definition for you, designing is the relationship between organizations and its customers. That's what service design is. SDH.8

The end thing and that's it. In a service it is about the relationship. So everything that takes place in time. SDH.48

I think you will come across that in more conversations, and also in earlier ones, we don't use the word much in service design anymore. But when we started it was holistic approach to service, so in my view that's the whole relationship. That's in all these things. SDH.71

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Human centered business analysis

As a service design, I see service design a bit like human centered business analysis. SDI.1

Design thinking is the mindset needed to use service design and service design is the result

It is kind of the same. So, design thinking is the mindset and by implementing it you can implement service design. So, via the design thinking mindset, if you gained that you can implement service design. Therefore service design is the final delivery of products or services. SDA.4

I think every company is open to it, but not every company understands what it is. And that they find it difficult to say, it is very much about a kind of mindset shift. SDE.16

I: So more like design thinking, but specifically on services.
SDF: Is the same. SDF.6

1.2 Characteristics
Aware of the bigger picture

As a service designer, you are part of the bigger picture SDA.1

Certainly, because service design is more on a strategy perspective or the scope of the service or the proposition that you deliver. SDB.12

That is a bit of a board, but what service design does, it works across the board, so it actually looks at what do all those 5/7 people make, what kind of experience do they create together and how can we do that even better going to make. So I think, I really see a service designer as an advisory role about knowledge that is there that they do not see. SDE.77

It's much more holistic. That is also the way in which you can distinguish more and more, because those products, at a certain point when I started there, you saw a website with those products, they were all the same. Such a micro image of the product. We did deliver top quality, but you couldn't show that on a picture like this. So you have to show it somewhere else. So you see that development enormously. You have to rely on that experience and the total picture and not just, it depends a bit on what you design, but you can hardly design a product alone. Not a functional thing. SDF.21

I: No, then you should look more at the bigger picture, you mean...
SDF: Yes, SDF.22

because yes, you can say yes, you saw that with my client, they came up with wonderful solutions, but I kept asking; what does your target audience get from this? How are you going to sell it to your target audience? How do you make them happy with this? While they saw a beautiful technical solution, everyone thinks that's great, right? They especially think that's great, but what's in it for them and how do you market this and who will it land with and what does the overall picture look like? Well, that's the sharpness you bring as a service designer and then of course they struggle and then you also indicate how it can be done or maybe I wouldn't do that anymore, is also possible. SDF.82

Everything helps, everything in the design toolbox helps to make people think differently than in excels, because if you only look at excels, you don't see the whole picture. Unless you can only really think in those numbers, but few people have been given who can keep an overview

of that. Organizing and structuring and visualizing information is also a very important quality of a designer. SDF.88

And what I actually also like about service design is another perspective. That is that you think very multidisciplinary and that you actually think about everything we consume and what we do in our lives and the goals we want to achieve and the interactions we have with organizations in our lives. They are all very multidisciplinary. That is about spatial, and also digitally, and about products and about communication, you name it all. SDG.5

Also notice that I find most customer experience projects I've been involved in much more inside out than outside in. So service designers really have a lot more that user perspective and are really very concerned with the outside world and the context. Well, a lot of people who work in companies find that difficult and complicated. SDG.11

and when I give my product to the customer, he or she simply has to be completely happy, then that is just taken care of. Yes, that's not how it works. SDG.53

And our task was therefore to focus on that soft side of the service in order to invest time and attention. And then you come to the design approaches, that is of course that the end user is important, that you think about journeys so that you don't think so much in interaction but in what if you arrive at that airport with your baby, then everything is organized for you or that you can find everything to safely check in with your baby. Well, that turns out to be very disappointing. SDH.60

Yes. Well, you should be more aware of that. SDH.70

I think you will come across that in more conversations, and also in earlier ones, we don't use the word much in service design anymore. But when we started it was holistic approach to service, so in my view that's the whole relationship. That's in all these things. SDH.71

So that you zoom out a little bit. SDH.86

then that has to be arranged in the next five years. The moment you walk there after five times or it has rained three times you no longer feel like it, that is unacceptable.
And so you are forced to place that walk in a larger context. But that's okay. SDH.95

And you do that by placing the things you deliver in a larger context. SDH.100

I: So he has a somewhat broader view of everything.
SDI: Yes. SDI.4

So, making business and IT aware, in teams they often work on a product or application and they have often a lot of knowledge about the product or application, but that the product or application is part of a bigger ecosystem that is the work of the service designer SDA.7

Well, Business and IT making aware that there is a whole ecosystems around the application. It is not only delivering systems, but also creating value with it. SDA.10

If you reason from service design, you want to provide added value to your customer, do something good for your customer, but you run the risk of forgetting that the customer is

part of the world and that there is something like people planet profit and that you will also have to operate in that balance and that your customers will eventually find that balance increasingly important. Hopefully you as a company too. I assume that as a company you also stand for something and not just follow the wishes of your customer. SDD.18

But yes in the end service design helps in any case, I notice that very much, it works to put things in perspective. SDE.20

That you're really going to look at what do all your services look like? What does your entire ecosystem of interactions actually look like, for and your people and your customers. SDE.44

And I also think that that is perhaps also a bit of the challenge of companies starting with a very small point, such as the website. But if you think about it, the website is just part of a bigger system. You really have to systematically think a bit about what exactly is happening and how you can fill that in in the right way. SDE.58

There is no one who often looks from above and we will do it differently, because everyone works in their own silo and if you knock on another silo yes I need more budget for this, yes then you have to come from good houses and then the other person must also find that very important. It is also a challenge, we naturally live by that as designers to give people that insight and show them by looking at that total picture that it can also be done differently. SDF.86

Everything helps, everything in the design toolbox helps to make people think differently than in excels, because if you only look at excels, you don't see the whole picture. Unless you can only really think in those numbers, but few people have been given who can keep an overview of that. Organizing and structuring and visualizing information is also a very important quality of a designer. SDF.88

And you do that by placing the things you deliver in a larger context. SDH.100

This is the nature of service design that is, it has a relation with interaction design that because you always interact so you have a touch point for these the physical point or tangible point in the journey in the interaction history which you are face to face with a provider that could be the intermediate using technology so it's an interface, digital interface for could be a desk at the auto physical interface, then you have a human agent that answer you when you ask something. But it's all the same a service RA.23

So, there is overlapping and differences in interaction design and service design, but I think that probably they are for a certain part when it especially if we look at the especially digital platform that we commonly use every day so if you see on Amazon just to say, and you browse on the website is an example of user interaction but they were all layout is a service layout, because it includes a lot of materiality. Just besides. Probably the interaction design, it's more focused, also in understanding different level of complexity in human experience, or in artificial experience so it's also kind of meta reflection about the way in which I could foster different way of interaction so it's about the task itself by service, usually use this kind of choice to produce a final effect that is the service so I think they are distinct, but they have a strong linkage or connection but one is the like building blocks, interaction design that could be applied in a broader and more complex layer as service design. RA.24

I: So a relationship is broader, in that sense?
SDH: Yes. Much wider. Yes. More complex, richer, more fun, more human. Yes. SDH.10

And our task was therefore to focus on that soft side of the service in order to invest time and attention. And then you come to the design approaches, that is of course that the end user is important, that you think about journeys so that you don't think so much in interaction but in what if you arrive at that airport with your baby, then everything is organized for you or that you can find everything to safely check in with your baby. Well, that turns out to be very disappointing. SDH.60

So if you look at what designers do, you have a UX designer, who is very much concerned with the interface, a product designer is more concerned with the physical qualities of a product, and a service designer looks more towards the organization of such a product. SDI.2

So the different steps that a customer takes in his journey and what is involved within the organization to be able to achieve that experience for a customer. SDI.3

And what I actually also like about service design is another perspective. That is that you think very multidisciplinary and that you actually think about everything we consume and what we do in our lives and the goals we want to achieve and the interactions we have with organizations in our lives. They are all very multidisciplinary. That is about spatial, and also digitally, and about products and about communication, you name it all. SDG.5

So, making business and IT aware, in teams they often work on a product or application and they have often a lot of knowledge about the product or application, but that the product or application is part of a bigger ecosystem that is the work of the service designer SDA.7

Well, Business and IT making aware that there is a whole ecosystems around the application. It is not only delivering systems, but also creating value with it. SDA.10

I: And they need to be educated to optimally do their work.
SDA: Yes, certainly and that could be a really time consuming process, because those are often people who have 20 year of work experience for this company. Often more product knowledge then would be good for them, to think broader and look at it in a different way. SDA.18

Holistic approach
So, it is a way to look at everything in a holisticly. SDA.3

But our goal mostly, I'm much more in the strategic part than I'm on the operational part. So we think a lot more about, say, a bit of holistic perspectives. About things we do for our customers. SDE.9

It's much more holistic. That is also the way in which you can distinguish more and more, because those products, at a certain point when I started there, you saw a website with those products, they were all the same. Such a micro image of the product. We did deliver top quality, but you couldn't show that on a picture like this. So you have to show it somewhere else. So you see that development enormously. You have to rely on that experience and the

total picture and not just, it depends a bit on what you design, but you can hardly design a product alone. Not a functional thing. SDF.21

And what I like about the service design perspective is that it connects and combines in all those disciplines. That is a bit more the traditional view, but the integration of various design disciplines, in a holistic approach so to speak. SDG.6

I think you will come across that in more conversations, and also in earlier ones, we don't use the word much in service design anymore. But when we started it was holistic approach to service, so in my view that's the whole relationship. That's in all these things. SDH.71

I: Okay and that she then actually goes more towards that design thinking, which is more holistic so to speak.
SDI: Yes, SDI.44

and those techniques that have the quality of being holistic, that they are customer-centric, that they are multidisciplinary and that they try to be factual. So yes you don't go from opinions to facts. SDJ.3

Customer centricity
By always putting the customer first SDA.5

So, you will look at the journey. Where does the journey start and in what way will the customer be introduced to the company, what does the customer already know. How could we create a good flow between applications, user flow to user flow. SDA.8

But you still need people who are able to interpret it or imagine that there are new things possible on the website, so technologies. By for example being able to read how fast someone scrolls and thereby showing more or less information, that is a new technological development, but you need someone that thinks about when to do which action and therefore you need a design thinker, because he reasons from a customer point of view and implements digital channels or technologies according to this. SDA.28

So that is searching to who the customer actually is, what are his/her demands and why does the current service not work that is offered or what would be the ideal service that could or could not be offered. SDB.9

Actually, going in a kind of create process. Meeting the customer is the basis, plus what I mentioned before, we also work often with our colleges, sometimes we get other interesting insights, more from a technological perspective or more from a business perspective. With all those insights we try going into a design project. SDB.45

Yes, service design is for me, anyway the most important of it is that you think from a customer prespective. So centered around the customer or guest or user. SDC.1

The beautiful thing about service design is looking who the target group is. What do they need? What are they coming across, what are problems and challenges that they experience in their daily lives and how can I as an entrepreneur or organization anticipate on this. That is what I like about service design. So in this way you meet the wishes of your target group. For me that is the key point of service design. SDC.4

Simply, it's almost the whole picture. So for that matter, you can always apply it in any way you want. In terms of digitization too. As far as I'm concerned, it always starts with what your customer wants. And yes I can't repeat that often enough.SDC.91

But it's actually, in general it already works that way. You have very different needs in the digital world than I do. And well, your mother or my mother or your grandmother, it is also very different for that. And it depends on your target audience what they need. SDC.92

And as a millennial, you can think again what your target group needs based on what your wishes are, but if your target group is mainly 30 or 40 years old or even older, then that cannot match at all. So in that respect, here too, ask your customer and see what their wishes are or, yes, I think you also learn a lot from frustrations and obstacles, so you look, hey, but where do they run into. SDC.93

And that's the starting point, ask your customer. SDC.97

yes, as far as I'm concerned, service design is a methodology, so an approach, actually a process that contributes to the creation of more customer-oriented services or products and therefore where you start from the experience world and thus actually through the wishes and needs of the customer comes to better services, better products. SDD.2

Yes, look in the end it's about people just feeling as good as possible with a service, so yes it has a bit to do with each other I think. SDE.8

I always think, look, the advantage of an external agency is that the moment you're in an organization, you're just in it all day. So you're just really on that train, every day. It's like that every day you're just in the same bubble and when an external agency comes, they always just come with a fresh look of hey what's going on? Who are your customer, what are they encountering, why? What is going well, what is not going well. And based on that you can simply advise. SDE.13

It really is a mindset shift. And that mindset shift comes from just literally repeating what you are doing every day. So you put your customer first, you make things for your customers. SDE.37

You make sure that you find out how you can provide the best service and you make things that are completely focused on what that customer wants, empathize with the customer's world. And the moment you really say that every day that people see and repeat that and also know what the basic principles are of how they build things then it sticks. Can't they go back. Can they really never go back? SDE.38

I think for example in ?what I'm talking about is? it is so because we put the customer first and because the customer actually expects that there is more knowledge for us and that they need better help and more expertise what should be there. That means if you look at your value delivery part, the side of your people, that they need to be trained much more. SDE.60

Designing services from the customer's perspective. SDF.1

Which is not always necessarily the case. Traditionally, the service is set up from within the organization, the customer is usually taken along a bit, but it is really where the customer is central and design a service from that. SDF.2

So you should always use the possibilities and the state of the technology. Always at the service of the customer. So yes it goes hand in hand and sometimes it clashes, because people don't always feel the need for digitization. SDF.40

Now you see all the possibilities with regard to the techniques and technology and the wishes of the customer. SDF.49

and also very much the problem of the person for whom you are doing it, so the customer or the user or the employee, who make their pain or those opportunities visualized for them. So being able to really empathize with what those people are going through SDF.59

There you also work with the same methodologies and therefore include your customer and that industry 4.0 is really just a means to solve customer problems, but that starts with those problems of the customer who wants to see that solution, SDF.81

because yes, you can say yes, you saw that with my client, they came up with wonderful solutions, but I kept asking; what does your target audience get from this? How are you going to sell it to your target audience? How do you make them happy with this? While they saw a beautiful technical solution, everyone thinks that's great, right? They especially think that's great, but what's in it for them and how do you market this and who will it land with and what does the overall picture look like? Well, that's the sharpness you bring as a service designer and then of course they struggle and then you also indicate how it can be done or maybe I wouldn't do that anymore, is also possible. SDF.82

And you could actually say that if you, I think, the dominant view on service design is that it is a kind of user-centric design in which you take the customer journey as the backbone and from there you optimize customer processes, so to speak. And that's a very big part of our job, and that's fine. That's an okay definition. SDG.2

Also notice that I find most customer experience projects I've been involved in much more inside out than outside in. So service designers really have a lot more that user perspective and are really very concerned with the outside world and the context. Well, a lot of people who work in companies find that difficult and complicated. SDG.11

they are a kind of basic principles of service design, you could say basic principles of human centered design that are about putting people first. Really understand what moves people. Complex stakeholders and municipalities and legislators also understand what moves them and explain them to the human perspective, build up an empathetic understanding for this and be able to communicate that understanding to other stakeholders. SDG.22

So those are five pillars of service design that we use. So human centred, collaborative, reframing and envisioning, experimentation and prototyping and context and structure. Those five, with which we actually explain what we bring to those kinds of processes. What is the value that we then bring in. SDG.27

Another method that we naturally use a lot is simply letting the customer do the talking. So ethnographic research with clients, filming clients. SDG.64

It is true that in servitization that is a partly customer-inspired process in which you look at the world of the customer and what are adjacent services that make sense around that product. How does your product play a role in customer value creation? And you can map out the entire journey and develop related services from there. SDG.80

And then you look at where that customer stands, what can that customer actually deliver from an organizational point of view? SDG.82

One of them is that you put people first. SDH.11

And that means that the focus on digital and technology is not on people at all. The one liner is new, our vision is not and our focus is not, but that is design in the service of people. The idea that you really genuinely immerse yourself in people's lives. SDH.12

And our task was therefore to focus on that soft side of the service in order to invest time and attention. And then you come to the design approaches, that is of course that the end user is important, that you think about journeys so that you don't think so much in interaction but in what if you arrive at that airport with your baby, then everything is organized for you or that you can find everything to safely check in with your baby. Well, that turns out to be very disappointing. SDH.60

I think that a lot of organizations besides hiring service design as a kind of consultancy to design new things, that a second aspect, and maybe just as important I think, is the properties of design or of service design and that is if you engrossed in your end user, which means that you literally just have to go outside, talk to people, so people find that very difficult, organizations. SDH.79

As a service design, I see service design a bit like human centered business analysis. SDI.1
I: So say more that focus on that customer experience and put that central.
SDI: Yes. SDI.16

and who is your customer and based on that we will create solutions. SDI.31

and those techniques that have the quality of being holistic, that they are customer-centric, that they are multidisciplinary and that they try to be factual. So yes you don't go from opinions to facts. SDJ.3

So that is searching to who the customer actually is, what are his/her demands and why does the current service not work that is offered or what would be the ideal service that could or could not be offered. SDB.9

Then we go talk to customers, at the start of the process. We try to take the lead in this, because interviewing is a certain expertise SDB.42

Actually, going in a kind of create process. Meeting the customer is the basis, plus what I mentioned before, we also work often with our colleges, sometimes we get other interesting

insights, more from a technological perspective or more from a business perspective. With all those insights we try going into a design project. SDB.45

And the most important is that you first investigate what the wishes, need, expectations, frustrations and hindrances are for the customers. And consequently, looking for ways to solve it. SDC.2

The beautiful thing about service design is looking who the target group is. What do they need? What are they coming across, what are problems and challenges that they experience in their daily lives and how can I as an entrepreneur or organization anticipate on this. That is what I like about service design. So in this way you meet the wishes of your target group. For me that is the key point of service design. SDC.4

And as a millennial, you can think again what your target group needs based on what your wishes are, but if your target group is mainly 30 or 40 years old or even older, then that cannot match at all. So in that respect, here too, ask your customer and see what their wishes are or, yes, I think you also learn a lot from frustrations and obstacles, so you look, hey, but where do they run into. SDC.93

And that's the starting point, ask your customer. SDC.97

Not explicitly you should do service design but just more of it, this is what your customer says, we hear this and this, these are possibilities but you have to make sure that everyone also supports it, we actually have to look at this, this and this. Yes and based on that we just say that right from the start. SDE.50

and also very much the problem of the person for whom you are doing it, so the customer or the user or the employee, who make their pain or those opportunities visualized for them. So being able to really empathize with what those people are going through SDF.59

I : So it is mainly looking at competitors and actually extracting inspiring activities from them. And so look at the customer and his wishes and needs.
SDG : Yes exactly. And they really give voice. SDG.66

Immersing ourselves in customers means that we can actually show you, but there is again a local police officer. I'm not going to show you everything, but yes, there is a local police officer and they have really spoken, that's just crucial that you do that. And that happens very rarely. SDH.15

So we involve people because we don't know either. SDH.23

So that means that you also have to have people in your house, designers who dare to do that. And we don't have that much trouble with that, I don't know any better. And the people who work don't know any better that it's perfectly normal to have a conversation with someone. So that means you dare to approach someone. That you don't start worrying about what they say or don't say about you and things like that. But before you know it, we've already done it. That is a quality of service design that is of immense value. SDH.30

Yes, I think so, and I think that lies in the transfer of the techniques and the core values of what we do. ?what do I get back? from clients, they always refer to that as a compliment and

that's very sweet and that's just fine, but I think you should do that yourself. So the moment you don't know as an organization, you talk to your end user. SDH.77

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No, it's more about first getting a good picture of a problem and the current market and the environment. In this way a piece of business is also added and we also use certain templates for it and in addition we really look at the human level of how people experience that problem. SDI.37

That patient also told her story first. For example, that she was going to have an operation, but that surgery was suddenly postponed, while she had already arranged everything and that was very much appreciated by the public, and also afterwards that you come up with solutions that then also counteract such things' one customer persists. Yes, that's just super important. SDJ.14

Focus on value creation
Well, Business and IT making aware that there is a whole ecosystems around the application. It is not only delivering systems, but also creating value with it. SDA.10

No, I think you should always look at the business case. So a company always has to gain something out of it, but I believe that when you have a good product based on the demand of the target group then you will create added value. SDA.37

But from a purely service design perspective, that should not be your motivation. At least, that's how I'm in it. SDC.24

If you reason from service design, you want to provide added value to your customer, do something good for your customer, but you run the risk of forgetting that the customer is part of the world and that there is something like people planet profit and that you will also have to operate in that balance and that your customers will eventually find that balance increasingly important. Hopefully you as a company too. I assume that as a company you also stand for something and not just follow the wishes of your customer. SDD.18

But on the other hand, we are also very much involved in value creation. And value creation for our customers, but say for the end user and for the customer. So see, how can you ensure, so how do you ensure that the proposition that a company has, that it matches the proposition that you are going to make for your customer. So what kind of value is the customer looking for? What value is the company looking for and how can you make something that is sort of a combination of a product that works for both parties. So reference to two things. SDE.3

So on the one hand value creation and on the other hand value addition by optimizing things, by understanding what is happening, by making the process as easy as possible, so that people feel as comfortable as possible with the process they are going through. So that's it for me really. Its two sides. SDE.4

But what I actually miss in that whole definition is a bit more the economic perspective. And that is about seeing value creation as a service and seeing the economy in services and thinking in services. So for me, service design is very much about seeing value as co-creation, seeing value as a process over time. Seeing value as something that multiple stakeholders work on together. Seeing things in services. SDG.3
The ability to reframe. And see problems not as problems but as opportunities. And really develop a vision based on that reframing. So don't think in how do we get out of this, but much more in how can you leverage this to gain value. SDG.24

And how you and your colleagues can focus on things that really create added value for the customer. And that is why we also say about customer centricity, digitization, sustainable innovation, they are all kind of in line with each other. SDG.45

And that design approach works very broadly. Because it is suitable for those kinds of changes that also involve value creation. So our work is therefore very broad. SDG.46

It is true that in servitization that is a partly customer-inspired process in which you look at the world of the customer and what are adjacent services that make sense around that product. How does your product play a role in customer value creation? And you can map out the entire journey and develop related services from there. SDG.80

Can be explorative or solving problems
So the one is very explorative and the other much more focused on solving problems. SDE.5

I studied design at university and in it you learn a design process where you first explore the problem and then come up with solutions and no to a problem definition. Then you will come up with very broad solutions and you will test and validate those solutions and you will arrive at a validated solution that has value for the target group for whom you design it and that fits within the organization and the technology. That's actually my definition. SDF.5

And that design approach works very broadly. Because it is suitable for those kinds of changes that also involve value creation. So our work is therefore very broad. SDG.46

Well, it's like, you usually get the job, yes we get them both. We are very much in the first part, so in the value creation part. Making new things. SDE.

Well, you can see that innovating a customer journey in a very process-oriented way. And if you organize those processes very ingeniously, you can save a lot of time and you can earn a lot of money with it. So the question is, is a customer's incentive to help people? Or is a customer's incentive to help people or that you can sell more stuff even faster. SDH.65

Outside-in approach
So very much an outside-in look SDF.58

Also notice that I find most customer experience projects I've been involved in much more inside out than outside in. So service designers really have a lot more that user perspective and are really very concerned with the outside world and the context. Well, a lot of people who work in companies find that difficult and complicated. SDG.11

I think that a lot of organizations besides hiring service design as a kind of consultancy to design new things, that a second aspect, and maybe just as important I think, is the properties of design or of service design and that is if you engrossed in your end user, which means that you literally just have to go outside, talk to people, so people find that very difficult, organizations. SDH.79

and who is your customer and based on that we will create solutions. SDI.31

Or maybe show examples. SDF.55

Numerous examples show from the world around us of I see this happening here, do you see that happening, can we apply that to our sector? SDF.57

Then good examples often help. Good examples of adjacent industries. SDG.61

But to get that project, I made a presentation where we said, well, companies like you, who are in a similar place of similar maturity. They're into stuff like this. Just to stimulate them and to show that this unlocks value with the customer. They tap into new segments. They make margins on services that are higher than the margins they make on those products. SDG.62

The best thing is of course, that is also service design, that you have examples instead of talking about it. SDH.17

And by actually showing them how it is possible and by bringing that very inspiring you actually tickle them awake for what they can do with it. So we do that a lot. SDG.63

I : So it is mainly looking at competitors and actually extracting inspiring activities from them. And so look at the customer and his wishes and needs.
SDG : Yes exactly. And they really give voice. SDG.66

co-creation with stakeholders
It really goes hand in hand. If we look, on one side at the end user as a source of good idea's. SDB.28

Yes, I think so, and I think that lies in the transfer of the techniques and the core values of what we do. ?what do I get back? from clients, they always refer to that as a compliment and

that's very sweet and that's just fine, but I think you should do that yourself. So the moment you don't know as an organization, you talk to your end user. SDH.77

What we did then was actually just taking the best-selling product and taking it an extra step and showing what opportunities are still there. So we started looking at what were really great opportunities that have come up from the human experience. SDI.21

Point is, end users don't show up because we need them. But the end users themselves recognize how important it is to work on something together. SDH.21

And ?more often? call to take the space to tell us what to do. Happens a lot. SDH.22

By business and IT it is primarily as a service designer to do stakeholder management. SDA.6

So, how do you implement that; by asking a lot of questions, researching, map things out and involving people. SDA.9

I: And are the end-users also involved in the process?
SDB: Yes, we always try to do it. Always starting with researching the end-users. SDB.15

And in this way, we involve customers in it at the beginning. SDB.16

I: Was the client involved in to project as well?
SDB: Yes, certainly. So, we always try, what I already mentioned, to very co-creatively work with the client. SDB.34

So try to be as specific as possible, but continuously on top of the process, and include them reasonably in what is happening. SDC.37

Well by definition you try to manage your stakeholders, that's an important one. SDF.47

they are a kind of basic principles of service design, you could say basic principles of human centered design that are about putting people first. Really understand what moves people. Complex stakeholders and municipalities and legislators also understand what moves them and explain them to the human perspective, build up an empathetic understanding for this and be able to communicate that understanding to other stakeholders. SDG.22

Are they also used during, for example, the brainstorming phase?
SDH: Yes. In fact, you say at the beginning they are in high demand, and that is not too bad. They really get involved from day one. Yes, I can't tell you otherwise. They are involved from day one. Whether they like it or not. SDH.19

but in this case it was precisely with those end users and with that company that it was mainly about ?binding? to give people a voice themselves and to let them experience its value. SDI.24

multidisciplinarity
I wrote one of my thesis on multidisciplinary teams, in combination with service design, and that's what I believe in very much. SDC.38

Because of course you also take the departments with you. Those who are part of such a project group, yes they might talk about it with a colleague. So I actually see more benefits to multidisciplinary teams than it can really slow things down. SDC.57

And what I like about the service design perspective is that it connects and combines in all those disciplines. That is a bit more the traditional view, but the integration of various design disciplines, in a holistic approach so to speak. SDG.6

and those techniques that have the quality of being holistic, that they are customer-centric, that they are multidisciplinary and that they try to be factual. So yes you don't go from opinions to facts. SDJ.3

I: That's great and you just mentioned that interdisciplinary is also part of service design. Have you almost exclusively worked on your projects in interdisciplinary teams?
SDJ: Yes, preferably SDJ.6

What I often do is, for example, when I give a workshop, a customer journey workshop, I try to include people who make policy, people who are in marketing and people who write texts and people who are designers. Yes, I try to involve a lot of different disciplines, yes. That's what I've often done, yes. SDJ.7

So, if we apply the service dominant logic to a different perspective or dangers to imagine, public intervention in the economy. I think sometimes you have to mix this kind of approach with something else. Just to say, because if you have to tackle the, I don't know the climate change challenges, you could not simply stand on this position, imagine that the capitalist society we produce automatically using this logic or submission for that. RA.26

And this is not the result only of business strategy is a result of a civilization perspective, a political perspective, All of our two deals with the economical challenge, but it looks at the Green Deal, as a way of inspiring it instead of China and say yes. RA.57

Yes, we work surely together with other disciplines that we have within our company; digital marketeers, we also have data scientists, also strategists who can formulate a business case, SDB.23

Actually, going in a kind of create process. Meeting the customer is the basis, plus what I mentioned before, we also work often with our colleges, sometimes we get other interesting insights, more from a technological perspective or more from a business perspective. With all those insights we try going into a design project. SDB.45

preferably people from different departments if you have a large organization. That ensures that you involve people with different points of view in your group, SDC.39

What's great is that people look at it in different ways and that makes you move forward as a group. Because if you and I do a project together it can be fantastic, but I am convinced that if we ask someone with a different background, a teacher student perhaps, I'm just saying something, then you get a completely different project, a completely different product which yields you. Precisely because such a person can look at things from a completely different perspective or think differently about such things. SDC.40

And then when you are in the solutions phase, and you start brainstorming about it, then everyone has their own frame of reference that they receive during the training or from their field of work. And that's when it all blossoms and you get the best ideas. SDC.42

Yes, there are people who really spend more time in the office, people who are more involved with the teachers. Yes, let them all join in because they all also have a certain part in the process of customer contact, which ensures that it all comes together that they all also learn a little bit about what someone else does for the customer. But also that you gain insights into what you are doing as an organization, what you can do better, what you can learn from each other. And if you don't have that then you really have a bare project. Yes, I am absolutely convinced of that. SDC.43

What I say, an opinion of another person is valuable. SDC.46

I have also participated in projects where there is great diversity in the team, and then you can learn so much from someone else just because they know certain websites or because they have heard certain speakers or read certain books. But also because they might just think in a different way. SDC.47

But it is true that, precisely because I have a completely different background, I also look at things differently. SDC.48

And while designers, really super creative people, they also use their heads in a completely different way. SDC.49

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We are now also working on that, for example, and when we organize workshops about to experience design, about value-driven design, then we also try to get those different silos around the table and we are really working on that now, then they really have to Make choices. SDJ.51

And from that point we go often design the actual touchpoints and then we got help from a UX designer or visual designer. SDB.10

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if you're in that research phase then everyone who has has a certain input, oh maybe we should think about this or I know someone we can interview who, for example, teaches at a certain kind of school. And that ensures that you simply get unbelievably good data. SDC.41

I have also participated in projects where there is great diversity in the team, and then you can learn so much from someone else just because they know certain websites or because they have heard certain speakers or read certain books. But also because they might just think in a different way. SDC.47

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Because of course you also take the departments with you. Those who are part of such a project group, yes they might talk about it with a colleague. So I actually see more benefits to multidisciplinary teams than it can really slow things down. SDC.57

I: With an interdisciplinary team, so to speak.
SDF: Yes, SDF.31

I : It's more because everyone has a different background, so they are less likely to agree on a certain thing.
SDC : Yes, yes that is true. SDC.51

But you also notice that the bigger your group gets, and the more opinions you have, the more difficult it is to come to a unanimous decision. SDC.52

In the Netherlands we are, of course, champions in letting everyone have their say and everyone can have their say. And that, of course, means that it can take a very long time. SDC.53

And at the lab it was the case that yes, you know, you often have people in a group who are very firm about something like well, you know, I think this is a very good idea, but what you say there I don't agree on. Well, if you really have people like that in a group, yes then it becomes a tricky process. SDC.54

I have to say that I haven't experienced it very much in my own projects because those project groups are also not very large. SDC.55

But what is another advantage of a multidisciplinary team, if you really do that for a client. So well like with that educational institution, if you have involved different departments, it is has a positive influence on change management. SDC.56

Because of course you also take the departments with you. Those who are part of such a project group, yes they might talk about it with a colleague. So I actually see more benefits to multidisciplinary teams than it can really slow things down. SDC.57

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SDF: Yes, SDF.31

Simplifying things
Because you can come up with the wildest ideas. But sometimes it doesn't have to be very complicated or complex or extensive. Sometimes a simple solution is much better. SDC.99

And finally the ability to structure and think in concepts and in architecture. And by architecture I mean portfolio architecture, service architecture, applying large structures in very complex matter so that you gain understanding and so that it becomes negotiable and through which you actually also create a lot of traction in complex change processes. SDG.26

So those are five pillars of service design that we use. So human centred, collaborative, reframing and envisioning, experimentation and prototyping and context and structure. Those five, with which we actually explain what we bring to those kinds of processes. What is the value that we then bring in. SDG.27

That is of course the great thing that more and more companies are discovering and governments and NGOs are even discovering that the complex problems they have become involved in with regard to the major social transitions, the energy transition, the climate transition, but also social issues you can no longer manage you out of it in the old way. You have to use design for that. SDG.29

What we are now seeing with customers is that they are really going to embrace our way of working, knowing that they simply can't figure it out otherwise. So that real reframing, looking for really radical collaboration, combining long-term vision with very short agile sprints and experiments. Starting to become almost commonplace among large organizations. And that is really fantastic to see. SDG.32

Because you can come up with the wildest ideas. But sometimes it doesn't have to be very complicated or complex or extensive. Sometimes a simple solution is much better. SDC.99

So on the one hand value creation and on the other hand value addition by optimizing things, by understanding what is happening, by making the process as easy as possible, so that people feel as comfortable as possible with the process they are going through. So that's it for me really. Its two sides. SDE.4

It is mainly service design is design is making things simple and keeping complex things hidden and yes under the hood so to speak. SDJ.38

Critical view

So, how do you implement that; by asking a lot of questions, researching, map things out and involving people. SDA.9

Then for example a campaign will be developed and then a marketing bureau is contacted very quickly and everyone is very satisfied with the solution instead of within the design thinking method looking at why a product does not sell and that could be because people don't want it, but it could also be because something is not described well on the website or different things. SDA.20

So that is searching to who the customer actually is, what are his/her demands and why does the current service not work that is offered or what would be the ideal service that could or could not be offered. SDB.9

because yes, you can say yes, you saw that with my client, they came up with wonderful solutions, but I kept asking; what does your target audience get from this? How are you going to sell it to your target audience? How do you make them happy with this? While they saw a beautiful technical solution, everyone thinks that's great, right? They especially think that's great, but what's in it for them and how do you market this and who will it land with and what does the overall picture look like? Well, that's the sharpness you bring as a service designer and then of course they struggle and then you also indicate how it can be done or maybe I wouldn't do that anymore, is also possible. SDF.82

And which services match that? And how many people is that? How many people can we help then? What does that mean for society? SDH.91

And if we don't really tackle this that we are living in a social political regime that is not dictatorship is the best thing, the best option we have now, but we see also the not positive effect of this social political setting so it's sometimes it's not only about doing a transforming, it's also about criticizing socio economic models. As a standpoint, from which you could intervene with different strategies or with an attempt to transform the socio economical setting. RA.13

you start from a concept and you end up being being imprisoned in that I would complexify a little bit the service dominant logic because it's, again, it's about a setting, totally without criticizing the capitalist model. RA.25

So I think that, Yes, we could start from some ideas, or sub concepts. We have to add a little bit more, as I was saying at the beginning of criticism, because in the other case we read only the public story the common story is developed through this academic goal but sometimes you have to do back and forth. This concept. Also, try to understand which are the consequences of blind application.RA.28

Okay, this one. The second is to discover the new truth so the way in which the word must change. You have to act, also in terms of, as I was saying before, criticism. RA.54

This is I think it's super connected to design and design spirits are quite different from the business school, that are sometimes not so able to resist criticism, I would think. RA.29

What I also tasted once is that, that is also very strange, in order to learn you also have to be a bit vulnerable. You also just have to dare to say: "ah this is not good" or "we should do this a little better" and some find that difficult. Despite everything, you have to say that things are going well. SDJ.27

I: That critical viewing is not really stimulated.
SDJ: No, SDJ.28

double diamond design process
So, how do you implement that; by asking a lot of questions, researching, map things out and involving people. SDA.9

So that is searching to who the customer actually is, what are his/her demands and why does the current service not work that is offered or what would be the ideal service that could or could not be offered. SDB.9

But in itself, yes I am watching, yes the companies we work for. Yes, you really have to take them into what it is, you also have to show them what it is. We often don't even start with the word service design, but we often start with hey we just have the problem, we don't fully understand the problem. So you really take people on a process and in the end it turns out to be service design with all the principles that fall under it. SDE.19

in general the meaning of the design process that goes from, I think, three main steps, that is the first most important one in contemporary design is problem finding. The second one is problem setting are, how I interpret this context quality and secretivity in transformation and then I have problem solving and that is clearly the most common one common version of what design is, but actually that essentially is a transformative issue about transformation, it could be applied to everything. RA.4

So first discover through discover what is available, which opportunities you may be missing out on. Defining the problem, well finding creative solutions. Really look for meaningful innovation for your company in that way. SDD.19

I studied design at university and in it you learn a design process where you first explore the problem and then come up with solutions and no to a problem definition. Then you will come up with very broad solutions and you will test and validate those solutions and you will arrive at a validated solution that has value for the target group for whom you design it and that fits within the organization and the technology. That's actually my definition. SDF.5

It is an approach and attitude. More than prescribed process. RA.5

So I try to include them in that, well okay, there is some kind of basis that we can work with, but it could just be that we have to adjust things and that if we shape the process too much

indicate that afterwards it just doesn't work out well or that we have to make very serious adjustments to it. SDC.32

If you don't have that right, and certainly also in the world of digitization and technology. If you don't understand what you need to solve, you can come up with a thousand solutions, but they are all not good solutions because you don't know what you are solving. Then you miss the point anyway. So in that respect, the entire process of service design is just a very nice point of reference for drawing out that process properly. And make it fit. SDC.101

That's one thing, you have to be able to handle it. The uncertainty of totally not knowing where it would go in the beginning. I like that. SDF.95

Cyclic activity that you do in developing the process RA.6

that is a kind of trajectory transformation in which is using iteration and you could call it. RA.9

The tricky part is that you actually make an appointment in advance or at least make reasonable agreements with the client of, well, we have a certain process that we go into. And actually I think, the charm of service design is that you, or at least the process, it's an iterative process. And you never know in advance where you will end up. SDC.30

So I try to include them in that, well okay, there is some kind of basis that we can work with, but it could just be that we have to adjust things and that if we shape the process too much indicate that afterwards it just doesn't work out well or that we have to make very serious adjustments to it. SDC.32

That's one thing, you have to be able to handle it. The uncertainty of totally not knowing where it would go in the beginning. I like that. SDF.95

And the most important is that you first investigate what the wishes, need, expectations, frustrations and hindrances are for the customers. And consequently, looking for ways to solve it. SDC.2

And that's the starting point, ask your customer. SDC.97

And you won't know until you have inventoried what exactly the problem you are going to solve, or the challenge, is. And that is why that first phase or that first diamond is so important because in the middle you decide of course, okay this is the problem we are going to solve here we are going to come up with the solutions. SDC.100

If you don't have that right, and certainly also in the world of digitization and technology. If you don't understand what you need to solve, you can come up with a thousand solutions, but they are all not good solutions because you don't know what you are solving. Then you miss the point anyway. So in that respect, the entire process of service design is just a very nice point of reference for drawing out that process properly. And make it fit. SDC.101

So first discover through discover what is available, which opportunities you may be missing out on. Defining the problem, well finding creative solutions. Really look for meaningful innovation for your company in that way. SDD.19

But in itself, yes I am watching, yes the companies we work for. Yes, you really have to take them into what it is, you also have to show them what it is. We often don't even start with the word service design, but we often start with hey we just have the problem, we don't fully understand the problem. So you really take people on a process and in the end it turns out to be service design with all the principles that fall under it. SDE.19

You really have to know what kind of things you solve and where you can get that from or whether it can serve as a basis for research or other things, I'll look into those. SDE.30

I : Yes. Because then the first part is not quite right, the problem formation and things like that?
SDE : Yes. SDE.32

There you also work with the same methodologies and therefore include your customer and that industry 4.0 is really just a means to solve customer problems, but that starts with those problems of the customer who wants to see that solution, SDF.81

and who is your customer and based on that we will create solutions. SDI.31

No, it's more about first getting a good picture of a problem and the current market and the environment. In this way a piece of business is also added and we also use certain templates for it and in addition we really look at the human level of how people experience that problem. SDI.37

That patient also told her story first. For example, that she was going to have an operation, but that surgery was suddenly postponed, while she had already arranged everything and that was very much appreciated by the public, and also afterwards that you come up with solutions that then also counteract such things' one customer persists. Yes, that's just super important. SDJ.14

I: So that you first frame the problem/need a bit and then look at what solutions are possible.
SDJ: Right, yes. SDJ.17

True to point of view so it's my take, that sometimes it's really interesting use our actual research approach, which you don't make models for theory but which you experiment and things so you prototype. RA.29

So they think that you were describing before so the method of trial and error and learning from these trajectories is more design oriented. RA.33

On Thursday always prototyping and testing with customers on Friday. SDB.50

That is the development I see and I also do things in healthcare and then they do everything they think they can do with a hackathon and then they lock themselves up for 3/4 days in a cage with a number of healthcare professionals and there they have to then the golden egg hatches, but in the end it often ends in beauty with a good idea, but then you really have to get started and you will not come to a good design in 4 days. It's just a thorough analytical process with a lot of creativity and mindset and experimenting and learning. SDF.12

The whole experimenting and prototyping which is a very important ingredient of service design. Where you actually make small mistakes much earlier in the process instead of big mistakes later in the process, so that you learn faster, so that you also learn together, learn from each other, so that you get a much more organic value creation process. SDG.25

So those are five pillars of service design that we use. So human centred, collaborative, reframing and envisioning, experimentation and prototyping and context and structure. Those five, with which we actually explain what we bring to those kinds of processes. What is the value that we then bring in. SDG.27

But to show that we make things like this, you can see, that's a prototype for a walk. SDH.18

I: Exactly, that that eventually leads to prototypes and that they are then tested.
SDI: Yes. SDI.39

So if they target on that they will do that with the interior, because there are people who have thought about it and tested it. So as a test they put out advertisements to different target groups and then they see which advertisement is clicked on the most and that is the advertisement they are going for. SDA.35

On Thursday always prototyping and testing with customers on Friday. SDB.50

In which of course you are in the first diamond you are very busy with that customer research and looking where you can find that connection. And then if you come up with ideas, yes going to test them, that is of course also a super important part of service design and that is also what ensures that the solution you come up with does not only fit the problem you encountered after the first diamond. have described. But that it also connects and that before you throw a very large investment at it that you have tested with your customer or with your target group whether it will really work. My experience is that sometimes it's very small adjustments that you make that make it just a little bit better. But it does help a lot to check it out. SDC.8

I studied design at university and in it you learn a design process where you first explore the problem and then come up with solutions and no to a problem definition. Then you will come up with very broad solutions and you will test and validate those solutions and you will arrive at a validated solution that has value for the target group for whom you design it and that fits within the organization and the technology. That's actually my definition. SDF.5

Concepts conceived and tested, great SDF.50

And that is very difficult to explain to non-creative types, the academic types or the university types, the business types. And what we're going to do now, in general, why we're here then is not to argue about that, but then we make something and then we try that out, and then we have proof that something works or doesn't work. , you can just show it. SDH.45

I: So continuous testing to see if they are on the right track?
SDH: Yes. And whether we are also right. SDH.46

That you can try things out and what more shall we say? SDH.80

because you often see that people do have a sense of a problem, but if you look closer, it turns out that there are actually a lot of problems. And then you have to choose okay what is one that we can now tackle and test. SDI.33

I: Yes indeed that prototyping, do you take on that testing?
SDI: Yes, but in active collaboration with the product owner. So we demand yes, you have to work with us on a few fixed days a week. It is not asked of you, we run. SDI.34
And you see by a certain phone developer who is very user friendly that they test everything before changing one thing. A music application is the same and also a certain streaming service does everything on big data. SDA.42

In which of course you are in the first diamond you are very busy with that customer research and looking where you can find that connection. And then if you come up with ideas, yes going to test them, that is of course also a super important part of service design and that is also what ensures that the solution you come up with does not only fit the problem you encountered after the first diamond. have described. But that it also connects and that before you throw a very large investment at it that you have tested with your customer or with your target group whether it will really work. My experience is that sometimes it's very small adjustments that you make that make it just a little bit better. But it does help a lot to check it out. SDC.8

I : That indeed continuous testing is indeed quite a thing within service design.
SDE : Yes. SDE.40

I: So continuous testing to see if they are on the right track?
SDH: Yes. And whether we are also right. SDH.46

I : And also with, say, evaluating the service. So that you keep checking to see if it still works.
SDH: Yes. SDH.96

So that friction is indeed how we now assume and want to make a hypothesis formula. We move forward based on testing those small pieces each time. SDI.38

I: And if you then continue testing that later by means of a prototype.
SDJ: Right, yes, but preferably as early as possible. SDJ.15

Certainly, testing everything. So that is the most important. The most important thing is to test and data analysis. So really from the first concept looking if people are interested. SDA.44

In which of course you are in the first diamond you are very busy with that customer research and looking where you can find that connection. And then if you come up with ideas, yes going to test them, that is of course also a super important part of service design and that is also what ensures that the solution you come up with does not only fit the problem you encountered after the first diamond. have described. But that it also connects and that before you throw a very large investment at it that you have tested with your customer or with your target group whether it will really work. My experience is that sometimes it's very small adjustments that you make that make it just a little bit better. But it does help a lot to check it out. SDC.8

I : That indeed continuous testing is indeed quite a thing within service design.

SDE : Yes. SDE.40

Yes, that is what I mean with testing. Testing is really going to the street and ask; what do you think of this. SDA.45

What was nice, last week Kirsten and Sharon had a prototype day. And one of the things they were going to do is drink coffee with them in the morning. Just not rocket science but it was necessary. SDH.20

And then someone from communication comes along and said, what fun, where did you find those people? In the database? Then I think, in the database? Those people just exist. SDH.29

Think Joh, we don't make assumptions at all. We do act in intuition and in that you have a feeling that you are going in the right direction or that people are saying smart things? but we don't even make assumptions about that. Doesn't play. SDH.41

I : So that is actually a strength of service design?
SDH: Yes. You mean you don't work in assumptions?
I : Yes.
SDH: Yes. SDH.42

Thinking about that was our job and as designers that means that you are comparable to those victims, that you don't know it either and that you just go and see who is actually walking around here? That's a bit of a naive look. SDH.61

That you can try things out and what more shall we say? SDH.80

So, not only testing the usability, but also really the desirability before testing the usability. SDA.46

So it does not need to be perfect, the final UX design, but he will start quickly with putting the interfaces one after another using a prototying tool. So for example sketch, Figma, but also WXD to in this way simulate the experience. In this case the digital experience. SDB.20

We sometimes use role play or cardboard prototyping. SDB.21

Yes, I'm thinking about whether there is some kind of common denominator, which you can use. I think a prototype is always a means to do something in that relationship. SDH.50

So prototyping, I also talked to a professor from the university about it, prototyping is in everything. And it is mainly physical and it is mainly about that relationship, that it takes place in the relationship between the person, the organization and the end user. SDH.52

And the similarity is in that you create that interaction between people. SDH.53

The whole experimenting and prototyping which is a very important ingredient of service design. Where you actually make small mistakes much earlier in the process instead of big mistakes later in the process, so that you learn faster, so that you also learn together, learn from each other, so that you get a much more organic value creation process. SDG.25

And actually see every new service as a prototype that enables you as an organization to learn and develop new capabilities and to grow to that next step. SDG.88

Or we don't, that may be an assumption, but it happens so often that we try something we don't have the result it works or it doesn't work but we get answers 'oh but if we can do this we can too this and this and this'. So it only gets bigger and more exciting, more beautiful, more interesting, when you've made something. SDH.47

So that friction is indeed how we now assume and want to make a hypothesis formula. We move forward based on testing those small pieces each time. SDI.38

I: And if you then continue testing that later by means of a prototype.
SDJ: Right, yes, but preferably as early as possible. SDJ.15

And also just because they just think it's fun to do that once. As an exercise. And of course it is. Anyway, journey mapping is just part of a very large process for us. So it's not just sketching something on the wall and that's it. SDE.33

Well, for example there are sessions about personas. SDC.34

So there are several factors, but that depends on the type of target group you are concerned with. So you turn that into personas again, don't know if you know what a persona is, but at least target audience sketched. SDF.79

Just to keep it in the tools and techniques that you then also draw up the personas of those end users and create journeys of what they experience. But for us it is at least on the soft side than on the process side. SDH.62

Involving and educating people
educating, training and involving people. SDA.12

We often explain the steps and why they are needed. Therefore, in this way a little bit training on the side. SDB.56

Well then we had that and then we said well you know a brand is just kind of an intangible thing. What doesn't really come to life when you're just talking about it you know? You also have to feel it and people have to support it, people have to understand what that is like. So we talked about internal engagement quite early on. SDE.43

I think for example in ?what I'm talking about is? it is so because we put the customer first and because the customer actually expects that there is more knowledge for us and that they need better help and more expertise what should be there. That means if you look at your value delivery part, the side of your people, that they need to be trained much more. SDE.60

we hope to ensure that with the consultancy we do that there is, as it were, training someone who will soon be able to sit in that position. That they have the right mindset and that you can fill it in correctly that way, SDE.80

But also that when we have done a project, customers often say, okay that is super valuable, we want to be able to do this too, this is so strategic for us and this is so important, we want

to learn this from you. Can you organize a training for us? Can you organize a program for us in which we will make this our own through coaching, projects and training. SDG.36

Yes, then you are actually, so we did a very large program at an airline in which we trained about 300 people in this way of working. Then you will see real change. That really has a lot of impact. SDG.37

At the airline, it was people from the operation who were responsible for developing digital tools for the airline. So really under the hood. We also provided management training at the financial company. SDG.38

Sometimes it's a matter of actually learning to work differently. Well then we do a service design training program. SDG.93

But you can also create real value because you are really teaching those companies something. SDG.96

Well, you can tell someone that, but if you have not experienced it, it is very difficult to convince someone of this and so yes, my view is that you only really see the power of this method by experiencing it . SDD.26

I: Yes exactly and in that way create support within the organization to apply that.
SD: Yes. SDD.27

So where customers normally know where they have a little bit of trouble, we can really show it in a way that they really just get it easily like oh yeah you know. And then here is my problem and this way I can solve it too. So the moment you really immediately show your value to companies, or can immediately bridge the gap between something they are working on in daily life and the solution you offer by means of, well, say, involving customers in your process yes then suddenly they are a bit open to it. SDE.21

I : So mainly that persuasion takes a while?
SDE : Yes and I think so too, it's also a bit of bringing your own expertise along and just gradually giving people the confidence that the things you do are good. SDE.23

Well then we had that and then we said well you know a brand is just kind of an intangible thing. What doesn't really come to life when you're just talking about it you know? You also have to feel it and people have to support it, people have to understand what that is like. So we talked about internal engagement quite early on. SDE.43

It is also very much dealing with people, getting people on board, facilitating, inspiring. SDF.52

and if you can substantiate that with some hard financial data, you're all set? and then also offer a way out "well I see a number of possibilities here" you usually get people along. SDF.60

No, I mean an innovation must be financially substantiated, but you do have to think a lot about the perception of your target group. SDF.75

I have to convince my stakeholders with a financial advantage and/or a safety advantage. If she is in an unsafe situation somewhere, they are also terrified that accidents will happen. SDF.76

I: Yes, and involving that increases the support base, so to speak, yes.
SDF: That's the theory, but practice shows that too. SDF.92

But to get that project, I made a presentation where we said, well, companies like you, who are in a similar place of similar maturity. They're into stuff like this. Just to stimulate them and to show that this unlocks value with the customer. They tap into new segments. They make margins on services that are higher than the margins they make on those products. SDG.62

I : But do you also help to change that mindset, so to speak? That they are interested in it?
SDH : Sure. SDH.99

It is also very much dealing with people, getting people on board, facilitating, inspiring. SDF.52

I: And how do you inspire people?
SDF: Yes, that is feeling. Just because of who I am, just passionate about your profession. SDF.53

Always thinking in possibilities and never thinking in that is not possible, because that is difficult and when people say that something is difficult or impossible, try to challenge how that can be done differently SDF.54

Yes, having an enormous drive, in workshops, good facilitating and challenging people. SDF.56

and if you can substantiate that with some hard financial data, you're all ?set? and then also offer a way out "well I see a number of possibilities here" you usually get people along. SDF.60

So inspire yourself with everything that is possible and come to solutions SDF.66

The ability to reframe. And see problems not as problems but as opportunities. And really develop a vision based on that reframing. So don't think in how do we get out of this, but much more in how can you leverage this to gain value. SDG.24

And by actually showing them how it is possible and by bringing that very inspiring you actually tickle them awake for what they can do with it. So we do that a lot. SDG.63

So that means that you also have to have people in your house, designers who dare to do that. And we don't have that much trouble with that, I don't know any better. And the people who work don't know any better that it's perfectly normal to have a conversation with someone. So that means you dare to approach someone. That you don't start worrying about what they say or don't say about you and things like that. But before you know it, we've already done it. That is a quality of service design that is of immense value. SDH.30

I: Yes indeed that prototyping, do you take on that testing?

SDI: Yes, but in active collaboration with the product owner. So we demand yes, you have to work with us on a few fixed days a week. It is not asked of you, we run. SDI.34

So, how do you implement that; by asking a lot of questions, researching, map things out and involving people. SDA.9

What I mainly do is involving business and IT in the design thinking method to apply service design. SDA.13

I: And are the end-users also involved in the process?
SDB: Yes, we always try to do it. Always starting with researching the end-users. SDB.15

I: Was the client involved in to project as well?
SDB: Yes, certainly. So, we always try, what I already mentioned, to very co-creatively work with the client. SDB.34

What we often try is to take them through the whole process and explain why we do certain things. SDB.37

So, what we do is sharing those insights with the clients, or we let them listen in with an interview or we interview customers, we are also recording, sometimes also video and we pick out the interesting snippers of the recording, so we can show it all. SDB.44

Before Covid we did a lot of workshops with the duration of a week, where we all together with the client, a bit inspired by the whole design sprint method by Jay Knap, that we would think about a new service proposition an test this on Friday. So, in this way we did it co-creativly. SDB.46

In this way co-creativly working with the client SDB.51

And yes, as far as process supervision is concerned, I prefer to be there, I already mentioned project groups, I prefer to be on top of it. So in the sense that it's not so much do it yourself, but that we do it together.SDC.33

So try to be as specific as possible, but continuously on top of the process, and include them reasonably in what is happening. SDC.37

But in itself, yes I am watching, yes the companies we work for. Yes, you really have to take them into what it is, you also have to show them what it is. We often don't even start with the word service design, but we often start with hey we just have the problem, we don't fully understand the problem. So you really take people on a process and in the end it turns out to be service design with all the principles that fall under it. SDE.19

So where customers normally know where they have a little bit of trouble, we can really show it in a way that they really just get it easily like oh yeah you know. And then here is my problem and this way I can solve it too. So the moment you really immediately show your value to companies, or can immediately bridge the gap between something they are working on in daily life and the solution you offer by means of, well, say, involving customers in your process yes then suddenly they are a bit open to it. SDE.21

I : So mainly that persuasion takes a while?
SDE : Yes and I think so too, it's also a bit of bringing your own expertise along and just gradually giving people the confidence that the things you do are good. SDE.23

and then I just work there for a while, just a few days a week and then you just take them in all kinds of new things and I help them that way. So something like that could be. SDE.85

Then they have to do something that they already do in a different way and that involves a lot of people and that is very difficult. SDF.33

Is the customer also very involved with this?
SDF: I try, to gain that support and also to provide insight into what is happening, SDF.89

but yeah it's a bit of a split you're in, because that customer just can't design, they just can't do it, but you want to keep them involved. So you usually do a brainstorming session for the shape or actually you have to do it yourself, I think, you should also sell like that, but that doesn't always happen at our company. Certainly also dive in for a week to go a little further than yes, you should not think that after a day of ideation workshop you have the egg of Columbus. SDF.90

but for involvement it is always good to keep people involved.
Or you're going to do it the other way around, you're going to come up with all kinds of things and you come up with 3/4 concepts and you let people give feedback on that, that's also possible. SDF.91

I: Yes, and involving that increases the support base, so to speak, yes.
SDF: That's the theory, but practice shows that too. SDF.92

Co-creation and collaboration. Really designing for how can we together ensure that the sin parts are greater than the parts. And really design those co-creations processes in such a way that they are meaningful and that people feel involved and heard and that they are given a good role in processes. SDG.23

So those are five pillars of service design that we use. So human centred, collaborative, reframing and envisioning, experimentation and prototyping and context and structure. Those five, with which we actually explain what we bring to those kinds of processes. What is the value that we then bring in. SDG.27

What we are now seeing with customers is that they are really going to embrace our way of working, knowing that they simply can't figure it out otherwise. So that real reframing, looking for really radical collaboration, combining long-term vision with very short agile sprints and experiments. Starting to become almost commonplace among large organizations. And that is really fantastic to see. SDG.32

So it's really about respect. Respect, cooperation, good listening. SDG.60

Sometimes it's a matter of actually learning to work differently. Well then we do a service design training program. SDG.93

I: And what you just mentioned, youth care, So are all clients also very involved in your projects? Or do they leave you very free in that and keep their hands off it, say?
SDH: No, we don't even do that. No. No we don't even do that. Do you understand? I wouldn't even assume such a project. No. SDH.24

you could almost say it is a USP of service design to involve end users. I don't think that always happens well. SDH.25

but in this case it was precisely with those end users and with that company that it was mainly about ?binding? to give people a voice themselves and to let them experience its value. SDI.24

Is that what service design techniques are generally freely accessible. You can understand a customer journey workshop quite easily and it is very visual so it appeals to people, so you can do it quite easily with different disciplines. So I also see that as a kind of enabler to get people together. SDJ.8

Strategy scope
Certainly, because service design is more on a strategy perspective or the scope of the service or the proposition that you deliver. SDB.12

Human perspective
All kinds of human qualities of which we believe that service design really has something to add. And can really bring something beautiful. So we're going for that too. SDG.21

And our task was therefore to focus on that soft side of the service in order to invest time and attention. And then you come to the design approaches, that is of course that the end user is important, that you think about journeys so that you don't think so much in interaction but in what if you arrive at that airport with your baby, then everything is organized for you or that you can find everything to safely check in with your baby. Well, that turns out to be very disappointing. SDH.60

Accessible
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Learning by doing
Learning by interacting or our famous work in Nordic economically determinable. There is a second option, these learning by doing all the literature around that. RA.10

In Design there is a huge movement towards what we call, evidence based, demonstration, so you could not simply analyze Service dominant logic theory, you have to apply it sometimes. And they will say that is really a thing. And, and this produces less models and more practice oriented experience from which you could do, kind of redirection feedback that really allows you to build a framework of a model that is a thing that could be dynamic and changing according to the practice of the action that you are already producing. RA.30

So they think that you were describing before so the method of trial and error and learning from these trajectories is more design oriented. RA.33

it's based on experiencing new things instead of just reading at that out of the book. RB.9

Yeah, yeah, that's a typical tool, well, a typical approach to creating commitment, and to create an acceptance of design so it's a "show don't tell". So, saying you showed that the power of workshop of the design workshop. RB.15

The other side is yes, which company is going to read a website once, say we are now going to do this 3 year plan together. So, yes, I think you have to get acquainted with something and learn to experience its power before you realize that this really requires something in that mindset change from you. SDD.23

Well, you can tell someone that, but if you have not experienced it, it is very difficult to convince someone of this and so yes, my view is that you only really see the power of this method by experiencing it . SDD.26

I: Yes exactly and in that way create support within the organization to apply that.
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So where customers normally know where they have a little bit of trouble, we can really show it in a way that they really just get it easily like oh yeah you know. And then here is my problem and this way I can solve it too. So the moment you really immediately show your value to companies, or can immediately bridge the gap between something they are working on in daily life and the solution you offer by means of, well, say, involving customers in your process yes then suddenly they are a bit open to it. SDE.21

That is the development I see and I also do things in healthcare and then they do everything they think they can do with a hackathon and then they lock themselves up for 3/4 days in a cage with a number of healthcare professionals and there they have to then the golden egg hatches, but in the end it often ends in beauty with a good idea, but then you really have to get started and you will not come to a good design in 4 days. It's just a thorough analytical process with a lot of creativity and mindset and experimenting and learning. SDF.12

The whole experimenting and prototyping which is a very important ingredient of service design. Where you actually make small mistakes much earlier in the process instead of big mistakes later in the process, so that you learn faster, so that you also learn together, learn from each other, so that you get a much more organic value creation process. SDG.25

And actually see every new service as a prototype that enables you as an organization to learn and develop new capabilities and to grow to that next step. SDG.88

And actually see every new service as a prototype that enables you as an organization to learn and develop new capabilities and to grow to that next step. SDG.88

So we have a little bit of friction between the two kind of work, because we are interested in how to do things. So, if it's not about what it's about how things happen, and this is strictly connected and evolved in service design for the fact that we need a theory of change to understand what is happening because of causal links that generates whatever framing of whatever phenomenon. Okay. So, we are not so able to transform the essay in the overall

theoretically interpretation sometimes but I think that we are, we are more adherent to real world practice, and understanding. RA.32

Making things tangible/visual

So, how do you implement that; by asking a lot of questions, researching, map things out and involving people. SDA.9
Well, if you're a good one, you just put your finger on the sore spot and then you make that insightful, visualization. That is often so complex that a good poster or a visualization or an infographic or a small, very small picture already helps to understand the total picture. SDF.87

Mainly making things visual really helps SDA.11

and also very much the problem of the person for whom you are doing it, so the customer or the user or the employee, who make their pain or those opportunities visualized for them. So being able to really empathize with what those people are going through SDF.59

Well, if you're a good one, you just put your finger on the sore spot and then you make that insightful, visualization. That is often so complex that a good poster or a visualization or an infographic or a small, very small picture already helps to understand the total picture. SDF.87

Everything helps, everything in the design toolbox helps to make people think differently than in excels, because if you only look at excels, you don't see the whole picture. Unless you can only really think in those numbers, but few people have been given who can keep an overview of that. Organizing and structuring and visualizing information is also a very important quality of a designer. SDF.88

So we put a lot of effort into that. So we do that in the way you are used to from service designers. Those are videos, that is visualizing, that is calculating the business case, what are we actually talking about? Yes, if you pinpoint the question behind the question or the essence of the assignment, then you shouldn't do your best to explain it, but you have to find forms to make it come alive. SDH.103

And this is not necessarily prototyping or visualization completely cut loose from each other. SDH.51

What I often saw is that those people did their profession, but that there were all kinds of organizational situations around it that the profession was not understood or that it was really necessary that there were finally people who made things visual, which also created movement in the organization, but yes. SDJ.1

1.3 Goals
Optimizing processes for a better and consistant user experience
yes look, we are quite strict about that as a company, we just really believe in it the moment you have a value proposition and you make sure that everything goes in that direction. So that there are no inefficiencies and that everyone knows exactly where they stand. In the long run, you are simply much more efficient as a company. And that just ensures that people know why they come to work. That your customers know why they are with you. SDE.46

It simply gives direction to decision making much easier or that you know what to do and what not to do. SDE.47

And the third thing that companies run into is that if you translate them then there may be someone who knows how to translate that very well to the website, because that is his specialty, but does customer service do it too. So the problem is that you have to try to do it consistently across all channels... For example, imagine you have a value expert, quite a few companies have that. How do you ensure that the website radiates expertise with the photography with the texts, etc. and with the products and that the customer service does the same. SDJ.49

I: That they then wear the same outside.
SDJ: Yes and that you also reuse things. That you don't get one department making something that the other department had already made.SDJ.56

yes with, for example, that values workshop I just talked about, how those values should come together, we do that for a client we have been working for for a few years and where several people in multiple teams are already working. So we deliver designers to scrum teams and we also do those workshops. SDJ.58

So, you will look at the journey. Where does the journey start and in what way will the customer be introduced to the company, what does the customer already know. How could we create a good flow between applications, user flow to user flow. SDA.8

Just to keep it in the tools and techniques that you then also draw up the personas of those end users and create journeys of what they experience. But for us it is at least on the soft side than on the process side. SDH.62

So the different steps that a customer takes in his journey and what is involved within the organization to be able to achieve that experience for a customer. SDI.3

So what I just said is still before the prototype and then you first make the customer journey. Like this is what happens ma'am, yes and then these are the bottlenecks, yes and only then come up with concepts. SDJ.16

Which means that a user or customer has different touches with a product, so touchpoints. So I try to design them as good as possible in order to create a perfect user experience. SDB.3

And from that point we go often design the actual touchpoints and then we got help from a UX designer or visual designer. SD.10

So, you will look at the journey. Where does the journey start and in what way will the customer be introduced to the company, what does the customer already know. How could we create a good flow between applications, user flow to user flow. SDA.8

It is true that in servitization that is a partly customer-inspired process in which you look at the world of the customer and what are adjacent services that make sense around that product. How does your product play a role in customer value creation? And you can map out the entire journey and develop related services from there. SDG.80

Just to keep it in the tools and techniques that you then also draw up the personas of those end users and create journeys of what they experience. But for us it is at least on the soft side than on the process side. SDH.62

So the different steps that a customer takes in his journey and what is involved within the organization to be able to achieve that experience for a customer. SDI.3

So what I just said is still before the prototype and then you first make the customer journey. Like this is what happens ma'am, yes and then these are the bottlenecks, yes and only then come up with concepts. SDJ.16

By mapping everything you can see how the process can be optimized and then because for example you see that department A takes three days, because they are waiting for system X or input from something. So, by mapping it you can undertake a process optimalization, so the underside and thereby creating a better customer experience on the upperside, because the bankcard is there faster or you get a faster response if you can open a bankaccount in the first place. So you have process optimalization that you can combine with customer optimalization and those tools are improving and it gets easier to map, but it stays a tool. SDA.32

So, you develop a service blueprint to look where the bottlenecks are and to solve those bottlenecks, SDA.33

Finding a valuable solution for the customer that both fits the organization and the technology
I studied design at university and in it you learn a design process where you first explore the problem and then come up with solutions and no to a problem definition. Then you will come up with very broad solutions and you will test and validate those solutions and you will arrive at a validated solution that has value for the target group for whom you design it and that fits within the organization and the technology. That's actually my definition. SDF.5

Finding the combination of customer value and value for the organization
No, I think you should always look at the business case. So a company always has to gain something out of it, but I believe that when you have a good product based on the demand of the target group then you will create added value. SDA.37

Certainly, but I really believe that when you create value for the end user then you also create value for the organization and in this way also accomplish a commercial goal. SDB.27

It really goes hand in hand. If we look, on one side at the end user as a source of good idea's. SDB.28

If we can make it hard, through achieving a commercial goal by implementing this idea or build a simple business case based on assumptions and market data it really goes hand in hand. SDB.29

But on the other hand, we are also very much involved in value creation. And value creation for our customers, but say for the end user and for the customer. So see, how can you ensure, so how do you ensure that the proposition that a company has, that it matches the proposition that you are going to make for your customer. So what kind of value is the customer looking

for? What value is the company looking for and how can you make something that is sort of a combination of a product that works for both parties. So reference to two things. SDE.3

And most people found the design thinking/service design workshop quite difficult. And there was one who said, I think I understand what you are doing, if you understand what people find important, the end users, then the rest will follow. Well one, he was absolutely right. Two, we proved that with him afterwards. And three, he was the only one of twenty-eight people to realize that. SDH.33

But on the other hand, we are also very much involved in value creation. And value creation for our customers, but say for the end user and for the customer. So see, how can you ensure, so how do you ensure that the proposition that a company has, that it matches the proposition that you are going to make for your customer. So what kind of value is the customer looking for? What value is the company looking for and how can you make something that is sort of a combination of a product that works for both parties. So reference to two things. SDE.3

And then you look at where that customer stands, what can that customer actually deliver from an organizational point of view? SDG.82

learning how to work differently
Sometimes it's a matter of actually learning to work differently. Well then we do a service design training program. SDG.93

Service design as a way to differenciate yourself
then service design makes me go to one store and not another. SDF.9

It's much more holistic. That is also the way in which you can distinguish more and more, because those products, at a certain point when I started there, you saw a website with those products, they were all the same. Such a micro image of the product. We did deliver top quality, but you couldn't show that on a picture like this. So you have to show it somewhere else. So you see that development enormously. You have to rely on that experience and the total picture and not just, it depends a bit on what you design, but you can hardly design a product alone. Not a functional thing. SDF.21

and what I see is that a lot of services that are going to actually look more and more alike. I mean if you have an app from bank A and bank B, in the end there isn't much difference anymore. So how can you differentiate yourself, well by tapping into those deeper and higher values and making them explicit too SDJ.42

Service design to innovate and expand
Or they want to innovate in a certain area, or they want to enter a new market/ try and test a new idea, SDB.7

and according to me this is such an approach, where you really let something very specific come back in the organization and ensure that it really retains, that is necessary to get a structural change and because otherwise when doing it once it stays abstract, really nice, cozy, thought up really nice things and then it's gone. That's the risk with these types of jams. SDD.22

I: do think more companies should use service design in their organization?

RA: Obviously yes they want to work. So it's a it's a job. Yes, also because my opinion is two point of view. The third is, obviously, yes that's because using a design approach is a project or approach, you could. I think more in tune with this idea of continuous innovation and continuous competition or innovation. So, this is the capitalist version. RA.53

But it's clear that is an opportunity, if you imagine again the discussion about mission oriented innovation, it's about dealing with gigantic mission that enclose innovation entire ecosystem and are they producing yes material develop so things, artifacts, and all the other sides. Huge proposal of service games that will from public side to the private one. So, I think absolutely, yes, RA.52

This is about a compassing older system and question that surround the process. So sometimes being like by design so you could take it plainly without problems with a normal average attitude or you could really be more aware whatever surrounds these processes and then include them and this gives you in my opinion a more clear idea of the frontier development. So it is a reality check. RA.59

So, making business and IT aware, in teams they often work on a product or application and they have often a lot of knowledge about the product or application, but that the product or application is part of a bigger ecosystem that is the work of the service designer SDA.7

And a third very big trend that we see, and that really has happened in the last two years, is that service design is increasingly about ecosystem innovation and about systemic design where you actually intervene in very large complex systems that are, for example, those stakeholders. , which are very dynamic, which are very complex SDG.13

That is of course the great thing that more and more companies are discovering and governments and NGOs are even discovering that the complex problems they have become involved in with regard to the major social transitions, the energy transition, the climate transition, but also social issues you can no longer manage you out of it in the old way. You have to use design for that. SDG.29

And that design approach works very broadly. Because it is suitable for those kinds of changes that also involve value creation. So our work is therefore very broad. SDG.46

Well I'm negative, but everyone is having fun with projects to prefent loneliness, but we haven't solved it. So it's important to see what things you can still design in between? Because to solve it. SDH.84

So we are kind of influenced by design in the most important activities problem finding could not be furthered by that, so we could produce something that could be defined by an alternative or innovative vision. RA.12

So there's a huge transformation in human experience. So if you start dealing with that you will say that certain design that is linked to the thing could be, for sure. Using this critical or alternative future vision, a way to try to grasp them. Something that allow you to develop this part. RA.55

An imaginary future in which you put new things that allow you to live in a new way. and then service, following because they from the business model perspective, the real interesting part is not producing things, is usedom, Send the performance. RA.56

It is, I think the great thing about service design is if you as a company have a service design agency that they often look at their problem from a different perspective. Or that their company is looked at from a different perspective. And based on that you can advise on propositions and that just works very well. SDE.12

Service design as a way to deal with organizational change
And if you start connecting all these, these, these topics, you will see that immediately service design is a way to deal also with organizational change, because it could intervene in that it could be the functional, or the critical part of the discussion of these beliefs RA.45

That you want to become more customer-oriented in this way and want to change your organization and if that is not the underlying goal then it does not make much sense, because then you do it, but it leads to nothing or not to the intended result. SDD.5

Using services design to improve/create services to become future proof
Currently I am hired to projects where big organizations are looking for a way to improve their service or are looking for new ideas regarding services, which will make them more future proof, as a goal. SDB.14

Service design creating a place to put all information
So in that I think that service design can simply advise and support and lead very well and above all just bring all the different people together a little bit, while yes everyone is doing something and just a place where you can put all your info and intel, yes that is really great, but that is not yet the case in many companies. So that's something for the future. SDE.79

and the other thing that also makes you hold onto things is building what we call a design system. Which means that you have all kinds of components that you use, for example on the website or letters or call scripts, that you have them all together in one system and that you can also reuse them. SDJ.54

So the content is the same, but the form is different. Yes, that's actually a component library and that's how you try to capture things. SDJ.55

I: That they then wear the same outside.
SDJ: Yes and that you also reuse things. That you don't get one department making something that the other department had already made.SDJ.56

Service design as a driver to change society
I think that service design is less or more the way in which will drive a lot of things in society. So yes, the answer is yes, then the way in which you drive it depends on values, ethics. RA.50

An imaginary future in which you put new things that allow you to live in a new way. and then service, following because they from the business model perspective, the real interesting part is not producing things, is usedom, Send the performance. RA.56

Service design to create behavioural change needed for a sustainable world

And the fourth is, of course, service design for sustainability. What is a very important spearhead at our company, we really put a lot of effort into it because we really feel that technology or product designs will not achieve a sustainable world. SDG.16

A great deal of design in circularity or sustainability is about technology and new business models, but not about people. We strongly believe that sustainable change ultimately comes down to human change, behavioral change SDG.17

2. Status of service design
2.1 development service design
service design has developed
And I think, also good to know, we can talk about it later, but service design as it is or was when we started is really different from what it is now. SDH.3

Broader application
Simply, it's almost the whole picture. So for that matter, you can always apply it in any way you want. In terms of digitization too. As far as I'm concerned, it always starts with what your customer wants. And yes I can't repeat that often enough.SDC.91

According to me, you can do a lot of things with the mindset and the methodologies and the tools and processes of, let's say service design or design thinking or you just call it design. SDF.24

Design moves from tacit products to organizational transformations
I graduated one of the first in the more experience design direction, but when my study started it was really still products, ergonomics and design-oriented, tangible. You see more and more a development towards what you said before servitization and digitization and experience driven design, which is good. SDF.19

Service design is for many organizations associated in terms of digital transformations and making service-oriented processes digital more efficient. What it all started with was that service design tells us that the relationship with people, with customers, becomes important. And that's something we've been holding very strongly to. SDH.4

I also worked as a teacher at the university for a while and you see that students are getting less of the hard skills of designing and more of using design thinking-like methods. So it's becoming more and more on a rhetorical level designers are working and less on a tangible level. SDI.43

While it is precisely that aesthetic that is also very important for a designer to get his message across and that is something that is often neglected. Whereas in the 90's that was just the thing. A designer was mainly concerned with aesthetics and now it has been transformed into more rhetorical. SDI.46

Not much has changed, except for extra tools
So in all those years not much has changed, except for a few extra tools here and there, but in fact it is the design of a product or service. SDF.7

Service design is getting commercialized and simplified
I see that development and it is kind of commercialized in that way and in some way it is good to make it tangible, but it is often also simplified by that canvas and after that you really have

to think about things carefully by testing, validating , really with your hands in the clay and in the mud and that one workshop where it is sometimes a bit decimated in all the beautiful social media posts and media. SDF.11

On the one hand, it becomes more democratic, so everyone can design and it is good in a way. It also creates awareness and it is marketable, but is also sometimes thought too easily and then they wonder why it doesn't work. SDF.13

Yes, so you think you can get everything done in a sprint of a week, so forget it. SDF.14

So the development is a bit of commercialization and the canvassing of design. SDF.15

Due to tools and models, everyone can design
On the one hand, it becomes more democratic, so everyone can design and it is good in a way. It also creates awareness and it is marketable, but is also sometimes thought too easily and then they wonder why it doesn't work. SDF.13

It's actually a five-step process that anyone could do with a little training and you can see that that has really come up in the last few years SDI.42

Is that what service design techniques are generally freely accessible. You can understand a customer journey workshop quite easily and it is very visual so it appeals to people, so you can do it quite easily with different disciplines. So I also see that as a kind of enabler to get people together. SDJ.8

So, well, IDEO put design thinking in a five-step process years ago and then you have a lot of other models, such as double diamond and the like, but that kind of ignores the expertise that you used to receive as a designer. SDI.41

It's actually a five-step process that anyone could do with a little training and you can see that that has really come up in the last few years SDI.42

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I: And so according to you that is a less good development at the moment?
SDI: Well it's a development that I think makes a lot of sense, but it worries me because you can't define what your expertise is as a designer anymore. SDI.47

I: And that you then wonder what the added value of a designer is.
SDI: Yes what my unique value is then. So that is very difficult to define. SDI.50

Greater role for service design in ecosystem innovation
It's much more holistic. That is also the way in which you can distinguish more and more, because those products, at a certain point when I started there, you saw a website with those products, they were all the same. Such a micro image of the product. We did deliver top quality, but you couldn't show that on a picture like this. So you have to show it somewhere else. So you see that development enormously. You have to rely on that experience and the

total picture and not just, it depends a bit on what you design, but you can hardly design a product alone. Not a functional thing. SDF.21

I: No, then you should look more at the bigger picture, you mean...
SDF: Yes, SDF.22

and what you also see happening now is, of course, that is still a bit of shouting, but value driven design and ethical design and keep that in mind. That is important and corporate social responsibility and ecological design and maybe that is also design thinking, system design is another trend that is rising, but in fact it is all the same. Look at the overall picture. It just depends on what scope you actually take as a designer, but I don't really care what I design. SDF.23

And a third very big trend that we see, and that really has happened in the last two years, is that service design is increasingly about ecosystem innovation and about systemic design where you actually intervene in very large complex systems that are, for example, those stakeholders. , which are very dynamic, which are very complex SDG.13

and where you really can no longer apply a linear design process and where the big question is where should I intervene and with which subset of stakeholders do I have to work in order to gain traction and to influence that system on a positive way. SDG.14

That is of course the great thing that more and more companies are discovering and governments and NGOs are even discovering that the complex problems they have become involved in with regard to the major social transitions, the energy transition, the climate transition, but also social issues you can no longer manage you out of it in the old way. You have to use design for that. SDG.29

Recently design and brand became closer together
Let me start with that brand driven innovation, hey, I wrote that in 2010. Then everyone thought it was all very nice and interesting. The academic world was very interested, but little came of it in practice. Branding was mainly a marketing communication activity and ideally that should indeed have an impact on innovation, but in practice that was hard to find. SDG.7

Now we are actually with the rise of customer experience and more holistic design of the entire experience economy and so on, innovation is increasingly about your brand DNA and translating your vision and purpose into valuable innovations. And then you actually see that brand driven innovation is becoming more and more commonplace. So let's say ten years later, at this company we do quite a lot of work on translating brand value into guiding principles and developing propositions based on those guiding principles that bring that brand to life. SDG.8

So that's one side of the story is service design is increasingly permeated by the brand. That's one. SDG.9

And that design thinking is really starting to get a foothold. SDG.30

Service design is now more associated with digital transformations and efficiency
Service design is for many organizations associated in terms of digital transformations and making service-oriented processes digital more efficient. What it all started with was that

service design tells us that the relationship with people, with customers, becomes important. And that's something we've been holding very strongly to. SDH.4

We're even at a point where I may not always identify with service design, where it's going. Which means I'd rather say we're a design agency and we're in the business of designing services. SDH.5

I hope so, I don't think it is anymore, but that's what we started with when we started with service design. SDH.64

Nowadays the process is more important than creating things
more on the process and less on the actual doing, actual making. I see that students still try to learn that themselves with tools and toolkits, but there is simply much less attention to it. SDI.45

Designing services based on deeper values of customers
What I just told you about there are a lot of techniques, but what actually has value. We've developed a kind of service here and it's called to experience design and that means you design real services that are really going and that really help you, that are really about you. ?That will? saying when something is about you I mean not only that it saves you time or that it saves you money or that it makes your life easier, but that it is also about what deeper values you have. SDJ.40

all kinds of values you have, how do you process that in the service SDJ.41

and what I see is that a lot of services that are going to actually look more and more alike. I mean if you have an app from bank A and bank B, in the end there isn't much difference anymore. So how can you differentiate yourself, well by tapping into those deeper and higher values and making them explicit too SDJ.42

Yes we have to stop optimizing our sales funnel, because yes that is optimized enough, but we have to do other things. Do you understand a little? SDJ.46

Managers without design experience become head of service design
But there are many organizations such as a telecom provider, cable operator, maybe even municipalities, it is a trained business administrator or a manager type a project manager. He then becomes head of design. Or head of service design. And he will have had the training, he will have read the books. But the experience that designers bring with them will never get into it and that makes projects not daring in that regard either, maybe it is, you know? That's it. You can see design as a trick, and then you have followed a training. But the funny thing is, I've studied for five or six years and 20 years of experience. SDH.36

But the value of experience, for example, lies in designers or how designers perceive the world and how they function. And so on the client side, functions of design lead or service design lead arise, filled in by non-designers and then, as far as I'm concerned, it remains very superficial. SDH.37

I : That they don't really go into the depths of what the end users want.
SDH: No. And that just happens a lot. SDH.38

and a weak signal is if you just say throw everything in a heap and you have a feeling I think we have to go that way, and that is partly intuitive and partly that is an accumulation of experiences, in our case in our work research . That you are going to try something based on that. So don't make an assumption, especially not design a new service on an assumption. But that you take action based on those signals that make you think, well, we have to do something with them. SDH.44

And that is very difficult to explain to non-creative types, the academic types or the university types, the business types. And what we're going to do now, in general, why we're here then is not to argue about that, but then we make something and then we try that out, and then we have proof that something works or doesn't work. , you can just show it. SDH.45

So, well, IDEO put design thinking in a five-step process years ago and then you have a lot of other models, such as double diamond and the like, but that kind of ignores the expertise that you used to receive as a designer. SDI.41

there are also a lot of business schools that teach design thinking, but there are hardly any designers who teach there. So that kind of indicates yes hey if someone else takes over that discipline from us, then what are we. SDI.49

2.2 service design within organizations
Increasingly more used in organizational transformation

There have been the goal of creating the service versus serving the goal of changing the culture and the direction of the company, that's the biggest change that I've seen over the years that is you also point out in your description of your project, service design is more and more seen as something that companies can use to transform themselves towards a more digital company or to address issues of customer centricity, or to become more innovation driven. So, this is the biggest change that I see that the scope of service design has increased and a lot of knowledge has been well, not a lot but knowledge is coming out, There are there's some agreement on how to use services designed successfully for this transformation purposes. That's the biggest change in my view. RB.5

So, I am part of a team with other service design, but also UX and UI designers and with this team we are responsible for the design part of digital transformations of big organizations. They are often coming to us with a question, or their proposition that they offer, digital is not working or they are looking for something new, SDB.6

I : And do you notice that when that deadline is over and the project is over that you have really made a lasting impact on the company or that it?
SDC : Well that lasting impact is mainly on the side of understanding the customer. And in that sense also provide them tools in terms of project approach of you know, how can you do that, SDC.60

And the fourth is, of course, service design for sustainability. What is a very important spearhead at our company, we really put a lot of effort into it because we really feel that technology or product designs will not achieve a sustainable world. SDG.16

That is of course the great thing that more and more companies are discovering and governments and NGOs are even discovering that the complex problems they have become involved in with regard to the major social transitions, the energy transition, the climate

transition, but also social issues you can no longer manage you out of it in the old way. You have to use design for that. SDG.29

We are increasingly thinking in terms of programs rather than projects. So that basically means we're trying to say, every project is a building block in the great transition. And those projects you string together and those projects help you to learn and they help you achieve results. SDG.33

And that design approach works very broadly. Because it is suitable for those kinds of changes that also involve value creation. So our work is therefore very broad. SDG.46

And that is actually a process in which we are increasingly involved. Now teach us how to get this done in our organization. So apart from the good ideas and the great services you have come up with, go help us to actually implement this in our organization. SDG.89

Service design is for many organizations associated in terms of digital transformations and making service-oriented processes digital more efficient. What it all started with was that service design tells us that the relationship with people, with customers, becomes important. And that's something we've been holding very strongly to. SDH.4

Yes, I see that it is moving much more towards facilitation and that worries me a bit. So the position that I now also have at the tourist association is actually promoting design thinking there and making everyone work in that way and then making myself redundant. SDI.40

it's tried a lot. Well, not a lot, it's tried more and more successful cases are scarce maybe because I think it's mainly, so it's mainly because it is a process that takes a lot of time, and it requires. Yeah, it's sort of open mind from the companies that receive that. We're not still, we're still not there so it designer a service designer still needs to spend a lot of time to explain why people should use this particular approach to achieve a certain goal, instead of more traditional business driven ones so instead of being able to jump in directly into transforming an organization with service design service designers need to spend a lot of time in explaining why, and providing, maybe a business case for that so that makes things slower. RB.12

So I know that many service design consultants are engaging in organization transformation processes so much more than before, or Servitization as you want to call it, but they. Yeah, there's, there's not a lot of visibility for the success of their successes and there's not an exemplar case that we all well, that we all recognize has been done through service design. RB.13

So, I am part of a team with other service design, but also UX and UI designers and with this team we are responsible for the design part of digital transformations of big organizations. They are often coming to us with a question, or their proposition that they offer, digital is not working or they are looking for something new, SDB.6

Especially from students who apply these kinds of techniques when they are graduating and you see the forerunners, the parties where you don't even have to propose this and the companies that may be slowly getting used to SDD. 7

They shout that they will do it, but they don't quite understand yet, but they are still very concerned with the total picture. Certainly the larger companies, those somewhat older companies such as the banks or the postal companies and the insurers, the health insurer. They all say that they think customer-centric and holistic, but in fact they are all still silos. So especially that they are aware of it, but really actually look at the total picture and maintain those principles, the maturity is not always the same everywhere. SDF.27

What we are now seeing with customers is that they are really going to embrace our way of working, knowing that they simply can't figure it out otherwise. So that real reframing, looking for really radical collaboration, combining long-term vision with very short agile sprints and experiments. Starting to become almost commonplace among large organizations. And that is really fantastic to see. SDG.32

We are increasingly thinking in terms of programs rather than projects. So that basically means we're trying to say, every project is a building block in the great transition. And those projects you string together and those projects help you to learn and they help you achieve results. SDG.33

And that is actually a process in which we are increasingly involved. Now teach us how to get this done in our organization. So apart from the good ideas and the great services you have come up with, go help us to actually implement this in our organization. SDG.89

No, we do have long-term relationships SDJ.57

Only doing a design/journey workshop, with no results

And I also think what it is is that, look it has of course been a bit of a hype in recent years about oh and then we will do customer journey and in every company suddenly people made journeys and mapped post-its. But the problem with that has always been, yes, well that's hanging in a room, everyone is super enthusiastic and then nothing else happens with it. SDE.25

And then that ?man? who said of ugh journeys, don't we have another word for that? I'm sick and tired of hearing that all the time. I don't like the word at all. Then I thought yes you know that means you have had experience apparently, so they just didn't yield anything it's a bit of a buzzword, nobody understands exactly what to do with it so it might also be a bit connected to your previous question. So yes then I thought okay well well they are not super enthusiastic. SDE.26

just to do it right and indeed just to guide well. So in that sense, yes I think people just don't do it out of yes, just not out of enthusiasm, but not indeed with the right guidance or not with the right goal, including what to do with it next. But that's just for the sake of mapping, so to speak, and then, of course, that doesn't do you much good. SDE.29

So I think it's mainly a bit of the impractical side of just not being able to apply afterwards. SDE.31

I : Yes. Because then the first part is not quite right, the problem formation and things like that?
SDE : Yes. SDE.32

And also just because they just think it's fun to do that once. As an exercise. And of course it is. Anyway, journey mapping is just part of a very large process for us. So it's not just sketching something on the wall and that's it. SDE.33

The word design becomes canvassed, while for me it's more of a mindset and you can also design more philosophically, but they think they can all capture design in canvases and then we do another canvas and another hackathon and they call that design and with a workshop with post its and canvases then we are there. SDF.10

I see that development and it is kind of commercialized in that way and in some way it is good to make it tangible, but it is often also simplified by that canvas and after that you really have to think about things carefully by testing, validating , really with your hands in the clay and in the mud and that one workshop where it is sometimes a bit decimated in all the beautiful social media posts and media. SDF.11

That is the development I see and I also do things in healthcare and then they do everything they think they can do with a hackathon and then they lock themselves up for 3/4 days in a cage with a number of healthcare professionals and there they have to then the golden egg hatches, but in the end it often ends in beauty with a good idea, but then you really have to get started and you will not come to a good design in 4 days. It's just a thorough analytical process with a lot of creativity and mindset and experimenting and learning. SDF.12

So the development is a bit of commercialization and the canvassing of design. SDF.15

And luckily not anymore, a few years ago it was like we're going to do a creative session with post-lts and then we're going to do a little business model canvas and then everything will be fine. That was actually a kind of very premature phase of design thinking in which there was the promise, but that promise was never fulfilled because there was no fundamentally different thinking. SDG.31

I think that many service designers do not realize how much they are actually stirring in organizations with their ideas and yes you have to put the customer first. And with that you sometimes see some disappointment in organizations like yes, then we did a service design process and that was a really nice journey and the poster is still there, but we haven't changed anything actually. We look at that poster every day and think that's how we should do it, but no one has told us how. That's a shame actually.SDG.98

Especially in say technology-driven somewhat masculine companies that are a bit rational and roll up their sleeves. Then suddenly such a nice club came along and they all went to workshop with us and then we all had to stick post-Its and then everything has to be different. Well, we're not going to do that again because it was very expensive and it didn't bring us anything. SDG.99

Service design's role gets expanded by also assisting in implementation
And that is actually a process in which we are increasingly involved. Now teach us how to get this done in our organization. So apart from the good ideas and the great services you have come up with, go help us to actually implement this in our organization. SDG.89

Yes, I see that it is moving much more towards facilitation and that worries me a bit. So the position that I now also have at the tourist association is actually promoting design thinking there and making everyone work in that way and then making myself redundant. SDI.40

More and more companies are using service design
And you see that more and more companies are using it SDA.39

Yes, if you look at what is on the market then I think yes. Service design is just hot and companies are working on it. SDF.26

That is of course the great thing that more and more companies are discovering and governments and NGOs are even discovering that the complex problems they have become involved in with regard to the major social transitions, the energy transition, the climate transition, but also social issues you can no longer manage you out of it in the old way. You have to use design for that. SDG.29

What we are now seeing with customers is that they are really going to embrace our way of working, knowing that they simply can't figure it out otherwise. So that real reframing, looking for really radical collaboration, combining long-term vision with very short agile sprints and experiments. Starting to become almost commonplace among large organizations. And that is really fantastic to see. SDG.32

Difficult to estimate if organizations use service design for organizational tranformation
I: No exactly. And do you also see that more companies nowadays have that DNA that you were talking about?
SDD: From my perspective that is sometimes a bit difficult to estimate. Also because I do see the work field in a kind of indirect sense. SDD.6

I: Is there already a lot of service design applied in that sector, what do you see?
SDD: Yes and no. That depends a bit on which part of the tourism sector you are dealing with. SDD.28

Well, I don't know if I can compare that with the past, because I mainly designed two types of products, then I don't know if other sectors haven't done this. SDF.25

Both young and older organizations use service design
And I also think one more thing that might be important. We all assume that companies involved in service design are all young companies, but we work for quite a few, well average age in some companies I work for is quite high. So those people have all worked there for twenty years. SDE.52

They shout that they will do it, but they don't quite understand yet, but they are still very concerned with the total picture. Certainly the larger companies, those somewhat older companies such as the banks or the postal companies and the insurers, the health insurer. They all say that they think customer-centric and holistic, but in fact they are all still silos. So especially that they are aware of it, but really actually look at the total picture and maintain those principles, the maturity is not always the same everywhere. SDF.27

At this moment not many organizations work according to service design theory
I expected that to be very self-evident in the theory of service design, when we started it was very normal. But there are not very many organizations that actually do it that way. I

wouldn't say we're unique, but it amazes me how few people actually talk to the end users. SDH.13

Makes connections between different layers of the organization

But that's the nice thing service design does too, he says yes, the manager doesn't know, because he is too far away from it. With those people on the operation floor who are in direct contact with the customer, we have to use them to obtain knowledge and they have to come up with those ideas and the managers can say yes or no. Or actually they should say yes, but then they must ensure that this is arranged. SDD.33

At the airline, it was people from the operation who were responsible for developing digital tools for the airline. So really under the hood. We also provided management training at the financial company. SDG.38

We're actually trying to look at these kinds of changes that never come all the way from the top but they also never come all the way from the bottom. I can't just bring about such a change all the way from the bottom up. You must also have sponsorship from above. So we try to design programs in which all target groups are affected as much as possible SDG.39

What we see more and more often is that a new service or a new solution that has to be understood at the top by the CEO, which means that you show something different, tell something different. And at the very bottom, we just have to go for that housing association, there will just be walks in that neighborhood, that's it. So, take a walk, have a cup of coffee together. That is it. That's very small. And the connection between what is very practical and small and what a CEO wants and everything in between, designing for that, that is what organizations get from service design. SDH.81

I : So basically making it understandable for everyone and also that everyone benefits from what I understand?
SDH: Yes. And if you don't do that in such a way that a service can simply fail. Yes. SDH.82

I : So that it must be acceptable to all parties?
SDH : Yes SDH.83

Well I'm negative, but everyone is having fun with projects to prefent loneliness, but we haven't solved it. So it's important to see what things you can still design in between? Because to solve it. SDH.84

I : And then I think it is also a bit of motivation to do it. You can have very nice ideas, but if no one wants to implement them.
SDH: Yes, exactly. Or if no one sees the connection, for example. SDH.85

I: That's great and you just mentioned that interdisciplinary is also part of service design. Have you almost exclusively worked on your projects in interdisciplinary teams?
SDJ: Yes, preferably SDJ.6

Collaborating with a service designer to enable change

I: And were they easier to take with you than people who don't have a design background?
SDI: Yes, definitely, they already knew what the potential value could be and they used us more as a kind of vehicle to cast their vote in the organization. SDI.28

I: Because otherwise it wouldn't work if they set it up themselves or how am I supposed to see that?
SDI: Well, because they didn't have the time themselves to develop those activities besides their work. SDI.29

What I often saw is that those people did their profession, but that there were all kinds of organizational situations around it that the profession was not understood or that it was really necessary that there were finally people who made things visual, which also created movement in the organization, but yes. SDJ.1

Using a linear design process is not possible anymore
and where you really can no longer apply a linear design process and where the big question is where should I intervene and with which subset of stakeholders do I have to work in order to gain traction and to influence that system on a positive way. SDG.14

There needs to be a mindset shift within companies in order to use service design
I think every company is open to it, but not every company understands what it is. And that they find it difficult to say, it is very much about a kind of mindset shift. SDE.16

And yes the second is indeed just that mindset shift. Sometimes it really takes time for people to see what they should or shouldn't be doing. SDE.42

In smaller- and family owned companies they tend to work with intuition instead of an methodological approach as service design
I think there are, well you have a lot of small companies, yes they just do what they do and they think they are good at it and they don't do it very methodically or systematically or using all kinds of models or techniques or tools like you have with service design, but they just do it by feel. There are many family businesses in tourism that also do it that way. SDD.29

Service design demand
Nowadays more demand for the service design mindset
I: And do you see nowadays that there is more demand for this mindset?
SDA: Yes, you see that yeah. SDA.22

I: Yes, but is there a demand for this way of thinking?
SDD: Yes, and if the demand isn't there, it arises because I think companies that don't actually adopt this customer-oriented approach are slowly losing contact with the market. SDD.10

So that will go well for a while, but at some point you will get an organization that knows how to listen better to customers and hopefully can also change and innovate faster. Yes, so outsmarting them, those are more likely to hit the market. So that is my conviction that more companies will find this interesting, also because it is simply necessary to keep your head above water. SDD.11

I: And do you also see that there is more demand for that these days?
SDG : Yes. SDG.28

And that design thinking is really starting to get a foothold. SDG.30

No, it is not. I think in the 15 years that we've been doing this now, the demand will get bigger. SDH.35

Companies are more open towards the service design method
Nowadays everyone is very open to it. SDB.38

and people understand it nowadays a lot better. SDB.41

I think every company is open to it, but not every company understands what it is. And that they find it difficult to say, it is very much about a kind of mindset shift. SDE.16

What we are now seeing with customers is that they are really going to embrace our way of working, knowing that they simply can't figure it out otherwise. So that real reframing, looking for really radical collaboration, combining long-term vision with very short agile sprints and experiments. Starting to become almost commonplace among large organizations. And that is really fantastic to see. SDG.32

Duration collaboration
Contact after project depends
I: And do you have contact with the client after the project?
SDB: After the project?
I: Yes, after the app is developed.
SDB: Yes, it depends. SDB.57

I: And then hear about it later then, or is it more like you have a certain project at a company and then it's done and...
SDF: Varies by project. SDF.37

Sometimes you do something and they say a nice thank you and then you hear nothing and sometimes you are still very involved and even occasionally a sparring partner during the implementation. It kinda depends. It also depends on the need. SDF.38

Via a contact person we stay updated with the organization and the project
We also have multiple persons within the company who are the contactperson for an organization. Therefore, we will stay updated on the state of affairs and sometimes there is a specific need of a client to stay longer involved when there is something live or something like that and sometimes they will come back to us when there are problems or because someone of our company is present there and there you are to use this opportunity. SDB.58

No, we do have long-term relationships SDJ.57

Working with organizations for a longer period of time
But in the end they all do now you know. Now it is suddenly all hot and happening and the entire company has also started working on service design. But that took a while and that's because we've been their strategic partner for a year and a half now. For a year and a half we just, well just their way of thinking we are changing a bit. And because their way of thinking changes, we can simply make a lot more impact than we would like. So that we also kind of, ?typical? what kind of company we are. SDE.27

look we don't do short projects. So our projects that always run for more than 2/3 years. SDE.35

So what you see is that, for example, we are present with customers longer and actually always start with a new project because we are actually working on that major transformation journey. SDG.35

No, we do have long-term relationships SDJ.57

yes with, for example, that values workshop I just talked about, how those values should come together, we do that for a client we have been working for for a few years and where several people in multiple teams are already working. So we deliver designers to scrum teams and we also do those workshops. SDJ.58

Service design jams/workshops are an introduction of service design and not a structural solution
As far as I'm concerned, those jams are really a teaser. So that's a nice way to get acquainted with it and maybe break the pattern, but it's not a structural solution. SDD.20

Instead of projects, use programs as building blocks for an organizational transition
We are increasingly thinking in terms of programs rather than projects. So that basically means we're trying to say, every project is a building block in the great transition. And those projects you string together and those projects help you to learn and they help you achieve results. SDG.33

But the great value lies in doing those projects one after the other. SDG.34

So what you see is that, for example, we are present with customers longer and actually always start with a new project because we are actually working on that major transformation journey. SDG.35

Impact service design
Instead of changing behaviour, showing the possibilities
If we really inspire people to work in this way, I don't know. I don't think they will change their behaveiour instantly, because after a project they will do their daily job again, but we really show what the process looks like, SDB.55

I : And do you notice that when that deadline is over and the project is over that you have really made a lasting impact on the company or that it?
SDC : Well that lasting impact is mainly on the side of understanding the customer. And in that sense also providing them tools in terms of project approach of you know, how can you do that, SDC.60

because well as I said, many people are not used to putting the solutions on hold for a while and mainly focus on the first diamond first to focus on the research part. That gives a lot of real eye openers. SDC.61

But it does ensure that by also getting acquainted with the wonderful tools that service design is rich in, they can find out, oh yes, actually we never really ask our customer anything. Yes, we sometimes ask them to complete a customer satisfaction survey. But yes, yes I always think that, yes those studies that you can't really do anything with. Then you only have the basics you are looking at. SDC.63

As far as I'm concerned, those jams are really a teaser. So that's a nice way to get acquainted with it and maybe break the pattern, but it's not a structural solution. SDD.20

But actually I don't care that much. Well, I like that my things are implemented, but what I especially like is that I show you how to design something customer-friendly and how to arrange it, I'll give some tips about that, but if you don't want to, good luck with it. I'm not going to change the organization. I can only give my ideas based on the research and design techniques I know. SDF.34

I: So more like a coaching role?
SDF: Well that anyway, coaching, inspiring. SDF.35
That's how I would land this and that's it, but at a certain point they have to pick it up themselves and want to. The customer then hey, to implement it. SDF.36

I can show you how to do it and then I help those who want to, but I'm not going anymore, I've done it, but I'm not going to drag anymore. I don't want to anymore. I try to inspire and say how it can be done and if they don't want to. SDF.48

By inspiring them, organizations continue using the service design methods
And yes, to really start the conversation. Yes, that is often what makes the lasting impact and what ensures that they, or at least want to keep going. SDC.64

I: So more like a coaching role?
SDF: Well that anyway, coaching, inspiring. SDF.35

Biggest impact is that organizations start listening to their customers
And maybe they don't do the whole process, so the test part we already talked about, which is often skipped a bit. Still, it does make a difference in that sense because they start listening more to the customer, and I personally think that's the most important thing, that the focus is really on their customer and that they want to listen to that more. That's uh, I think that's often the biggest impact such a project makes. Yes. SDC.65

Simply, it's almost the whole picture. So for that matter, you can always apply it in any way you want. In terms of digitization too. As far as I'm concerned, it always starts with what your customer wants. And yes I can't repeat that often enough.SDC.91

In order for service design to have impact, service design should be in the DNA of the company
The mindset is something that is actually needed, because if it is only a methodology then it is a trick and of course it is. It contains all kinds of instruments and these are all tricked out ways to weigh things up and as far as I'm concerned that part of the mindset is more that if you as an organization want to deal with this seriously then you should not only use it as a methodology, but then you have to it is also kind of in the essence or in the DNA of your company. SDD.4

That you want to become more customer-oriented in this way and want to change your organization and if that is not the underlying goal then it does not make much sense, because then you do it, but it leads to nothing or not to the intended result. SDD.5

I think every company is open to it, but not every company understands what it is. And that they find it difficult to say, it is very much about a kind of mindset shift. SDE.16

But in the end they all do now you know. Now it is suddenly all hot and happening and the entire company has also started working on service design. But that took a while and that's because we've been their strategic partner for a year and a half now. For a year and a half we just, well just their way of thinking we are changing a bit. And because their way of thinking changes, we can simply make a lot more impact than we would like. So that we also kind of, ?typical? what kind of company we are. SDE.27

When such a project is completed, you are not finished. It's not like oh we did this project. We did a great job for our customers. They have been able to tell their story to someone again. We have new ideas again. We can get back to work. That's not how it works. You're not ready then, it might even just start. SDC.85

And that may be something that has changed over a longer period of time, but there are also things that are changing faster than many companies realize. So yes, you are never really done with inventorying what your customer wants and seeing if those wishes change and whether your product or service still fits. So that's a really good quote. SDC.87

Yes, because if you are today, if you are on top of the world, that does not mean that you will be in a few months because the companies around you change, but so does your customer. SDC.88

and according to me this is such an approach, where you really let something very specific come back in the organization and ensure that it really retains, that is necessary to get a structural change and because otherwise when doing it once it stays abstract, really nice, cozy, thought up really nice things and then it's gone. That's the risk with these types of jams. SDD.22

It's an ongoing process I think, always. SDE.34

That's how I would land this and that's it, but at a certain point they have to pick it up themselves and want to. The customer then hey, to implement it. SDF.36

I think that airline is also a good example, they have started an initiative very often in the last ten years, very nice app, and I think most of it just doesn't exist anymore, you know those apps? All new services that are just watered down and gone. SDH.97

Impact by training people within the organization
Yes, then you are actually, so we did a very large program at an airline in which we trained about 300 people in this way of working. Then you will see real change. That really has a lot of impact. SDG.37

The impact of service design within an organization depends on which techniques are used
That does happen, but whether it has much of an effect then it comes down to using the right techniques. It's not just a cup of coffee together. SDJ.10

I: Yes, so the techniques actually guarantee the quality of such a session.
SDJ: Yeah, that's important. SDJ.11

Service design can change the way of thinking within an organization
I: And do you see that the way of thinking of clients also change. That is becomes more design thinking?

SDB: Yes sometimes clients also have that. SDB.53

But in the end they all do now you know. Now it is suddenly all hot and happening and the entire company has also started working on service design. But that took a while and that's because we've been their strategic partner for a year and a half now. For a year and a half we just, well just their way of thinking we are changing a bit. And because their way of thinking changes, we can simply make a lot more impact than we would like. So that we also kind of, ?typical? what kind of company we are. SDE.27

It really is a mindset shift. And that mindset shift comes from just literally repeating what you are doing every day. So you put your customer first, you make things for your customers. SDE.37

You make sure that you find out how you can provide the best service and you make things that are completely focused on what that customer wants, empathize with the customer's world. And the moment you really say that every day that people see and repeat that and also know what the basic principles are of how they build things then it sticks. Can't they go back. Can they really never go back? SDE.38

And yes the second is indeed just that mindset shift. Sometimes it really takes time for people to see what they should or shouldn't be doing. SDE.42

I : But do you also help to change that mindset, so to speak? That they are interested in it? SDH : Sure. SDH.99

Service design in the future
Service designers in every board
And I just think you know, in the future every board will have a service designer but that is still a process that we are just going to. SDE.24

It also has a bit to do with what is the role of service design within an organization. And what I said you know you have operational level using people to optimize things, but I really think in the future we'll just have a service design director or strategic director really on the board who just, not so much an executive role has, but more of an advisory role SDE.76

That is a bit of a board, but what service design does, it works across the board, so it actually looks at what do all those 5/7 people make, what kind of experience do they create together and how can we do that even better going to make. So I think, I really see a service designer as an advisory role about knowledge that is there that they do not see. SDE.77

Some people really love design thinking, but I see more and more designers wondering, yes hey it's super cool that we can now end up anywhere, even in the board room. But what's next? Because if everyone does this, what are we doing. SDI.52

By promoting service design and let organizations work according to its principles, could lead to the designer being redundant
Yes, I see that it is moving much more towards facilitation and that worries me a bit. So the position that I now also have at the tourist association is actually promoting design thinking there and making everyone work in that way and then making myself redundant. SDI.40

I: And so according to you that is a less good development at the moment?
SDI: Well it's a development that I think makes a lot of sense, but it worries me because you can't define what your expertise is as a designer anymore. SDI.47

I: Also because you have that facilitative area that you just talked about, that you transfer it more what that design thinking is and that…
SDI: Yes and you also see, SDI.48

there are also a lot of business schools that teach design thinking, but there are hardly any designers who teach there. So that kind of indicates yes hey if someone else takes over that discipline from us, then what are we. SDI.49

I: And that you then wonder what the added value of a designer is.
SDI: Yes what my unique value is then. So that is very difficult to define. SDI.50

Some people really love design thinking, but I see more and more designers wondering, yes hey it's super cool that we can now end up anywhere, even in the board room. But what's next? Because if everyone does this, what are we doing. SDI.52

3. Difficulties of organizations to apply service design
3.1 Qualitative difficulties
Service design mainly using qualitative methods
And I think that we are less or more using this kind of approach in our understanding of what could change in a situation. And I think this is a huge difference because it's more about doing ethnography than building models, so going directly to the experience and understand them with a lot more of qualitative observation then kind of quantitative observation RA.34

Where design is seen as a bit of a fuzzy discipline, a qualitative discipline, where we interview a lot of people, prototyping. Gaining lot of qualitative data and testing the opinions on certain things, SDB.25

I am convinced that through qualitative research, to use jargon, then you will really find what people are looking for. And then you come across deeper emotions and wishes of people. And really the latent need. SDC.6

and working from a persona that can work very well and especially I think and with service design it is often about qualitative forms of research and there are no deep statistics underneath that say that so many percent of people find something and says that it is very important. SDD.8

Another method that we naturally use a lot is simply letting the customer do the talking. So ethnographic research with clients, filming clients. SDG.64

What we often do is when we have an interview with the customer then record a piece of video and those videos are very powerful. SDG.69

Interviews with customers, but mainly contextual research. So you also go along with people and you observe what they are doing and based on that you also ask questions and you also see if you can come up with something together. To get those deeper needs to the surface. SDI.22

So sometimes a survey can be a solution. Sometimes you will have to shadow people, but at other times just a focus group or interviews can be enough to get a good picture of what is going on. SDI.36

what you often do is that you retrieve qualitative information through, for example, generative sessions. These are techniques in which people start to share dreams and those are of course quite intensive sessions that you cannot do with a lot of people and then you can verify the results of those sessions through surveys and you can of course do those surveys with a lot of people. . So a bit of a back and forth game between qualitative and quantitative. Do you understand? SDJ.4

After doing qualitative research, verifying it with quantitative data
what you often do is that you retrieve qualitative information through, for example, generative sessions. These are techniques in which people start to share dreams and those are of course quite intensive sessions that you cannot do with a lot of people and then you can verify the results of those sessions through surveys and you can of course do those surveys with a lot of people. . So a bit of a back and forth game between qualitative and quantitative. Do you understand? SDJ.4

I: Bit more triangulation idea.
SDJ: Yes, so you also use a combination of techniques and never one technique. You say that right. SDJ.5

Organizations want hard/quantitative data
we try to compliment it with things that for example a data scientist or a strategist thought out. Often this is some harder data. Those customers, I speak about big organizations, corporates are more prone to that, so if you can calculate, we can create an amount of profit with improving a touchpoint or we can reach get this many extra customers or we can prefent people from churning, how do you call that? Leaving and this based on calculations of quantitative data will complement the field. SDB.26

If we can make it hard, through achieving a commercial goal by implementing this idea or build a simple business case based on assumptions and market data it really goes hand in hand. SDB.29

I sometimes find that very disturbing, people always look for KPIs, always working on KPIs. You have to be able to express it in a KPI and if you can, then it is good. So yes, that is an important reason why the projects often come in an acceleration stream that you as a service designer might prefer not to see. SDC.19

I: What I had indeed heard from other service designers is that they indeed mainly have a goal, for example the increase in sales. Not really looking at whether that is possible at all or whether the target group likes it at all.
SDC : Yes, exactly. That is often true, that also comes down to the hard numbers. It's often about wanting to do better as a company, and that's fine and I get that. I'm not a very commercial person myself, but I understand that as a company you want to do that well and that you want to earn well. SDC.23

I think that is the biggest point that a lot of organizations that have to overcome it, because you can no longer see in those statistics that what 5 people have shouted during an

observation it is less important than when 1000 people filled in a questionnaire. And we often find that difficult to understand in the professional field. SDD.9

and if you can substantiate that with some hard financial data, you're all set? and then also offer a way out "well I see a number of possibilities here" you usually get people along. SDF.60

I: And is that hard data also very important to get people on board?
SDF: Not always, SDF.61

sometimes it's just common sense, but certainly in a large organization where you have all kinds of layers, someone somewhere has to give a budget for a team and then you really have to give hard data, yes if we don't solve this it will cost so much and have to you really talk in euros. SDF.62

So there are several factors than just financial, but that is a very important one, because without the financial picture you will not get anything done. Because it can also be certainty; SDF.77

I : So more of the books and numbers and not so much.
SDH: Yes. SDH.28

A large part is that a great deal of value is attached to quantitative research methods. So it is very difficult to quantify experiences. SDI.17

Hard to generalize qualitative data
of that then there is a huge discussion about how to generalize this, see what our individual experience into a general agreed, and grounded discussion. RA.35

Because, if you imagine the, there are a lot of discussion about, about the discussion of scale up of models so I do a little thing and then I might just throw it in a bigger one. RA.36

and working from a persona that can work very well and especially I think and with service design it is often about qualitative forms of research and there are no deep statistics underneath that say that so many percent of people find something and says that it is very important. SDD.8

I think that is the biggest point that a lot of organizations that have to overcome it, because you can no longer see in those statistics that what 5 people have shouted during an observation it is less important than when 1000 people filled in a questionnaire. And we often find that difficult to understand in the professional field. SDD.9

Well that's enough to put some more resources on here, while it's not statistically substantiated at all. SDF.64

So what you see a lot on the client side, for example, is that you want proof that something you design will work. That means, for example, if you have spoken to a lot of people that if the majority say this is what I want then we will do it like this. That's a very rational approach. What many people find difficult with a design is that we work intuitively SDH.43

A large part is that a great deal of value is attached to quantitative research methods. So it is very difficult to quantify experiences. SDI.17

3.2 business want commercial gain
An organization is convinced when a service design solution fits into the goals of the company and leads to/ saves money

No, I mean an innovation must be financially substantiated, but you do have to think a lot about the perception of your target group. SDF.75

I have to convince my stakeholders with a financial advantage and/or a safety advantage. If she is in an unsafe situation somewhere, they are also terrified that accidents will happen. SDF.76

So there are several factors than just financial, but that is a very important one, because without the financial picture you will not get anything done. Because it can also be certainty; SDF.77

So there are several factors, but that depends on the type of target group you are concerned with. So you turn that into personas again, don't know if you know what a persona is, but at least target audience sketched. SDF.79

At an organization we actually looked at what their needs were within the work and where they wanted to go as an organization and that worked very well for us, SDI.25

Businesses want commercial gain
No, I think you should always look at the business case. So a company always has to gain something out of it, but I believe that when you have a good product based on the demand of the target group then you will create added value. SDA.37

But it can indeed also be that you invest in a test phase with an app or something, so that it all takes a little more time, and costs money. But yes, that is certainly often the driving force behind why they want to go straight away to implementation, hurry up because yes, whether we have to gain something out of it, also has to do with numbers in the sense that yes, they are people. SDC.18

I: What I had indeed heard from other service designers is that they indeed mainly have a goal, for example the increase in sales. Not really looking at whether that is possible at all or whether the target group likes it at all.
SDC : Yes, exactly. That is often true, that also comes down to the hard numbers. It's often about wanting to do better as a company, and that's fine and I get that. I'm not a very commercial person myself, but I understand that as a company you want to do that well and that you want to earn well. SDC.23

Well, you can see that innovating a customer journey in a very process-oriented way. And if you organize those processes very ingeniously, you can save a lot of time and you can earn a lot of money with it. So the question is, is a customer's incentive to help people? Or is a customer's incentive to help people or that you can sell more stuff even faster. SDH.65

I guess I haven't researched that but I think the digitally oriented clubs and maybe the ?? oriented clubs, which rely heavily on a great customer experience in relation to very

ingenious processes to provide as many people as possible as quickly as possible with whatever it takes to earn money. And that's nothing against making money, but that's just different from when we started. SDH.66

So also a whole family culture. So that people just really like to know each other well and always do it the way they are used to and prefer not to do it differently, because that all costs time and money and after all we have people to save and help, that. SDJ.23

If you. I don't know which is the your political position, but if you mind, or pay attention to the fact that we are living in a capitalist society. We could not really intervene in society without this framework. RA.11

The promotion sometimes have a consumerist attitude towards everything, and also the idea that you could really transform everything into money or business value that is not at all. RA.27

3.3 takes a lot of time and resources
When applying service design in transforming a company it takes a lot of time
it's tried a lot. Well, not a lot, it's tried more and more successful cases are scarce maybe because I think it's mainly, so it's mainly because it is a process that takes a lot of time, and it requires. Yeah, it's sort of open mind from the companies that receive that. We're not still, we're still not there so it designer a service designer still needs to spend a lot of time to explain why people should use this particular approach to achieve a certain goal, instead of more traditional business driven ones so instead of being able to jump in directly into transforming an organization with service design service designers need to spend a lot of time in explaining why, and providing, maybe a business case for that so that makes things slower. RB.12

but generally it's not enough so it's business cases, plus a lot of really conversations and okay let's try this project. Let's try this workshop. So it's really providing a practical proof of the value of services, it is really time consuming. RB.14

Yeah because so when it's different from from a traditional way of working. It's normally companies work with more it's more like they, it's more a transaction approach that companies that the business people have on certain tasks so yeah we need a direction for a vision for how we want to interact with our customers. We get to a department that is able to do it. And then we get the get the results back. But co creation means It means it's different cocreation means that you have to give your time. RB.17

When such a project is completed, you are not finished. It's not like oh we did this project. We did a great job for our customers. They have been able to tell their story to someone again. We have new ideas again. We can get back to work. That's not how it works. You're not ready then, it might even just start. SDC.85

The other side is yes, which company is going to read a website once, say we are now going to do this 3 year plan together. So, yes, I think you have to get acquainted with something and learn to experience its power before you realize that this really requires something in that mindset change from you. SDD.23

But it's a really long process. So sometimes it takes you a year/a year and a half to get it there that they think oh yes you know now we're going for it. So that takes a while. SDE.22

But in the end they all do now you know. Now it is suddenly all hot and happening and the entire company has also started working on service design. But that took a while and that's because we've been their strategic partner for a year and a half now. For a year and a half we just, well just their way of thinking we are changing a bit. And because their way of thinking changes, we can simply make a lot more impact than we would like. So that we also kind of, ?typical? what kind of company we are. SDE.27

look we don't do short projects. So our projects that always run for more than 2/3 years. SDE.35

But I think at some point, it's not something you do in one day. SDE.36

And yes the second is indeed just that mindset shift. Sometimes it really takes time for people to see what they should or shouldn't be doing. SDE.42

So that question just now, difficulties. It just takes a while. It takes really long. And it's not like you say it once in a conversation, no. It's literally, I talk about it every time almost all my conversations, in all the presentations that we do it is present. SDE.49

We know that now and that's why it works now. But that just really takes time. So that's not something that just changed. SDE.51

That was two years ago. They are still working on steps one and two. And that's not because those steps are so complicated, but that's because that organization is just not used to thinking that way. They don't have the roles for that at all. They don't have the training for that. They don't have the KPIs for that at all. They can't put that in their IT systems, you know? SDG.85

That is actually often much more work than coming up with the services themselves. SDG.90

In other words, that process is often projects that take years. For example, we are working at a bank. We've been at it for three years. We have been working for a clothing brand for five years. SDG.94

Educating people on design thinking methods is a time consuming process
I: And they need to be educated to optimally do their work.
SDA: Yes, certainly and that could be a really time consuming process, because those are often people who have 20 year of work experience for this company. Often more product knowledge then would be good for them, to think broader and look at it in a different way. SDA.18

And the clients I've encountered so far, they don't see that as an important step either. And to convince them of that, that you can prevent mistakes in the long run, or at least reduce the chance of mistakes. It is difficult to convince them, to get them there, to make them understand the impact of such a test phase. SDC.13

Co-creating not always practical as it takes time and money

We see quite often that it is practically not always feasible, it costs time to schedule etc. It is also time is money in the consultancy business. So, not everyone is willing to pay it, SDB.18

Organizations are not willing to spend too many resources on a service design project

What I just said, they don't want to invest too much time in it. Of course, most of that has to do with money. So it's, how many resources do you want to free up as a company for it? And that can be in people, but in the end that is also just money because you pay those people. SDC.17

But it can indeed also be that you invest in a test phase with an app or something, so that it all takes a little more time, and costs money. But yes, that is certainly often the driving force behind why they want to go straight away to implementation, hurry up because yes, whether we have to gain something out of it, also has to do with numbers in the sense that yes, they are people. SDC.18

I sometimes find that very disturbing, people always look for KPIs, always working on KPIs. You have to be able to express it in a KPI and if you can, then it is good. So yes, that is an important reason why the projects often come in an acceleration stream that you as a service designer might prefer not to see. SDC.19

The other side is yes, which company is going to read a website once, say we are now going to do this 3 year plan together. So, yes, I think you have to get acquainted with something and learn to experience its power before you realize that this really requires something in that mindset change from you. SDD.23

I: That they must first have the feeling that it will indeed really help before they want to invest in....
SD: Yes. SDD.24

But then they said yes bye you know spent enough money, we don't do it. SDE.45

External designer/consultant is expensive

So I think you always want to have a fresh look, but then you also have to have the budget for it, because it's just yes hiring a consultant is not very cheap and so when you work for a company as a service designer that is of course much cheaper for the company. SDE.82

Especially in say technology-driven somewhat masculine companies that are a bit rational and roll up their sleeves. Then suddenly such a nice club came along and they all went to workshop with us and then we all had to stick post-Its and then everything has to be different. Well, we're not going to do that again because it was very expensive and it didn't bring us anything. SDG.99

Coming to a good design takes time

That is the development I see and I also do things in healthcare and then they do everything they think they can do with a hackathon and then they lock themselves up for 3/4 days in a cage with a number of healthcare professionals and there they have to then the golden egg hatches, but in the end it often ends in beauty with a good idea, but then you really have to get started and you will not come to a good design in 4 days. It's just a thorough analytical process with a lot of creativity and mindset and experimenting and learning. SDF.12

Yes, so you think you can get everything done in a sprint of a week, so forget it. SDF.14

but yeah it's a bit of a split you're in, because that customer just can't design, they just can't do it, but you want to keep them involved. So you usually do a brainstorming session for the shape or actually you have to do it yourself, I think, you should also sell like that, but that doesn't always happen at our company. Certainly also dive in for a week to go a little further than yes, you should not think that after a day of ideation workshop you have the egg of Columbus. SDF.90

After those six weeks you have worked out a number of beautiful concepts and you did not need a canvas, a workshop for that, just think carefully with the designers who can do it best after all. SDF.97

let it rest, we'll figure it out ourselves. If you could do it that well you would have figured it out. So you won't make it in that workshop either. SDF.98

3.4 Other way of working
Designers work intuitively with uncertainty involved
Well, what do we want to deliver at the end of this session, and that is the starting point. And that's how you get started. SDC.35

So in that sense I try to look more and also help the client in understanding what are the deliverables or intermediate phases after a certain session or after certain phases in the process and looking from there. And not so much of OK, we have so many weeks and we deliver this in the end, and we'll see how we get there, because the client cannot work with that. SDC.36

So try to be as specific as possible, but continuously on top of the process, and include them reasonably in what is happening. SDC.37

You have to accept uncertainty, on not having a final results right away, and that is simply different. And there's a lot of creativity goes going on so a more intuitive way of working. That's just different from from the traditional ways in which business operates so that's an obstacle. One of the fundamental obstacles to to accepting things like co creation. RB.18

The tricky part is that you actually make an appointment in advance or at least make reasonable agreements with the client of, well, we have a certain process that we go into. And actually I think, the charm of service design is that you, or at least the process, it's an iterative process. And you never know in advance where you will end up. SDC.30

So I try to include them in that, well okay, there is some kind of basis that we can work with, but it could just be that we have to adjust things and that if we shape the process too much that afterwards it just doesn't work out well or that we have to make very serious adjustments to it. SDC.32

That's one thing, you have to be able to handle it. The uncertainty of totally not knowing where it would go in the beginning. I like that. SDF.95

Think Joh, we don't make assumptions at all. We do act in intuition and in that you have a feeling that you are going in the right direction or that people are saying smart things? but we don't even make assumptions about that. Doesn't play. SDH.41

So what you see a lot on the client side, for example, is that you want proof that something you design will work. That means, for example, if you have spoken to a lot of people that if the majority say this is what I want then we will do it like this. That's a very rational approach. What many people find difficult with a design is that we work intuitively SDH.43

and a weak signal is if you just say throw everything in a heap and you have a feeling I think we have to go that way, and that is partly intuitive and partly that is an accumulation of experiences, in our case in our work research . That you are going to try something based on that. So don't make an assumption, especially not design a new service on an assumption. But that you take action based on those signals that make you think, well, we have to do something with them. SDH.44

Hard to understand for some organizations

I think every company is open to it, but not every company understands what it is. And that they find it difficult to say, it is very much about a kind of mindset shift. SDE.16

They shout that they will do it, but they don't quite understand yet, but they are still very concerned with the total picture. Certainly the larger companies, those somewhat older companies such as the banks or the postal companies and the insurers, the health insurer. They all say that they think customer-centric and holistic, but in fact they are all still silos. So especially that they are aware of it, but really actually look at the total picture and maintain those principles, the maturity is not always the same everywhere. SDF.27

Marketing, yes no they want it. Sometimes it is a marketing talk, but it is not always well embraced or understood and then they shout customer experience and they find that important and then they also do things, fragmented across all silos but it does not come all together. As a result, you get this 1 consistent customer experience in many areas. SDF.28

What I often saw is that those people did their profession, but that there were all kinds of organizational situations around it that the profession was not understood or that it was really necessary that there were finally people who made things visual, which also created movement in the organization, but yes. SDJ.1

Greater focus on technology than people

And that means that the focus on digital and technology is not on people at all. The one liner is new, our vision is not and our focus is not, but that is design in the service of people. The idea that you really genuinely immerse yourself in people's lives. SDH.12

What you often see with those kinds of organizations, really is, they are so focused on the idea that all the value they deliver is contained in that beautiful piece of technology that they deliver, that product. That is typical of that engineering mindset. SDG.52

and when I give my product to the customer, he or she simply has to be completely happy, then that is just taken care of. Yes, that's not how it works. SDG.53

And they are often companies that are quite rationally driven and rather left-brained or analytical. Well, when you get there with, well, even if the customer buys a very technical product, there's still emotion involved. Then experience is involved. Then that human relationship is important. Stand on it. It is quite a challenge to make that clear to these types of companies. SDG.57

That car manufacturer also had a very high engineering culture. So in that car industry they take a lot of pride in making a really good working product and that's something you have to know how to balance at a time like this. SDI.19

and there are whole lists of them and you can put them all next to each other mathematically and every manufacturer tries to tick it again and then they are at the top of a certain top list and then they get more sales, but in the end , what does it matter for the user. Do you notice that extra megapixel, do you understand? That is so irrelevant and we call it feature rite in our profession. So a huge Christmas tree of features. SDJ.37

And they are often companies that are quite rationally driven and rather left-brained or analytical. Well, when you get there with, well, even if the customer buys a very technical product, there's still emotion involved. Then experience is involved. Then that human relationship is important. Stand on it. It is quite a challenge to make that clear to these types of companies. SDG.57

Focus on the problem, before looking into solutions

Then for example a campaign will be developed and then a marketing bureau is contacted very quickly and everyone is very satisfied with the solution instead of within the design thinking method looking at why a product does not sell and that could be because people don't want it, but it could also be because something is not described well on the website or different things. SDA.20

Business is used to think from solutions and therefore to implement this solution and the design thinking method of service design you go look into the problem and first investigate the problem further. SDA.21

We always try to validate the reason behind it. Therefore, it surely is a requirement that before accepting a project and a company goes to us "hey we have an idea for an app, could you design it?". Then we say no. We can design it, we can execute your idea, but we first want to do all the stages before it SDB.40

And the most important is that you first investigate what the wishes, need, expectations, frustrations and hindrances are for the customers. And consequently, looking for ways to solve it. SDC.2

Also with project groups, when you start working on it, you are really still in those first phases. They immediately come up with solutions. Then maybe from one interview it appears that a customer has a certain need, oh but we can solve that in this way. Ho ho ho wait, hold on, we are still investigating. Hold your horses. For many people this is a very big challenge. To really wait until you as a project group can define such a problem. And then start thinking in solutions. SDC.27

But the great thing, I think at least about service design, is that you don't have to solve it right away and sometimes just give it some time and park it for a while, collect more information, suddenly the moment comes that the solutions will come naturally. SDC.28

And that's the starting point, ask your customer. SDC.97
And you won't know until you have inventoried what exactly the problem you are going to solve, or the challenge, is. And that is why that first phase or that first diamond is so

important because in the middle you decide of course, okay this is the problem we are going to solve here we are going to come up with the solutions. SDC.100

If you don't have that right, and certainly also in the world of digitization and technology. If you don't understand what you need to solve, you can come up with a thousand solutions, but they are all not good solutions because you don't know what you are solving. Then you miss the point anyway. So in that respect, the entire process of service design is just a very nice point of reference for drawing out that process properly. And make it fit. SDC.101

I : Yes. Because then the first part is not quite right, the problem formation and things like that?
SDE : Yes. SDE.32

So we involve people because we don't know either. SDH.23

You are not solving the real problem. Something that we really enjoy that clients don't always feel like is, you will probably also hear that in the conversation, I would certainly aim for it is called the question behind the question. Or framing an issue. So a lot of wrong problems are also solved. SDH.88

Yes exactly, so let's look at a problem first. If that is clear enough, there is a problem. Then we will look at what a possible solution could be SDI.30

Well, we must first establish whether there is a problem, on what do they base that. What research has already been done and is the problem clear enough to address, SDI.32

I: So that you first frame the problem/need a bit and then look at what solutions are possible.
SDJ: Right, yes. SDJ.17

So, on day 1 we would share insights and decide our focus, what is an opportunity that we want to focus on. SDB.47

Design thinking is not for everyone a natural proces, where you first investigate what the real problem is you want to research, but just think is solutions, a lot of people tend to directly go towards the solution. SDB.54

You are not solving the real problem. Something that we really enjoy that clients don't always feel like is, you will probably also hear that in the conversation, I would certainly aim for it is called the question behind the question. Or framing an issue. So a lot of wrong problems are also solved. SDH.88

Organizations work with tasks and transactions
Yeah because so when it's different from from a traditional way of working. It's normally companies work with more it's more like they, it's more a transaction approach that companies that the business people have on certain tasks so yeah we need a direction for a vision for how we want to interact with our customers. We get to a department that is able to do it. And then we get the get the results back. But co creation means It means it's different cocreation means that you have to give your time. RB.17

Because previously they only had to take an order and say I'll book it in. And now because it is much more service-oriented, they must also be able to give advice and they must also be able to think along. SDE.54

and then an R&D department with a number of technicians had to make things and they often had to do a little bit of things differently, mean change, but they couldn't really do that. They weren't R&Ders, they were glorified engineers who could only perform, not create. SDF.51

I: Yes exactly and I need more routine and guidance in that regard, so that's why..
SDF: And that also makes it difficult to land it in organizations. SDF.96

No, we just gave it to the marketing department and they processed it. But no we haven't yet. SDG.77

Where things went wrong, or where it really started to get in the way, is that the employees of that airport no longer have a task. SDH.55

So that task-oriented that disappeared because of the self-service and management found it very difficult to think of what those girls should do. SDH.56

Organizations work based on assumptions without testing it in the real world
Die bankkantoren die gaan sluiten, die bank medewerkers die gaan naar het hoofdkantoor en die krijgen daar een rol waarbij ze verantwoordelijk zijn voor een product of service waarbij zij denken; ik weet wel wat die klanten willen, want ik heb heel lang met klanten gewerkt. SDA.16

You get a lot of traditional marketing. Like, I have a product or service, I put it on the marked and from that point I will see what happens. Of course, you think about your target group but there is not a specific fit to their needs. No, you thought of something and put it on the market. SDC.3

SDC: So it's really a test phase, yes.
I: Do you see that this is already done a lot within companies?
SDC: Oh no, definitely not. No, far too little. Anyway. SDC.9

That often makes it tricky. In the sense that they think they have a very good idea of what is going on. But actually, most of the time the bottom line is that there is something else behind it or yes, what they think is going on is not the whole story.SDC.21

And it may indeed be the case that in that research phase you find out, yes, it is nice what you come up with and where you would like to grow, but that is totally not feasible with this target group or the problem you think that they have, they do not have it, so yeah you know, the solution. SDC.25

And maybe they don't do the whole process, so the test part we already talked about, which is often skipped a bit. Still, it does make a difference in that sense because they start listening more to the customer, and I personally think that's the most important thing, that the focus is really on their customer and that they want to listen to that more. That's uh, I think that's often the biggest impact such a project makes. Yes. SDC.65

Yes, at least tell your story if it is marketing per se. With marketing you can still think of I have a product and I will push it down your throat just to say it bad. But it is mainly showing what you stand for and what you are going for and who you are. So that as an organization you almost feel like a kind of person in the world. Instead of being the big bad wolf slowly swallowing the whole thing. SDD.68

I : Yes. Because then the first part is not quite right, the problem formation and things like that?
SDE : Yes. SDE.32

Because it used to be the case with this company, for example, that they were just allowed to make things based on assumptions, well that is simply not possible anymore. Then the question is yes have you tested it? Do you know? And then if it isn't then it just can't be then it's just not valid. So I think that makes a difference. SDE.39

Which is not always necessarily the case. Traditionally, the service is set up from within the organization, the customer is usually taken along a bit, but it is really where the customer is central and design a service from that. SDF.2

I: So it's more that they, or at least that's what I often hear, that in general companies think more solution-oriented instead of delving more into what the problem actually is or the possibility.
SDF: Yes often it is better to peel off one level, another level one or two, they should also be able to do that with that industry. SDF.83

I expected that to be very self-evident in the theory of service design, when we started it was very normal. But there are not very many organizations that actually do it that way. I wouldn't say we're unique, but it amazes me how few people actually talk to the end users. SDH.13
you could almost say it is a USP of service design to involve end users. I don't think that always happens well. SDH.25

Our clients who have known us for a while know that we do it that way. And there are plenty who underestimate how important it is. SDH.26

Perhaps the most important lesson of the last ten/fifteen years is that many people have some kind of image of what the customer is and what they do and what they think. That they have no idea of reality. SDH.27

And then someone from communication comes along and said, what fun, where did you find those people? In the database? Then I think, in the database? Those people just exist. SDH.29

Putting people first is easier said than, apparently easier said than done. And I don't think the people who deal with that recognize or see how easy it is to cycle somewhere, ring the bell and have a conversation. That is greatly unrecognised. SDH.35

That really happens, and I think it has to do with the fact that if you've done an education that those people have generally done, I'm just wondering if I had another example. People often think for the end user. Many people often think that they want it that way, or that they want it that way, and the practice is simply much more nuanced than that. SDH.39

I : So more assumptions?

SDH : Yes assumptions yes. Yes, we recently had someone who said 'yes, but those are assumptions'. SDH.40

And look at the government there are other things at play. there have. you think a lot of politics and a lot from the inside out, we are the ministry and we know what the Netherlands looks like by way of a. Yes that is also ?first? very generalizing what I'm saying now, but yes that can also get in the way. SDJ.29

SDC : So it's really a test phase, yes.

I : Do you see that this is already done a lot within companies?

SDC : Oh no, definitely not. far too little. Anyway. SDC.9

And what I notice in the projects I do, now for myself but also those I have done in the past is that, organizations are mainly looking for help in understanding the customer. And if I understand my customer, then I can make something of it myself and then we make sure it works. But the step of testing is not something many companies do. At least not the average companies. SDC.10

I : Why do you think they find that difficult to understand?

SDC : They just want to start implementing right away. Get started right away. SDC.14

Actually, I was already told then of oh yes, we are already working on this, we have already done this. And instead of them first taking the step of, okay let's take a look at what we can all improve and what is useful to tackle first, how we are going to do that and indeed instead of that test phase just right away implementing , bam, we have to adjust this now. SDC.15

It was also the case for this specific client, they work with school years, so it had to be done quickly. But as soon as a solution comes into view, it's really just like, okay we're going to implement it. That's how organizations generally work, just jump right in and get started. SDC.16

But it can indeed also be that you invest in a test phase with an app or something, so that it all takes a little more time, and costs money. But yes, that is certainly often the driving force behind why they want to go straight away to implementation, hurry up because yes, whether we have to gain something out of it, also has to do with numbers in the sense that yes, they are people. SDC.18

And maybe they don't do the whole process, so the test part we already talked about, which is often skipped a bit. Still, it does make a difference in that sense because they start listening more to the customer, and I personally think that's the most important thing, that the focus is really on their customer and that they want to listen to that more. That's uh, I think that's often the biggest impact such a project makes. Yes. SDC.65

That includes ?service design?. That you can think about or design a solution for a long time without testing it, that just happens and then you look at how your process saves things such as that fraud case, what's that called again? The misery of the IRS?

I : Allowance affair?

SDH: Yes, exactly. If they just had tried something. SDH.78

Well, customers with, talking to customer is a pretty big step for some companies. SDB.39

then I think ok for whom am I making my company, who am I doing it for? And then you look like okay but who are those people now and then yes then no longer lead the important people in the company say there in the company but actually your customers lead your company and that interaction that is for some companies I think so, yes that is tensive I think. So I understand. SDE.18

Also notice that I find most customer experience projects I've been involved in much more inside out than outside in. So service designers really have a lot more that user perspective and are really very concerned with the outside world and the context. Well, a lot of people who work in companies find that difficult and complicated. SDG.11

I expected that to be very self-evident in the theory of service design, when we started it was very normal. But there are not very many organizations that actually do it that way. I wouldn't say we're unique, but it amazes me how few people actually talk to the end users. SDH.13

Immersing ourselves in customers means that we can actually show you, but there is again a local police officer. I'm not going to show you everything, but yes, there is a local police officer and they have really spoken, that's just crucial that you do that. And that happens very rarely. SDH.15

Our clients who have known us for a while know that we do it that way. And there are plenty who underestimate how important it is. SDH.26

Putting people first is easier said than, apparently easier said than done. And I don't think the people who deal with that recognize or see how easy it is to cycle somewhere, ring the bell and have a conversation. That is greatly unrecognised. SDH.35

And now at a certain point they say yes they have to put the customer first and they have to radiate customer experience and pride in the brand, they have to work harder on that. But again, when you speak to them, which management did not do, there is a lot of pride among the employees. SDH.57

I think that a lot of organizations besides hiring service design as a kind of consultancy to design new things, that a second aspect, and maybe just as important I think, is the properties of design or of service design and that is if you engrossed in your end user, which means that you literally just have to go outside, talk to people, so people find that very difficult, organizations. SDH.79

Organizations think in solutions
How I also explain it is business is, business is used to think in solutions. SDA.19

Then for example a campaign will be developed and then a marketing bureau is contacted very quickly and everyone is very satisfied with the solution instead of within the design thinking method looking at why a product does not sell and that could be because people don't want it, but it could also be because something is not described well on the website or different things. SDA.20

Business is used to think from solutions and therefore to implement this solution and the design thinking method of service design you go look into the problem and first investigate the problem further. SDA.21

Design thinking is not for everyone a natural proces, where you first investigate what the real problem is you want to research, but just think is solutions, a lot of people tend to directly go towards the solution. SDB.54

That is often the problem. It is very difficult for my clients, in other words for my customers. Not to think in solutions. And that also means that they are often further wrong than they want to admit. SDC.26

Also with project groups, when you start working on it, you are really still in those first phases. They immediately come up with solutions. Then maybe from one interview it appears that a customer has a certain need, oh but we can solve that in this way. Ho ho ho wait, hold on, we are still investigating. Hold your horses. For many people this is a very big challenge. To really wait until you as a project group can define such a problem. And then start thinking in solutions. SDC.27

because well as I said, many people are not used to putting the solutions on hold for a while and mainly focus on the first diamond first to focus on the research part. That gives a lot of real eye openers. SDC.61

I: So it's more that they, or at least that's what I often hear, that in general companies think more solution-oriented instead of delving more into what the problem actually is or the possibility.
SDF: Yes often it is better to peel off one level, another level one or two, they should also be able to do that with that industry. SDF.83

Not a sufficient understanding of what the real problem is. SDH.89

Organizations tend to react on situations instead of anticipation
Now you see that there are more and more tools that help with this, but then that also has to be a bit of a problem of anticipation. That is also very difficult for such an organization, which reacts more often. SDI.18

Becoming a customer driven company requires another way of working
then I think ok for whom am I making my company, who am I doing it for? And then you look like okay but who are those people now and then yes then no longer lead the important people in the company say there in the company but actually your customers lead your company and that interaction that is for some companies I think so, yes that is tensive I think. So I understand. SDE.18

Then they have to do something that they already do in a different way and that involves a lot of people and that is very difficult. SDF.33

That was two years ago. They are still working on steps one and two. And that's not because those steps are so complicated, but that's because that organization is just not used to thinking that way. They don't have the roles for that at all. They don't have the training for that. They don't have the KPIs for that at all. They can't put that in their IT systems, you know? SDG.85

That is actually often much more work than coming up with the services themselves. SDG.90

And most people found the design thinking/service design workshop quite difficult. And there was one who said, I think I understand what you are doing, if you understand what people find important, the end users, then the rest will follow. Well one, he was absolutely right. Two, we proved that with him afterwards. And three, he was the only one of twenty-eight people to realize that. SDH.33

Organizations run into the fact that if you want to fundamentally solve the problem you have to stick your neck out and not everyone is in the mood for that. It's that simple, we just have to accept that ?have there? Not everyone want to. Rather deliver a little mediocrity. SDH.98

3.4 Doubts on the effect of service design
No successful example on organizational transformation through service design
So I know that many service design consultants are engaging in organization transformation processes so much more than before, or Servitization as you want to call it, but they. Yeah, there's, there's not a lot of visibility for the success of their successes and there's not an exemplar case that we all well, that we all recognize has been done through service design. RB.13

Lot of convincing needed before key stakeholders join
And it should be done so the key stakeholders should work with the service designer, most of the time. That's in practice also quite difficult, because, well, that also needs a lot of convincing, so you need to. Yeah, I think it's a, it's a, it's a step further than once you have convinced them of the value of that you also can get more time, out of the key stakeholders so that's part of the problem, and that's one of the challenges, I think it's not yet fully implementing a service design approach. RB.16

What I see is that. Maybe it's also a matter of urgency. So, it's fine as it is, because we don't have any urgent challenge from the outside world so the business indeed is doing well. It's okay. We're doing fine with our current approach, But, because there's no, no distructive competitor. Business Value Proposition coming your way. So, or there's not a major crisis in the industry so I think there's an element of urgency that interacts with this need of innovating, versus just doing things a bit better than before. So, once, there's the urgency for change, then the company becomes more open minded to also offer the service design or design possibilities. RB.19

But it's a really long process. So sometimes it takes you a year/a year and a half to get it there that they think oh yes you know now we're going for it. So that takes a while. SDE.22

I : So mainly that persuasion takes a while?
SDE : Yes and I think so too, it's also a bit of bringing your own expertise along and just gradually giving people the confidence that the things you do are good. SDE.23

People within an organization do not have the skills to use design methods
What you see in practice is that they don't know how to do agile product development and don't know how to test concepts, interview customers. So all those things that you should do as a service designer and also as a product owner should have as a skill, you don't have that in a lot of companies, because product owner roles are often given within an organization to people who worked there for a long time and they don't have the mindset. SDA.17

So I also think that maybe working with an agency is in line with the fact that the company may not have that expertise in-house, so that's why they ask you to help with it or preserve that valuable position or forming or executing or controlling. SDE.14

So I think usually companies always have good ideas. But that it is always nice if there are just some experts who indeed know a little more about it. And just being able to make an inventory between, that makes a difference. SDE.15

but yeah it's a bit of a split you're in, because that customer just can't design, they just can't do it, but you want to keep them involved. So you usually do a brainstorming session for the shape or actually you have to do it yourself, I think, you should also sell like that, but that doesn't always happen at our company. Certainly also dive in for a week to go a little further than yes, you should not think that after a day of ideation workshop you have the egg of Columbus. SDF.90

let it rest, we'll figure it out ourselves. If you could do it that well you would have figured it out. So you won't make it in that workshop either. SDF.98

And that is also a development, a design world where they say yes you have to do it together, which I also want to get rid of a little bit, but yes some people just can't do it. Do you get those simple crap ideas again, so yes we are going to make an app, yes okay nice. SDF.99

I : Yes. But so within companies it is not so normal? To do it that way?
SDH: No. Those are all people who are not trained to talk to people. SDH.31

There are many people on our customer side. The type of person, type of layer in an organization, person with a certain role or responsibilities, that sort of thing. Yes, they are not trained to listen to people. Or run after it. Or start a conversation. That's how it is. These are people who come from the marketing angle and then it's about coming up with great plans, communication plans. They are people who are much more in the management, leadership environment. SDH.32

Some organizations do not see the neccesity of testing phase
One because there is often simply no time for it, but also because they do not think about the effect of testing a solution at all.SDC.11

You can do it in so many different ways. As a result, it's actually kind of forgotten. SDC.12

And the clients I've encountered so far, they don't see that as an important step either. And to convince them of that, that you can prevent mistakes in the long run, or at least reduce the chance of mistakes. It is difficult to convince them, to get them there, to make them understand the impact of such a test phase. SDC.13

Some companies have a hard time trusting the service design process
You have to trust the process, but many clients who are not familiar with service design find that very difficult. SDC.29

But a client is not satisfied with that. Of course they want to know some steps in advance. SDC.31

So in that sense I try to look more and also help the client in understanding what are the deliverables or intermediate phases after a certain session or after certain phases in the process and looking from there. And not so much of OK, we have so many weeks and we deliver this in the end, and we'll see how we get there, because the client cannot work with that. SDC.36

I: That they must first have the feeling that it will indeed really help before they want to invest in....
SDD: Yes. SDD.24

I: Yes exactly and I need more routine and guidance in that regard, so that's why..
SDF: And that also makes it difficult to land it in organizations. SDF.96

Some organizations do not see the what service design adds
It is often quite a struggle. Because that sales organization often has something like what are you doing? We do know our customer. What are you coming to tell us that we don't know yet? Well then we really have to show with a lot of respect and velvet gloves that we have something to add. SDG.68

Perhaps the most important lesson of the last ten/fifteen years is that many people have some kind of image of what the customer is and what they do and what they think. That they have no idea of reality. SDH.27

I : So more of the books and numbers and not so much.
SDH: Yes. SDH.28

And then they realized that they actually don't know who they are at all. SDH.90

4. Servitization
4.1 understanding of services
Multiple persona's who receive the service
because often there are several personas who receive the service in an organization, or whether that is actually the solution for each of those target groups. SDD.54

Yes, you can cluster them in a number of main groups SDF.80

And so the question is, you sold an elevator and who is the customer now. They did not understand that, did they not realize that you sell a lift to one person and that if you come to visit and you get stuck or I know a lot someone who comes I know a lot fix something at your home, a mechanic who comes and it is stuck in that elevator, which you see more in product-oriented organizations because you talked about that a bit, that service also means that you don't just have to improve the sales of that elevator, or the repairs of that elevator lift but that you have to understand that there are a lot of people who are customers without paying you or without you being aware of it. I was just thinking about that because you started with product oriented to service. All right. SDH.104

Problem with defining services
then we have again, another problem in definitions and because services could be defined in a lot of things. RA.15

Yes, services are seen as a cost item, I think that is because there is a very limited picture of what the service is. Someone who has no clear idea of what a service is. For them it is probably a transaction. So adding an extra transaction costs extra people and extra money. SDH.69

I see no difference between what a product or service is, where is the dividing line. SDI.7

Attempt to build a performance to satisfy a need
But, in general, they could be seen as the attempt to build a performance that could satisfy a need, okay this is the most generic thing that we could express. RA.16

and then a final intention that could be transformed because it's designed is something that you could receive, that is, that is perishable just because it's a performance, so it would not block a train, you could take a train. RA.21

Same as product, but spread over time
And a service is actually a product, but then spread over a period of time. SDB.2

Not tangible
this could be very complex or intangible sometimes RA.20

but at the same time, the performance that it could offer sometimes is intangible so the final result is intangible. RA.22

but a product is tangible and a service is not. SDB.4

I : Yes exactly. To indeed provide those tools in order to shape the process. It seems to me that it is especially important when designing a service because it is precisely in this way that it is not tangible.
SDC : Yes. Yes it is. SDC.109

Everything that takes place in the relationship between an organization and its customers
In the sense that a service is everything that takes place in the relationship between an organization and its customers. And that's what we design for. SDH.6

I think you will come across that in more conversations, and also in earlier ones, we don't use the word much in service design anymore. But when we started it was holistic approach to service, so in my view that's the whole relationship. That's in all these things. SDH.71

World is made of services
But if you imagine that your entire life is made of service, even if you're living in a material physical reality. But everything connects this physical reality to the action or your thoughts or needs, or whatever, you will discard everything is caused by something that is a provider that is offering your service and you are accepting it. Even if tacitly, and then you enter this world of service and you use it every day RA.17

So in that sense everything is a service or a reminder of a service actually that is the product you offer. SDD.59

But what I actually miss in that whole definition is a bit more the economic perspective. And that is about seeing value creation as a service and seeing the economy in services and

thinking in services. So for me, service design is very much about seeing value as co-creation, seeing value as a process over time. Seeing value as something that multiple stakeholders work on together. Seeing things in services. SDG.3

And that is actually much broader than the standard service. And it goes much wider. And that's the beauty of your subject, servitization. In which you actually start looking at manufacturing companies a bit as well. They really benefit from that view. With that image of what you deliver as value, you can start thinking more in terms of services, so to speak. SDG.4

Service framework being the driver of tacit things
So again, you see things, but the, what really drives the things that you are encountering. Every day, it's a service framework RA.18

Interaction between actors and agents
So, it's an interaction between actors and agents with the possibility to choose an infrastructure RA.19

Services cost money
So then our mission is to serve more people. And yes that costs money. So it doesn't make money, but that costs money. SDH.67

Yes, services are seen as a cost item, I think that is because there is a very limited picture of what the service is. Someone who has no clear idea of what a service is. For them it is probably a transaction. So adding an extra transaction costs extra people and extra money. SDH.69

So you can't do it either, because then it is a cost item, you can also do it then you help your end users, then you help your customer. SDH.75

Services have higher margins than products
But to get that project, I made a presentation where we said, well, companies like you, who are in a similar place of similar maturity. They're into stuff like this. Just to stimulate them and to show that this unlocks value with the customer. They tap into new segments. They make margins on services that are higher than the margins they make on those products. SDG.62

Without purpose/deeper value, services can become flat
I also see that movement on the one hand, because we talk about it at companies and companies are really inspired by it, they think yes, that's completely true and on the other hand I also really want it, because I think sometimes services just too flat. SDJ.44

4.2 Service need tangible products/touchpoints
Services and products go hand in hand
Even if you bring a product to the market, you still need your channels and a handling of your product. So yes, product and service go hand in hand. SDI.6

What I understand from many people is that they draw the line between a tangible product and a digital product, but that digital product also has physical qualities and that solid product, that physical product also has organizational qualities. So yes, I find that comparison a bit strange, because before that there were also services, for that digitization and vice versa. SDI.8

I now also see that at the tourist association, although it is really a service-oriented company. So that's another confirmation of yes that product or service doesn't really matter that much, it might be more digitization SDI.14

Products and services are equally important
no I don't think so because I still see the importance of products RB.27

Yes, I have experienced that with a car manufacturer. That really wants to be a service oriented company. Although, I actually think the separation between product or service is a false comparison, because you need both. SDI.5

Even if you bring a product to the market, you still need your channels and a handling of your product. So yes, product and service go hand in hand. SDI.6

I now also see that at the tourist association, although it is really a service-oriented company. So that's another confirmation of yes that product or service doesn't really matter that much, it might be more digitization SDI.14

Products provide a coherent brand experience
I think it's going to be difficult from from a brand perspective. So, normally products are still carry a lot of the brand components, and you also want to make the experience coherent through all touch points. And so that means that in touch points. There are, there will always be some physical touch points, and the coherence, there is super important. So what would we know from brand experience design is that, yeah, you need to really pay attention to all the physical, including product elements, very, very deeply, so even if it's a company, you go for full customization you still need to ….. Is that really a good idea what are certain key product elements that you want to maintain in order to make sure that your brand values are preserved but that's my personal opinion, and it's I also do research on branding. I don't think we can get to that but I don't think that's the best direction for for a company. RB.28

Services need physical qualities too, such as touchpoints
Services that just need a certain physical quality too, be it on a screen or something you use, there is always some kind of interface needed by which a customer interacts with an organization. So I think what most people talk about by servitisation they actually mean digitization. SDI.9

4.3 Understanding of servitization
Within servitization, the already excisting service componant is build further
but yes I know just few companies that are really only product-driven. Because often, if you have a webshop, then you naturally already have a certain service or if you have a store. Most companies already have some kind of service in them. SDC.70

*I : And that service part is then expanded more if they want to enter such a process?
SDC : Yes. SDC.71*

Even if you bring a product to the market, you still need your channels and a handling of your product. So yes, product and service go hand in hand. SDI.6

Servitization goes deeper than a good service concept

But if you really want to make a difference, then you don't just have a good service concept, it goes much deeper than that, you actually want to capitalize on that customer's loyalty. So you also want to be a partner in life, that's what he calls it. So that means you're there for that customer at any given time. And that also applies to both types of companies, whether you are really product-driven or more service-oriented. SDC.80

And that is actually much broader than the standard service. And it goes much wider. And that's the beauty of your subject, servitization. In which you actually start looking at manufacturing companies a bit as well. They really benefit from that view. With that image of what you deliver as value, you can start thinking more in terms of services, so to speak. SDG.4

So where the world is not yet ready, I think the servitization is that you frame the issue, that you may have a different view of it that offers much more opportunities and much more possibilities, much more innovation. SDH.92

Servitization is a customer-inspired process where services are developed around a product to create value

It is true that in servitization that is a partly customer-inspired process in which you look at the world of the customer and what are adjacent services that make sense around that product. How does your product play a role in customer value creation? And you can map out the entire journey and develop related services from there. SDG.80

and at that car manufacturer it was very experience driven. So looking very closely at what is the customer's experience and what else can we offer them around our original proposition, the car. SDI.15

I: So say more that focus on that customer experience and put that central.
SDI: Yes. SDI.16

I: To balance with that customer?
SDI: Yes with that customer experience, because yes, the customer does not only care about a product that works very well, it also needs something more. SDI.20

What we did then was actually just taking the best-selling product and taking it an extra step and showing what opportunities are still there. So we started looking at what were really great opportunities that have come up from the human experience. SDI.21

Within servitization, you look what type of service (product oriented, business model oriented etc.) fits the organization

But what is important is that you also look at a kind of taxonomy of possible services, and my colleague has mapped that out very well. Who has looked very closely at are there directly product-related services? So then you should think about repair services. There are services that deal with new business models, new financing models. There are services that deal with access and disclosure and things like that. Services that are about optimization of use. I don't remember it all by heart, she has mapped it all out neatly. But you can imagine that you can make a kind of plastification of different services that fit that product. SDG.81

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4.4 The servitization process
The process takes years
Yes well you know that is actually a process that has been going on for years SDC.72

That was two years ago. They are still working on steps one and two. And that's not because those steps are so complicated, but that's because that organization is just not used to thinking that way. They don't have the roles for that at all. They don't have the training for that. They don't have the KPIs for that at all. They can't put that in their IT systems, you know? SDG.85

In other words, that process is often projects that take years. For example, we are working at a bank. We've been at it for three years. We have been working for a clothing brand for five years. SDG.94

Should be top-down
Hell yes. So it has to be almost top-down. SDF.94

Not top-down and also not bottom-up, but with sponsorship between the two
We're actually trying to look at these kinds of changes that never come all the way from the top but they also never come all the way from the bottom. I can't just bring about such a change all the way from the bottom up. You must also have sponsorship from above. So we try to design programs in which all target groups are affected as much as possible SDG.39

Lead users give input for servitization process
I : Yes, that is indeed nice to hear. So those lead users are also often used to shape those services for such a servitisation process?
SDG : Yes. As one of the ways to get input. SDG.79

The servitization process as a roadmap by starting with simple changes first and building on them
And that started with super simple, just low hanging fruit, and that was a kind of roadmap of and then you can start building that and then you can develop those services and you can unlock that. Made a whole plan, a whole roadmap. SDG.84

4.5 Servitization within an organization
Culture change required, as employees get a more advising role towards the customer
Because previously they only had to take an order and say I'll book it in. And now because it is much more service-oriented, they must also be able to give advice and they must also be able to think along. SDE.54

So it's a very big change in culture as well and in the way people interact with each other. So I think that's really a whole, that's actually the most important piece.SDE.55

I think for example in ?what I'm talking about is? it is so because we put the customer first and because the customer actually expects that there is more knowledge for us and that they need better help and more expertise what should be there. That means if you look at your value delivery part, the side of your people, that they need to be trained much more. SDE.60

To become customer centric, the skills of employees and the quality of systems should match/complement each other

So you have two things that can cause problems. The moment you say, say, well, we are going to work really customer-centric, we are going to make sure that everything is set up in the way our customer wants and what suits the company, of course, the direction of the company. So on the one hand you have so if you look at value delivery, on the one hand you have people, who we really see as people capabilities and skills. So that's really who owns it, what can they do, what else do they need to be able to do, so how is the value transferred by the people. And on the other hand, you have your system and your services. And also your products actually. So that also has to do with delivery. So how do non-humane things ensure that the proposition or the value is conveyed to customers. And they must also be able to work well with each other. SDE.56

Sometimes you also have companies that have super old systems. And then you can train your people completely well. The moment your systems and the online experience or the systematic experience, if that's not good, then it doesn't work either. Because in the end, look in the end, service level is going to be customer experience, let me take that first, it's about having consistent experiences. From start to finish. It is, of course, about the singing of interactions. So everything. People, systems, services, products, whatever. That is the experience you have with a company or with a brand. So in that you really have to look at complete systems. SDE.57

I think for example in ?what I'm talking about is? it is so because we put the customer first and because the customer actually expects that there is more knowledge for us and that they need better help and more expertise what should be there. That means if you look at your value delivery part, the side of your people, that they need to be trained much more. SDE.60

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And actually see every new service as a prototype that enables you as an organization to learn and develop new capabilities and to grow to that next step. SDG.88

Yes, often what we do is really look at what kind of capability's you need to be able to provide this kind of service. Part of it is about technology, it is about IT, it is also about various back-end systems, but also remuneration structures of sales people and so on. This can be done very broadly, we will map it out. SDG.91

Let service innovation and organizational change run parallel

So a very large part of that servitization transition is actually about organizational change and organizational readiness. And if you don't take that into account, you can come up with all kinds of fantastic services for such a customer, but then it just gets very complicated and frustrating for them. SDG.86

I : And then that roadmap is a kind of tool to let them change in small steps?
SDG : Yes. And to really let the change in service provision in innovation run parallel to the organizational change. SDG.87

And actually see every new service as a prototype that enables you as an organization to learn and develop new capabilities and to grow to that next step. SDG.88

What I often saw is that those people did their profession, but that there were all kinds of organizational situations around it that the profession was not understood or that it was really necessary that there were finally people who made things visual, which also created movement in the organization, but yes. SDJ.1

Servitization asks for a different view in opportunities and innovation arise
So where the world is not yet ready, I think the servitization is that you frame the issue, that you may have a different view of it that offers much more opportunities and much more possibilities, much more innovation. SDH.92

What we did then was actually just taking the best-selling product and taking it an extra step and showing what opportunities are still there. So we started looking at what were really great opportunities that have come up from the human experience. SDI.21

4.6 Difficulties regarding servitization
For product providers, moving towards services is a big step
Because I, yes I have not had much to do with real product providers who want to focus more service. But what I can imagine is that if you have a product and you have always focused on okay, you know, product, that quality has to be good, we really make sure that everything is just top arranged, if you suddenly go to a service must be quite a step. SDC.67

That was two years ago. They are still working on steps one and two. And that's not because those steps are so complicated, but that's because that organization is just not used to thinking that way. They don't have the roles for that at all. They don't have the training for that. They don't have the KPIs for that at all. They can't put that in their IT systems, you know? SDG.85

And so the question is, you sold an elevator and who is the customer now. They did not understand that, did they not realize that you sell a lift to one person and that if you come to visit and you get stuck or I know a lot someone who comes I know a lot fix something at your home, a mechanic who comes and it is stuck in that elevator, which you see more in product-oriented organizations because you talked about that a bit, that service also means that you don't just have to improve the sales of that elevator, or the repairs of that elevator lift but that you have to understand that there are a lot of people who are customers without paying you or without you being aware of it. I was just thinking about that because you started with product oriented to service. All right. SDH.104

Often, organizations are not ready for servitization
Because that is a super important aspect of servitization is that you see that organizations are often not ready for it at all. SDG.83

So where the world is not yet ready, I think the servitization is that you frame the issue, that you may have a different view of it that offers much more opportunities and much more possibilities, much more innovation. SDH.92

Yes. You just run into people who either don't see it or don't want to see it. SDH.101

For some customers, this is a slightly too long-term perspective. You can't sell that nicely. At least that's too vague. SDH.102

Companies find it a challenge how to be service-oriented

And innovating the services at that airline in the last ten years, it started with a kind of efficiency boost, which is that you just need fewer people to make a flight take place, which is super good. They weren't going to lay off more people, at least that wasn't the plan. But what they run into is how you can be service-oriented. SDH.58

Difficulties of the transition to service depends on the organization

And what you saw, what were the difficult bottlenecks when they wanted to move on after this?
SDI: Yes, that varies a lot per organization. SDI.11

5. service design contributions to servitization
5.1 Mindset
Service design contributes to servitization by changing the mindset

I: Yeah that is used for other purposes as well. In one of the papers I've read of you: Service design for effective servitization you mainly talk about changing that mindset. With the use of service design but does it also have other purposes in servitization do you think?
RB: I think it's well the mindset is a bit it's a very important component RB.6

I : And do you think that service design can also have a positive impact on the servitisation process? From companies moving from product to service?
SDC : Yes, sure. SDC.66

And that is, well also with your background at the HBS then you also understand that service is not always for everyone, but it is of course a completely different way of doing business than if you are simply product-driven. The great thing about using service design to make that switch is that you start with a customer and start with hey, but what are those wishes? What are needs? And what are the real things you can help your customer or your target groups with? And I think that already provides that mindset that you need to be able to provide service at all. SDC.68

So that, yeah I definitely think it's just a really good tool to help with that SDC.69
that's when I came into contact with service design and from that moment on I really fell in love, and totally, just feeds a top mindset, process. SDC.90

Moving the attention from a technological product towards a service componant

and service design of course moves the attention from just technology product into something that is more service, that is, yeah, It is a service component so, you might ask whether we have products anymore, or whether we always talk about product service systems really due to the, to this strong digital component that is attached to every product, nowadays. So I think the two trends of, well, digitization and Servitization are very close to each other. RB.22

5.2 Making it easier and create commitment
Achieving behavioral changes in making it easier to adopt new processes

but I think it's also a very effective way of achieving behavioral changes to help people within an organization to adopt new process RB.7

We really an effective way of making it easier for people within organizations to adopt new behaviors new way of doing because they just practice these new ways of doing, for example, a more creative way of addressing any kind of problem so they just practice, and maybe under the guidance of well under the guidance of a designer, into this practice that is normally playful emotional engaging, they see that, oh this is a different way of working, it's not that difficult. I can do it and I can get results. So that's the, it's not only to change the mindset but it's also to change the behavior. RB.10

Service design's co-creative nature creates commitment for the servitization process
It's also I think another purpose of using service design is that it's an inclusive process so collaboration is key for, for me it's not collaboration, it's really co creation so it's getting the perspective of everyone and getting given everyone the possibility of having an influence on the outcome so it's also, it sort of serves the purpose of creating convergence around transformation. So, in the day. Yes, it's a bit stakeholders that are affected, for instance, by Servitization process may have different interest in services and activities they can start sharing this interest and converging towards, towards a common one element of creating convergence and commitment. RB.11

Service design makes the servitization process easier
And with service design thinking it is a step that you then take to be more service-oriented or to be service-oriented is much easier. SDC.75

5.3 As a tool/strategy
Service design is a tool that enables service innovation
It is therefore a tool that enables you to initiate service innovation. SDD.3

Service design as a renewal or innovation strategy
Well, that was great, you could also put service design next to it as a renewal or innovation strategy and make your entire organization at home in it so that we can also learn to embrace it together SDD.21

6. Organizational transformation factors
6.1 Urgency
Technologies can create a sense of urgency to tranform a company
Well, first of all, technology is one of the recent ways in which you can add urgency to the process of is when of change, because from new technologies, a lot of distracting challenges come so a lot of sectors are challenged by this new digital technologies that you mentioned yourself before, so I think technology is really one of the reasons why companies need need to change that they, it is indeed normally associated with where it's more and more often dealt with service design. RB.20

And you know, that's how it is, I think a certain level of digitization is expected in all industries. But yes, if you have been postponing that for 5 years because you think, yes we have a website, people can find us, yes then you are really behind the times. SDC.96

Furthermore, digitization has of course a huge impact. Everything must be digital is the norm and that creates enormous possibilities. SDF.16

There needs to be a certain urgency in order for an organization to start a transformation process
What I see is that. Maybe it's also a matter of urgency. So, it's fine as it is, because we don't have any urgent challenge from the outside world so the business indeed is doing well. It's

okay. We're doing fine with our current approach, But, because there's no, no distructive competitor. Business Value Proposition coming your way. So, or there's not a major crisis in the industry so I think there's an element of urgency that interacts with this need of innovating, versus just doing things a bit better than before. So, once, there's the urgency for change, then the company becomes more open minded to also offer the service design or design possibilities. RB.19

I: So the necessity must also be seen.
SDF: Yes anyway SDF.44

So you always have to have some kind of pain or urgency if you want to get things done and it is not always felt or experienced equally hard by everyone, at larger, more unwieldy companies. SDF.46

that happened everywhere and the balance costs a lot more money, but not so if people have a budget per year and they manage it every year well then there is actually no problem. Who cares and they just make it up too. So there is no pain. While if you just put it on a spreadsheet then you think my God how is it possible, because a ?? can solve it once, but yes it is already budgeted every year. SDF.85

Pain has to be big enough, or you have to have a visionary who gets it. SDF.93

Yes. You just run into people who either don't see it or don't want to see it. SDH.101

Step one is to create a sense of urgency for change management. Well, that sense of urgency has of course also arisen with Corona. Everything becomes liquid under pressure. SDJ.61

So then you see that under pressure change arises, you have to. SDJ.62

Business model under pressure, so looking for new ways to create value
They buy certain cars, they are the official partner of that carbrand in The Netherlands and they subsequently sell them to the dealer. This business model is certainly under pressure, so they are searching ways to add extra value, so they stay relevant as a company, because otherwhise they will have no right to excist, SDB.33

So then you see that under pressure change arises, you have to. SDJ.62

When the expected service level is not met, people go to competitor
but what is becoming increasingly important is that if you as a company do not provide good service, your customer will go to a competitor. Now there is just a certain level of service is just expected, if you can't deliver then you will be immediately written off and it's not even that you than people think "Next time I will buy from them again". No, people look for someone else who can deliver it better. SDC.73

Everyone knows that big electronics company, everyone knows that that company provides fantastic service, which also raises people's expectations. So you also notice that companies need to work on their service. SDC.74

Well, what I say, the expectation of service orientation from organizations has of course changed a lot in recent years. So there's actually, you know, if you don't participate, or if you

don't participate in that, then you're already out of business as a company. That's just the basics you should have.SDC.76

Yes, of course digitization has really skyrocketed in the past year. Expectations again. You know, people also expect you to be able to deliver online. SDC.95

And that they sometimes go to a competitor who has a lesser product, who scores lower, say, on the objective product criteria, but who does have better service or a better repair service or has more insight into the customer's entire journey. SDG.55

I: To balance with that customer?
SDI: Yes with that customer experience, because yes, the customer does not only care about a product that works very well, it also needs something more. SDI.20

Needs and demands change over time rapidly, especially now
Then people were very different than they are now and okay we are now almost 1.5 years further, but even let's say half a year ago. That is at such a rapid pace, many wishes and needs have changed, because you are at home more, because you can't go to your favorite pub, well you can't go to the zoo, you can do all those fun things you can do not. So wishes change and this is of course a very extreme example, but over time things change SDC.86

And that may be something that has changed over a longer period of time, but there are also things that are changing faster than many companies realize. So yes, you are never really done with inventorying what your customer wants and seeing if those wishes change and whether your product or service still fits. So that's a really good quote. SDC.87

Yes, because if you are today, if you are on top of the world, that does not mean that you will be in a few months because the companies around you change, but so does your customer. SDC.88

I: Yes, but is there a demand for this way of thinking?
SDD: Yes, and if the demand isn't there, it arises because I think companies that don't actually adopt this customer-oriented approach are slowly losing contact with the market. SDD.10

One should concider the competitors develop over time as well
Yes, because if you are today, if you are on top of the world, that does not mean that you will be in a few months because the companies around you change, but so does your customer. SDC.88

So that will go well for a while, but at some point you will get an organization that knows how to listen better to customers and hopefully can also change and innovate faster. Yes, so outsmarting them, those are more likely to hit the market. So that is my conviction that more companies will find this interesting, also because it is simply necessary to keep your head above water. SDD.11

It can go wrong when not interacting/focussing on the customer
It goes wrong so often. You just don't get it. But yeah, anyways. SDH.34

6.2 Structure
Silo's are a real problem, due to not learning from each other

I : Yes, I had also heard from other service designers that say companies that really work in those silos, that that is a real problem.
SDC : Oh yes, absolutely. Yes. Yes, I think that's a bit of a stupid word, but working together in the chain, or yes, stupid words together. It's kind of a term like, oh yeah you know, such an organization, should you do something about that? But it is really true. Because if you work in silos, however clear that may be, you don't learn from each other.
I : No.
SDC : And that is such a shame. SDC.45

En vaak als je dan in die silo's zit, dan heb je alle designers zitten bij elkaar. Alle mensen die verstand hebben van IT zitten bij elkaar. Ja en dat, je hebt geen kruisbestuiving, dat is zo zonde. SDC.50

I think that is also one of the bigger challenges, a lot of companies are just super gesilooded, so they just do their own thing SDE.78

I: But could it be because of those silos that it won't be transferred?
SDJ: Yes, it's definitely because of the silos. SDJ.50

When having a heavy silo'd company, it will be harder to look at the whole picture and use service design principles
They shout that they will do it, but they don't quite understand yet, but they are still very concerned with the total picture. Certainly the larger companies, those somewhat older companies such as the banks or the postal companies and the insurers, the health insurer. They all say that they think customer-centric and holistic, but in fact they are all still silos. So especially that they are aware of it, but really actually look at the total picture and maintain those principles, the maturity is not always the same everywhere. SDF.27

Marketing, yes no they want it. Sometimes it is a marketing talk, but it is not always well embraced or understood and then they shout customer experience and they find that important and then they also do things, fragmented across all silos but it does not come all together. As a result, you get this 1 consistent customer experience in many areas. SDF.28

That is of course very difficult and then you have to start working together in a different way and that's where it sometimes stops that they know how it works, but how you have to work together differently, because every island has its own owner, its own KPIs. That's where things sometimes go wrong. SDF.29

There is no one who often looks from above and we will do it differently, because everyone works in their own silo and if you knock on another silo yes I need more budget for this, yes then you have to come from good houses and then the other person must also find that very important. It is also a challenge, we naturally live by that as designers to give people that insight and show them by looking at that total picture that it can also be done differently. SDF.86

And the third thing that companies run into is that if you translate them then there may be someone who knows how to translate that very well to the website, because that is his specialty, but does customer service do it too. So the problem is that you have to try to do it consistently across all channels... For example, imagine you have a value expert, quite a few companies have that. How do you ensure that the website radiates expertise with the

photography with the texts, etc. and with the products and that the customer service does the same. SDJ.49

I: But could it be because of those silos that it won't be transferred?
SDJ: Yes, it's definitely because of the silos. SDJ.50

I: That they then wear the same outside.
SDJ: Yes and that you also reuse things. That you don't get one department making something that the other department had already made.SDJ.56

Responsibility is needed to work across silo's on one customer journey, needed for service design
That is of course very difficult and then you have to start working together in a different way and that's where it sometimes stops that they know how it works, but how you have to work together differently, because every island has its own owner, its own KPIs. That's where things sometimes go wrong. SDF.29

Not in boxes, but more on a customer journey. So you can say well we are responsible for everything the customer communicates in this chatbot, but you can also now you are only working within such a silo, but you can also think now I am now going to focus completely on closing for example a package or ordering a new cool product and I will make sure that we are in such a team with all channels to make that customer journey. So you're not going to look for that collaboration within the silos, but you're just going to design customer journeys from start to finish. So you sometimes call it a value stream. SDF.30

but then also put that responsibility there and not that responsibility in those isolated silos. Yes, that's what companies struggle with enormously. SDF.32

Then they have to do something that they already do in a different way and that involves a lot of people and that is very difficult. SDF.33

As far as I'm concerned, those are also deliveries of service design designers who make a very specific statement, you must do this, and you must not do this and this is a good example of well then they did not do this with service design but with just their common sense and they're just totally right. This is by the way nothing against subcontractors, but that you take that responsibility for it, that is very wise. SDH.76

Or if no one takes responsibility, for that. SDH.87

and know how to make the horizontal journeys. So many organizations that are vertically divided and you see with that digitization you see that a lot of horizontal work is also required and that is quite difficult for companies that come from an older era before digitization. SDI.13

We are now also working on that, for example, and when we organize workshops about to experience design, about value-driven design, then we also try to get those different silos around the table and we are really working on that now, then they really have to Make choices. SDJ.51

There are silos in companies, but people are always willing to sit together. SDJ.9

A possibility to remove the silo's is to work on a certain product or for a certain customer group with a team with different disciplines

Well the music streaming service model that is a model in which the organization of the music streaming service is arranged in such a way that it is oriented around customer groups, say then you have tribes and guilds and guilds are specialisms and every team that designs something consists of 4/5/ 6 different disciplines and such at a bank, for example, they have a few ?guidelines? and therefore no longer have departments ala marketing ala IT, but in fact you have more teams that really produce something for the customer and that includes marketers and ITers. SDJ.52

So those departments are no longer hierarchical, but they are more provisional, they simply supply their people and are more knowledge suppliers, but the ultimate organization is then the organization around producing around those services, but I think that is a very good development. SDJ.53

Hierarchy is a disadvantage as there is no chance for bottom-up innovation

There are a small number of companies that have a bit of a scale where you might actually be able to bring in external advisors on this. But the disadvantage with some tourist companies is that there is quite a hierarchy. SDD.30

I also once did a project with a student who tried to apply more service design around the hotel industry, but in that respect you notice the fact that there is a solid hierarchy there, so hey, that there is a very large is layered and that this hierarchy actually creates a kind of limitation that someone on the floor cannot so easily contribute to something that has to change from above. That there is a lot of top-down management and a little less bottom-up SDD.31

And that way of thinking is of course not present in all those hierarchical organizations. SDD.34

I: And that the director then has less insight into what the customer actually wants and does. SDD: That has, there are exceptions, but that is often the problem and often also the way in which those organizations are run or set up. So the fact that those are very layered organizations and not flat organizations throws that in the hand. SDD.35

Yes there is also quite a hierarchy in the care of a doctor is higher than a nurse and let the doctors or let the MT decide for us what should and should change differently. Yes, we are busy enough already. You know, I just happened to be back on it and it's kind of a complex thing. SDJ.24

Organizational structure is changing within organizations in different industries

and I think that is changing, because in every organization in every sector, in every industry it is changing right now. SDD.32

So it is also a question of hopefully having people in the organization that you can trust that they can simply come up with the best solution for the customer within a certain bandwidth and that they enjoy a certain freedom in this and that we going to see afterwards whether the solution was offered, hey how could we do it differently next time or well. So yes, that is changing. SDD.39

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So those departments are no longer hierarchical, but they are more provisional, they simply supply their people and are more knowledge suppliers, but the ultimate organization is then the organization around producing around those services, but I think that is a very good development. SDJ.53

By changing the culture, an organization can create a flatter and desired structure
Well, the one thing is that the organization becomes flatter and that you create less hierarchy in a company so that there is more equality that can be done through functions, but that can also be done by simply changing the culture. So there's something in that. SDD.36

So flatter would be better. You can see that to some extent in the culture or mentality in certain organizations or sectors. So if you can change that, there will also be more of an open mindset. That word will come back. That breeding ground could be for service design approach. SDD.37

Within a flatter organization is a more open mindset
So flatter would be better. You can see that to some extent in the culture or mentality in certain organizations or sectors. So if you can change that, there will also be more of an open mindset. That word will come back. That breeding ground could be for service design approach. SDD.37

With hierarchy there is a bigger chance of becoming bureaucratic than efficient
Yes, and if you are very hierarchical, the question is whether you become more efficient or more bureaucratic. SDD.38

So according to me, but well not always that far. So I venture to doubt whether hierarchy ensures efficiency. SDD.40

In order to flatten the organization, you need people that you can trust with extra responsibility
So it is also a question of hopefully having people in the organization that you can trust that they can simply come up with the best solution for the customer within a certain bandwidth and that they enjoy a certain freedom in this and that we going to see afterwards whether the solution was offered, hey how could we do it differently next time or well. So yes, that is changing. SDD.39

and education can also be about empowering or actually increasing a bit of responsibility and self-esteem that the employee who is in the operation has. because I think that's what you actually need, isn't it, so that there are employees on the floor who dare to speak up and who take or are given the space to share their insights about what the customer says, thinks, thinks. SDD.42

Education will help as well to give people more responsibility needed for a flatter organization

I: And would education also help to flatten the organization? So that the service employee is indeed well trained to make that decision?
SDD: Yes SDD.41

As lower rank employees are busy, they don't feel the need to make management decisions in a high hierarchic company
Yes there is also quite a hierarchy in the care of a doctor is higher than a nurse and let the doctors or let the MT decide for us what should and should change differently. Yes, we are busy enough already. You know, I just happened to be back on it and it's kind of a complex thing. SDJ.24

There is indeed hierarchy. So just let me do my job and let the big guys decide how things should be done differently. SDJ.25

Within larger organizations quantitative / hard data is more important then in smaller companies in order to convince
sometimes it's just common sense, but certainly in a large organization where you have all kinds of layers, someone somewhere has to give a budget for a team and then you really have to give hard data, yes if we don't solve this it will cost so much and have to you really talk in euros. SDF.62

Yes, we just did a project in a medium-sized company where we worked together with the director, owner, who also relies very much on his entrepreneurial spirit. So he does think in euros, but it is also a lot in this case than yes a man who wants, who wants to move forward, who also sails on his intuition and of course he thinks in euros, SDF.63

Well that's enough to put some more resources on here, while it's not statistically substantiated at all. SDF.64

It's just his instinct combined with potency of the ideas you have. SDF.65

6.3 Mindset
Gaining a service design mindset makes organizations more successful
So, the companies working according to the service design mindstet will become the most succesfull ones SDA.38

And if you can really respond to that as an organization, then you have gold in your hands. And I think that is really the success formula of service design. In that way, yes, that you can connect services in such a way that people think, well I actually didn't know that I needed this at all, but it's fantastic. That is the starting point that makes service design according to me. SDC.7

But I believe that it works SDA.42

It's hard to take that seriously in the beginning, but if you do it seriously and you take it seriously, you get to work with it then you think gosh that's actually more fun plus it leads to more or better results than when I work with such a traditional target group description. I can do a lot more with this, for myself or my organization than when I create a target group. SDD.25

It is, I think the great thing about service design is if you as a company have a service design agency that they often look at their problem from a different perspective. Or that their company is looked at from a different perspective. And based on that you can advise on propositions and that just works very well. SDE.12

then service design makes me go to one store and not another. SDF.9

It's very diverse. But the bottom line is that design approach that just works really well. SDG.47

Some managers do not want to take risks and only want to implement small changes
And that in practice you run into the fact that managers at whatever level do not want to run a risk and therefore do nothing. Or a little thing. And the worst part is if it's so small that if it falls over you just don't hear it fall. That you don't notice that it didn't work. Do you understand what I mean? SDH.93

I : So you mean an initiative that is too small? Or?
SDH: Yes. A small initiative, SDH.94
Organizations run into the fact that if you want to fundamentally solve the problem you have to stick your neck out and not everyone is in the mood for that. It's that simple, we just have to accept that ?have there? Not everyone want to. Rather deliver a little mediocrity. SDH.98

In industries with similar products they have a more open mindset as both user experience and innovative products are key
So, for example at a bank they are very open for the mindset, because in my opinion as a bank there is not much to compete with except user experience or customer experience, as banks in general all have a bit of the same product, here image is important as well as sometimes innovative products, SDA.15

and what I see is that a lot of services that are going to actually look more and more alike. I mean if you have an app from bank A and bank B, in the end there isn't much difference anymore. So how can you differentiate yourself, well by tapping into those deeper and higher values and making them explicit too SDJ.42

Product owners originally from another function often lack the mindset, due to their extensive experience
What you see in practice is that they don't know how to do agile product development and don't know how to test concepts, interview customers. So all those things that you should do as a service designer and also as a product owner should have as a skill, you don't have that in a lot of companies, because product owner roles are often given within an organization to people who worked there for a long time and they don't have the mindset. SDA.17

When it is going well, companies don't feel the need to improve
I: That is indeed a good eye-opener for companies. I had also heard from other interviews that indeed, one also had a quote "Better is the enemy of good". When people think that a company is doing well, they stop looking for opportunities to improve it.
SDC: Yes, and that's something I keep coming across time and time again and I try to instill that in my clients. SDC.84

So actually you have to see it this way, it's within companies, you just have to see a company as a kind of ego, and that ego thinks I've always done it that way, everything goes very well.

And then suddenly someone comes and says oh yes but I actually hear from other people that you should do this and this. And that is quite different. Then you have to be yourself so you have to get rid of your ego, SDE.17

So the first is the ego piece. By that I mean more of, the way we've always done it, it's going really well, so why change it? Well, that's one ?reason?. SDE.41

and often, that's funny, sometimes you can show it all how things can be done differently and can be better and smarter, but often you just see that the pain is not big enough. Can you say yes it could be better, but yes it is still fine. SDF.45

I found a nice quote; "better is the enemy of good" SDF.69

In other words, if I'm going to improve something, there's a good chance that it will go wrong and if it's good, it's good you know. We don't need better. SDF.70
Not very fast but it has been improving a bit incrementally over the years and at some point it is good enough and when you look for better than everything that can go wrong, while it is already running well, SDF. 71

So also a whole family culture. So that people just really like to know each other well and always do it the way they are used to and prefer not to do it differently, because that all costs time and money and after all we have people to save and help, that. SDJ.23

Everyone within a company should support the idea and should understand the value proposition
But the view of my company is really to get people to get behind an idea and that idea really kind of circulates throughout the company and that everyone understands what it is and that it just actually makes you actually creates alignment within the company and that everyone just understands why they are doing what they are supposed to do. SDE.48

Not explicitly you should do service design but just more of it, this is what your customer says, we hear this and this, these are possibilities but you have to make sure that everyone also supports it, we actually have to look at this, this and this. Yes and based on that we just say that right from the start. SDE.50

I : So basically making it understandable for everyone and also that everyone benefits from what I understand?
SDH: Yes. And if you don't do that in such a way that a service can simply fail. Yes. SDH.82

I : So that it must be acceptable to all parties?
SDH : Yes SDH.83

And the second thing that companies encounter is that those values are written down, but are not yet really used by everyone or are translated into... SDJ.48

Not everyone within a company wants to put a lot of afford in solving the problem
Organizations run into the fact that if you want to fundamentally solve the problem you have to stick your neck out and not everyone is in the mood for that. It's that simple, we just have to accept that ?have there? Not everyone want to. Rather deliver a little mediocrity. SDH.98

Yes. You just run into people who either don't see it or don't want to see it. SDH.101

For some customers, this is a slightly too long-term perspective. You can't sell that nicely. At least that's too vague. SDH.102

When there is a form of uncertainty, people are more likely to think along actively
So that brought a lot of uncertainty, and people were therefore much more likely to want to actively think along. SDI.26

When there is a lot of pressure due to being busy, companies "don't have time" to innovate
There is also a lot of pressure. So especially now with Covid. Then you don't have time for innovation. You just have to ram. SDJ.26

Vulnerability is needed to critically look on what to improve within an organization
What I also tasted once is that, that is also very strange, in order to learn you also have to be a bit vulnerable. You also just have to dare to say: "ah this is not good" or "we should do this a little better" and some find that difficult. Despite everything, you have to say that things are going well. SDJ.27

I: That critical viewing is not really stimulated.
SDJ: No, SDJ.28

Increasing the operation employees self-esteem so they dare to speak up
and education can also be about empowering or actually increasing a bit of responsibility and self-esteem that the employee who is in the operation has. because I think that's what you actually need, isn't it, so that there are employees on the floor who dare to speak up and who take or are given the space to share their insights about what the customer says, thinks, thinks. SDD.42

6.4 Industry
Due to faster change in B2C, they need to be more innovative/adaptive than B2B
but I think that the developments within the B2C markets develop much faster than within the B2B market. With those developments I mean customer needs that change continiously. So a fast changing world, customer needs can arise each day. As a result, a B2C company has to act faster, imagine new things, testing new things and with a B2B company it is not that bad, it is much slower there and the flower project what I have completed for example, looking how customer friendly their service was, if you would look from a B2C point of view then you would think; Why do all these flowerwholesale, so the customer, why do they accept it? A lot of things were done in a old fashioned way. Somebody calls to a shop for the flower exporter and wants tomorrow 600 boxes of these roses. In conclusion, the customer expectations within B2B do not change as rapidly. SDB.59

Within B2C it is easier to switch to the competitor
I: It could also possibly be that within B2C it is very easy to switch to the competitor and not so easy within B2B.
SDB: Yes, that is certainly true. Yes that is a good point. SDB.60

So I think in the B2C environment, that people expect a lot more from it just has to be all on par, that's an experience I have too. Because otherwise I'll go to someone else. SDE.71

I: Yes. Exactly, maybe it can indeed be because there might be some more providers for B2C. That makes it easier to switch.

SDE : Yes. Certainly. So really, let's say keeping that customer relationship is really difficult or something and I think so too. SDE.75

Trends like servitization, digitalization and sustainability are relevant for all industries
And whether you're in the manufacturing industry or purely in the service sector, it doesn't really matter.SDC.79

And you know, that's how it is, I think a certain level of digitization is expected in all industries. But yes, if you have been postponing that for 5 years because you think, yes we have a website, people can find us, yes then you are really behind the times. SDC.96

I: Yes, but is there a demand for this way of thinking?
SDD: Yes, and if the demand isn't there, it arises because I think companies that don't actually adopt this customer-oriented approach are slowly losing contact with the market. SDD.10

Having a customer centered/innovative mindset is more often in the B2C market than B2B
I: Yes, and in general do you think it is more in the B2C market or in the B2B market?
SDD: It is logical that it is in the B2C market, where you and preferably also could make a kind of a sharp or clear profile could be made. SDD.12

I don't know the B2B market very well, incidentally you also see there that it does happen or that it is also used SDD.13

so you just notice that the consultancies that bring organizations into changes also work with that, but I think the emphasis is still on what happens at B2C. So yes, that's the first step. SDD.14

I: Yes, and then maybe B2B will follow.
SD: Yes. SDD.15

B2B relies heavily on long term relationships, so personal contact is important here
And in the cargo industry, actually all relationships or all contacts are built on very long-term relationships that they already have with each other. So if you take that away, you also remove a piece of connection with the brand. So they just have relationships with their sales manager that they've been with for really 20 years. Without you thinking that as a service designer, oh you know those people that just costs me too much money I'm just going to build technology in it, that doesn't work. SDE.64

But also with that airline, what we try to do or at least what they try to do is all the easy tasks, easy freight that can be booked very easily, all goes through online. And the things that are more difficult or the things that just require real expertise, always go through people. Because that just ultimately creates the bond with your brand, SDE.65

Anyway, if you look at other industries, human contact is really important there. And it will always remain that way. SDE.67

I think maybe the biggest difference is that in B2B you're dealing with relationships that have often been around for a long time. SDE.69

But in B2B you don't do that so quickly because you have a completely different relationship with each other so you really have to say often supplier and so it is very much about supply on demand and often you also just have your regular people you can talk to. So that also kind of forgives you for not having all your things in order right away. You are not directly expected to do everything like that internet company. SDE.72

That maybe the B2C is a bit more anonymized and B2B is mainly really relationship driven. At least that's what I see in the clients we work for. SDE.74

Within B2B expectations are slowly getting higher as well
But we also notice that more and more, yes people are influenced by what they see in others. SDE.73

More commercial industries have the money and culture needed to gain a customer centric mindset, which is not present at non-commercial sectors
Those are just a lot of different companies and you notice that one sector, the somewhat commercial branches that are ahead, because they have to. SDJ.18

They just have to, take a bank that simply has one of the best apps in the Netherlands regarding banking, yes and there is also a lot of money. So there are, they are making progress, but there is still a lot to do in healthcare, for example. While when it comes to a service and a service where a patient must be central, that is it. SDJ.19

Yes it is a wicked problem. So it's a problem with many headlines and many causes. SDJ.20

You can mention things like that in healthcare there just isn't as much money as in the banks. So they can't hire that many people, say no designers for example, SDJ.21

but there is also a lot of blue culture in the healthcare sector. So very strong with checking marks and quality protocols. That is very strong. SDJ.22

So also a whole family culture. So that people just really like to know each other well and always do it the way they are used to and prefer not to do it differently, because that all costs time and money and after all we have people to save and help, that. SDJ.23

Yes there is also quite a hierarchy in the care of a doctor is higher than a nurse and let the doctors or let the MT decide for us what should and should change differently. Yes, we are busy enough already. You know, I just happened to be back on it and it's kind of a complex thing. SDJ.24

6.5 Larger ecosystem
External change is changing believes of individuals and organizations
Yes, but, let's imagine let's start from a very basic comment of the post COVID situation, nobody was thinking that it was possible to reorganize function or reduce whatever functional activity in terms of organizational model for enterprises with this idea of delocalisation of work. So the idea, the so called smart or agile war. Okay, in which I don't use the enterprise infrastructure, I don't use city infrastructure, I'm delocalized, and I'm working from my home. RA.42

Then people were very different than they are now and okay we are now almost 1.5 years further, but even let's say half a year ago. That is at such a rapid pace, his many wishes and

needs have changed, because you are at home more, because you can't go to your favorite pub, well you can't go to the zoo, you can do all those fun things you can do not. So wishes change and this is of course a very extreme example, but over time things change SDC.86

I: Certainly, but because of the Corona you also see that the entire digital transition is getting underway at many companies.
SDJ: Yes, SDJ.60

I: But also actually that our own values have also changed a bit, because you first thought it couldn't be done and now it does.
SDJ: Yes, but also values like health have only become more important for people in recent years. Or value as family or your neighborhood are all things that are shifting. That is very interesting. SDJ.63

Organizations react on external change and look if it is valuable for them
So there is a behavioral setting that is guiding you in terms of expectation. The next organizational model generation. So, probably. I think a lot of enterprises that as the sectorial organization are setting it is appropriate for this change will be back to the normal condition because they could start saying yes, I could save a lot of money in terms of building location. I produce a more enjoyable and pleasurable job description, that's because people could say at home so I could access kind of profiles job profiles, or talent, they would not be able to attract this moment. Or, I could balance my gender mix, because I could attract more women and so a lot of possible changes. RA.43

Now you see that there are more and more tools that help with this, but then that also has to be a bit of a problem of anticipation. That is also very difficult for such an organization, which reacts more often. SDI.18

Value and purpose economy is upcoming, with a great emphasis on the "why"
Nowadays everything is an experience and now we are moving towards a value and a purpose economy. It's much more about the why behind things. SDJ.43

I also see that movement on the one hand, because we talk about it at companies and companies are really inspired by it, they think yes, that's completely true and on the other hand I also really want it, because I think sometimes services just too flat. SDJ.44

But the whole story of sustainability, the story of making a difference to the world, corporate social responsibility, those are also things you have to work on and that way you as a company can respond to a somewhat higher goal. that your customer or your target group also has. SDC.78

we don't always have to go far to find something good and maybe there is still something in it for the manufacturing industry, because often raw materials or other products are needed that are obtained from very far, because they are cheaper. Yes, it can also be closer and there is also a bit of durability in it. SDD.55

Now we are actually with the rise of customer experience and more holistic design of the entire experience economy and so on, innovation is increasingly about your brand DNA and translating your vision and purpose into valuable innovations. And then you actually see that brand driven innovation is becoming more and more commonplace. So let's say ten years later, at this company we do quite a lot of work on translating brand value into guiding

principles and developing propositions based on those guiding principles that bring that brand to life. SDG.8

That is of course the great thing that more and more companies are discovering and governments and NGOs are even discovering that the complex problems they have become involved in with regard to the major social transitions, the energy transition, the climate transition, but also social issues you can no longer manage you out of it in the old way. You have to use design for that. SDG.29

And which services match that? And how many people is that? How many people can we help then? What does that mean for society? SDH.91

Yes we have to stop optimizing our sales funnel, because yes that is optimized enough, but we have to do other things. Do you understand a little? SDJ.46

7. Industry 4.0 technologies
7.1 Important development
Prototypes are more often digital
I: Yeah, so it is more often digital?
SDB: Yes. SDB.22

Digitalization skyrocketed this past year
Yes, of course digitization has really skyrocketed in the past year. Expectations again. You know, people also expect you to be able to deliver online. SDC.95

A digital product has of course come on the rise SDF.8

Furthermore, digitization has of course a huge impact. Everything must be digital is the norm and that creates enormous possibilities. SDF.16

I: Certainly, but because of the Corona you also see that the entire digital transition is getting underway at many companies.
SDJ: Yes, SDJ.60

Everything digital becoming the norm
Furthermore, digitization has of course a huge impact. Everything must be digital is the norm and that creates enormous possibilities. SDF.16

Because of digitalization, customers expect more innovative products
So there is a gap between my expectations and as a consumer between I expect an innovative product and I get an outdated product by way of sometimes. So that gap that arises in any case in the experience in design and yes I started as a product designer so you see a huge turnaround from where I started. SDF.18

Industry 4.0 is not as big as trade fairs claim it to be
there has been shouting at all trade fairs for years, industry 4.0, industry 4.0, but it doesn't go as loud as the shouting at those fairs and it kind of gets stuck in some kind, at a certain level and all the promises that have been made for years called they are still not all redeemed. It takes a while. SDF.67

7.2 Goals of using these technologies

Automation

Digitization can lead to automation SDD.44

What you actually have to look at is how can you ensure that technology plays a role in such a way that things start to automate, for example. So that things are just easier, that you just have instant access to them. That you don't have to call someone, for example. SDE.61

That's all automated now. There is also a kind of digitization movement. SDH.54

Being a form of innovation

and digitization can be a form of innovation SDD.45

Using technology to control the situation

So perhaps I could move my control and is not better, I don't know, just to make the example on my infrastructure so I could control you is using the software. RA.46

yes because it, you will move the control or power part from the physical setting to the digital one. RA.48

Industry 4.0 is just a means to solve customer problems

There you also work with the same methodologies and therefore include your customer and that industry 4.0 is really just a means to solve customer problems, but that starts with those problems of the customer who wants to see that solution, SDF.81

7.3 Conditions and requirements regarding technology

Needs and wishes regarding technology differs between different target groups

But it's actually, in general it already works that way. You have very different needs in the digital world than I do. And well, your mother or my mother or your grandmother, it is also very different for that. And it depends on your target audience what they need. SDC.92

And as a millennial, you can think again what your target group needs based on what your wishes are, but if your target group is mainly 30 or 40 years old or even older, then that cannot match at all. So in that respect, here too, ask your customer and see what their wishes are or, yes, I think you also learn a lot from frustrations and obstacles, so you look, hey, but where do they run into. SDC.93

but not every digital innovation makes the customer experience better and if you take the premise of what service design should do, make for a better customer experience or customer experience. Then not every digital solution is the answer. However, this is certainly not the answer for every target group and that also has a lot to do with the acceptance or adoption of new technologies that are not embraced equally quickly by everyone. SDD.46

So you should always use the possibilities and the state of the technology. Always at the service of the customer. So yes it goes hand in hand and sometimes it clashes, because people don't always feel the need for digitization. SDF.40

Certainly not with a certain target group, unless your target group is perhaps the generation XYZ or something who are completely tech-savvy and it's all fine SDF.42

Technology is developing and you can use a lot of possibilities, but the question you have to ask is whether it is useful, whether the customer is waiting for it and whether it is valuable for the customer. SDJ.31

A technological solution should be sustainable
So you have a lot of the kind, if you think and look at what comes up in that ideation phase of the service design process, then you will often see that a certain technology, new or existing, plays a role in solutions. So that that is the core of the innovation that is proposed to improve the customer experience. But the question is whether that is always the real solution. No matter how sustainable that solution is. So whether that is the longer-term solution or whether you will have a new technology in a few years' time and that you will then tap into it again. SDD.47

I: That it should be looked at carefully to see whether that technology is indeed sustainable for the foreseeable future.
SDD: Yes that. How long can you keep such a technology in the air SDD.48

When digitalizing an organization, employees need to learn new skills
And then you have to imagine that they just really go from a very little analog way of working to something more digital. And suddenly it suddenly becomes completely different. Then suddenly they have to do other things an they have to learn them. SDE.53

technology assists in simple tasks, but complex matters asks for human contact
So if he wants to know something very simple, I can imagine that technology plays a very good role in that. Because that is literally a button and you can see what you want to know. The moment you are looking for more complex things, yes you just want to be able to talk to someone directly. SDE.62

But also with that airline, what we try to do or at least what they try to do is all the easy tasks, easy freight that can be booked very easily, all goes through online. And the things that are more difficult or the things that just require real expertise, always go through people. Because that just ultimately creates the bond with your brand, SDE.65

Technology implementation requires the reframing of all work processes
Because digitization often requires a truly radical reframing of your work processes. How you view your role in value creation. You often have to organize yourself differently. Processes are becoming much more transparent and much more open. SDG.41

So you also have to be much more aware of what you are actually doing. SDG.42

So actually digitization for me is also very much about organizing yourself differently towards what actually creates value. SDG.43

While of course you can, as an organization, be busy endlessly messing around and think you are doing a good job, but digitization actually exposes things, digitization really exposes what you are actually doing and what really benefits the customer in your work processes. SDG.44

and know how to make the horizontal journeys. So many organizations that are vertically divided and you see with that digitization you see that a lot of horizontal work is also required and that is quite difficult for companies that come from an older era before digitization. SDI.13

With digitalization you have to evaluate your role in value creation

Because digitization often requires a truly radical reframing of your work processes. How you view your role in value creation. You often have to organize yourself differently. Processes are becoming much more transparent and much more open. SDG.41

So you also have to be much more aware of what you are actually doing. SDG.42

So actually digitization for me is also very much about organizing yourself differently towards what actually creates value. SDG.43

Digitalization requires working horizontally, instead of vertically

and know how to make the horizontal journeys. So many organizations that are vertically divided and you see with that digitization you see that a lot of horizontal work is also required and that is quite difficult for companies that come from an older era before digitization. SDI.13

With technology and data, sometimes less is more to make it understandable

I think gosh some nice mathematical bar charts, but you ask yourself as a user afterwards; "how much is a lot?", "Is 1000 kilowatt hours, is that a lot or is that not much?", you know a lot. That means nothing to you at all, it only tells you something if you compare it with your neighbor. So then it starts to say something and if, for example, you get the feeling that you use more than your neighbor, then something in your life also goes like "gosh I should actually live a bit more sustainably." And that is quite different from cramming in as much technology and as much data as possible. Do you understand what I mean? SDJ.32

So a service only becomes a service if you leave things out and if you simply use less technology and less data. Or at least make data invisible by way of. SDJ.33

It is invented and made by techies, well then you get a lot of technical screens in front of you, also as a user and those techies are used to it, they think graphics are beautiful, but a house garden and kitchen figure who looks at it and thinks yes nice, I think it's too much information I just don't understand it at all, what should I do with this? Is it much, is it little? SDJ.35

I: That the needs of the end user actually have to be taken into account, what the needs are, what kind of information that person needs.
SDJ: Yes absolutely. SDJ.36

7.4 Pro's regarding industry 4.0 technologies
Having a positive influence on quantitative development
better or more attempts of quantitative development. RA.40

Improves digital touch point in the customer journey
Those are digital channels. When looking at your experience with this company, these experiences are via digital channels. When looking at the design thinking mindset of service design then you are looking at the customer journey via those different digital channels. As a result, digital channels are touchpoints in the customer journey and those are technologies that can be improved. So the website, everything that is possible to put on the website, but also the readable data from the website can be improved. SDA.27

Yes, those touchpoints have always existed, only now with that digitization you can act much more with them and much faster. SDI.10

Can improve the readable data from digital touchpoints

Those are digital channels. When looking at your experience with this company, these experiences are via digital channels. When looking at the design thinking mindset of service design then you are looking at the customer journey via those different digital channels. As a result, digital channels are touchpoints in the customer journey and those are technologies that can be improved. So the website, everything that is possible to put on the website, but also the readable data from the website can be improved. SDA.27

7.5 Cons regarding industry 4.0 technologies

Privacy issues, due to monitoring everything

This is why it could become so important to talk about privacy and control, because it will be the next generation of the discussion different theories of discussion about organization from our privacy and the way in which I could control you. Because in other days you will live. Clearly, at home, and you will benefit from this comfort. But you, you will be like a prisoner. Like in the, in the Middle Ages. No, I mean just like in the 18th century panopticon. That was the model of control using prisons. So, it's an overall control it will be digital, it will not be a tower, which you see yourself. It will be simply in your access point in the enterprise network, they will monitor your work. RA.47

You will some time because you are not paying attention, you will not notice it. And the second step could be just to make a kind of speculative design perspective, you will end up being measured, like in the starting year of capitalism, terms of productivity or time spent. And then depending on that I could make temporary contract just because it will be linked to your performance so no life, employment, okay, but small contract with AI but in terms of productivity. RA.49

and the technology only has advantages, an entire module where we met was also about the ethical side of technology, for example. SDD.49

Not every digital innovation leads to an improved customer experience

but not every digital innovation makes the customer experience better and if you take the premise of what service design should do, make for a better customer experience or customer experience. Then not every digital solution is the answer. However, this is certainly not the answer for every target group and that also has a lot to do with the acceptance or adoption of new technologies that are not embraced equally quickly by everyone. SDD.46

So you should always use the possibilities and the state of the technology. Always at the service of the customer. So yes it goes hand in hand and sometimes it clashes, because people don't always feel the need for digitization. SDF.40

In healthcare you see that human contact is very desirable, in the experience. I have also designed systems and people find it more pleasant to talk to a receptionist than to a robot or a screen and yes that sometimes clashes in the customer experience. Where you try so hard to digitize something human in a human way, but sometimes it just doesn't work, especially in hospitality not with a real human approach. SDF.41

Can limit personal human contact, which can be a missed opportunity

So how does that technology help and technology can also very much facilitate the personal or human contact, the real interaction, that with which you could make a difference. Still in my experience in the hospitality sector. That you actually limit that. SDD.50

Yes, it can also be a missed opportunity to make personal contact and make a difference by responding just a little more or specifically to the needs of this customer instead of another. SDD.52

And in the cargo industry, actually all relationships or all contacts are built on very long-term relationships that they already have with each other. So if you take that away, you also remove a piece of connection with the brand. So they just have relationships with their sales manager that they've been with for really 20 years. Without you thinking that as a service designer, oh you know those people that just costs me too much money I'm just going to build technology in it, that doesn't work. SDE.64

8. Manufacturing industry
8.1 Manufacturing industry and servitization
Servitization as a way for the manufacturing industry to take responsibility for their product and its waste

Well, that could also be something for the manufacturing industry, because you can make products, but are you going to sell them and then you actually give it away and also give away any waste that arises from it, or are you actually going to rent or rent it out? or lease where in both cases the ownership of what you give away remains with you and you can also take more responsibility for what is left at the end of the ride if it has been used or consumed. SDD.62

Thought that's pretty easy. So if you can still do something with the junk then you want it back and if it is now junk that is no longer usable for you then I can bring it to the municipality, then the municipality has to clean up your mess. SDD.63

At least then I think you really can't do anything with it anymore or can't you take care of your own junk, because hey yes that was yours, I rented or leased it, whatever you want to call it. SDD.64

or, for example, could make very nice new things out of those old routers that are all coming back. So that they are indeed a waste partner there, you also have the manufacturing industry, for example. Anyway, that is a bit of a circular or cyclical way of thinking, but that this actually happens far too little in many companies. So yes, all in response to as a service concepts. SDD.65

Seeing services as value would help manufacturing companies

And that is actually much broader than the standard service. And it goes much wider. And that's the beauty of your subject, servitization. In which you actually start looking at manufacturing companies a bit as well. They really benefit from that view. With that image of what you deliver as value, you can start thinking more in terms of services, so to speak. SDG.4

It is true that in servitization that is a partly customer-inspired process in which you look at the world of the customer and what are adjacent services that make sense around that product. How does your product play a role in customer value creation? And you can map out the entire journey and develop related services from there. SDG.80

So where the world is not yet ready, I think the servitization is that you frame the issue, that you may have a different view of it that offers much more opportunities and much more possibilities, much more innovation. SDH.92

I: To balance with that customer?
SDI: Yes with that customer experience, because yes, the customer does not only care about a product that works very well, it also needs something more. SDI.20

Experiencing servitization processes quite regularly in the manufacturing industry
I : As a result, you do indeed have a lot of experience in many different areas. Have you ever experienced a servitisation process in a company?
SDG : Yes. Regularly. We work very much for the manufacturing industry. SDG.48

A lot of diverse organizations that all come from that product orientation and that real manufacturing background and see that that is not enough. SDG.49

Also because we employ quite a lot of university engineers, they understand those companies well, they speak the language of manufacturing well. And then come up with a service design approach and an approach to develop that service portfolio. SDG.51

And that is actually a process in which we are increasingly involved. Now teach us how to get this done in our organization. So apart from the good ideas and the great services you have come up with, go help us to actually implement this in our organization. SDG.89

Especially product-driven companies need to be customer centered in order to survive
and the companies that still think yes but you know we just have a good product, the quality is good and there is never a fuss and all our reviews are good. Yes that's great, but you just can't manage with that anymore and I think that is a message for many product-driven companies. That yes if you want to survive the coming years that you really have to shift that focus and that without knowing who your customer is that you just can't make it anymore. If you have a good idea for a product. Yes that's great, but that doesn't mean you can sell it well. SDC.83

I: Yes, but is there a demand for this way of thinking?
SDD: Yes, and if the demand isn't there, it arises because I think companies that don't actually adopt this customer-oriented approach are slowly losing contact with the market. SDD.10

That car manufacturer also had a very high engineering culture. So in that car industry they take a lot of pride in making a really good working product and that's something you have to know how to balance at a time like this. SDI.19

I: To balance with that customer?
SDI: Yes with that customer experience, because yes, the customer does not only care about a product that works very well, it also needs something more. SDI.20

Sometimes it takes a while before manufacturers realize that a customer is buying more than a product
And it really takes a while before they realize that the customer is buying more than that. SDG.54

That will take a while. SDG.56

8.2 Service design within the manufacturing industry
Creating service portefolio's with service design
Also because we employ quite a lot of university engineers, they understand those companies well, they speak the language of manufacturing well. And then come up with a service design approach and an approach to develop that service portfolio. SDG.51

I : And how do you change that mindset?
SDG : Yes, we do that mainly by understanding very well where they come from. And especially not too much with the raised finger of you would actually this. SDG.58

8.3 Other opportunities for the manufacturing industry
Sourcing locally to become more sustainable
we don't always have to go far to find something good and maybe there is still something in it for the manufacturing industry, because often raw materials or other products are needed that are obtained from very far, because they are cheaper. Yes, it can also be closer and there is also a bit of sustainability in it. SDD.55

Shifting from ambition of growth to ambition of improvement to create social impact
Well, you can translate that to the manufacturing industry, perhaps in the sense of production, always assumes mass is cash register, but you can also do better is cash. So you can with fewer products, not necessarily the ambition to only use growth as a kind of dominant, but to look at how you can maybe without growth being your goal you can make things better and then growth will come. naturally and hopefully growth will also lead to a social impact SDD.56

The manufacturing industry can save a lot of money with smarter solutions
because they can often earn a lot of money with smarter/better solutions, but then you have to dare to change and, just like with innovation, experiment and learn continuously is not something that is regular within the industry ??. It is very protocol-based and laid down in standards and safety regulations, and I don't think that makes it easy to innovate. SDF.72

Manufacturers should focus more on what the actual problem is
I: So it's more that they, or at least that's what I often hear, that in general companies think more solution-oriented instead of delving more into what the problem actually is or the possibility.
SDF: Yes often it is better to peel off one level, another level one or two, they should also be able to do that with that industry. SDF.83

You often see in the industry, especially in the maintenance sector, that that is just putting out fires and patching up and then it works again for a while, but the underlying problem yes no that layer is not broken no you have poorly trained your staff on maintenance. If you get a higher level, yes maybe the staff, is there even no budget for training made available by the board of directors or is it not strategically important or well. SDF.84

that happened everywhere and the balance costs a lot more money, but not so if people have a budget per year and they manage it every year well then there is actually no problem. Who cares and they just make it up too. So there is no pain. While if you just put it on a spreadsheet then you think my God how is it possible, because a ?? can solve it once, but yes it is already budgeted every year. SDF.85

8.4 Situation and mindset within the manufacturing industry
In the manufacturing industry often the easy but bad choices are made regarding social impact

but also be aware of the social impact of your organization. That ultimately your customer would actually like to contribute to this. Only now we often make, I think that is also in the manufacturing industry, we now often make the bad choice, the easiest choice. SDD.57

Not easy to innovate in the manufacturing industry, due to the perception of change being scary as there is a risk

Yes, because it's all there, even since companies have been doing what they already do for 80 years and always small incremental improvements and if you definitely want to change things in a factory where food is produced, an hour of standstill costs 10,000, maybe 20,000 euros. So they find every change scary. So you have to come from good homes if you want to take that risk and be able to bear it. SDF.68

In other words, if I'm going to improve something, there's a good chance that it will go wrong and if it's good, it's good you know. We don't need better. SDF.70
Not very fast but it has been improving a bit incrementally over the years and at some point it is good enough and when you look for better than everything that can go wrong, while it is already running well, SDF. 71

because they can often earn a lot of money with smarter/better solutions, but then you have to dare to change and, just like with innovation, experiment and learn continuously is not something that is regular within the industry ??. It is very protocol-based and laid down in standards and safety regulations, and I don't think that makes it easy to innovate. SDF.72

I : So you mean an initiative that is too small? Or?
SDH: Yes. A small initiative, SDH.94

Within the manufacturing industry hard financial data is far more important than general experience, as this gives certainty
I: And is it also true that the hard data we talked about earlier, financial business cases, is very important....
SDF: There certainly, yes that is very hard there. You won't make it without it. Then you can throw it nicely on experience, but that doesn't interest them. SDF.73

So there are several factors than just financial, but that is a very important one, because without the financial picture you will not get anything done. Because it can also be certainty; SDF.77

And they are often companies that are quite rationally driven and rather left-brained or analytical. Well, when you get there with, well, even if the customer buys a very technical product, there's still emotion involved. Then experience is involved. Then that human relationship is important. Stand on it. It is quite a challenge to make that clear to these types of companies. SDG.57

Within the manufacturing industry it is all about production numbers, the prevention of malfunctions and safety
There is simply production in numbers or the prevention of malfunctions, a malfunction means less production. SDF.74

I have to convince my stakeholders with a financial advantage and/or a safety advantage. If she is in an unsafe situation somewhere, they are also terrified that accidents will happen. SDF.76

Manufacturers think in technical solutions and not so much from a customer centric perspective *because yes, you can say yes, you saw that with my client, they came up with wonderful solutions, but I kept asking; what does your target audience get from this? How are you going to sell it to your target audience? How do you make them happy with this? While they saw a beautiful technical solution, everyone thinks that's great, right? They especially think that's great, but what's in it for them and how do you market this and who will it land with and what does the overall picture look like? Well, that's the sharpness you bring as a service designer and then of course they struggle and then you also indicate how it can be done or maybe I wouldn't do that anymore, is also possible. SDF.82*

And they are often companies that are quite rationally driven and rather left-brained or analytical. Well, when you get there with, well, even if the customer buys a very technical product, there's still emotion involved. Then experience is involved. Then that human relationship is important. Stand on it. It is quite a challenge to make that clear to these types of companies. SDG.57

When succeeding with the current budgets, manufacturers don't see urgency to change *that happened everywhere and the balance costs a lot more money, but not so if people have a budget per year and they manage it every year well then there is actually no problem. Who cares and they just make it up too. So there is no pain. While if you just put it on a spreadsheet then you think my God how is it possible, because a ?? can solve it once, but yes it is already budgeted every year. SDF.85*

There is no one who often looks from above and we will do it differently, because everyone works in their own silo and if you knock on another silo yes I need more budget for this, yes then you have to come from good houses and then the other person must also find that very important. It is also a challenge, we naturally live by that as designers to give people that insight and show them by looking at that total picture that it can also be done differently. SDF.86

Manufacturers realizing that just delivering a product is not enough, larger focus on value *A lot of diverse organizations that all come from that product orientation and that real manufacturing background and see that that is not enough. SDG.49*

And that's not what the customer is buying. That customer buys that buys value, that customer that buys mobility, that buys access to things, that buys communication, and not that thing. So those are very nice grateful customers. SDG.50

And that they sometimes go to a competitor who has a lesser product, who scores lower, say, on the objective product criteria, but who does have better service or a better repair service or has more insight into the customer's entire journey. SDG.55

That car manufacturer also had a very high engineering culture. So in that car industry they take a lot of pride in making a really good working product and that's something you have to know how to balance at a time like this. SDI.19

Changing the mindset of a manufacturer by understanding where they are coming from and step in at their level

I : And how do you change that mindset?
SDG : Yes, we do that mainly by understanding very well where they come from. And especially not too much with the raised finger of you would actually this. SDG.58

So we really try to think along with where that organization is in their own development. And step in at the level where they are. And not to immediately start calling from you are hopelessly behind. SDG.59

So it's really about respect. Respect, cooperation, good listening. SDG.60

At an organization we actually looked at what their needs were within the work and where they wanted to go as an organization and that worked very well for us, SDI.25

At this moment manufacturers only think about product optimalization and not the overall value the optimization has for the end user
and there are whole lists of them and you can put them all next to each other mathematically and every manufacturer tries to tick it again and then they are at the top of a certain top list and then they get more sales, but in the end , what does it matter for the user. Do you notice that extra megapixel, do you understand? That is so irrelevant and we call it feature rite in our profession. So a huge Christmas tree of features. SDJ.37

9. Servitization and industry 4.0 technologies
9.1 Servitization and digitalization are very closely related
Due to product-service systems, digitalization and servitization are very close to each other
and service design of course moves the attention from just technology product into something that is more service, that is, yeah, It is a service component so, you might ask whether we have products anymore, or whether we always talk about product service systems really due to the, to this strong digital component that is attached to every product, nowadays. So I think the two trends of, well, digitization and Servitization are very close to each other. RB.22

Yeah, they definitely go together. RB.24

Services that just need a certain physical quality too, be it on a screen or something you use, there is always some kind of interface needed by which a customer interacts with an organization. So I think what most people talk about by servitisation they actually mean digitization. SDI.9

A platform is an example of incorporating both technologies and servitization
Well, you see that in the tourism industry, for example, that it is a bit on the platform concepts. So what happens with a stay platform that you don't have to have a holiday home to be able to stay in someone else's holiday home. That you share that with each other. So that sharing and coming together or interaction with others is stimulated in this way. Yes, so rent instead of own. SDD.61

Servitization is the same as digitalization
Services that just need a certain physical quality too, be it on a screen or something you use, there is always some kind of interface needed by which a customer interacts with an organization. So I think what most people talk about by servitisation they actually mean digitization. SDI.9

I now also see that at the tourist association, although it is really a service-oriented company. So that's another confirmation of yes that product or service doesn't really matter that much, it might be more digitization SDI.14

Customer centricity, digitalization and sustainable innovation are all in line with each other
And how you and your colleagues can focus on things that really create added value for the customer. And that is why we also say about customer centricity, digitization, sustainable innovation, they are all kind of in line with each other. SDG.45

9.2 Technologies contribute to servitization
Technology is driver of servitization
So, it could start from describing which are the influences that could drive service innovation, or using a discussion about the role of service, in regard with technology just two simple These are commonly the most important drivers that could guide this transformation. RA.38

Yeah, exactly. So in a way one of the main servitization processes so one of the main service driven transformations are triggered by the digitization. RB.23

Technology can contribute to servitization, but a design thinking mindset is needed first
So, I think not with technologies, look I think that is also the problem with only technologies, you can never create a design thinking mindset with it, because it is all about interpreting what is happening by researching. So those technologies that contribute to it and they are really going to help and make things go faster, but you always need people who can invent and implement it. SDA.23

Yes and then with the design thinking mindset implementing these technologies. SDA.24

But you still need people who are able to interpret it or imagine that there are new things possible on the website, so technologies. By for example being able to read how fast someone scrolls and thereby showing more or less information, that is a new technological development, but you need someone that thinks about when to do which action and therefore you need a design thinker, because he reasons from a customer point of view and implements digital channels or technologies according to this. SDA.28

But you have to interpret it as a human being. So tools are improving with google analytics, we know more and more about people, so we can adjust continuously better profiles. We can send continuously better targeted advertisements, but we still have to think about when to send which advertisement. SDA.34

Role that technology plays within servitization depends on the purpose that you give it within your service experience
SDE : So you just mean how technology plays and role in the provision of services?
I : Yes. What role does it play within that transition?
SDE : It depends a bit on what purpose it serves within your service experience. SDE.59

So I think it really depends on what purpose it serves. SDE.63

So I think, maybe a bit of a long story to answer, but I think technology is definitely all right, as long as it serves the right purpose. SDE.68

10. Service design and industry 4.0 technologies

10.1 Service design contributes to implementing technologies

Service design can help in finding the best use of technologies

And mainly I think because of the need of figuring out what's the best use of these technologies. So, that's an effort from a user perspective, so that's the mistake that some companies don't want to do, or, yeah, so they then think okay we need an a human centered approach towards technology. And that's where service design perhaps can help RB.21

I: In the way that service design can make like a technology work in the sense that the the end consumers are Yeah, are eager to to work with it, basically.
RB: Yeah, exactly. RB.25

I: That in this way it will be implemented in a broader way and I also read that through the broad mindset of design thinking technology is implemented in a broader way then only process optimalization.
SDA: Yes exactly SDA.25

Yes, it also needs to be valuable for end users. Yes, with technology something needs to be designed, with those technologies, through service design. SDB.31

Simply, it's almost the whole picture. So for that matter, you can always apply it in any way you want. In terms of digitization too. As far as I'm concerned, it always starts with what your customer wants. And yes I can't repeat that often enough.SDC.91

I : Yes exactly and that from there you have to look at what the needs are for those technologies.
SDC : Yes. And you can start looking based on that. SDC.98

If you don't have that right, and certainly also in the world of digitization and technology. If you don't understand what you need to solve, you can come up with a thousand solutions, but they are all not good solutions because you don't know what you are solving. Then you miss the point anyway. So in that respect, the entire process of service design is just a very nice point of reference for drawing out that process properly. And make it fit. SDC.101

but not every digital innovation makes the customer experience better and if you take the premise of what service design should do, make for a better customer experience or customer experience. Then not every digital solution is the answer. However, this is certainly not the answer for every target group and that also has a lot to do with the acceptance or adoption of new technologies that are not embraced equally quickly by everyone. SDD.46

Technology is developing and you can use a lot of possibilities, but the question you have to ask is whether it is useful, whether the customer is waiting for it and whether it is valuable for the customer. SDJ.31

So, I think not with technologies, look I think that is also the problem with only technologies, you can never create a design thinking mindset with it, because it is all about interpreting what is happening by researching. So those technologies that contribute to it and they are really going to help and make things go faster, but you always need people who can invent and implement it. SDA.23

Yes and then with the design thinking mindset implementing these technologies. SDA.24

But you still need people who are able to interpret it or imagine that there are new things possible on the website, so technologies. By for example being able to read how fast someone scrolls and thereby showing more or less information, that is a new technological development, but you need someone that thinks about when to do which action and therefore you need a design thinker, because he reasons from a customer point of view and implements digital channels or technologies according to this. SDA.28

But you have to interpret it as a human being. So tools are improving with google analytics, we know more and more about people, so we can adjust continuously better profiles. We can send continuously better targeted advertisements, but we still have to think about when to send which advertisement. SDA.34

So, it gets easier, but you still have to interpret it. SDA.36

If you don't have that right, and certainly also in the world of digitization and technology. If you don't understand what you need to solve, you can come up with a thousand solutions, but they are all not good solutions because you don't know what you are solving. Then you miss the point anyway. So in that respect, the entire process of service design is just a very nice point of reference for drawing out that process properly. And make it fit. SDC.101

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So you have a lot of the kind, if you think and look at what comes up in that ideation phase of the service design process, then you will often see that a certain technology, new or existing, plays a role in solutions. So that that is the core of the innovation that is proposed to improve the customer experience. But the question is whether that is always the real solution. No matter how sustainable that solution is. So whether that is the longer-term solution or whether you will have a new technology in a few years' time and that you will then tap into it again. SDD.47

Makes technology easier to understand by simplifying it for better experience
Both the end consumers, but also the employees themselves, because when they add an AI component to a service or a product. Also, the employees the needs to work with that so that needs to further develop that product, and for or deliver a service. They also need to change their way of doing in service design also takes that perspective of making that technology, easier to understand, to the employees of the company in themselves. RB.26

It is mainly service design is design is making things simple and keeping complex things hidden and yes under the hood so to speak. SDJ.38

I: Meet offstage so to speak.
SDJ: Yes. SDJ.39

Because of the design thinking mindset technologies are implemented in a broader way

I: That in this way it will be implemented in a broader way and I also read that through the broad mindset of design thinking technology is implemented in a broader way then only process optimalization.
SDA: Yes exactly SDA.25

Service design adds a human touch to technology
I: To sum up actually by using service design technology gains a human touch. That it is also looked into that way, instead of "this is it and good luck with that".
SDB: Yes. SDB.32

Simply, it's almost the whole picture. So for that matter, you can always apply it in any way you want. In terms of digitization too. As far as I'm concerned, it always starts with what your customer wants. And yes I can't repeat that often enough.SDC.91

Zeker als je kijkt naar webshops bijvoorbeeld. Als je daar inventariseert van hé weet je, waar lopen mensen nou tegenaan, wat werkt in dat digitale proces, wat werkt wel, wat werkt niet? Van het stukje wat niet werkt leer je het meest want dat kun je gaan verbeteren. Dus ook daar. SDC.94

I : So actually service design brings more of the human side to digitization too? What do I mainly hear?
SDH: Yes, I think so. SDH.63

It is invented and made by techies, well then you get a lot of technical screens in front of you, also as a user and those techies are used to it, they think graphics are beautiful, but a house garden and kitchen figure who looks at it and thinks yes nice, I think it's too much information I just don't understand it at all, what should I do with this? Is it much, is it little? SDJ.35

I: That the needs of the end user actually have to be taken into account, what the needs are, what kind of information that person needs.
SDJ: Yes absolutely. SDJ.36

Service design contributes to digitization and digital optimization
I : Yes exactly. Actually, the last topic I want to touch on is digitization. Whether service design can also play a role in this.
SDC : Absolutely. SDC.89

Simply, it's almost the whole picture. So for that matter, you can always apply it in any way you want. In terms of digitization too. As far as I'm concerned, it always starts with what your customer wants. And yes I can't repeat that often enough.SDC.91

Well according to me they could reinforce each other SDD.43

I : And you just mentioned that digitization. So those five pillars you mentioned earlier also have a positive influence to make those kinds of changes?
SDG : Yes. SDG.40

Zeker als je kijkt naar webshops bijvoorbeeld. Als je daar inventariseert van hé weet je, waar lopen mensen nou tegenaan, wat werkt in dat digitale proces, wat werkt wel, wat werkt niet? Van het stukje wat niet werkt leer je het meest want dat kun je gaan verbeteren. Dus ook daar. SDC.94

Well, you can see that innovating a customer journey in a very process-oriented way. And if you organize those processes very ingeniously, you can save a lot of time and you can earn a lot of money with it. So the question is, is a customer's incentive to help people? Or is a customer's incentive to help people or that you can sell more stuff even faster. SDH.65

10.2 Technologies contribute to service design
Technology improves visualization tools
I: Another thing I found was that technologies could also contribute to service design by improving visual tools.
SDA: Certainly, yes very much. Those tools are a means. SDA.29

I : Yes exactly. To indeed provide those tools in order to shape the process. It seems to me that it is especially important when designing a service because it is precisely in this way that it is not tangible.
SDC : Yes. Yes it is. SDC.109

but yes I don't even know if you can do that digitally if that is very much an improvement on that. But yes, it can help a lot and you know for sure if you really want to show things visually, it works very well. And then that only reinforces the process and that is of course nice. SDC.111

But there are also a lot of tools that help you map out the data you collect. There are several providers of tools that can map this out for you. SDC.104

Helping with something as simple as in Teams you believe that it is called the whiteboard, well that you can digitally paste post-its with all digital participants. These are of course all good tools that can help you with that. And that can make the process a lot easier in that sense. SDC.105

But you can still use digital tools even if you're just with a group. So yes in that sense, there are plenty of options that could be supportive of the process, but it would never completely replace it. SDC.107

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Technology improves different digital touch points in the customer journey
Those are digital channels. When looking at your experience with this company, these experiences are via digital channels. When looking at the design thinking mindset of service design then you are looking at the customer journey via those different digital channels. As a result, digital channels are touchpoints in the customer journey and those are technologies that can be improved. So the website, everything that is possible to put on the website, but also the readable data from the website can be improved. SDA.27

Yes, those touchpoints have always existed, only now with that digitization you can act much more with them and much faster. SDI.10

Technologies contribute to the service design process, but cannot replace it

I : And now my last question is actually the other way around: can technology contribute to the service design process?
SDC: Yes, that too. SDC.102

Helping with something as simple as in Teams you believe that it is called the whiteboard, well that you can digitally paste post-its with all digital participants. These are of course all good tools that can help you with that. And that can make the process a lot easier in that sense. SDC.105

But you can still use digital tools even if you're just with a group. So yes in that sense, there are plenty of options that could be supportive of the process, but it would never completely replace it. SDC.107

As I just said, you have some sort of facilitator of the process. That's how I see myself for projects, you always need them. So the digitization is mainly supportive. SDC.108

but yes I don't even know if you can do that digitally if that is very much an improvement on that. But yes, it can help a lot and you know for sure if you really want to show things visually, it works very well. And then that only reinforces the process and that is of course nice. SDC.111

Well according to me they could reinforce each other SDD.43

Development in technologies lead to opportunities regarding experience
Due to this digitization, your customer contact becomes much more comprehensive and you can also do much more in terms of experience. Go on social media to see what others have bought from a target group. You will configure the product online. SDF.20

10.3 Role technology to service design
Technologies as inspiration/enabeler for service design idea's
Certainly you know the three circles of Ideo; desirability, viability and feasibility. We are more on the feasibility thing, so more on the possibilities of IT. This will be described, the content capabilities form, but there are a lot of technological developments that can influence the design or the improvement of the service. So, about IoT or the other standard ones; blockchain, AI etc. If you know what it is all about as a designer it could inspire you to come up with some idea's. That you know there is more possible. SDB.24

Technology is a enabler. SDB.30

Furthermore, digitization has of course a huge impact. Everything must be digital is the norm and that creates enormous possibilities. SDF.16

Yes, you cannot do service design or design the future without taking digitization into account. SDF.39

So you should always use the possibilities and the state of the technology. Always at the service of the customer. So yes it goes hand in hand and sometimes it clashes, because people don't always feel the need for digitization. SDF.40

Now you see all the possibilities with regard to the techniques and technology and the wishes of the customer. SDF.49

Yes you know I see technology as an endless pool of possibilities and data is one of them. SDJ.30

Technology is developing and you can use a lot of possibilities, but the question you have to ask is whether it is useful, whether the customer is waiting for it and whether it is valuable for the customer. SDJ.31

You cannot do service design without taking digitalization into account
Yes, you cannot do service design or design the future without taking digitization into account. SDF.39