STRATEGIC INNOVATION

Driven by Design

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Abstract

It is repeatedly acknowledged that incumbent firms need to innovate strategically to sustain long term competitiveness. According to scholars, design has in recent years shown capable of taking on companies' strategic challenges. The companies specializing in this, strategic design consultancies (SDCs) are approaching strategic innovation in a fundamentally different way than traditionally. This begs the question of how SDCs manage to innovate strategically. This is the fundamental question that this thesis attempts to answer.

The investigation was based on eight qualitative interviews with high-profile designers in Frog Design, Fjord+Accenture, Designit, Hello Group, 1508, and Bespoke, all leading international and Danish consultancies. Their processes were analyzed on the basis of design theory, strategy theory, and theory addressing the interplay between the two.

The analysis investigates how SDCs gather research, sense-make, and ideate to challenge the visions of clients before testing both concepts and client capabilities, and finally enabling clients to transform.

In contrast to a traditional crafting design process, the SDCs do not work from a defined brief. Through the works of multiple design scholars, it becomes apparent how the SDCs systematically challenge the problem understanding by searching far and wide for insights which form the basis of a better solution. New and classical theories within strategy formation assist in explaining how the SDCs reach valid solutions to complex problems.

The research draws attention to strategic design's applicability for bridging differences between ways of reasoning, and inside-out and outside-in perspectives when innovating strategically.

Lastly, the research considers how incumbents can become Learning Organizations and facilitate vision and design cycles to strategically adjust to changing environments. More specifically, the research arrives at several balanced recommendations on how a work group for such cycles could be composed and empowered. Including, but not limited to, the establishment of a collaborative room, the necessary attitude and dynamic capabilities for searching, sensing, experimenting, learning and continual transformations.

1 Introduction

Throughout most of the 20th century, incumbent firms have been able to dominate their industries for decades and decades with one single technology or a few products. However, as a consequence of several driving forces, they are becoming fundamentally challenged. Especially the very product-focused ones in mature industries, once unique-to-the-organization business process are getting widely distributed and imitated, manufacturing is oftentimes standardized and relocated to low-income countries, and product life cycles get shorter and shorter, enacting fierce price competition. This creates a commodity trap, an often perilous phenomena. Innovation thus becomes an imperative as well as a treadmill for many, and incumbents that do not keep up, risk falling off the treadmill altogether (Chesbrough, 2011).

In the Innovator's Dilemma, Clayton Christensen and Michael Raynor (1997) touch upon the same topic. However, they illustrate that even if incumbents manage to 'sustain' innovation, they may get caught up on a trajectory of incrementally improving their products or services, only with an eye to their most demanding customers, while they forget about the needs of the many. This allows disruptors with fewer resources to target the overlooked segments and gain a foothold by better solving the "job-to-be-done", frequently at a lower price (Christensen and Raynor, 1997).

While some disruptors are small and limit themselves to one or a few industries, others are taking over industry after industry. Among them are tech-born giants such as Amazon, Google and Facebook. Common for them is how they embrace the myriad of new exponential technologies and dive into the complexities of societal change to continuously exploit opportunities for entering or creating new markets. Meanwhile, incumbent firms fail to cope with change. Instead they wed themselves into the web of inferior technologies or chose to rely heavily on one or a few competitive advantages that assume relativity to competitors within the same industry. These are known as competency traps (Helfat et al., 2010).

To compete with disruptors, incumbents need to get off the sustaining trajectory to avoid the risks of competency traps, commoditization and disruption. Industry glasses must be thrown away to stay on the lookout for new strategic opportunities, and be accompanied by readiness to fundamentally challenge their vision and transform their businesses continually, like the disruptors. This is what Sniukas et al. define as innovating on a strategic level, rather than on a product or service level. Sniukas et al. argue that to do so, companies must continuously ask themselves a series of fundamental questions: what business are we in? Who is our customer? What offerings should we

offer? And how might our business model and revenue model allow us to do that? (Sniukas et al., 2016).

To address such fundamental questions, incumbent firms often bring in external manpower. Throughout decades, incumbents have sourced help from big management consultancies like McKinsey and Boston Consulting Group. These are renowned for their ability to model businesses to capture as much economic value as possible. However, critics hold it that management consultancies--as well managers internal to the firm--tend to apply inductive or deductive reasoning to shape a picture, based on the past, from which they extrapolate what will happen in the future and devise strategies accordingly. In a world where change truly has proven to be the only constant, strategies devised as such will quickly lose their validity. The future repeatedly refuses to materialize as an extrapolation of the past.

Worse yet, the approach and models tend to view the "problem space" as a static given (Dorst, 2016), and instead of getting a deep understanding of the problem and the customers entangled in the problem, they approach strategic issues as matters of choosing the right path (Boland & Collopy, 2004). Traditional management consultants may be masters of understanding business modeling and value capturing mechanisms, but they often fail to create value for the people that matter the most: the customers. Management consultants with more of a technological focus seem to face the same challenge and often end up enhancing rigid legacy systems.

As opposed to management consultants, designers have become known for their ability to deeply understand customer needs, challenge the understanding of a problem (Dorst, 2016), and craft products and services that users desire (Brown, 2009). As opposed to management consultants, designers make use of intuition and abductive reasoning, which means all new ideas have to be validated through future events and cannot be validated through analysis of the past (Martin, 2009). Rather than choosing a path, designers often come to create a new path (Boland and Collopy, 2004).

The power of design has become particularly apparent, when the democratization of design through *design thinking*. This has included other professions in the design process, to together apply a human-centered design approach. Many may recall the videos in which an IDEO team *dove deep* to understand customer needs and then isolated themselves to reimagine and design the ideal shopping cart up until a big launch moment. While they may have managed to design the ideal shopping cart, it never made it to the stores. Why so? Critiques have it that a very human-centered

approach is deemed to foster an incremental innovation with little appreciation of economic viability and the overall business model. In other words, the innovation, or invention, was not elevated to a systemic and strategic level.

In the meantime, a new field has emerged to seemingly merge the best from management and design, namely strategic design or business design. This development has also been illustrated by the design ladder on which the bottom step is “non-design”, the second step is “design as crafting”, the third step is “design as process”, and the top step is “design as strategy”. Simultaneously, Design consultancies have gone from a focus on craftsmanship, advertisement and visual identity, to corporate identity (Julier, 2008, p. 23-25), to now deal with strategic issues, as what we choose to term strategic design consultancies (SDCs). Since 1999, IDEO has taken this journey themselves. Others include Frog Design, Designit and Hello Group. For example, Hello Group has co-developed MobilePay with Danske Bank, which has become Denmark’s de facto standard for peer-to-peer payments.

Management consultancies seem to also have acknowledged the potential of combining strategy and design in one powerful, as they have started to acquire big design consultancies. To mention a few examples, PwC has acquired BGT (2013), McKinsey & Company has acquired Lunar (2015) and Accenture has acquired Fjord (2013). These acquisitions indicate that management consultancies might have found that the methods of designers can help them in several ways. Design and strategy, when combined, might have the power to enable strategic innovation both satisfies human values and enhances economic value capturing.

Only very few studies have been conducted about the methods of strategic design consultancies (Boztepe, 2016). However, Danish Design Center has recently partnered 18 incumbent firms and 18 small design consultancies with the purpose of enacting collaboration around strategic issues and to develop new innovation methods (Dansk Design Center, 2017). The result was overwhelmingly positive (Nejrup, 2017). Now, if small design consultancies with little experience within strategy formation can help incumbent firms, the potential of learning from the bigger SDCs seems immense. We have been intrigued by what there might be to learn from bigger SDCs such as IDEO, Frog Design, Designit, Fjord+Accenture and Hello Group that apply strategic design in a systemic way and continually collaborate with incumbent firms to harvest the potential of bridging the opposing worlds of design and strategy, avoid the risks of commoditization, competency traps and disruption, and innovate strategically. This leads us to our research question.

RQ: How do strategic design consultancies (SDCs) work to innovate strategically and how can incumbent firms adopt the methods of SDCs to dynamically innovate and strategically adjust to changing environments?

Firstly, we take the reader through our methodology which explains how the thesis fulfills the scientific and academic requirements. Secondly, we review the theories which form the foundation for the analysis, describing design and its relation to strategy. In the analysis, we dive into the strategic design process described by our interviewees (a list of interviews can be found in the Bibliography). The analysis has three major chapters each elucidating the steps taken by the SDCs to form and realize a new strategy for their clients. First step is Mystery to Vision, next follows Vision to Strategy, and finally Strategy to Execution. We analyze their approach using theories about strategy, design, their interplay and strategic design or business design. In the discussion, we discuss the applicability of our findings to incumbent firms that single-handedly or in collaboration with SDCs want to work with strategic design to dynamically innovate and strategically adjust to changing environments. Finally, we conclude and restate our findings.

2 Methodology & Research Design

Epistemology

We have mostly followed the epistemology of Bernard J.F. Lonergan, Insight Based Critical Realism, holding that experience, understanding, reflection and will are grounds for insight, deliberation and choice, and that collaborative work in society provides the grounds for reflective affirmation of reliability and validity in what is known (Lonergan, 1992). For the same reason, we have attempted to engage as many people as possible with potentially different viewpoints while writing the thesis, as well as participating in the work of one of the smaller SDCs, Bespoke, and taking every chance possible to engage in relevant workshops and events. We acknowledge that the 'reality' of the case studies that we include and our findings, are the result of insights and reflection based on concrete set of interlinked circumstances that we have experienced. That said, we have of course tried to reduce our subjectivism and we believe that the project does offer findings with general merit, especially on how the SDC attempt to break down the mental wall between designers and managers as necessary for innovating strategically together.

Research Approach

Our analysis is based on multiple case studies, more specifically Designit, Frog Design, Fjord, Hello Group, Bespoke and 1508. Yin (2003) argues that multiple case studies are preferable to a single when trying to make generalizations, as we intent to do about the work methods of strategic design consultancies. We have mainly used qualitative data in the form of interviews with representatives from the different SDCs, while finding inspiration in hermeneutics and applying abductive reasoning, with the general purpose of nurturing insights. To analyse how the SDCs manage to work with design and innovate on a strategic level, we have come to apply four analytical 'glasses' as described below. Due to the abductive nature of our research, we apply these 'glasses' interchangeably, as we find that each field of theory contributes to understanding how the strategic consultancies merge the worlds of design and strategy to innovate strategically. In between interviews we have tried to make sense of our data by identifying congruences and discrepancies with different theories. Inspired by hermeneutic research methods, we sought to fusion the horizons of management, which we represent, and design, which the SDCs mainly represent, although they are themselves merging these two worlds to some extent. The four pairs of 'glasses' are as follows:

1. We pull from some of the fundamental concepts and scholars within the design. Among them are Herbert Simon: satisficing and 'design as searching, Donald Schön: reflection-in-action (Schön, 1983), the scholars behind sense-making or meaning creation (Krippendorff, 1989; Verganti, 2009), John Arnold with 'building to think' (Sonalkar, 2016) or "thinking with your hands" (David Kelly) and John Heskett's literature on design. We find that all of these concepts and theories are at least as relevant in for strategic design as they have been for all other types of design.

2. Secondly, the double diamond (British Design Council, 2007), and the human-centered design processes of the Stanford d.school and IDEO (2010) serve as reference points for comparison and contrast when we analyze the processes of the SDCs. In addition, we also compare and contrast the strategic design process with more traditional strategic management approach, as related to

3. Thirdly, we have analyzed the processes of the SDCs with the different Schools of strategy in mind. By viewing the SDCs and clients through the lenses of the strategy Schools we are able to see potential differences in their approaches to strategy.

4. Fourthly, we have analyzed the SDCs' processes against the newest literature within the field of strategic design. Tim Brown's "Change By Design" (2009) and Roger Martin's "The Design of Business" (2009), laid the foundation for the strategic appliance of design in the late 2000s. Since then, a few processes have been outlined, that we believe bear close to a strategic design process. They are (1) the process described in Jeanne Liedtka and Tim Ogilvie's book, Designing for Growth: A Design Thinking Tool Kit for Managers from 2011, (2) Kees Dorst's Frame Innovation Model from 2016, which was recommended to us by a professor from Stanford d.school (Neeraj Sonalkar), and (3) the approach found in The Art of Opportunity: How to Build Growth and Ventures Through Strategic Innovation and Visual Thinking written by Marc Sniukas, Matt Morasky, and Parker Lee. Moreover, we have made great use of "Design and the Creation of Value" (2017), written by John Heskett, Clive Dilnot and Suzan Boztepe. They touch upon design's role in innovating and creating value for organizations and products with a firm grounding in economic theory. Lastly, we have also included 'the Lean Startup' approach (Ries, 2011), which is based on design thinking, lean principles and agile methods. The approach is born out of practice rather than academia, but has again and again been referred to by our interviewees.

We continuously make reference the design ladder developed by Dansk Design Center (2002) as well as both John Heskett's figures for illustrating "Business strategies and design competencies in a company: four alternatives, and the "Major design functions in a firm (Heskett et al., 2017, p. 162 & 170).

Lastly, we pull on the findings of our analysis, and discuss them with the purpose of giving a normative suggestion as to how incumbents potentially could adopt the methods of SDCs to dynamically innovate and strategically adjust to societal changes and new technologies In the end of the discussion, we shortly touch upon how such a process for innovating strategically needs to be complemented in different ways.

Data Collection & Analysis

Primary Data

What has intrigued us about this topic is the ability of strategic design consultancies to create strategic innovation, which we consider the outcome of their work. However, because the world of strategic design consultancies was practically unknown to us, we were only vaguely aware of all the elements that constitute their work, and knew nothing about the relationships and patterns in which those elements interact. Having two unknowns (what and how) calls for a process of creative exploration and abduction, in which the only known was the outcome: strategic innovation.

Due to our background in innovation studies at Copenhagen Business School, theories from these fields make up the relationships and patterns we would have assumed to correlate with the ability to innovate. We decided to conduct a series of interviews and observe the work of strategic designers and the artifacts they use, in order to creatively explore the research field (strategic design consultancies). Our interview approach in these early interviews were largely ethnographic in nature and inspired by James Spradley and his book about ethnographic interviews (Spradley, 1979). According to him, what people say, how they act and the artifacts they use are the three sources from which an ethnographic researcher can make cultural inferences (Spradley, 1979, p. 8). The initial interviews were with with Neeraj Sonalkar, Research Associate at the Center for Design Research at Stanford University, Anna Papadopoulos, Partner at Mandalah, Global Innovation Consultancy, Jørgen Kejlberg, Senior Business Developer in the Department for Innovation and Industry Development at Denmark Technical University (DTU), Rune Toldam Partner and Creative

Director at Bespoke - a Strategic Foresight & Experience Design firm Christoffer Nejrup, Project Manager at Dansk Design Center. These interviews were semi-structured.

We set out to investigate a world which was very new to us and therefore we approached the 'world of design' with high sensitivity and an "attitude of ignorance" (Spradley, 1979, p. 4). In other words, we left our theories at home, prepared only a few questions and themes, and opened ourselves up to alternative ways of understanding the relationships and patterns that govern how strategic innovation is fostered. We set out to understand the pattern of actions that people have performed to innovate strategically innovation, and the direct occasions that spark their actions (Dorst, 2015). When trying to develop an understanding of the natives' 'weltanschauung' reflexion is critical. For that reason, we abductively iterated between interviewing and finding relevant literature and theories able to explain our observations or finding gaps in the literature. We attempted to avoid naively assuming that concepts would have the same meaning across cultures - design and management (Spradley, 1979, p. 4) and instead elucidate possible semantic discrepancies.

Once we had gained a basic understanding of the patterns and relationships in the research field, we were able to determine an initial frame and research design for the project and gathered relevant literature within the areas of design and strategy to form a literature review. Our following step was to embark on the interviews with Hello Group, Designit, Frog Design and Fjord+Accenture. Intervieewees included Henriette Hosbond, User Experience Lead at Hello Group - a strategic design firm, Sofie Holstein-Homann, Global Head of Strategic Development at Designit and Linda Tolj, Strategic Design Director at Designit. From Frog Design, we interviewed Ulrik Hogrebe, Associate Creative Director and Toshi Mogi, Assistant Vice President of Strategy and Innovation - Financial Services. And from Fjord + Accenture, we interviewed Peter Jørgensen, Managing Director / Products, Customer & Channels Lead at Accenture Denmark, and Mikkel Rathje Business Designer at Fjord. In addition, we interviewed Klaus Bundvig, Director of Business Development at 1508 A/S, a Danish second tier strategic design firm with a digital focus. We decided to include 1508, because we quickly found that Dansk Design Center nurture respect for their talents related to strategic innovation. During the interviews and in our following analysis and discussions of the findings, we focussed on understanding the important themes for their work and developed a discourse for answering the first part of our RQ: how do SDCs work to innovate on a strategic level.

When outlining and analysing what we consider to be a general strategic design process, we first transcribed the interviews and through an abductive approach we developed categories for

qualitative analysis by iterating between our data and existing literature (Saunders et al., 2009, p. 492). Once we had a sense of which categories were determining the successful creation of strategic innovation, we coded for these categories in Nvivo and analyzed how the different SDCs engage with the different categories. We retrieved our main inspiration from Designit, Frog, Fjord and Hello Group which have the strongest strategic focus, the largest, and are the most well-established. Nevertheless, 1508, Bespoke and the design consultancies that participated in the PLUS Program have also provided inspiration in the form of specific tools and specific examples taken from their strategic projects.

Secondary Data

We have made use of the results of the PLUS-program run by Dansk Design Center (DDC). It is a double market maturation program, with the purpose of maturing Danish companies and Danish design consultancies to cooperate around strategic company challenges, as well as developing new and effective ways and tools for accelerating innovation (Danish Design Center, 2017). With funding from the Danish government, DDC put together 18 partnerships. Each partnership consisted of one company and one or two design consultancies. The partnerships ran throughout 18 months and the results were published in March 2017. We reached out to DDC early on and interviewed Christoffer Nejrup who was project manager for the program and read the cases to get enlarge our understanding of Strategic Design. Moreover, we have collected relevant secondary data from academic journals, periodicals, industry news publications, empirical studies, industry statistics, company data and of course articles from our own studies in Management of Innovation and Business Development.

Limitations and Delimitations

The largest limitation to our study is the nature of our primary data. Due to our epistemological viewpoint, we would have liked more time and chances to gather data of participatory or observatory character to rely less on interviews. We listened to interviewees from the SDCs explain their work and methods to us, but we only witnessed one SDC workshop take place at Bespoke. The work conducted by the SDCs tend to be secretive for which reason we did not have the opportunity to observe a client-SDC workshop firsthand. Furthermore, more time would have enabled us to gather a bigger sample size. We interviewed eight interviewees from six different strategic design firms. Furthermore, geographically we were only able to collect data in Copenhagen, Denmark and New York City, USA.

We have chosen not to examine topics related to corporate identity and brands and how design might be used to create value in this regard. Nor have we looked deeply into the cognitive process related to how users perceive design and attribute value or meaning to different objects. Instead we have been concerned with design as a practice or process and its relevancy for strategy formation. Due to this focus, we limit ourselves to design consultancies that have a clear strategic focus, and we have not gone deep into the actual crafting of product or service designs. Instead we have focused on experience design and its facilitation of interaction between businesses and users, which is, however, inspired by the traditional forms of design.

Validity and Reliability

To get closer to a valid picture of how the SDCs work to innovate strategically, we would have liked to combine the gathered interviews with action research, at best participating in a strategic design process or at least observe how some of the big SDCs work. Unfortunately, this wasn't possible, because they are secretive about their work and need to uphold non-disclosure agreements with their clients. However, we observed Bespoke work throughout a full day and participated in as many open and relevant workshops and events as possible with a total of XX with companies and organizations such as IBM (2017) INDEX: Design to Improve Life (2017), Karlskrona Transition Lap (2017), and Social Innovation Lab (Kph Projects, 2017). Also, due to NDAs, the big SDCs were reluctant to use specific examples from their work. On the other hand, we have experienced that the smaller design consultancies have been more open to talking about specific clients and cases. In addition, we were lucky the Dansk Design Center published several reports about the PLUS Program from which we have included a few examples to get more specific. Our analysis is based on the interpretation of two management students with no prior experience within design. This can also be considered a strength, as it constitutes a "fusion of horizons" (Stanford, 2003).

We would also have liked to include more quantitative data in our thesis. The general inclusion of both qualitative and quantitative data would have allowed us to triangulate our findings in some parts and reduced the risk of misinterpretation. In other words, we could have ensured that the data was telling us what we thought they were telling us (Saunders et al, 2009, p. 146). However, as described above, we were limited by time constraints and the SDCs were understandably reluctant to share quantitative data.

Lastly, we are highly aware of how fluid and dynamic the processes of SDCs are. Therefore, the reliability of the framework for a strategic design cycle, which is the result of our analysis, and

strategic design review, which we propose in the discussion, are based on how we see design and strategy merging as of spring 2017 by use of our interviews as well literature available right now. It is likely that a generalized process framework or a suggestion for strategic design reviews will look very different if data is gathered over a longer time horizon. And while the work methods of the consultancies may be somewhat generalizable, their approach to a client case will always be idiosyncratic. We try to capture the richness of each SDCs vocabulary and unique methods. Therefore, we will also try to integrate the terms that the individual SDCs use about their own process, since such terminology naturally is important for making the analysis relevant and not losing any originally intended meaning.

3 Literature Review

Design

The Basics of Design

In this literature review, we will try to give a better understanding of design, the general design process - largely inspired by design thinking, the move towards strategic design and the interplay between strategic design with value creation and business model innovation (BMI) or strategic innovation. We will first go through a few of the dominant understandings of design.

Design as Searching

One of the first to define "design" was Herbert Simon, Nobel laureate in economics in 1978 and renowned for his studies on decision-making across many fields. He viewed design as a rational search process and defined design as "the transformation of existing conditions into preferred ones" (Simon, 1969, p.55), which entails adopting natural sciences or positivism as the model for a science of design and if design practitioners operate in an objective and knowable reality. Successful problem solving involves searching the maze selectively for alternatives, to reduce it to manageable proportions (Simon, 1969, p.54) and to arrive at a solution that is "good enough". Simon called this satisficing. In short, Simon considers design to be equal to (rational) problem solving, or as Kees Dorst puts it, "design as searching" (Dorst, 2016).

Wicked Problems

In later times, the perspective of Simon has been largely criticized (Schön, 1983; Dorst, 2016). While "design as searching" may be appropriate in a well-informed problem space already entranced from situations of practice, designers often face complex situations in which analytical thinking and searching alone is not going to generate an answer (Riel in Martin, 2009, p. 94-95). Problems increasingly tend to be uncertain, incoherent and ill-defined with ambiguous causes and effects, a phenomena/situation that continues to change as potential solutions are devised, and no clear stopping rule as to when the problem is 'solved' (Riel in Martin, 2009, p. 94-95). Such problems are often referred to as wicked problems (Rittel & Webber, 1973; Buchanan, 1992; Martin, 2009). With wicked problems, finding a solution should not be the only, nor the primary focus. Deep attention needs to be paid to understanding the nature of the problem itself in all its complexity (Riel in Martin, 2009, p. 95). Several scholars have opposed Simon and suggested a more interpretivist or constructivist view (explorative enquiry) on design, which roughly can be divided in two main

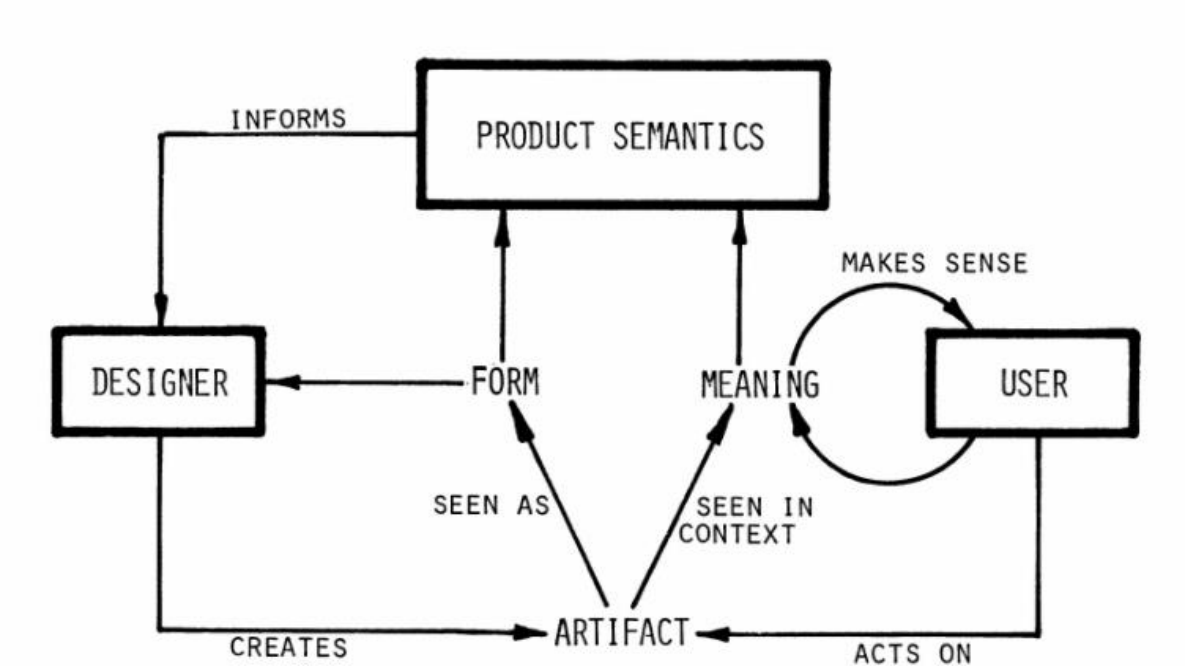
streams, reflection-in-action (Schön, 1983) and meaning creation or sense-making (Krippendorff, 1989; Verganti, 2009).

Reflection-in-Action

Donald Schön was the original advocate of reflective practice, which he considered to be the practice by which professionals become aware of their implicit knowledge base and learn from their experience as they progress (Schön, 1983). According to Schön, changing a given situation takes precedence over the interest of first understanding it, if done with a mental habit of reflection on experiences as they happen, to immediately optimize the following action (reflection-in-action) (Schön, 1983). When facing complex and incoherent situations, wicked problems, designers construct and impose a coherence or frame of their own (Doorst, 2016). Subsequently, they discover consequences and implications of their constructions – some unintended – which they appreciate and evaluate, sometimes leading them to change their initial coherence or frame. They spin out a web of moves, consequences, implications, appreciations, and further moves. Each move is a local experiment that contributes to the global experiment of reframing the problem. Moves create new problems to be described and solved. Moves have expected or unexpected consequences in many design domains and implication bindings on later moves. Throughout the whole design process, designers must reflect (Schön, 1983).

Sensemaking or Meaning Creation

Design as meaning creation and designers as interpreters of meaning have developed as another direction of design (Krippendorff, 1989; Utterback et al. 2006, Verganti, 2008). As the first proponent of design as sense-making, Klaus Krippendorff argued that people do not perceive pure forms, unrelated objects, or things as such but as meaning. Objects are always seen in a context (of other things, situations, and users, including the observing self). According to him, “meaning is a cognitively constructed relationship. It selectively connects features of an object and features of its (real environment or imagined) context into a coherent unity” (Krippendorff, 1989, p.12). He suggests that: “Making sense is a circular cognitive process that may start with some initially incomprehensible sensation, which then proceeds to imagining hypothetical contexts for it and goes around a hermeneutic circle during which features are distinguished in both contexts and what is to be made sense of - and meanings are constructed until this process has converged to a sufficiently coherent understanding”.



(Krippendorff, 1989, p. 13).

Design, For What?

Fast-forwarding to present day, the meaning of the word 'design' is still manifold and it shifts dependent on who is using it, to whom it is applied, and in what context. Professor John Heskett, a British writer and lecturer on the economic, political, cultural and human value of industrial design, illustrates this beautifully with his infamous sentence: "design is to design a design to produce a design." (Heskett, 2003, p. 4).

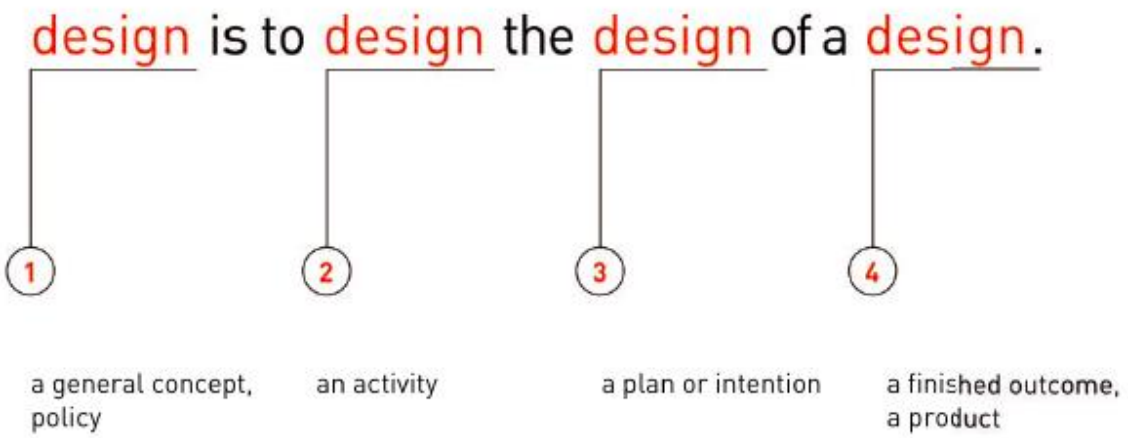


Figure 1. John Heskett (2003) summarization of design (Source: Hardt, 2006)

According to Heskett, design can be understood within the four broader dimensions seen in Figure 1. Many others state that design can be understood within merely three dimensions: as a product, a process, or as a practice (Edman, 2011; Doblin 1987, p. 62). Throughout this thesis, we will mainly focus on design as a process or practice, but even within these two dimensions there are endless amounts of subdivisions like service design, web design, strategic design and many others. Heskett opposes the more lightweight understandings of design that either attributes no real substance to it in basic questions of existence or mistakes a facet of design as the whole picture. He defines design as "the human capacity to shape our environment in ways without precedent in nature, that serves our needs and gives meaning to our lives" (Heskett, 2003, p. 5). This is a useful definition because it integrates the two elements of problem solving and meaning creation (Kristensen et al., 2014, p. 68). He believes that design should be the crucial anvil on which the human environment in all its details is shaped and constructed for the betterment and delight of all (Heskett, 2003, p. 2). More specifically, Heskett argues that good design involves both sound technical problem solving and sensemaking that considers how users operate in a certain context (Heskett, 2005).

The Role(s) of Designers & the Creation of Value

There are different views as to what role designers should play in an organization and how they can might create value. The main perception is tied to creativity (Brown, 2009). However, according to Richard J. Boland Jr. and Fred Collopy (2004, p.15), there is an important distinguishment to make between creativity and designing: "creativity needs the guiding energy of a design attitude in order to focus our efforts on results that will be truly innovative and produce long-lasting organizational betterments. Design is in that sense larger than creativity. Design provides a context for creativity by channeling it toward humanly satisfying purposes (...)" (Boland & Collopy, 2004, p.15). The 'human' part has been emphasized by many who believe that designers have the ability to satisfy human values for the customers or users, and to so their designs must be human-centered (Heskett et al. 2017; Schmiedgen, 2013; Brown 2009).

Important to note, is that the idea of value itself has changed in meaning within design. Earlier it was related to the exchange of meaningful products (or services) between company and customer to create user value. But now there has been a shift towards instead focussing on experiences (Boztepe, 2007, p. 58). With the exchange approach, value arises from the price and desire for a product, while with the experience approach, value arises in the interaction between user and product within a particular sociocultural setting. Rather than focusing on the exchange situation of a product, the experience approach view products (or services) merely as what enables experience

and in order to create user value one must utilize design to analyse and understand every point of experience with the product(s) (or services) (Boztepe, 2007, p. 58). In addition, Tim Brown, the CEO of IDEO argues that "Although the design of an experience may involve products, services, spaces, and technology, an experience carries us beyond the comfortable world of measurable utility and into the hazy zone of emotional value" (Brown, 2009, p. 127-128).

	Exchange Approach	Sign Approach	Experience Approach
Value Arises from	price and desire for a product	social and cultural context	interaction between user and product within a particular socio-cultural setting
Value is	objectively determinable in terms of price	subjective, almost arbitrary	both objective and subjective
Unit of Analysis is	an exchange situation	social communication	any point of experience with the product
Product is	a sacrifice made by user measured in terms of money	socially assigned meaning	what enables experience
Implications for Design	the need to make product qualities visible	the need to understand social sense making	the need to understand what makes up experience

Figure 14: Traditional approaches to user value (Source: Boztepe 2007, p.58)

Boland and Collopy go a step further than 'user value' and argue that increased attention needs to be called to a design attitude in management practice and education to produce "long-lasting organizational betterments" (Boland & Collopy, 2004, p.15), and as a derivative of that: business value or economic value. John Heskett together with Clive Dilnot and Suzan Boztepe, has identified, with a particular basis in economic New Growth theory, three areas that designers should be concerned with when attempting to create value. Firstly, they--similarly to Boland and Collopy--state that designers should take the role as visionary originators of totally new products, capable of significantly changing existing markets, or even creating new ones, and therefore of generating new economic value (Heskett et al., 2017, p. 140).

Secondly, New Growth theory includes technology as a core factor in understanding how the business functions, and technological knowledge, both coded and tacit, has in-built value from its capacity to derive innovative ideas from practice (Heskett et al, 2017, p. 137). Therefore, design as an activity or designers can and should take a vital role as translators of technological possibility into innovative reality to create a close an essential harmonization of design and technology (Heskett et al., 2017, p. 140). To adequately understand technological opportunity designers should have some technological competence or at least the ability to have dialogue with, and work in close relationship to, technological specialists. If not, they will be confined to the trivialities of what Heskett et al. call

“felt-pen design” or “the visual appearance as a last-minute additive”, rather than being involved with the total concept (Heskett et al, 2017, p. 139) or strategy. Thirdly, designers must function within institutional structures of various kinds that enable and constrain their endeavors (Heskett et al., 2017, p. 138). This is especially true in an interplay with management and strategy planning, as we will later touch upon.

When discussing how a successful or value-creating outcome of design looks like, many utilize the Venn-diagram seen below, which also summarizes the points made above: enhance desirability with a well-designed experience to generate user value, ensure business viability to create economic value and consider technological feasibility to apply or build capabilities and technologies for the particular problem and business. This relates to the role of designers as translators of technological opportunity, but also understanding the current technological structures in the given business, like for example legacy systems. In the intersection of these three dimensions resides a value creating solution.

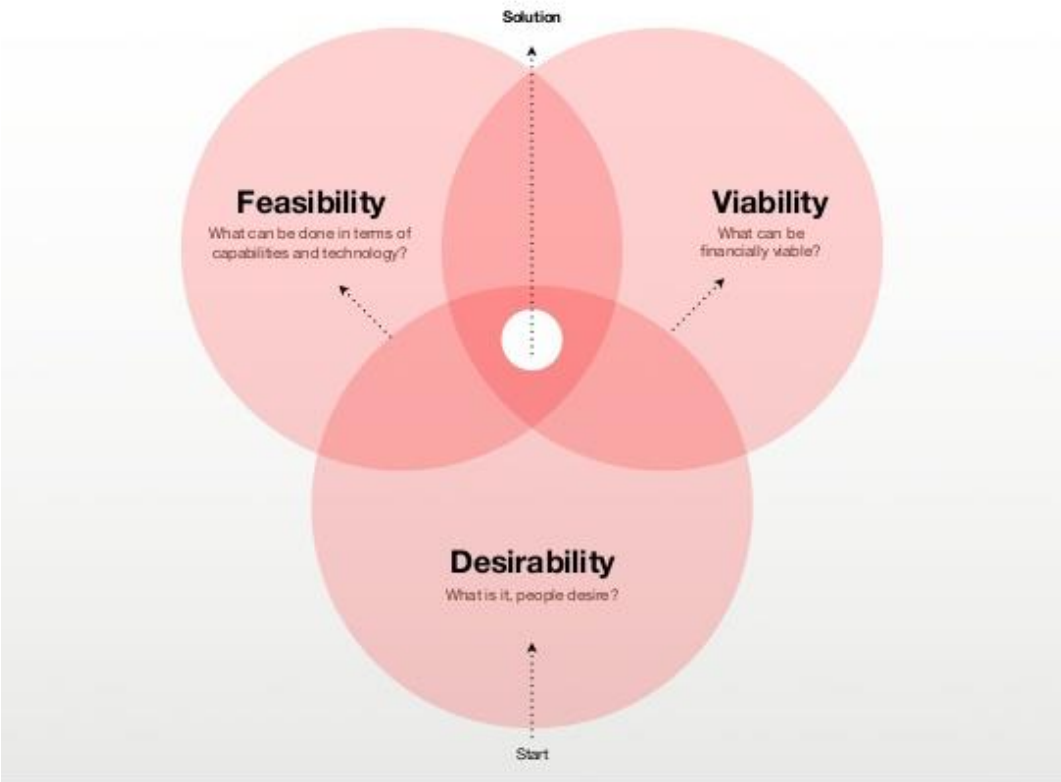
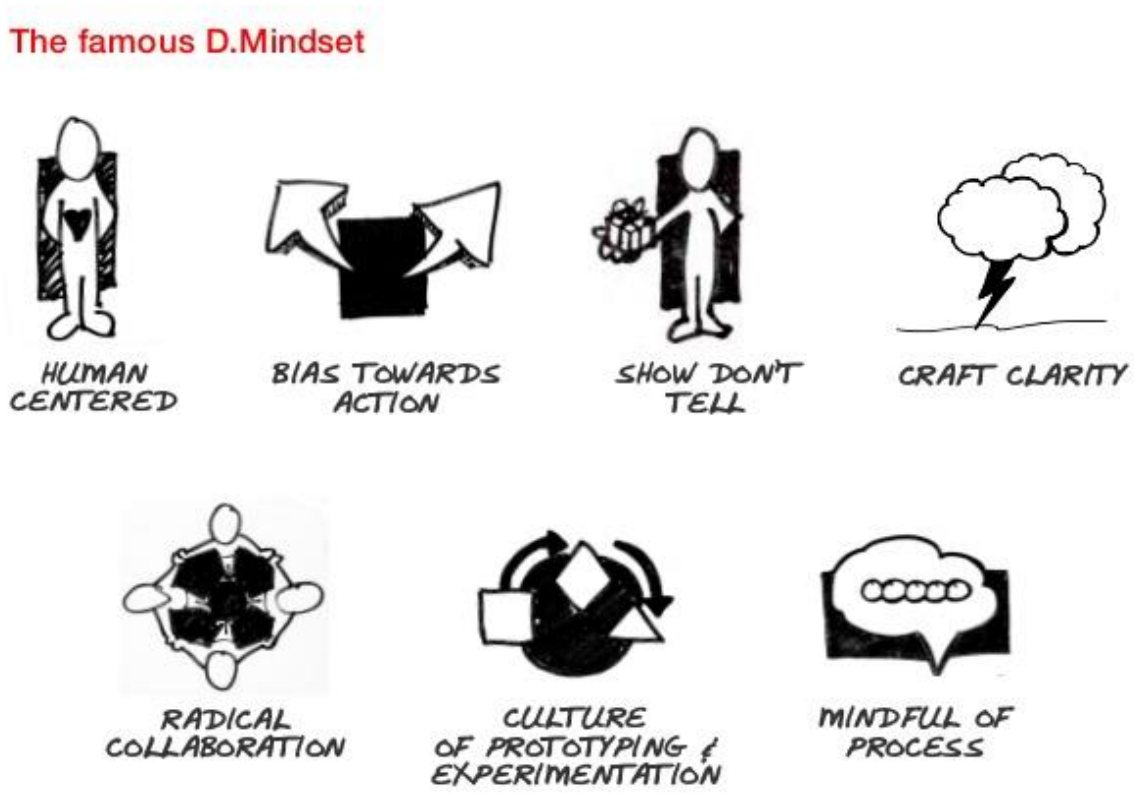


Figure 2, Source: Schmiedgen, 2013 p. 38

According to Jan Schmiedgen, design practices are very adept in commensurating the three dimensions (Schmiedgen, 2011, p.35). However, many other professions are often more skillful and knowledgeable within each dimension (see Appendix M). Instead of acting like experts within each dimension, designers often take a role as bridger or knowledge broker between different dimensions. In the book, Design Inspired Innovation by James M. Utterback, and Roberto Verganti among others, they argue that "they [designers] may be seen as articulators of tacit knowledge, where articulation is a process of expression through drawings, plans, models and so on" (Utterback et al., 2006, p. 89).

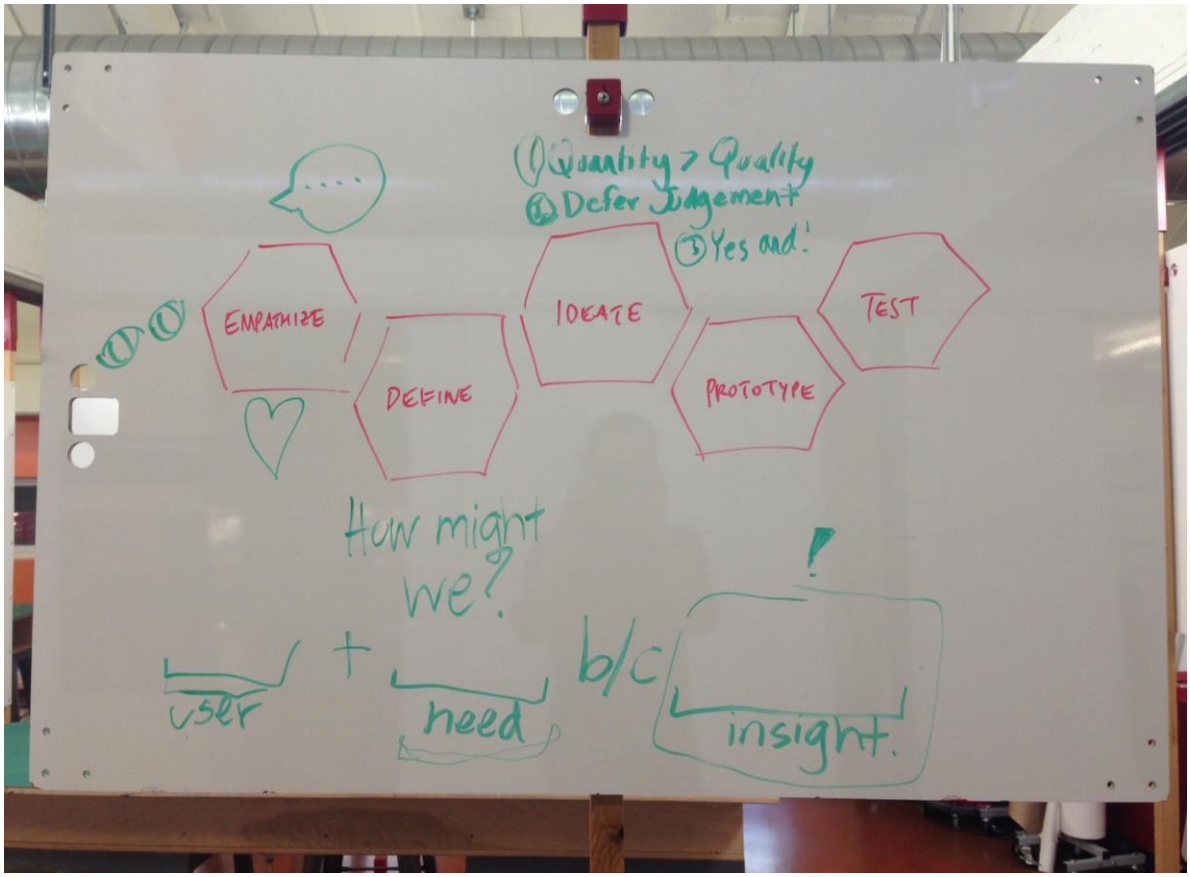
In addition, many have emphasized that designers are skillful in 'getting real' quickly or simply building to think as it was termed in the 1960s by John Arnold, who also started the design program at Stanford University (Camacho, 2016, p. 92). He argued that building is equal to or better than thinking (Sonalkar, 2016, 00:09:30). In many cases building helps one to think not only as an individual but as a team and serves as boundary objects that can facilitate the integration of perspectives from each of the three dimensions (Carlile, 2004). Later, David Kelly took over the design program at Stanford and founded the Stanford d.school—the Hasso Plattner Institute of Design at Stanford University, as well as founded IDEO which he now chairs. 'Building to think' as a basic principle seems to have inspired at least four aspects of the "d.school mindset", being "Craft Clarity", "Bias Towards Action", "Show Don't Tell" and a "Culture of Prototyping and



Experimentation" (Schmiedgen, 2013, p.39). These guide Design Thinking, which is the term used to describe the process or paradigm that has evolved at Stanford to democratize the design as practice to include additional disciplines like engineering and computer science to work in multidisciplinary teams, when solving design problems (Camacho, 2016, p. 92). Radical collaboration - human centered. The last aspect of the d.mindset is "Mindful of Process", and the d.school did codify a process, which we will go through below. This process largely became the foundation of Design Thinking.

Design Thinking

The d.school at Stanford consider themselves to be the "ground zero" for design thinking (Kelly in Camacho, 2016, p. 88). However, over the years DT has simultaneously been put into practice at both Stanford d.school and at IDEO. Together, they are the seemingly the main contributors to the conceptual field of Design Thinking. According to them, Design Thinking is a method for how to come up with ideas (Kelly in Camacho, 2016, p. 88) or as a systematic approach to innovation (Brown, 2009, p. 157). David Kelly who founded IDEO similarly helped democratize the DT process by outlining their famous process with the three phases "Inspiration, Ideation, Implementation" (Hobcraft, 2014), while the d.school now uses the phases "Empathize, Define, Ideate, Prototype, Test" (see Picture xx below). The most important commonality is that they are both human-centered, always taking a point of departure in the customer, user, or stakeholder (Brown, 2009). In addition, they both follow the divergence-convergence model, the designers will move between concrete and abstract, and the process is very fluid between the phases. We now go further into what this entails.



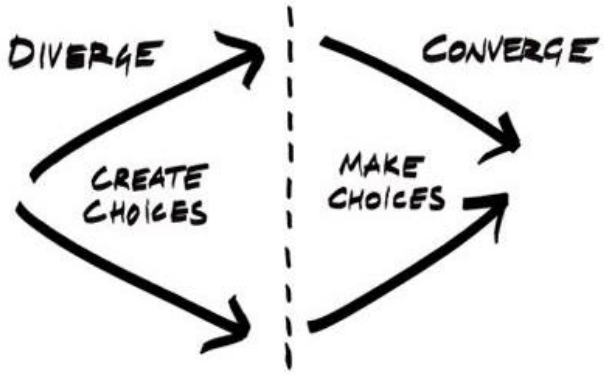
Picture 1 taken when visiting the d.school at Stanford University in September 2016.

The Most Common Generic Creative Models

Tim Brown, the current CEO of IDEO, puts out a mental matrix in his book Change By Design for design thinkers to adopt. One of the fundamentals in this matrix is divergence and convergence thinking (Brown, 2009). According to Brown, the process of the design thinker, rather, looks like a rhythmic exchange between the divergent and convergent phases with each subsequent iteration less broad and more detailed than the previous ones (Brown, 2009, p. 98). The objective of divergent thinking is to multiply options to create more alternatives. These might be different insights into consumer behaviour, alternative visions of new product offerings, or ways of creating interactive experiences. In this phase, firms need to fight a natural tendency of most companies which is to constrain problems and restrict choices in favor of the obvious and the incremental (Brown, 2009, p. 69). By testing competing ideas against one another, there is an increased likelihood that the outcome will be bolder, more creative, disruptive, compelling (Brown, 2009, p. 67). Basically, to have a good idea, you must first have lots of ideas.

On the other hand, the convergent phases of problem solving is what drives us towards solutions: “Convergent thinking is a practical way of deciding among existing alternatives. What convergent

thinking is not so good at, however, is probing the future and creating new possibilities. Think of a funnel, where the flared opening represents a broad set of initial possibilities and the small spout represents the narrowly convergent solution. This is clearly the most efficient way to fill up a test tube or drive toward a set of fine-grained solutions" (Brown, 2009, p. 67). When two sequences of divergence and convergence follow one and another, it is commonly known as a double diamond. Generally, one diamond is considered the 'problem space' while the second diamond is considered the solution space. We will return to this after the next to models.



(Figure 4 Brown, 2009, p. 67)

Inherent to the divergence-convergence model are also two natural complements: analysis and synthesis (Brown, 2009, p. 69), based on which other creative models related to DT have been constructed. While analytical tools are used to break apart complex problems to understand them better, synthesis is the collective act of putting the pieces together to create whole ideas. Once data have been gathered with analysis, meaningful patterns are identified with synthesis. According to Brown, synthesis can also be exercised to weave many different strands into a coherent story. Below is an example of an Analysis-Synthesis Bridge Model (Figure XXX), in which observations are analysed and followingly synthesized into a framework.

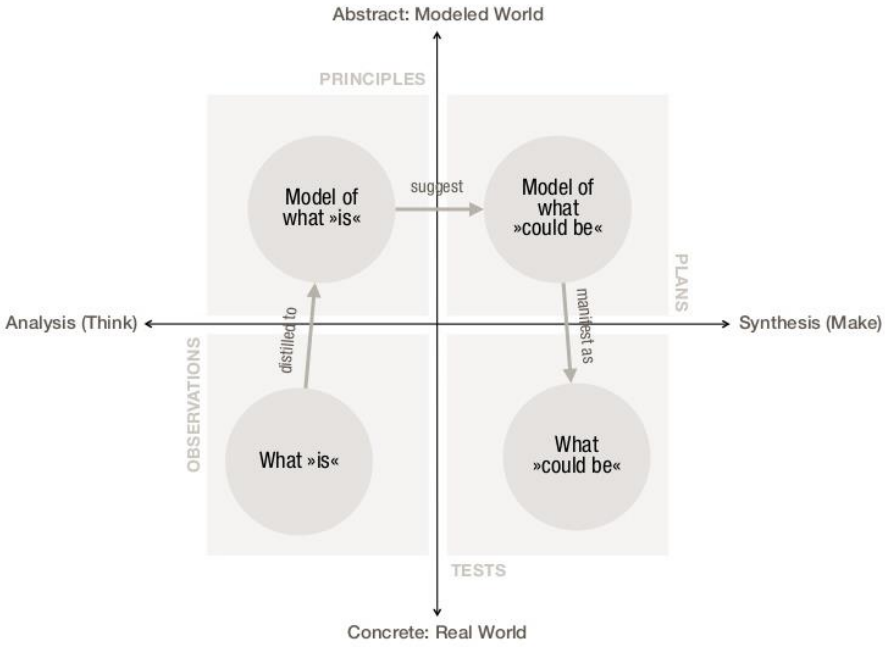


Figure 5 (source: Schmiedigen, 2015, p. 41)

While moving between analysis and synthesis, the model below also moves from concrete to abstract to abstract to concrete. The problem phase would conclude with an abstract understanding of the problem based on concrete data, and the next phase would start out with developing an abstract understanding of the solution to be made which will evolve into a concrete solution. Lastly, Jan Schmiedgen (2013), points out that another important creative model is that of multiple re-entry points, which emphasizes an important point, that the creative process often is more fluid and dynamic than the other models that we have seen (see appendix B).

The Double Diamond Model

To represent the traditional product/service design process, we choose to include the Double Diamond model developed by the British Design Council (Design Council, 2007). They analyzed design processes across eleven design departments of well-known international firms and found commonalities in the firms' methods and order of appearance. The model illustrates how, when moving from left to right through time and process, the designers apply divergent-convergent thinking twice, hence the *double* diamond. The process and methods bear close resemblance to the d.school's and IDEO's. Discover insights into the problem, Define the area to focus upon, Develop potential solutions, Deliver solutions that work (Design Council, 2007).

Moving Up the Design Ladder

The above processes are mainly concerned with the crafting of products and services. However, design can play multiple roles within organizations. To emphasize this, the Danish Design Center developed the “Design Ladder” which illustrates how design can be used at four different levels in the organization (Dansk Design Center, 2016a). For each step upward, design becomes more integrated in the mindset of the company. The lowest step is non-design, here design is invisible in the company and any design tasks are not handled by trained designers. The second step is called “design as form-giving”, one could also say “crafting” or “styling”. At this step, design is merely used in the final form-giving stage of a product development or graphic design process. At the third step, “Design as a process”, the design is not a result, but a way of working where design is integrated into the development process at an early stage. The solution takes a point of departure in the problem and the user, and requires the cooperation of many different disciplines such as the process and material technicians, marketing and administration. The cases in the Design Council’s (2007) Double Diamond are examples of this use of design. The fourth and final step is where design hold the most potential in terms of value-creation. “Design as strategy” means that the designer works with the company’s owners or managers with the potential of rethinking the entire, or parts of, the business foundation (Dansk Design Center, 2016a).

Figure 6. Design Ladder (Dansk Design Center 2016a)

Design's expansion into corporate strategy formation has lately become a conceptual field (Rasmussen et al., 2011; Boztepe, 2016). The application of design on a strategic level is most often termed strategic design or business design (Martin, 2009). Despite interest in the strategic relevance of design for nearly a decade (Brown, 2009; Martin, 2009), the current practice of strategic design and the processes related to firms that apply strategic design has been subject to limited documentation (Boztepe, 2016). A few scholars have tried to theorize about a design process for business innovation (Liedtka & Ogilvie., 2011), strategic innovation (Sniukas et al. 2016) or innovating to solve open, complex, dynamic, and networked problems (Dorst, 2015). We will dive further into these processes after haven taken a deeper look at the field of strategy formation. Dealing with corporate wide strategy aspects, rather than merely products or services, fundamentally changes the basis on which the design consultancies work. To better understand what this change implies and how strategic design works, we must first gain an understanding of the domain and traditions of strategy formation.

Strategy Formation & Innovation

In order to understand whether and/or why the strategic design interfere with strategy formation, we first need an understanding of what strategy formation is. According to Henry Mintzberg, professor of management at McGill University, strategy has two essential characteristics, it is made in advance of the situation in which it applies, and it is developed purposefully (Mintzberg, 1987). We interpret "purposefully" as implying that strategy will always be build based on a certain purpose or *vision*. However, while you often have an intentional plan, made in advance of the situation in which they apply, some of it will go unrealized and some of it will be enacted deliberately. As the deliberate strategy is enacted, new strategies emerge as patterns that were not expressly intended. Together, deliberate strategy and emergent strategy forms the realized strategy. Hence, strategy can be more or less intentional. Purely deliberate means no learning, purely emergent means no control (Mintzberg et al., 2005, p. 11). According to Mintzberg, all real-world strategies need to mix the two in some way: to exercise control while fostering learning. Effective strategists mix the two in ways that reflect the conditions at hand, notably the ability to predict as well as the need to react to unexpected events (Mintzberg et al., 2005, p. 11-12). Throughout the thesis, we will refer to this mix as the *means* of reaching the set purpose or vision. Vision will similarly be used with the intended meaning described above.

Mintzberg (1987) has, additionally, defined strategy using five Ps: plan, ploy, pattern, position, and perspective. Strategy as a plan is a direction, a guide or course of action into the future, a path to get from here to there. Strategy as a pattern is related to consistency in behavior over time, often identified in realized strategy when looking back. A position can be understood as the locating of particular products in particular markets (positioning). Perspective, he argues, is to the firm what the personality is to the individual. Perspective is the way of viewing the world. A firm can view it as fixed and stable, or it can view it as dynamic and open for it to take. When referred to as a ploy, strategy is “a specific "maneuver" intended to outwit an opponent or competitor” (Mintzberg et al., 2005, p. 15).

In Mintzberg’s later published book Strategy Safari (2005), he outlines ten schools of strategy to provide an overview of strategic management. He groups the ten schools into three groups. Three of the schools are considered prescriptive in nature: The Design School, Planning School, Positioning School, which view strategy formation respectively as a process of conception, a formal process and as an analytical process (Mintzberg, 2005, p. 5). These schools are all concerned with prescribing ideal strategic behavior. The latest of the prescriptive schools, the Positioning school, focuses on the selection of strategic positions in economic marketplace (Mintzberg et al., 2005, p. 5).

The prescriptive schools, and especially the positioning school can generally be related to Product-Market Position View (PMPV), which is deeply connected with Michael E Porter, who holds that “a firm's profitability depends on the attractiveness of the industry in which the firm competes and its positioning in the industry as well as its local environment” (Porter in Afuah and Utterback, 1997, p.183) and "Strategy is the creation of a unique and valuable position, involving a different set of activities" (Porter, 1985). His generic strategies for achieving competitive advantages over competitors were: (1) cost leadership, (2) product differentiation or (3) or focusing on a niche (Porter, 1980). Essentially strategy as a position, relative to competitors, and with a seemingly static perspective with little appreciation of changes that may appear outside the industry.

Mintzberg (2005 et al., p. 6) presents six other schools that he groups as the descriptive schools, because they have been more concerned with describing how strategies get made, than prescribing ideal strategic behavior. Two of the six, the Entrepreneurial and the Cognitive schools, attributes the strategy formation to the individual. The remaining four in the descriptive group, the learning, power, negotiation, culture and environmental schools have tried to open the process up beyond the individual to other forces and actors. One of them, the Learning School, we find has the most

relevance for our thesis, since it considers the world too complex to allow strategies to be developed all at once as clear plans or visions. Strategy must emerge in small steps, as an organization adapts or learns (Mintzberg et al, 2005, p. 6).

Among the most notable literature within the Learning school, is Peter Senge and his literature on "learning organizations". He suggests that organization should facilitate the learning of its members and continuously transforms itself. "What does it take for an organization to continually reinvent itself as its world changes? he asks (Senge, 1995, p. 360). According to him, with a focus on learning, people could help their firms cultivate tolerance, foster open discussion, and think holistically and systemically. In addition, learning organizations would be able to adapt to the unpredictable more quickly than their competitors could (Senge, 1995).

Equally or more notable are the studies about dynamic capabilities (Teece et al, 1997), which extends the Resource Based View (RBV) (Barney, 1991) and stands in contrast to the Product-Market Position View (PMPV) of Porter. The RBV holds that the competitive advantage and general performance of the firm is determined based on the distinctiveness of the firm's strategic capabilities (Barney, 1991). However, like the PMPV, it is a static view that does not address changing environments, while dynamic capabilities can be understood as the capacity to renew competences so as to achieve congruence with the changing business environment (Teece, 1997). The approach generally emphasizes the development of management capabilities, and difficult to imitate combinations of organizational, functional and technological skills. According to Teece, dynamic capabilities can be seen as an emerging and potentially integrative approach to understanding the newer sources of competitive advantage.

The capabilities within the categories of Teece et al. (1997) are: paths, managerial processes and positions. Paths are related to technological opportunities and path dependencies: where a firm can go is a function of the path travelled, its current position and the paths ahead (Teece et al, 1997, p.522). Processes are distinguished between: some are for coordination and integration, others for learning and some for reconfiguration and transformation (Teece et al., 1997, p.520). Positions relate to a firm's specific assets, grouped as technological assets, complementary assets, financial assets, reputational assets, institutional assets, market structure assets and organizational boundaries (Teece et al., 1997, p.521-522).

Scholars have found many common characteristics exists between the fields of dynamic capabilities and innovation capabilities, which is also widely recognized and a crucial domain for sustained competitiveness (Lidija and Robert, 2014). Traditionally, two types of innovation have been widely recognized, namely innovation related to technology push and market pull. The early innovation models saw innovation as a linear sequence of functional activities (Tidd, 2006). These are known as push-pull models where either an idea originates from inside the company (likely in its R&D department) and is being 'pushed' to the market through technological innovation and marketing (inside-out perspective). Conversely, the market can signal a need for something new and be 'pulled' by the market (Tidd, 2006, p.3). Interestingly, the theory of Teece et al., (1997) challenges this idea when emphasizing the importance of fist sensing technological opportunities (occurring outside the organization), before reconfiguring accordingly, or rather innovating. With that argument, we interpret that Teece et al., along with the Learning School, generally emphasize the importance of taking an outside-in perspective. Essentially it comes down to where you look first, when strategizing or innovating.

Generally, we find that the Learning School is the most congruent with the strategic design processes, which we will later describe, together with the third group and school, the configuration school. This school seeks to be integrative, cluster the various strategic elements into distinct stages or episodes, for example, of entrepreneurial growth or stable maturity, sometimes sequenced over time to describe the life cycles or organizations (Mintzberg et al, 2005, p. 7).

The reconfiguration or transformation idea has spun into a new area of strategic management emphasizing a business transformation mindset (Schmiedgen, 2011, p. 18). In addition to flexibility and adaptability to change as emphasized by Teece et al., (1997). Focus has shifted towards organizational learning (Nonaka, 1995), organizational systems within open relationships and networks (Dyer & Singh, 1998), open innovation (Chesbrough, 2003), and business model (BM) innovation (Massa & Tucci, 2014). Of these, we find business model innovation (BMI) to be particular important for our thesis, because strategy, according to Casadesus-Masanell et al, (2010) refers to strategy as a firm's contingent plan as to which BM it will use. It is important to note the word "contingent" - strategies should contain provisions against a range of environmental contingencies (or emergent strategy), whether they take place or not. "An outside observer will only be able to observe the realized strategy, rather than the entire contingent plan" (Casadesus-Masanell et al., 2010, p. 203-4). This supports that strategy, in the sense of the means to achieving an aim, is concerned with both intended and emergent strategy. In contrast, the BM is dependent on your

choice of strategy, and will be chosen and shaped followingly, taking contingencies or emergent strategy into consideration.

According to Amit and Zott (2012), innovation at the BM level can often translate into a sustainable performance advantage. In recent years, several novel types of BM have seen the light of the day. Many of these have been related to Digitalization. Platform business models is one example of a type of BM that has gained widespread popularity in recent years, which consists of an architectural design for products and services, and an infrastructure facilitating platform users' interaction (Eisenmann et al., 2006).

The Business Model Canvas is widely used to guide innovation related to new BMs or changes in existing BMs. In their book, they define a BM as "the rationale of how an organization creates, delivers and captures value" as well as "the blueprint for a strategy to be implemented" (Osterwalder and Pigneur, 2010, p. 14-15). The canvas is a visual chart that attempts to capture these three aspects by including the elements seen below.

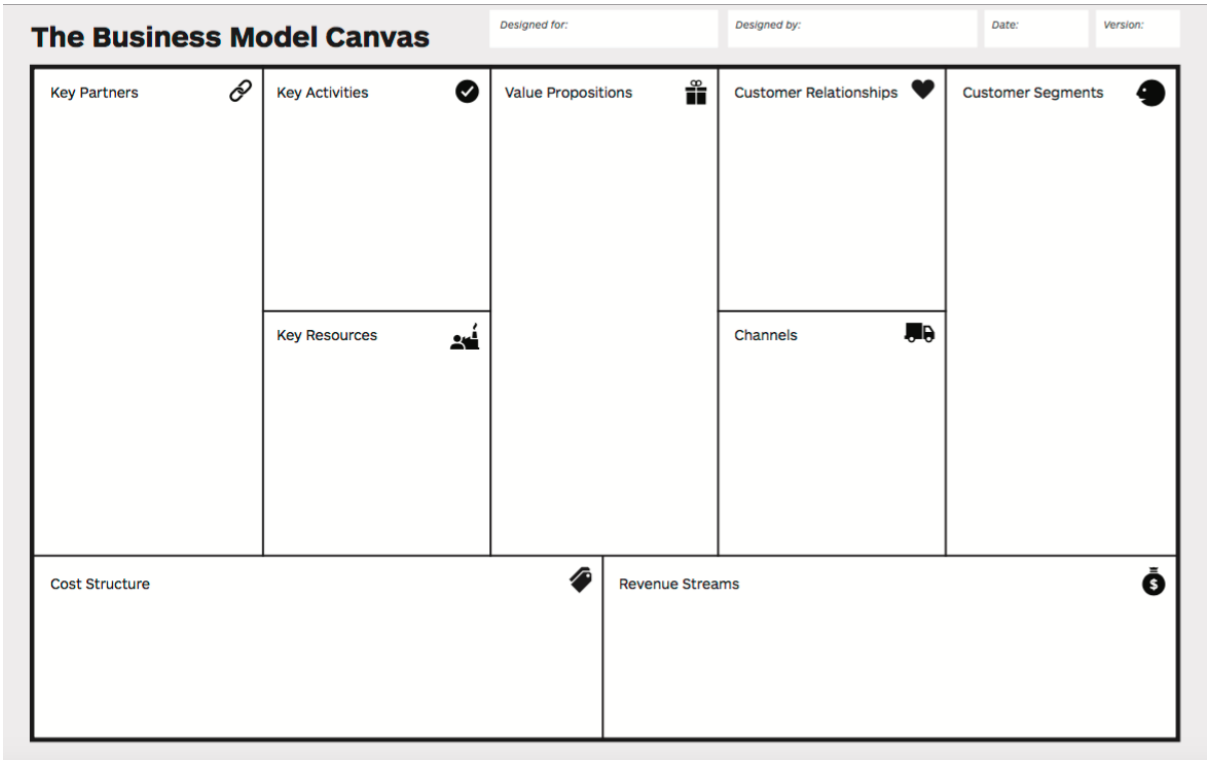


Figure 7. Business Model Canvas (Osterwalder and Pigneur, 2010)

Osterwalder and others have later developed an additional Value Proposition Canvas that has two sides. On one side, the Customer Profile, you clarify your customer understanding with a set of customer characteristics that you assume, observe and verify in the market. With the other, the

Value Map, you describe how you intent to create value for that customer with a set of value proposition benefits that you design to attract customers (Osterwalder et al., 2014, p. 9). You achieve fit between the two, ”when your products and services produce pain relievers and gain creators that match one or more jobs, pains, and gains that are important to your customer“ (Osterwalder et al., 2014, p. 9).

Much of the strategy discourse described above is concerned with gaining competitive advantages against competitors and dividing existing market spaces. W. Chan Kim and Renée Mauborgne (2015) argue that competition has become the basis of strategy making, and have coined the term Red Oceans. While previous strategy discourse has had the aim of increasing demand in existing markets, Kim and Mauborgne urge firms to set the aim of creating new markets. According to them, firms should focus on making competition irrelevant by reshaping market boundaries and industry structures. They consider such oceans blue (Kim & Mauborgne, 2005). We find that aiming to create new markets is another indication of a general switch away from the inside-out perspective which in this case extends to the industry through the idea of red oceans, to an outside-in perspective.

Change & Strategic Dilemmas

We now turn to contemporary strategic challenges, which might have spurred the above mentioned development in the strategy discourse. These will help us understand the present challenges faced by managers and incumbents.

Myopia & Competency Traps

The diminishing effects on abilities to cope with change caused by bounded rationality and myopic tendencies of managers is well documented (e.g. Levitt, 1960). However, even in the awareness of how their environments are changing, some managers still do not adjust. Some managers are too wedded to a technology, even though a clearly superior technology has entered the market (Helfat, 2010, p. 55). “They choose not to cope with change” (Helfat, 2010, p. 48). Competency traps might be an important factor in understanding the inflexibility of many firms.

The Innovator’s Dilemma & Solution

Clayton Christensen (1997) argues that incumbent firms often fail to spot disruptive technologies because they begin their lives too weak for the firm’s current value networks. Acting in the fiduciary interest and dismissing the technology, the incumbent continues to sustain their current product performance trajectory to the betterment of the higher market segments. Coming from the lower

segments of the market, the disruptive technology has suddenly caught up with the incumbent's product performance. The incumbent faces a dilemma: if the technology gains a foothold in a market outside of our own, will it potentially be able to carve out profit from our markets? And if so, with the risk of cannibalizing ourselves, is it worth investing in the technology in the long term? (Christensen, 1997). As a solution to the dilemma, Christensen and Raynor (2003) suggest that firms should focus on what the customers really seeks to accomplish in a given situation - what is their "job-to-be-done"? The authors observed people buying milkshakes at McDonald's every morning, and asked them why they bought it. The customers would explain that they needed something to keep them full and occupied while driving to work. The milkshake does the job better than any of its competitors, not just Burger King's milkshakes. From the customer's' point of view, the milkshake competes against bananas, donuts, and bagels. The authors realized that the customers had a job-to-be-done and that they would sometimes 'hire' different products to do the job.

Commodity Trap

The commodity trap is a state feared primarily by manufacturers, but also service providers, providing easily compared products or services. The commodity trap strikes when products are sold on the basis of their cost, and not the value provided to the customer. When manufacturing and business processes become increasingly widely distributed and difficult to protect from imitation, the commodity trap is quick to take hold over entire industries. Furthermore, increased transparency has also contributed to the commodity trap. As an example, look to white goods or electronics, where the price is the last battle line (Chesbrough, 2011). Both the Innovator's dilemma and commodity trap force companies to reinvent themselves with high frequency and continuously find markets of refuge. Servitization. Digitalization as the move from an analog to a digital business enables many opportunities. Among one of them is servitization which Chesbrough (2011) offers as remedy for the commodity trap. It entails that the manufacturing company shifts its focus towards delivering value to their customers not only through their tangible products, but through a combination of products and services (see Tukker, 2004). The movement builds on the idea that customers want function or access rather than ownership (also known as "Access over ownership"). The dematerialization and adding of services is both better for the environment and also provides companies with a higher profit (Tukker, 2004).

The Interplay Between Strategy and Design

We will now look into the interplay between strategy, or strategic management and design. More specifically we will look into how scholars examine the differences between the two fields, how they might clash or complement each other and potentially merge into the fields of “strategic design” or “business design”.

Decision Attitude and Design Attitude

Managing as Designing edited by Richard Boland Jr. and Fred Collopy offers an excellent contrast between what they term a “decision attitude” and a “design attitude”. The decision attitude is used extensively for problem solving in management (and strategy) education. It assumes that alternatives to consider are easy to come up with but the difficulty lies in choosing from the alternatives (Boland and Collopy, 2004, p. 4). In a clearly defined situation with easily identifiable alternatives, the methods of the decision attitude perform well. However, when that is not the case--the situation is not stable, the alternatives to choose from are endless, and the repercussions of our decisions are unclear--a design attitude is required (Boland and Collopy, 2004, p. 4). Managers are known for predicting the future by analysing past information through methods of inductive or deductive reasoning. The problem with using this reasoning to device strategies for innovation is that innovation by definition deals with novelty, hence the foundation of information on which analysis takes place is often very insubstantial (Boland & Collopy, 2004). “The design attitude, in contrast, is concerned with finding the best answer possible, given the skills, time, and resources of the team, and takes for granted that it will require the invention of new alternatives.” (Boland and Collopy, 2004, p. 6). The underlying difference between the two mental models comes down to the ways of reasoning which is well described by Kees Dorst (2016).

Ways of Reasoning

Kees Dorst (2015) follows Roozenburg and Eekels (1995) who brought the pragmatist philosopher Charles Sanders Peirce into design when explaining different ways of reasoning. Based on Peirce’s thinking, they argue that there are four basic ways of reasoning: deduction, induction, (normal) abduction, and design abduction. To illustrate the differences between the ways of reasoning, Dorst uses the formula: WHAT + HOW = OUTCOME. The “what” is the elements such as people and things and the “how” is the connection between these elements, or the “pattern of relationships”. The “outcome” is the observed phenomena of a process in which these elements have interacted (Dorst, 2015, p. 45).

- Deduction: solid reasoning from cause to effect. Elements (what) and patterns of relationships (how) are known. We predict the outcome. Following an observation can be used to validate.
- Induction: discovering patterns. Elements are known and we know or can observe the outcome of their interaction/relationships, but we do not know the pattern of relationships (how) that governs the outcome.
- Abduction: solid problem-solving, based on experience. The elements are unknown, but the outcome is known and so is the how. We can find a new solution with old patterns or change the elements. This is problem solving where we try to change the elements of a solution.
- Design abduction: two unknowns (what and how) lead to a process of creative exploration. The outcome is known as the desired value that we want to achieve. Here we get to question the pattern of relationships instead of simply changing the elements.

Through this comparison, Dorst establishes the design professions as thinking fundamentally different from fields that are predominantly based on analysis (deduction, induction) and normal abduction (Dorst, 2015, p. 50). Analysis is what Boland & Collopy (2004) would call a "decision attitude" while they would refer to problem-solving as a "design-attitude".

Roger Martin is similarly inspired by Charles Sanders Peirce who states that "All new ideas have to be validated through future events." (Peirce in Martin, 2009). The solving of a particular mystery is a unique event which Peirce reminds us requires a logical leap of mind attained through abductive reasoning and inference to the most valid explanation (Martin, 2009, p. 107 & 123). Roger Martin is similarly inspired by abductive reasoning and he argues that design thinking is the new competitive advantage when used as a complementary to business strategy, processes, or an organizational culture (Martin, 2009, p. 118). On one hand design thinking can be used to seek validity in change and mysteries and turn them into strategic game changers. On the other hand it can be used to reconfigure businesses to best exploit existing situations, in relativity to competitors, which can be related to Product-Market Position View (see e.g. Porter, 1985) and Resource Based view (Barney, 1991).

The Balancing Act - Exploitation and Exploration

According to Roger Martin, businesses work along knowledge funnels going from mystery to heuristic to algorithm. To leap across these knowledge stages a company needs to explore to search for new knowledge and "the reinvention of business". Each leap requires new knowledge and

testing. However, Martin considers exploration alone unstable and argues that exploration needs to be balanced with exploitation - the maximization of payoffs of existing knowledge from each stage. Within one knowledge stage the business can generate data about the past which it can use as proof for doing incremental improvements. This approach is related to reliability because it relies on the past while exploration implies searching and testing for the validity in new knowledge. Martin (2009, p. 105) argues that the design of business needs to be a balancing act embracing both reliability and validity.

Reliability takes precedence over validity in business. “The incentives to favor reliability are omnipresent [in business] while the rewards of seeking validity seem distant and uncertain.” (Martin, 2009, p. 115). Which leaves employees and managers alike to seek consistency and predictability in their decisions. According to Martin, there are three obstacles to revolt analyticals. First, the preponderance of analytical thinking. Second, the reliability orientation of key stakeholders. Third, the ease of defending reliability vs. validity. In addition, he relates reliability or analytical thinking to deduction, induction and the left brain hemisphere while he relates validity to abduction and the right brain hemisphere (Martin, 2009, p. 141-143).

Relating this to strategy terminology of Mintzberg, the decision attitude, reliability focus and exploitation seem relatable to strategy as an intended plan or position with little appreciation for emergent strategy or learning, hence the prescriptive group of schools of strategy. On the other hand, the design attitude and exploration views strategy as emergent, acknowledges the complexity of the world, and would belong to the Learning or Reconfiguration Schools (Mintzberg, 2005, p. 6).

Strategic Design

This section includes different views on the nature of strategic design and finally looks into how scholars have theorized about the interplay between design and strategy (Martin, 2009; Brown, 2009), including the design processes as outlined by Liedtka & Ogilvie (2011), Sniukas et al. (2016), and Dorst (2011). However, to get a better understanding, let us first briefly look at a definition of strategic design.

According to Dansk Design Center (2016c) traditional design creates delimited solutions for individual needs or problems, for example through services and products. Strategic design, however, concerns the use of design for large, complex, and systemic challenges. Strategic design challenges the understanding of the problem, identifies different opportunity spaces and lines of action and

contributes to the creation of more holistic and robust solutions to complex problems. Arguably, strategic design concerns designing the foundation for better decision making and works optimally when it is integrated in businesses', organizations', and authorities' work with business strategy, innovation and development, etc (Dansk Design Center, 2016c).

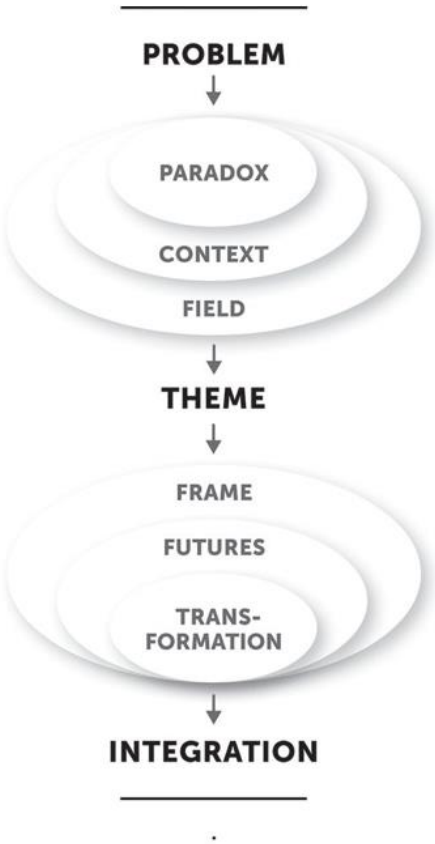
The Design of Business

Another field that has evolved within design thinking is Business Design (Sniukas, 2016, p.229). One of the main proponents is Roger Martin. Business design is focused on solving problems that imply the redesign of a business strategy, a process or an organizational culture (Martin, 2009, p. 118). Business Design mixes 'business thinking', which is logic, inductive and deductive, with 'design thinking', which is intuitive, creative and abductive. Martin believes both ways of thinking should be balanced. The model also emphasizes the need for empathy, creativity, collaboration and diversity, mixed with analytic thinking in the later configuration stages, when the strategy is created (Martin, 2009, p. 25-68). To balance the pluralism of the design field, we will mainly refer to Strategic Design rather than Business Design throughout the thesis. In addition, we assume our case companies to not only design businesses but rather strategies, of which the business design is only one component.

Frame Innovation

Kees Dorst, industrial designer and philosopher, also expands the application of design well beyond its traditional use. In his book, Frame Innovation: Create New Thinking by Design, he emphasizes the understanding, or "frame", of the problem as the key to solving the problem itself. He argues that by defining the problem, one will inadvertently freeze the context, "and more often than not this is a grave mistake that will come back to haunt you as you try to implement the new solution" (Doorst, 2015, location 456). Therefore, he proposes a Frame Creation Model that represents how designers reframe problem situations to find novel solutions to complex problems. He calls framing the key to design abduction, which he considers the problem solving approach of designers. "In questioning the established relationships in a problem situation, design abduction creates both a new way of looking at the problem situation and a new way of acting within it." "A frame is the proposal through which, by applying a particular pattern of relationships, we can create a desired outcome." (Doorst, 2015, location 1120). Often the bridge between the problem space and the solution space is by identification of a new key concept (e.g. a festival) or expansion of the key concept with which the situation was initially framed. For example, if the problem of crime on a party street in the UK is approached as if it were a festival, then our solution would look like X. The frame is the path to a solution (Dorst, 2015).

The frame creation model involves nine steps. The first five steps are problem-focused, while steps 6 to 8 are critical investigation of possible solution directions and finally integration. While the nine steps of the frame creation model can be seen as a general and logical progression, in practice the activities that are captured in the steps all interact with each other - in a frame creation session there is a constant to-ing and fro-ing between the steps, and that is absolutely crucial in order to arrive at a good and balanced result to the frame creation process (Dorst, 2015). The starting point for a frame creation project can occur at any of the stages. The design situation requires the design and use of "learning devices" to reach a solution. These "learning devices" include (thought) experiments and simulation techniques. In addition, designing the understanding and creation of social interactions is part of the design process itself. The design team needs to develop a way to imagine a solution, to share this view with one another, to judge the solution, and to decide which way to go (and experience shows that this process is not always easy) (Dorst, 2015) (Figure 8. Dorst, 2015).



Designing for Growth

In their book, "Designing for growth: A design thinking toolkit for managers", the innovation experts Jeanne Liedtka and Tim Ogilvie propose their version of the design thinking process for businesses (Liedtka & Ogilvie, 2011). They separate the book into four parts, each with their own guiding question. "What is?" (how do current solutions look?), "what if?" (how might solutions look?), "what wows?" (which are our best concepts?), and "what works?" (do our concepts work in the market?) (see visualization in Appendix C).

The book offers a step-by-step approach to design thinking and multiple tools for performing the process. One of the tools is "assumption testing" which tests the assumptions underlying the attractiveness of a new business concept. The approach acknowledges that a new business concept is actually a hypothesis. The tool can be used to surface assumptions early in the design phase, or later to test the viability of a more developed concept (Liedtka & Ogilvie, 2011, p. 117). This thinking is also the foundation of The Lean Startup.

The Lean Startup

In his famous book “The Lean Startup”, Eric Ries, software engineer, manager and entrepreneur, argues that entrepreneurs (and intrapreneurs) should use a semi-scientific approach to test their assumptions with Minimum Viable Products (MVPs) and then build sustainable business models based on validated learning. MVPs bear close resemblance to experimentation or assumption testing (Liedtka & Ogilvie, 2011), and the idea of prototypes (Brown, 2009). The core difference is that while prototypes can be mistaken for a “first version of a product”, MVPs are meant to test an assumption or business idea in its minimum *viable* form, hence it needs to resemble the experience of the final rather necessarily look like the first version of the final product (Ries, 2014). In contrast, we will adopt Dorst’s term learning devices, when concerned with ensuring relevancy and validity among colleagues, business partners, suppliers or the like (Dorst, 2015, p. 5). See Appendix G for more on the difference between the terms.

Ries argues that businesses should apply his approach in iterative “build-measure-learn” loops throughout the product development (or design) process (Ries, 2011, p. 15). Once a loop is completed, the company should either “pivot”, i.e. change their strategy based on the measured feedback from stakeholders, or “persevere” i.e. keep moving along the same trajectory. Changes could relate to redefining core value, choosing another customer segment or changing their main sales channel (Ries, 2014). With the competency traps, commodity traps, and the innovator’s dilemma, the Lean Startup approach is being applied in not only startups, but also bigger enterprises.

The Art of Opportunity

The Art of Opportunity is a new approach and book by Marc Sniukas, Matt Morasky, and Parker Lee (2016). They criticize the Product-Marked Position View and instead offers a step-by-step approach to redefining any business with a focus on strategic innovation, as concerned with finding and seizing opportunity for value creation (Sniukas et al., 2016, p. 28). The authors argue that only by looking beyond the company to a broader holistic perspective can a company be successful and create value. A company should do this by examining “where to play”, “how to play”, and “how to win”.

Where to play shifts the focus from industries, markets and competitors to customers and noncustomers, customer needs and expectations, and the customer experience. How to play firstly defines the business’ offering which is the “Unique blend of products, services, and the customer experience” (Sniukas et al. 2016). These three elements are the customer touch-points and include

every step along the customer journey: how customers become aware of your company, product, or service, as well as evaluation of options, purchasing, delivery, usage, purchasing supplements, maintenance, and disposal (Sniukas et al., 2016, p. 68). Secondly, the BM should be analyzed similarly to The Business Model Canvas by Osterwalder and Pigneur (2010). Thirdly, how to win specifies how the business will solve the customers' needs better than anyone else. Firm value is about making sure that the strategy will open up further opportunities and operational and financial benefits. Ecosystem value is about "Creating strategic, operational, and financial value for your partners and the larger ecosystem your company is embedded in and relies on." (Sniukas et al., 2016, p. 29-30). Strategic innovation means carefully designing the strategy from a combination of these three points (Ibid, p. 68).

Sniukas et al. contrast strategic innovation with business design thinking. Strategic innovation is the content of the new strategy whereas business design thinking is the practices enabling the team "to achieve success more effectively and efficiently." (Sniukas et al., 2016, p. 30). Similar to Liedtka & Ogilvie (2011), research is followed by synthesis and analysis through various human-centered tools such as persona creation and customer journey mapping. In addition, Sniukas et al. (2016) advocate a Resource Based View (see e.g. Wernerfelt, 1984; Barney, 1991) by arguing to look at which resources and capabilities of the the focal company are rare or unique, and organize to exploit these. Thereby Sniukas et al. take a dual stand on exploitation and exploration. According to Sniukas et al.(2016), for innovation to be strategic it must be holistic: it should not only create value for the customer, but also for the firm and its ecosystem (suppliers, partners, stakeholders).

Practitioners of Strategic Design

With the increasing attention of strategic design in both academic and practice-oriented settings, design consultancies have also evolved to now combat strategic issues and seemingly try to innovate strategically. Scholars have previously used broad categories such as "design bureaus" or "design consultancies" when referring to design firms such as those described above (Boztepe, 2016). We will instead categorize them as "strategic design consultancies" (SDCs) due to their common strategic focus. Among them are the early proponent of design thinking, IDEO, as well as Frog Design founded by the German industrial engineer Hartmut Esslinger in 1969. Esslinger and his company which later has become Frog Design have designed classics such as the Sony Walkman and early Apple designs such as the first portable Apple computer (Frog Design, n.d.). However, over the past two decades, they have slowly gone from designing products to now designing systems of brand, product and service that deliver distinctly better experiences. They apply design to the creation of

new strategies, complex ecosystems, and entirely new businesses (Frog Design, n.d.). Other similar global firms similar to Frog, include Continuum and Fahrenheit 212.

In Europe, the biggest SDC is Designit, which has Danish roots. As mentioned in the introduction, these companies have gained significant traction in recent years and the earlier 'strategic problem solvers'--traditional management consultancies like Accenture, McKinsey, EY and PWC--have all acquired design firms to explore the potential of merging design with strategy. Many smaller aspiring SDCs come from a digital design but are now thriving by taking on more systemic challenges (e.g. 1508 A/S). Their focus used to be mostly within graphical design and corporate identity but realizing the potential of applying their design competences to more complex and holistic problems have led them further up the Design Ladder. While Hello Group identify themselves as a "Strategic Design Firm", 1508 still takes on many crafting assignments but have climbed the Ladder fast, according to many of our interviewees (Jørgensen, 2017; Rathje, 2017 01:08:33; Toldam, 2017, 01:10:31).

However, to understand how the SDCs work to innovate strategically, we must first arrive at a fitting definition of strategic innovation of our own, we must (1) align our understandings as to what the intention, type and scale of innovation might be, before we can (2) define the components that can serve as subjects of strategic innovation, as part of an overall strategy.

Strategic Innovation

Interestingly, we have found that strategy is made up by an overall vision and the means by which you want to achieve that vision. However, when merging strategy and design in one field, disagreement can arise as to what that vision should be. On one hand, design puts a large emphasis on creating meaningful products or experiences that satisfy human values (assuming that the economic value will follow). On the other hand, strategy literature is generally concerned with the generation of economic value. Therefore, Strategic Design, as a practice must take a dual aim, or as John Heskett says: "reconcile the two poles of [economic] value and [human] values" (2017, p. 180). He holds that both are necessary and integral components of the tasks facing designers.

Heskett further argues that while design may have been understood mainly as a particular approach or expertise for the differentiation of a company's products, designers can also be employed as strategists to bring about strategies that create new value, new markets and innovative proposals on a corporate-wide basis (Heskett et al., 2017, p. 163). Following these words, value(s)--that be

human, economic (or dual) and new markets--must be part of the desired future scenarios of businesses. More specifically we assume two scenarios: (1) value creation in an existing market or (2) value creation in a new market.

The idea of creating a new market can be related to creating a Blue Ocean, ideally with no or very limited competition (Mauborgne & Kim, 2004). To realize any of these scenarios, we assume that any given business will adopt a strategy made up by a vision and means to achieve that vision. To better understand what this entails, we again turn to John Heskett. According to him, designing on a corporate-wide strategy level involves determining what the future role of a firm should be, its markets and customers (Heskett et al., 2017, p. 169). We think that "the future role of a firm" as well its choice as to what "markets and customers" it will target can be understood as the vision of a business. Sniukas et al. (2016), refers to this as "where to play?", while Osterwalder et al. (2010) talk about choosing a customer segment. We find that redefining the vision (choice of future role, customers and markets) can be considered one type of strategic innovation.

In addition to redefining a vision, designing on corporate-wide level, can also help to determine the "major products" and "the organization required" needed to create value on an existing or new market (Heskett et al., 2017, p. 169). We believe these aspects are concerned with the means of achieving a vision. However, we intend to use slightly different terms than Heskett. We adopt the terms offerings, BM and revenue model to describe the three components of Strategic Innovation related to "how to play?", or the means to achieving a vision (used by Sniukas et al2016).

- Firstly, we will use the term offerings throughout this thesis as one component of the means. Sniukas et al. (2016) define this as the unique blend of products, services, and the customer experience. We relate this to what Heskett calls "major products" and what he further calls: the interface in between the customers and the organization itself (Heskett et al., 2017, p. 169). Essentially the offering should focus on a complete experience rather than a single object .Value proposition is in turn what should enable a match between choice in the choice of customers [vision], and the offerings (Osterwalder et al., 2013).
- Secondly, we will use the term Business Model to define the organizational component required to deliver the offerings. Heskett et al., refers to determining the "the organization required" for a given corporate-wide strategy, while Osterwalder and Pigneur (2010) talk about Key Resources, Activities and Partnerships. Furthermore, we will consider the BM to "dependent on contingencies" (Casadesus-Masanell et al., 2010) or be "a blueprint of the

strategy" (Osterwalder and Pigneur, 2010). Like the other components of the means, it is dependent on the vision set by the organization.

- Thirdly, we will add revenue model as a third component, to only be concerned with revenue streams, pricing mechanisms and payment mechanisms (Sniukas et al., 2016, p. 143). This can be related to what Osterwalder and Pigneur (2010, p.17) have termed financial viability, and similarly related to revenue streams and cost structure. Similarly, Heskett et al., (2017, p. 178) talk about transaction innovation as opposed to product or process innovation.

Common for these three components is a systems focus rather than an object focus (Heskett et al., 2017, p. 175). Systemic as well object-focused innovation has generally been known to take the form of either technology push and market pull (Tidd, 2006). However, the processes described by Jeanne Liedtka et al., (2011), Tim Brown (2009) and Roger Martin (2009) generally offers design-driven innovation as the third alternative to technology push and market pull innovation (Heskett et al., 2017, p. 198). We choose to add a fourth type of innovation, business innovation, based on the idea of applying novel business practices and capabilities across industry boundaries. This is inspired by Clayton Christensen (2016) and his way of asking whether others, in other industries, solve a similar job-to-be-done. In addition, it is inspired by Kees Dorst (2016) and his Frame Innovation, which can enable innovation through the application of novel frames. Lastly, it is inspired by the idea of Analogous Markets (Franke et al., 2014). Analogous markets are defined as "[...] a market that is analogously related with the focal target market in terms of sharing similar relational characteristics of the problem" (Franke et al., 2014, p. 1064). Essentially business innovation can empower the innovation of specific elements of the BM, as well as complete transformation of both BM and revenue model. The three former types of innovation can empower both the offerings as well the BM and revenue model.

John Heskett et al.,(2017, p. 172) further propose a scale for defining degrees of design innovation going from 1. No change or imitation, 2. Incremental detail change, 3. Radical redefinition of basic concept or 4. Fundamental change. We choose to assume that this scale can also be applied on the level of strategic innovation, when driven by design, as well as for the abovementioned types of innovation, that generally empower strategic innovation.

Several scholars hold that to reach a scenario in which you create value as well as a new market, you most innovate radically rather than incrementally (Verganti, 2009; Brown, 2009, Heskett et al.,

2017). Generally, firms should be wary of only innovating incrementally, following market pull. It can involve the risks of disruption (Christensen, 1997), commoditization (Chesbrough, 2010) and competency traps (Helfat, 2010). At IDEO, they recommend their clients not only innovate incrementally, which they consider to involve incremental changes on existing offerings in existing markets. It should be balanced with Revolutionary and Evolutionary ways to grow. Evolutionary either concerns new offerings in an existing market or targeting a new market with existing offerings. Revolutionary is new offerings in a new markets, essentially creating a new market (Brown, 2009, p. 161) (see Appendix D). Roberto Verganti extends the warning to include human-centered design innovation (2009). According to him, businesses must look beyond customers and users and mere "adoption to evolution of socio-cultural models", which will foster incremental market pull innovation and the mere (Verganti, 2009).

Verganti is one of the later proponents of sense-making or meaning creation, and suggests that businesses should instead search for signals that are inconsistent with the evolution of sociocultural phenomena in order to spot New Cultural Paradigms (Verganti, 2009, p.55). A way to do so is to call upon "interpreters" - experts who deeply understand and shape the markets they work in (Verganti, 2009). This will enable the business to suggest new radical meanings to people, that they *could* love through a new vision or product languages (Verganti, 2009, p.55). As such, organizations can take part in generating new meanings, or as he calls it *radical innovations of meaning*. He adds: "retrospectively, people often seem to have been simply waiting for them" (Verganti, 2009, p. 56). Similarly, John Heskett et al., (2017, p. 176) argues that design has a much bigger potential than this: "in the context of innovative possibilities, [design] can deliver to users, and much more powerfully, what they never knew they wanted or realized they could have" (Heskett et al., 2017, p. 176).

Both Heskett (Heskett et al., 2017, p. xx) and Verganti (Verganti, 2009, p. 56) talk about radical technological innovation. Technology is similarly emphasized in the dynamic capabilities literature in relation to paths. Many opportunities are related to learning of reconfiguration based on new technologies (Teece et al., 1997). When combined, radical technological innovation and meaning innovation, Verganti (2009, p. 55) calls it a *technology epiphany* (See Figure 3. Lastly, business innovation, or the methods of Frame Innovation, Analogous markets can enable radical BMI.

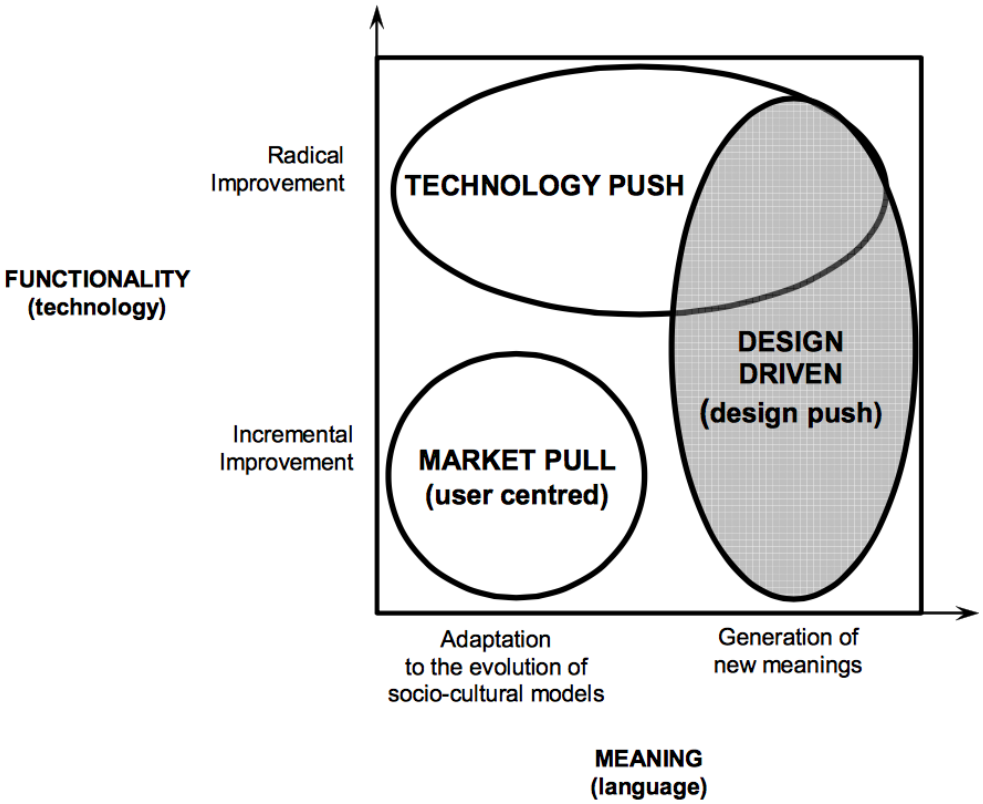


Figure 9. (Verganti, 2009)

To help the reader we will shortly sum up some of the important parts in the Literature Review. Competitiveness, can not only be achieved with planning and the prescription of ideal strategic behavior, through 'the lens' of positioning that assumes relativity to an industry, nor by incremental innovation that originates from within an organization or is pulled to life by an existing market. Competitiveness, if following the views of the Learning School, is largely a function of what you are able to sense and learn from emerging opportunities, especially those related to new Cultural Paradigms new technologies or novel business practices. In addition, becoming a Learning Organization with Dynamic Capabilities requires the ability to reconfigure and potentially turn the aforementioned opportunities into Meaning Innovation, Technological Innovation and Business Model Innovation. With such ability, businesses can potentially innovate strategically by redefine their vision and either increase demand within an existing market or create new markets, Blue Oceans. Alternatively, a business can transform its business through three additional types of strategic innovation: offerings, BM and revenue model.

These are some of complexities that SDCs most likely need to deal with if wanting to innovate on a strategic level rather than on a product level. Since very little literature describes whether or how they do so, we will engage an analysis of the methods, tools and processes in order to find out how

they manage to innovate strategically (as defined above). In addition, we will be discussing how our findings can help incumbents that deal with the risks of changing environments (e.g. commoditization, competency traps and disruption) and innovate strategically. As mentioned in the methodology, design basics, traditional design thinking, the complexities described above related to strategy and innovation, and lastly the current theories about strategic design or business design processes will form the basis of our analysis.

4 Analysis of the Strategic Design Process

As described in the Literature Review, strategic design has come to live as sub practice of design, reaching the top level of organizations: strategy formation. On this basis, we identified the biggest (and seemingly) best design consultancies stating that they work with strategic design as our subjects of analysis. Interviewing them, we quickly found that they in fact are engaged in the formation of corporate-wide strategies rather than only innovating on a product or service level. They are designing complete experiences and guide business transformations to increase demand in existing markets or create entirely new markets (Tolj, 2017, 00:36:01). In order to analyse how they manage to do so, we will start out with an overall look at the nature of the SDCs' work. Firstly, we will look at the starting point of their projects.

Closed Product Briefs to Strategic Mysteries

We have found that the nature of problems and hence the starting point of the SDCs' design processes has changed. Generally, they have moved from being closed product briefs to being strategic mysteries which enable and require the SDCs to approach them in a more open manner. Earlier, when for example Designit solved less strategic and more crafting-oriented problems, the design briefs would be predefined and very narrow in scope. Typically, the brief would go: "we need you to build this thing, it needs to fit this segment, cost this much, and be for this market" (Holstein-Homann, 2017, 00:52:39), leaving very little room for interpretation and innovation. A specific example is Samsung that for about eight years ago approached Designit and asked them to craft a phone in metal, with a specific screen size and other details (Holstein-Homann, 2017, 00:52:39). Sofie Holstein-Homann, Global Head of Strategic Development at Designit, calls this "old-school designing" and since then, briefs have become increasingly open (Holstein-Homann, 2017, 00:12:15).

The above-described development can also be illustrated with John Heskett's figure of Business Strategies and Design Competencies in a Company (Heskett et al., 2017, p. 162). The SDCs used to get hired to bring in a particular approach or expertise that would differentiate a company's products, *Original Design Manufacturing*. Now they are being employed as strategists to bring about innovative proposals on a corporate-wide basis, in which the aim is the evolution of strategies to create new value and new markets, *Original Strategy Management* (Heskett et al., 2017, p. 163). According to John Heskett, design when used on a corporate-wide strategy level involves determining what the future role of a firm should be, its markets and customers, its major products, and the organization this will require (Heskett et al., 2017, p. 169). Based on this, as well as the definitions of Sniukas et al., (2016), we will consider strategic innovation as the radical redefinition

or fundamental change of the *vision* (future role, customers and market) or the *means* (offerings, business model (BM) and revenue model) of a strategy. In addition, we consider strategic innovation to be concerned with taking a systems view or holistic view, while innovating to create new value and new markets (Heskett et al., 2017).

According to Klaus Bundvig, Director of Product Development at 1508, crafting tasks and strategic innovation differ in one fundamental way: crafting a certain product has a known outcome, while the strategic and innovative tasks often have an unknown outcome (Bundvig, 2017, 00:06:13). When innovating strategically, the SDCs need to generate value in a new way. With such a task it is impossible to say from the beginning that crafting, for example a website, is how you best create that value (Bundvig, 2017, 00:06:16). The strategic design process needs to culminate with having built the right thing, rather than simply building a thing right (Rathje, 2017). Nowadays, a task can be based on as little as a hunch about a change that is happening or will happen, an opportunity or a broadly defined problem. Examples include: “okay, we are facing a challenge with those competitors that have started to enter our market”, “we have observed that consumer behavior has changed in this way” or “our net promoter score is decreasing rapidly and we do not know why” (Holstein-Homann, 2017, 00:12:17). The starting point is not necessarily related to a problem initially, but usually there is some underlying problem or valid explanation to be found. To describe this common starting point of the strategic design processes, we have chosen to borrow the term “mystery” from Roger Martin (2009). The term simply represents a hunch that something could work in a better way and urges for an exploration around the mystery to take a logical leap of mind through abduction (Martin, 2009).

Mystery is also a fitting word for how the SDCs looked to us at first. Their work seemed both fluffy and magical at the same time. According to Holstein-Homann from Designit, their clients often find themselves baffled in the same way (2017). Not without reason. Or rather, maybe, because of another type of reason and the hyperdynamic nature of their work.

Hyper-Dynamic Approach

“We often remind ourselves that the trick to rules is to know when to break them. To be willing to bend the methodology when that makes sense for the project and the client”. “New ideas can be integrated continuously. These changes are not only welcomed by our process, but fundamental changes are expected to happen as the journey unfolds” (Hello Group, 2017). These are the words that meet you, if you read about Hello Group’s approach on their website (will now be referred to

simply as “Hello”). According to them, strategic design should be hyper-dynamic (Hello Group, 2017). In addition, we sensed that their processes are very fluid, meaning that the exact point where one phase stops and another begins is not always clear. There are multiple re-entry points and the SDC might skip one or more steps in their official process. Phases will most likely overlap rather than happen sequentially. As Tim Brown said: “Insights rarely arrive on schedule, and opportunities must be seized at whatever inconvenient time they present themselves” (Brown, 2009, p. 64).

Furthermore, the strategic design process should not be considered linear. Instead the SDCs make iterations and repeat steps again and again, with small or bigger changes. Most of our interviewees emphasized iterations as being one of the keys to not only strategic innovation, but innovation in general (Hogrebe, 2017, 01:04:15; Hosbond, 2017, 00:01:00; Nejrup, 2017, 00:30:41). According to Mikkel Rathje, Business Designer at Fjord, they work on making their process more iterative and less of a linear waterfall model (Rathje, 2017, 00:43:54). For the same reason, their model has recently been changed to resemble a circular analysis-synthesis model (See Appendix E). Only through multiple iterations can you reach a valid outcome, Rathje says (Rathje, 2017, 00:44:20), which is congruent with what many theories also hold (Ries, 2011; Osterwalder & Pigneur, 2010; Brown, 2009).

Henriette Hosbond, UX Design Lead at Hello Group adds: “there are different ways to do [strategic design]. We have a clear process, but it varies completely depending on what the task is. Therefore, there is no one-size fits all model [or process] (Hosbond, 2017, 00:04:08). Holstein-Homann from Designit similarly states that they always adapt their approach to the customer and how the client is used to working to get the most out of the cooperation (Holstein-Homann, 2017, 01:02:28). She adds that all their offices globally share “hero-cases” on a quarterly basis. These are meant to enable a mutual understanding of “what works and what doesn’t work” (Holstein-Homann, 2017, 00:17:38). On the same basis, they update their official process on an ongoing process. For which reason, it will probably look very different in half a year (Holstein-Homann, 2017, 00:51:17).

This organizational learning process seems to be a valid explanation for the evolution that Designit and the other SDCs have been able to undertake. The idea of sharing “hero-cases” reveals that Designit must empower their employees to try out new methods and approaches in each project, and it leaves room for something that designers value highly: intuition. We think that applying such a dynamic approach is key when dealing with strategic mysteries. Nevertheless, all the SDCs interviewed do have an official process, which to some extent is inspired by more traditional design

thinking processes and double diamonds (see Appendix L) (Hogrebe, 2017, 01:03:21). According to Ulrik Hogrebe from Frog, design thinking provides a “cognitive backbone” for them, but their actual process never turns out as a clear-cut double diamond (Hogrebe, 2017, 01:03:21).

Designers and Managers

On the issue of uncut diamonds, Hogrebe adds that rather than one double-diamond, they now have to manage up to seven double diamonds or “tracks” that run in parallel, of which only one or two are concerned with designing an object (Hogrebe, 2017, 01:03:21). Apart from designing a meaningful offering for their clients, they are now also deeply engaged in shaping and handling organizational problems while forming coherent new strategies. Hogrebe jokingly said that clients now go: “can you please help us [A]: create a phone, [B] figure how to get it to market, [C] make us more agile, [D] make the organization able to innovate, [E] sort out internal stakeholder problems? And have it done by Tuesday by the way.“ (Hogrebe, 2017, 01:04:31). With this development, the SDCs have also entered the C-suites of big corporations, which, judging from our interviews hasn’t always been a pleasant debut. As we have described in the lit review, designers and managers differ from one another in very fundamental ways.

Richard Boland Jr. and Fred Collopy sums up the differences well with the “decision attitude” and the “design attitude”. The decision attitude (managers) assumes it is easy to come up with alternatives to consider, but difficult to choose among them. In contrast, the design attitude assumes that it is difficult to design a good alternative but once you have developed a truly great one, the decision about which one to select becomes trivial (Boland and Collopy, 2004, p. 4-6). Essentially this build on a fundamental difference in reasoning. While managers tend be inductive or deductive, designers approach problems abductively. They learn to conduct experimentation (iteratively) without proof, while managers or management consultants wait to try something until there is proof (Hogrebe, 2017, 00:27:17). This makes sense when managers traditionally handle other people’s money, for which reason they need proven rationale behind their decisions (Liedtka and Ogilvie, 2011). This reveals another difference between designers and managers. While managers most often would aim to maximize economic value, we have found that designers are often concerned with instead satisfying human values (Tolj, 2017, 00:37:53). As we will show through the analysis, this difference in priorities is highly important (Hogrebe, 2017, 00:29:53).

In our interview with Hogrebe, he also jokingly said that c-suites never take him seriously (Hogrebe, 2017, 00:55:59). Despite his tone, it was clear that this remark was a symptom of all the differences described above between designers and managers. He followingly said that Frog struggles to create

a common space and discourse for both mental models (Hogrebe, 2017, 00:29:53). Our analysis will later show that breaking down the mental wall between the two is the most important factor for enabling the SDCs and their clients to innovate strategically together. According to Hogrebe, their process is key for tearing down that wall, but it is not a matter of sending the c-suite off on a one-week design thinking workshop (Hogrebe, 2017, 00:27:17). It is the result of common adaptation and a series of workshops and demos, as well as multiple sketches, artifacts and proof of concepts produced that become manifestations of the "bridge" between design and management, or design and strategy (Hogrebe, 2017, 00:33:34). According to Hogrebe, people need to internalize it by being in the space and have an object in their hand in order to go: "Okay, this is the manifestation of the strategy and the craft and now I understand that. But I think that at a purely intellectual level, it is difficult to do that" (Hogrebe, 2017, 00:33:34).

For the above reason, we think there is merit, and a need, for going through the complete processes of the SDCs to generalize as much as possible and analyze commonalities as well particularities with a very conscious effort of not sacrificing validity. We hope this can provide a picture of the aspects with are important for the SDCs' ability to innovate strategically, apart from the ones already mentioned.

Mystery to Vision

Generally, the SDCs seem to follow a pattern that has previously been described by Kees Dorst: they consider a situation, imagine a better situation, and act to create the improved situation (Dorst, 2015, location 83-84). In our words: mystery, vision, strategy and execution. Firstly, the SDCs go from "*Mystery to Vision*" as they immerse themselves into the problem and opportunity spaces and set an abstract vision for how the strategy should be. Followingly they get more concrete and ideate and experiment their way from *Vision* to a coherent *Strategy*. Lastly, they implement the strategy to finally go from "*Strategy to Execution*".

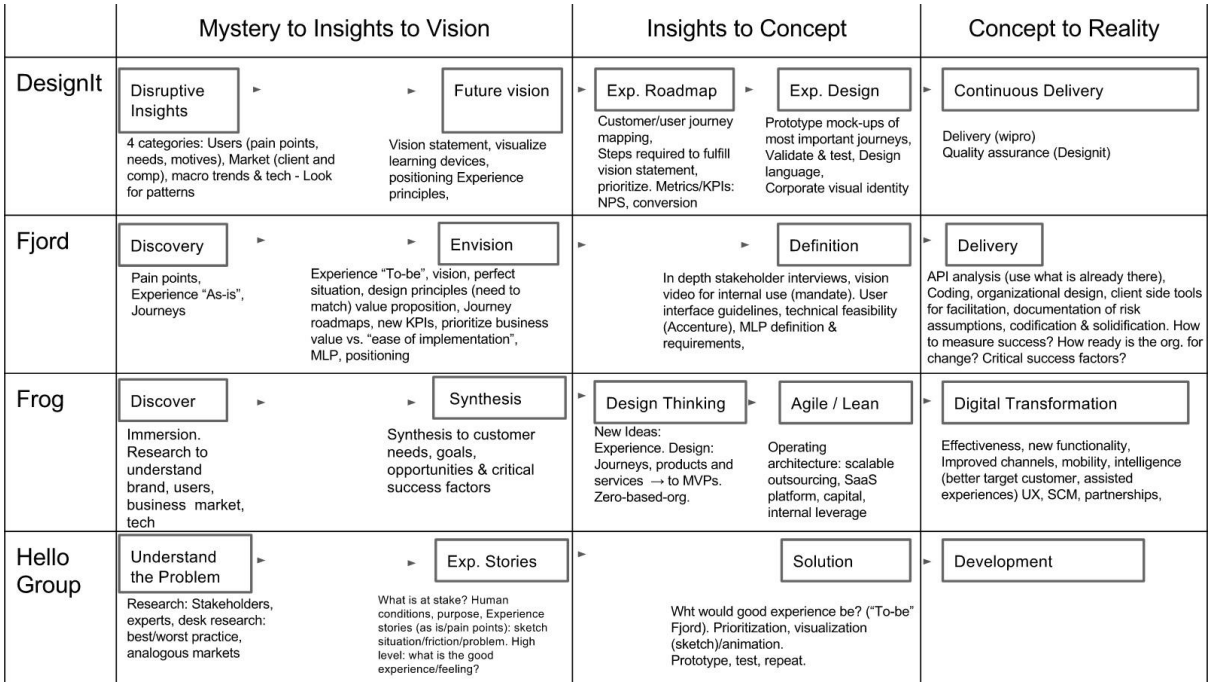


Figure 10. (SDC's design processes)

Multidisciplinary Design Teams

The SDCs assign teams that together work with a client from research through to implementation. The size of the teams seems to vary between four to eight people (Holstein-Homann, 2017, 00:10:59). According to Holstein-Homann, as a strategic design consultancy, their diversity in domains, professions and capabilities is important for their ability to innovate strategically. Their diversity is also what separates them from design firms without a strategic focus (Holstein-Homann, 2017, 00:05:47). In our interview with Holstein-Homann, she went through what some typical professions in a SDC are: anthropologist and ethnologists specialized Understanding people or users. Apart from that, designers, but within different domains. Digital Designers and Product Designers are designing digitally or physically . UX designers design flows, mainly digitally, but also physically. Service Designers come from a digital design or social science background and often have a cross-channel focus: "How should the overall experience we want to develop look like?". These people also need to be systems thinkers. They employ Brand Designers who are focused on creating a strong brand platform, Creative Technologists who know how to code. Project Managers who manage one or multiple projects for the same client and finally Business Designers or Strategists, who often have MBAs or a business background of some sort (Holstein-Homann, 2017, 00:05:47).

Critical Towards the Client's Problem Understanding

In the cases where the client has predefined a problem, the SDC is often very critical towards the client's formulation of the problem, as well as their understanding of the opportunity space. The

root cause to a problem is often found elsewhere than in the mere symptoms described by the client (Hosbond, 2017, 00:20:43), for which reason the SDC needs to get the right angle on the problem (Hosbond, 2017, 00:20:43; Rathje, 2017, 00.12:57). This is known as framing the problem (Dorst, 2015), or setting the problem (Riel in Martin, 2009, p.95). When framing the problem, the SDCs attempt to approach the situation with a clear mind. This seems to be very important for the SDCs ability to innovate strategically for the below reasons.

The clients tend to make assumptions, consciously or unconsciously, about its current situation due to limiting biases such as organizational inertia (Mogi, 2017, 00:12:07). This can also be a considered a reliability bias (Martin, 2009) For example, clients will often have nurtured the idea internally that a feature-packed app can solve their problems (Hosbond, 2017). Holstein-Homann says that with their process, Designit tries to take a step away from only giving form to such an app idea or other closed product briefs, and instead open the clients' mindsets to consider more radical and strategic changes (Holstein-Homann, 2017, 00:52:14).

This looks to be a fitting attitude in a time where contemporary problems tend to be uncertain, incoherent and ill-defined with ambiguous causes and effects, a phenomenon that continues to change as potential solutions are devised, and no clear indication as to when the problem is 'solved' (Rittel & Webber, 1973; Buchanan, 1992; Riel in Martin, 2009, p. 94-95; Dorst, 2015), commonly referred to as wicked problems (Rittel & Webber, 1973; Buchanan, 1992; Martin, 2009). With wicked problems, finding a solution should not be the only, nor the primary focus. Deep attention needs to be paid to understanding the nature of the problem itself in all its complexity (Riel in Martin, 2009, p. 95), especially when concerned with strategy. When innovating and crafting on a product level, the problem is normally well-understood or at least the client thinks so. However, when the potential subject of change is the client's strategy, the problem to be found and targeted is most likely systemic and involves many different stakeholders. In addition, understanding the bigger picture "as it is", including threats and opportunities outside the client's immediate context, is important when attempting to form a valid strategy that will have to persist as many years as possible (Rathje, 2017,00.12:57).

Sources of Insight

Link into sources of insights. The SDCs have different names for their initial phase: "Discovery" in Frog and Fjord (Frog, 2017; Rathje, 2017), "Disruptive insights" at DesignIt (DesignIt, 2017), and "understand the problem" at Hello and 1508 (Hosbond, 2017; Bundvig, 2017). According to Rathje

from Fjord, the first phase is all about getting a deep understanding of the situation “as is” (Rathje, 2017, 00:12:57). This corresponds well with the process of Liedtka and Ogilvie, which starts with the question “what is?” with the purpose of exploring the current reality (Liedtka and Ogilvie, 2011, p. 31). Many different sources of insights can help to deepen an understanding of the current reality, including the problem. However, we have seen general similarities in the sources the SDC’s include in their research.

Based on analysis, we have chosen to form three categories of sources of insight. Firstly, all the SDCs still emphasize the importance of human-centered research to gain insights into what existing or new users value. Secondly, working on a strategic level requires that the SDCs also are attentive to the capabilities of the client, especially related to innovation, their position in the market/industry and best or worst practices as well as industry trends nationally or internationally. Thirdly, SDCs tend to include more distant sources and try to use foresight to understand potential threats and opportunities, in the form of new BMs, new technologies or new cultural paradigms. These aspects are very likely to be important for the future strategies of the client.

Human-Centered Research

SDCs all state that taking departure in human-centered research is very important to gain a deep understanding of current users or new users they want to target (Holstein-Homann, 2017, 00:23:45; Hosbond, 2017, 00:04:08, Rathje, 2017, 00:12:57). In this aspect, the strategic design process bears close resemblance to the traditional product design process (Design Council, 2007).

Firstly, the SDCs will likely gather whatever quantitative data that the client might have. For example about: “Who is churning? Which customer buys what? What is the relative consumption of different segments and who do we make the most money on?" (Holstein-Homann, 2017, 00:24:19). However, observations and interviews conducted by anthropologists or other social scientists serve as an even larger part of the knowledge foundation for user insights.

An interview could have the power to capture some of the more ‘fluffy’ insights which the quantitative data cannot, and answer questions such as: “Why do the user make this decision and what is the actual reason why they churn after six months?” (Holstein-Homann, 2017, 00:25:10). In one case, Designit conducted 72 qualitative interviews, partly with users and partly with internal stakeholders (Holstein-Homann, 2017, 00:24:19). For each interview, they make summary pages mapping specific pains, needs and opportunities in each interview (Holstein-Homann, 2017, 00:26:17). By observing the people, the observants can infer the intangible meaning of their

experiences and uncover discrepancies between perceptions and reality (Stanford d.school, 2010). A social scientists could ask: “Please show me how you use this creme” and discover that some use a face cream for their hands, even though the company is certain that users will use it for their faces (Nejrup, 2017, 00:22:30).

Insights from interviews and observations are also used to map user journeys, which enables them to identify and analyse the customer touch points (Rathje, 2017, 00:16:20). A full journey could be: becoming aware of the product or service, deciding to buy it, how to buy it, bring it home, open it, and start using it (Papadopoulus, 2016). At Fjord, the mapping happens in a so-called rumble, where all stakeholders and users are gathered in one room to describe and visualize what is wrong with the current experiences “*as is*” (Rathje, 2017, 00:17:37). Visualizing the full journey is meant to enable the identification of problems in the form of pain-points or friction and opportunities in the form latent or untapped needs. At the end of the day, such opportunities should be turned into stickiness or loyalty from the user (Holstein-Homann, 2017, 00:12:12).

In general, this part of the SDCs’ research do not seem to differ from the human-centered processes reviewed in the lit review, and according to Hogrebe, this is the most sacred type of research for Frog (Hogrebe, 2017, 00:40:35). In Stanford d.school’s human-centered design thinking process, the first phase is to ‘empathize’ (Stanford d.school, 2010), which implies a very strong focus on gaining empathy for the people you solve a problem for. However, Verganti (2009) argues that businesses must look beyond customers and “mere adoption to evolution of socio-cultural models” because it can lead to incremental improvements instead of radical innovation (Norman & Verganti, 2012; Verganti, 2009). Similarly, if the company come to focus too much on its most demanding customers, it can set the company on a sustaining trajectory of overshooting the needs of the mass market, which opens up for disruptors (Christensen, 1997).

Holstein-Homann acknowledges this same point and says: “The insights that you are able to generate from users is limited in its long-term predictability. That is why we use technology insights to create guesstimates on how the future looks like in, 3-5-10 years from now” (2017, 00:57:17). Therefore, a strategic design process needs to draw on a broader spectrum of sources. The names that the SDCs use for their first phase, especially “Discover” and “Disruptive insights”, imply that insights can come from many additional sources; hence their focus expands beyond the user. In addition, it is important to note that the job of SDCs is no longer simply crafting and styling a product that the user will desire. Instead, they deal with wicked mysteries that tend to be systemic and

involve many more stakeholders. As Ulrik Hogrebe says, they now “are affecting a bigger and wider ecosystem of all sorts of [stuff] in there” (Hogrebe, 2017, 01:03:21).

Business & Industry Research

Throughout the research phase, the SDCs continue to immerse themselves in the client’s context to engage with major stakeholders, get a good understanding of the current vision of client business objectives and assess current capabilities and learning needs (Hogrebe, 2017, 00:39:14; Hosbond, 2017, 00:04:08), as well as understanding the client's competitive position by scrutinizing previous solutions, looking at their current BM and their strengths and weakness relative to competitors (Holstein-Homann, 2017, 00:22:28).

Competitive Position Within Client Industry

The SDC will aim to understand the client’s position, their strengths and weakness, relative to competitors (Holstein-Homann, 2017, 00:22:28). This part follows the PMP View emphasised by Porter (Afuah and Utterback, 1997), and be considered a bit untraditional of a focus for a design consultancy. Moreover, they benchmark both nationally and internationally, for example by mapping competitors’ user journeys (Hosbond, 2017, 00:04:08). This is to compare the experience the client organization provides to those of its competitors. At Hello they also map out bad customer journeys that may exist in the industry. Realizing why it is bad might create an insight (Hosbond, 2017, 00:04:08).

The SDCs are also conducting product or content audits (Rathje, 2017, 00:16:20). However, considering previous and existing solutions or earlier attempts involves the risk of having those in mind, when trying to come up with novel ideas. This is what we have described as the inside-out perspective. Nonetheless, it is still important to understand why those solutions, as they are, do not work optimally or why earlier attempts have failed (Hogrebe, 2017, 00:53:52). Kees Dorst also argues that in order to create newness, the designer has to know the thought process that led to the design of current products and to the current problem situation (Dorst, 2015).

Assessing Capabilities and Identifying Learning Needs

As earlier mentioned, the traditional design thinking process only includes one double diamond (focussed on crafting a product or service), while Hogrebe from Frog states that they now have up to seven tracks of double diamonds, running in parallel to the product/service design. The additional tracks can be considered areas of improvement where the SDC will take on larger tasks such as how to manage stakeholders, improve revenue, change organizational design, and the internal decision-

making processes of the client organization (Hogrebe, 2017, 01:05:57). When Hogrebe enters a client organization, he is mentally checking off what are the strategic needs, the user needs (assessed with the human-centered research), and finally what are the learning needs within the organization (Hogrebe, 2017, 00:45:00). Rathje poses related questions (Rathje, 2017, 00:16:20).

Other SDCs emphasize the importance of assessing current technology capabilities and systems (Tolj, 2017, 00:27:34; Holstein-Homann, 2017, 00:31:55). This is particularly important when the SDCs work on a holistic and strategic level, because whatever they come up with must fit into the organization, also technologically. In addition, much of the SDCs work tend to be technical, many apps are developed and there is much talk about digital transformation, which Frog especially specializes in (Mogi, 2017).

Looking at capabilities and resources probably remind most people of the resource-based view (RBV) within strategy literature (Barney, 1991, Teece et al., 1997, Eisenhardt etc.), which holds that the competitive advantage and general performance of the firm is determined based on the distinctiveness of the firm's strategic capabilities (Barney, 1991). However, this is generally a very static view, which does not address changing environments. Rather than the RBV, the SDCs seem to adopt a dynamic perspective to capabilities (Teece et al. in 1997), since they highlight words such as agility, mobility and lean (Mogi, 2017). SDCs assess the capabilities and resources of their clients, not only to activate them as competitive advantages, but also to ensure that the client is fit to withstand a fast-changing environment, innovate dynamically and strategically adjust. For this purpose they need for instance a good decision-making process to renew competences to respond to shifts in the business environment (Teece et al., 1997, p. 515).

Assessing the client's learning needs can also be done through analysis of past failed design projects. What the SDC might find are organizational 'antibodies', or management issues which resulted in an unsuccessful adoption of a strategy (Hogrebe, 2017, 00:53:52). In such instances, Hogrebe also considers it his job not just to push a new concept through, but to also leave a lot of knowledge residue behind. This could be understood as tacit knowledge build-up about design methods, which is an invaluable element in innovate conceptualization and practice, according to Heskett et al (2017). With tacit, as well as coded, design knowledge, the SDCs tries to reduce the risk of friction in future collaboration with the given client. This is done largely by involving the client in the rest of the process, innovating together and educating them about methods, tools etc. (Hogrebe, 2017, 00:53:52).

As the world becomes more digital and interconnected, industry boundaries become blurry, designers can often need to look further than the client's immediate context to understand potential threats and opportunities and to arrive at an innovative solution (Dorst, 2015). We have found that our interviewees is very aware of the same issue.

Blurry Industry Boundaries

Besides being Strategic Design Director at Designit, Linda Tolj teaches an MBA executive course where she does an exercise about customer expectations. First, she asks the executives to identify the biggest pain points that their customers currently experience. Upon hearing about problems from roaming costs to legacy systems, she poses a provoking question: "Now, which of these [pain points] will you be solving in the next six months?" (Tolj, 2017, 00:50:16). With every class, this question brings about a roar from the executives: "How are you expecting us to solve this when we … [various reasons]?!" When the group has calmed down again, Tolj says: "These are the people you are earning money from, this is your source of income." She continues: "Because in the meantime..." after which she shows a final slide with disrupters within different industries (Tolj, 2017, 00:50:16).

Tolj has two overall points with this exercise. One is to pay attention to customers' expectations and apply human-centered research methods, as already described. As an incumbent, you want to exceed or at least meet customer expectations (Tolj, 2017, 00:50:16). Secondly, Tolj wants to point out that any industry can be disrupted, it can come from unexpected places, and often industries do not notice it before it is too late. She paints a picture of an executive or middle manager that sits in a big machinery of a company, where things are working and the salary always comes in (Tolj, 2017, 00:52:45). This is the picture of a company that feels no urgency to make major improvements or changes to their strategy (Tolj, 2017, 00:52:45). Followingly, Tolj used a very illustrative analogy to point out how the industry can be just as negligent to possible disruptors or opportunities. In her course, she usually shows a picture of a rugby team that is huddling up. Then she says: "Most traditional industries are like this: You are actually buddies because you are trying to keep the others out and then you are looking at each other and copying each other (Tolj, 2017, 00:52:45). While the industry acts like this, the real world is moving on outside and the customers "could just be walking by to someone else" (Tolj, 2017, 00:52:45).

Tolj finds it very important that her MBA students as well her clients get a real sense of urgency. "[Banks] make money from their customers, so how can you down prioritize them in a time when

industries are blurring and anyone can get in? Anyone could be my bank. The real banks are just a vault to me. I don't care, I don't want their services" (Tolj, 2017, 00:51:43). This comes back to our earlier point that clients as well as SDC has to arrive at the job-to-be-done. Why do users want and need a bank? According to Tolj, they just want a vault. This could be an insight drawn from the human-centered research. Followingly, banks should be asking themselves: "Is anyone solving this job in a different and a better way than us?" For this exact same reason, SDCs put a strong emphasis on looking beyond industry boundaries in their research as well as generating general insights that apply across industries - an outside-in perspective (Tolj, 2017, 00:29:44). All the SDCs highlight some aspect of blurry industry boundaries (Tolj, 2017, 00:51:43; Hosbond, 2017, 00:04:08; Toldam, 2017, 00:27:11; Hogrebe, 2017, 00:21:01) and apply this thinking in their search for insights, while also trying to affect the client organization.

The SDCs address the issue of blurry boundaries to open the eyes of their clients and induce a sense of urgency. This seems to be a prerequisite for working with strategic innovation. In addition, searching across boundaries, can be a way to sense general insights, macro trends.

Macro trends

A general, distant, and future-oriented research perspective helps the SDCs identify opportunities for radical innovation to potentially get ahead of disruptors, account for rapid changing environments and elevate their work to a strategic and holistic level on which the complexity and richness of wicked problems is captured. For those reasons, it seems to be of high importance that the SDC (and the client) have the ability to see, or foresee, new tendencies across industry boundaries.

Rune Toldam, Partner and Creative Director at Bespoke, says that they attempt to spot societal chances to come with a practice they call Strategic Foresight. To do so they scan for new tendencies within the social, technological, ecological, economic and political dimensions (Toldam, 2017, 00:31:49). Designit has a similar practice, but refers to the trends that they spot as macro trends, implying that can be within many different dimensions. However, they have an additional research category called technology insights that also seems to be future-oriented. Relevant changes for clients could be macro-economic, political (e.g. changes in legislation), or decreases in the supply of certain commodities. Such changes could pose problems or threats to the business of a client. However, the macro trends highlighted by the SDCs were mainly opportunities for strategic innovation, and can be grouped within three categories: New BMs and practices, new technologies

and new Cultural Paradigms. These three types of changes all seem to be powerful sources of insight for strategic innovation.

Throughout our analysis, it became apparent to us that the SDCs rely heavily on their macro-level knowledge for coming up with strategic innovation to solve the problems faced by clients. The SDCs can bring knowledge from one industry to another, except when faced by restrictive clauses (Holstein-Homann, 2017, 00:50:10). This knowledge would normally be out of reach or regarded irrelevant, and Boztepe refers to it as a "knowledge brokering capability" (Boztepe, 2016, p. 8). This was also emphasized as a critical ability by Frog Design, Hello, Bespoke, and Designit (Hogrebe, 2017, 00:21:01; Hosbond, 2017, 00:10:27; Toldam, 2017, 00:27:11; Holstein-Homann, 2017, 00:22:28).

New Business Models and Practices

The SDCs frequently referred to copying the BMs and practices of startups as opportunities to innovate. In our research, we have found that many of the SDCs look to other industries to examine best practices and get inspiration for new BMs and practices which their client can adopt (Holstein-Homann, 2017, 00:31:55). We believe this can be compared to the practice of looking to analogous markets. Analogous markets are defined as "[...] a market that is analogously related with the focal target market in terms of sharing similar relational characteristics of the problem" (Franke et al., 2014, p. 1064). For example, was 1508 undertaking a project for a labor union and would at a meeting ask: "Unions are membership-based, who is in a similar membership-based situation? Scouts, fitness centers etc." (1508, 2015). They would print out the online touch-points of these companies in analogous markets and analyse how they solve challenges such as the on-boarding experience. This provided inspiration and insights for their own project. The method of searching in analogous markets has been found to increase novelty in solutions. The greater the analogous distance, the higher novelty but also lower potential for immediate applicability (Franke et al., 2014). In the analogous markets exercise, the SDCs and clients get to stretch their imagination and creative ability to integrate abstract and seemingly distant ways of solving the 'same' problem.

In addition to looking at analogues markets, the SDCs also try to pull inspiration from disruptors that succeed with novel business practices or a completely new BM. To best do so they use *what if* questions to put the client organization in the hypothetical situation of a disruptor or an organization that starts from zero. Frog refers to the latter as zero-based organizations - "what if you started from zero, how would you do? Or if you were a scalable start-up?" (Tolj, 2017, 00:28:48; Bundvig, 2017, Mogi, 2017, 00:12:20), or a tech savvy venture capital firm (Mogi, 2017, 00:12:07),

what would you do? These type of questions are also used later when the SDCs envision a better future with the client.

New Technologies

In the age of exponential technologies, insights driven from developments in technology are paramount. The SDCs often talked about significant technological changes which create opportunities to generate value. An exponential technology is a technology where each year the power and/or speed are doubling, and/or the cost is dropping in half. Examples include computing, additive manufacturing, and nano technology which builds on radical innovation (Kurzweil, 2005). These are powerful technologies which enable companies to grow and move at higher speed than companies who have slow and outdated legacy systems. Every one of our respondents mentioned technology as a source of insights during our interviews. Rathje from Fjord explained how he creates "technology roadmaps" as for how the current technological situation is (Rathje, 2017). This allows him to spot developing trends.

Linda Tolj from Designit and Rathje from Fjord mentioned sound and voice overtaking text as the new medium for communication between customers and businesses (Rathje, 2017, 00:47:58). Tolj argues that we are now entering a new paradigm where we can interact with artificial intelligence through chatbots embedded in our products and services (Tolj, 2017, 00:30:21). Examples are Apple's Siri, Google Home or Amazon Echo. This is what Verganti describes as a technology epiphany because it involves a radical technological innovation and radical meaning innovation (Verganti, 2009). Rathje explains how increasingly more companies get an actual voice through these technologies, and companies now need to decide upon how their brand should be communicated through voice: "How do they talk, how is their mood?" (Rathje, 2017, 00:47:58). These shifts in technology can represent both a threat and opportunity for the SDCs clients. Not intercepting these trends can deem solutions irrelevant within a very short timeframe.

New Cultural Paradigms

Important societal shifts are what Verganti describes as New Cultural Paradigms, which involves a change in the fundamental meaning users attribute to a situation or a given designed artifact, or even a business. When businesses manage to spot such a change and innovate accordingly to tap into latent or emerging needs, it is called meaning innovation (Verganti, 2009, p. 55). Many of our interviewed SDCs, especially Designit and Bespoke expressed that they look for trends across the globe which can help them identify new Cultural Paradigms (Tolj, 2017, 00:31:46; Holstein-Homann, 2017, 00:25:39). Bespoke uses a question like: "What is the future of urban living?" and from this

question they develop holistic knowledge which can guide their projects (Toldam, 2017, 00:09:13; 00:18:44:20).

Designit and Fjord use a practice for spotting new cultural paradigms, which they call “mirrored expectations” and liquid services respectively (Holstein-Homann, 2017, 00:57:51). Linda Tolj provides an example of how it works. She has noticed how Web 2.0 has lead people to seek more influence over their products and services (Tolj, 2017, 00:31:46). An example could be crowdfunding sites like Kickstarter.com, where the customers have the ability to become part of the development process and crowdfund projects which they would like to see become reality. In order to be able to generalize from these crowdfunding websites, she asks herself: “What is the drive behind it?” or “what is the underlying expectation?” and arrives at the conclusion that people want to influence their products and services (Tolj, 2017, 00:31:46). She mirrors these expectations to other services, and asks “How much would I be willing to pay for my Netflix subscription, if I could pledge money for another season of my favorite show? (Tolj, 2017, 00:33:10).

Generalizing from such observations has lead Designit to accumulate more than 100 cultural paradigms, or “macro trends” as they call them, in a bank for inspiration in future projects (Holstein-Homann, 2017, 00:25:34). Bespoke similarly accumulates their cultural paradigms in Scan cards which can provide inspiration for future projects (Toldam, 2017, 01:00:58). Identifying new cultural paradigms is basically about spotting “seeds” that will turn into clear trends in the future. However, the future can easily be obscured by the individual who is bounded by the existing cultural paradigm (Verganti, 2009, p. 54-55). Verganti therefore points to “Interpreters” as another source of spotting these seeds, because their guesses are likely to be more precise than others (Verganti, 2009, p. 116). Correspondingly, many of our interviewed SDCs mention to engage with experts within the fields of which they research (Holstein-Homann, 2017, 00:23:45; Hosbond, 2017, 00:04:08; Toldam, 2017, 00:55:18). Interviews with experts or visionaries can enable the SDCs to make qualified guesses about the future, which is key when innovating strategically since it requires long-term thinking (Holstein-Homann, 2017, 00:57:17).

In this section, we have seen how SDCs gather insights from diverse sources far away from their client’s immediate context in an attempt to foresee the future. The SDCs use these insights to ensure relevance in a digital world where disruption can come from any direction and happen at any time. Similarly, the world presents incumbents with numerous opportunities for creating value and new markets.

An Abstract Model of What Is

Sensemaking - Building Patterns and Themes

With the multitude and variety of sources of insight we have analyzed until now, it would be natural to fear that the SDCs become overwhelmed with information. Therefore, the SDCs start to synthesize their research to gather patterns and universal themes and create an abstract model of what is (Hogrebe, 2017, 00:38:14; Tolj, 2017, 00:04:50; Toldam, 2017, 00:37:04). This can be described as sense-making, as put forward by Klaus Krippendorff, or what Kees Dorst calls *theme analysis* (Krippendorff, 1989; Dorst, 2015). According to Dorst, "themes are the sense we are able to make of a situation when we approach it openly, without prejudgment" (Dorst, 2015, location 1366). It is important to note, that due to the fluidness of the design process, sensemaking happens continually and tacitly, also before this stage.

In their strategic foresight approach, Bespoke makes extensive use of visualizations. According to Toldam, you need to 'create' your data in a way so that you can look at it, or what he calls "building blocks" (Toldam, 2017, 00:37:04). This enables them to place 'building blocks' next to one another physically, give them different names, possibly identify a pattern and then look at what a given pattern tells them. They sometimes iterate that process as many as ten times. You need to be open to moving the "building blocks" around again and try new combinations (Toldam, 2017, 00:37:04). Dorst says that at best, such an approach can allow for a simplification, to distinguish a set of significant experiences and a deeper layer of meaning that underlies many observations (Dorst, 2015).

Visualizing like Bespoke can also ease the communication in multidisciplinary teams and activate different interpretations that they may have. Moreover, Hogrebe finds it very important that a multidisciplinary team is gathered from start to end, because whatever you arrive at in the sense-making process needs to make sense 'through the eyes' of different disciplines and from different perspectives (2017). In this sense, visualizations can also act as boundary objects that for important discussions and negotiations to arise, what can also be called 'trials of strength' (Carlile, 2004). Artifacts can act as mediums that enable different arguments to be formed. Followingly, a negotiation could arise between different disciplines such as designers, technologists and managers who each represent a different aspect, respectively the human element (desirability), the technological element (feasibility) and the business (viability). These are the three dimensions that Tim Brown says need to reconcile in order to design successful innovation (2009).

In addition, visualizing can also enhance one's own thought process. Toldam says: "it is about getting it out of here (points to his head) and stick it onto a wall. Visualize it! It is so much easier to work with" (Toldam, 2017, 00:36:10). This can be understood as building to think, or visualizing to think (Sonalkar, 2016). As such visualizations can help you engage not only in a 'negotiation' with your team members, but also with yourself. Having a conversation with yourself through a medium can also be related to reflection-in-action (Schön, 1983), as you perform an action and subsequently let the outcome (for example a scan card) breath, while you reflect.

When Bespoke manage to make a 'simplification' or notice a pattern they make what they call a SCAN card, which is considered to illustrate a theme (Toldam, 2017). For example, Bespoke identified a pattern within transportation when they asked: "what do all of these developments have in common?" (Toldam, 2017, 00:29:23). The developments included car-sharing platforms, Uber, flexible leasing, automated cars etc. The answer was: "The vehicle doesn't matter; it is about getting from A to B" (Toldam, 2017, 00:29:23).

While Bespoke use SCAN cards, Designit emphasize the importance of creating "summary pages" during user interviews. The summary pages give them a clear idea about who exactly they talked to, what their needs and pains are, and potential opportunities that were identified during the interview (Holstein-Homann, 2017, 00:26:17). Designit could also create "personas" based on their summary pages. For example, Bespoke worked with a client called Growbox, for whom they manage to generalize about the human values of young families with kids in a certain setting. These included: collective, family-oriented, the design needed to be honest, educational and with clear origin (Toldam, 2017, 00:37:04).

Common for both SCAN cards and summary pages, is that the SDCs can use them to always trace the "breadcrumb trail" of a theme back to its source (Toldam, 2017, 00:42:39). This traceability can be of high importance if speaking to a proof-seeking manager. Lastly, according to Toldam, the outcome of the sensemaking process could be up to 12 or 15 themes. However, most likely only five of them will turn out to be truly relevant for the given case and client (Toldam, 2017, 00:56:56).

Crafting To Test Assumptions

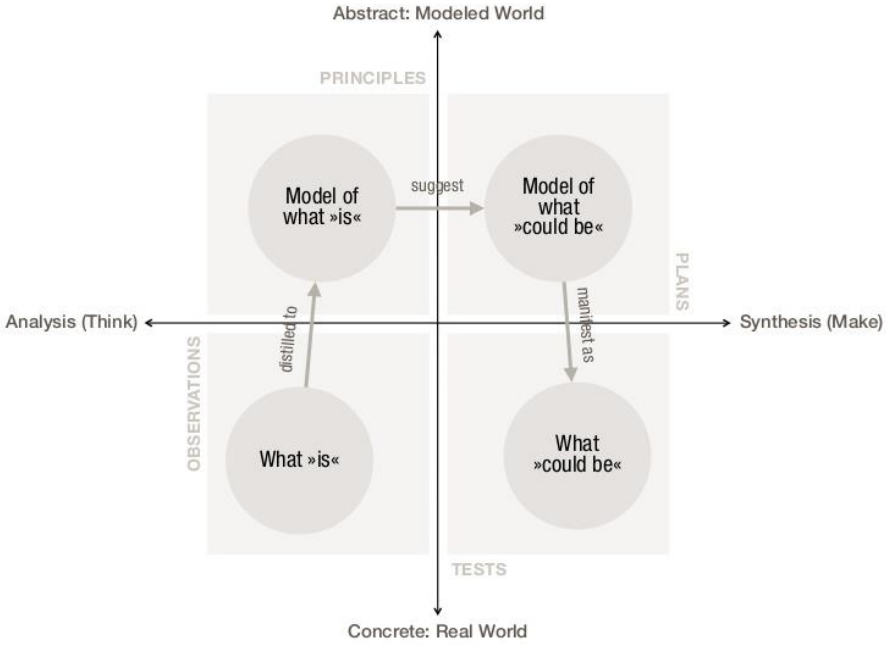
While studying the process of Frog, Fjord, and 1508, we noticed how they have started to craft at an earlier stage of the process than in the traditional design processes (Design Council, 2007). We think they do so to validate assumptions they may form during the sensemaking process. For example, 1508 sensed a new cultural paradigm when they were doing research for a car distributor. They had

a hunch that a new cultural paradigm would make people more interested in *accessing* rather than in *owning* cars (Bundvig, 2017). To test whether this was true, Bundvig formulated a hypothesis: “we think car owners are willing to lease their cars on a short-term basis.” Then he crafted a “scam site”, essentially a fake website that gave people two options: press here to buy a car or press here to subscribe to a car service, even though the car distributor not had set up such a service. The website registered the amount of “buy” clicks each option got. Measurement is done through KPIs such as “We know this is the right way to go once 500 people have clicked “buy” and 50 % have shared the website”.

The KPI was reached, which confirmed the validity of the new cultural paradigm that 1508 had spotted. Followingly, 1508 had a better idea of what direction the car distributor should take and could engage in forming it. In this case, the hunch was based on very little analysis and a large portion of intuition, but similar assumption testing can be performed after more research. Crafting early on can ensure that the rest of project is not based on wrong assumptions. This approach sidesteps traditional research. Rather than guessing that the user wants this or society will change like that, early crafting enables the SDC to get a reality check. Even though 1508’s approach resembles prototyping, the method should not be confused with actual prototypes, which traditionally are considered ‘first versions’ of the final product (Hackney & Manar, 2015). Bundvig refers to this process as “crafting insights” or “crafting to inform the strategy” (Bundvig, 2017, 00:06:13), but we will refer to the approach as assumption testing (Liedtka and Ogilvie, 2011).

Testing assumptions with crafting early on has to be a very thoughtful exercise. The SDCs need to be conscious about not creating solution 1.0 but rather a type of artifact that will generate insights or confirm an assumption. Entering ‘solution mode’ too early can be dangerous (Nejrup, 2017, 00:26:00, Hosbond, 2017, 00:20:43). The longer you dare to stay in the problem space, the better the solution. That is what is most difficult for clients. They want to move on and start talking about solutions like: “let’s do something, let’s make an app!?” (Hosbond, 00:24:00). Entering solution mode too early will kill any good insights (Nejrup, 2017, 00:26:00). According to Hosbond, it is very often a challenging task to prevent the client employees from entering solution mode and stay in research mode, when they run workshops. Similar to focusing too much to the users, talking about solutions before understanding the bigger picture can lead to incremental and/or misguided solutions (Hosbond, 2017, 00:20:43).

Up until now, the SDCs have mainly been concerned with modelling ‘what is’, first on a concrete level by identifying insights within different areas: human-centered research, business & industry research and macro research. Followingly, by use of sense-making or theme analysis, the SDCs found patterns or universal themes in the insights. As such they went from a ‘concrete model of what is’ to a more ‘abstract model of what is’. We found that some of the SDCs have started to craft earlier in the process to test the validity of some of the themes or assumptions, which will live on in the process either as themes related to the problem or as themes related to opportunities. Following the analysis-synthesis model seen below, the SDCs slowly start to imagine how a better future could look like for the clients and its customers while staying in the abstract.



(Source Schmiedgen, 2015)

An Abstract Model for What Could be

According to Holstein-Homann, the scope of their work differs highly from project to project. In fact, it depends on their ability to map out what the problems is, what opportunities there might be and finally what a potential future could look like. After this the SDC will present their suggestion for an alternative new vision, but not until they have solidified a potential vision and a sign-off with the client, will they know what the scope of the project will be. In some cases, they may engage in strategic innovation to change the client’s vision. As said, this implies redefining their future role within the market, who their customer is, what market they should target or, potentially, create an

entirely new market. Alternatively, the SDC helps the client redefine what the means to achieving the vision should be, which can be concerned with new offerings or transforming the BM and revenue model (Hogrebe, 2017, 00:09:47; Tolj, 2017, 00:24:19). However, ideas for such changes would stay on an abstract level. Thirdly, they may sometimes just be concerned with optimizing the current user experience with an improved offering (Tolj, 2017, 00:04:50).

Experiences Rather Than Products

In all cases, the SDC's modelling of what *could* be takes its departure in the user and how to create a better experience for her or him (Hogrebe, 2017; Holstein-Homann, 2017; Hosbond, 2017). But in order to ensure that they build on their research, they work to ensure that their research materializes as criteria or principles that guide what they should build. As Mikkel Rathje says: "Without delimitations, the solution could be anything" (2017, 00:22:18). Toldam similarly says that the design process needs a creative frame (Toldam, 2017, 00:13:11). Essentially, the criteria or principles are meant to ensure that the SDC is building the *right thing*, or *the good experience* (Hosbond, 2017, 00:07:25; Rathje, 2017, 00:27:27). This is opposed to building the *thing right*, which is the focus of the SDC after the actual scope has been agreed upon. Our analysis has generally shown that 'delimitations' can take many forms depending on the SDC.

To begin with we thought that SDCs talked about criteria or principles that a certain product should fulfill, but we quickly found, that most of the SDCs have stopped talking about specific products. Instead, Designit, Hello Group, Frog and Fjord talk about complete user journey experiences and experience design. Designit talks about experience principles (Holstein-Homann, 2017) and Frog about "design principles for the experience" (Mogi, 2017, 00:19:58). Toshi Mogi says that by figuring out what the design principles for the experience should be, they get a high-level understanding of what the solution needs to look like (Mogi, 2017, 00:19:58). The SDCs' change from product focus to experience focus is congruent with the development in user value approaches described by Suzan Boztepe (2007). She states that with a experience approach, you view products (or services) merely as what enables experience and in order to create user value one must utilize design to analyse and understand every point of experience with the product(s) (or services) (Boztepe, 2007, p. 58).

Generally, the SDC try to imagine 'the good experience' based on what they have found in their research and then attach principles to that experience that can guide them afterwards. There are multiple benefits of such an approach. Firstly, it enables them to better include the human and emotional values in what they are envisioning. As Tim Brown, the CEO of IDEO says that "Although the design of an experience may [also] involve products, services, spaces, and technology, an

experience carries us beyond the comfortable world of measurable utility and into the hazy zone of emotional value" (Brown, 2009, p. 127-128).

Rather than principles, Dorst talks about frames (Dorst, 2015). In his book, he states for a frame (or experience) to really come alive it has to be inspiring and captivating, and should immediately draw forth mental images in the key people involved" (Dorst, 2015, location 1307-1309). We think this can be transferred to the idea of a full experience rather than single products. It is most likely easier to absorb for stakeholders and to gather around. Dorst continues: "Frames can often be episodic mini stories with the ability to open up a whole world of shared experiences among people. With those common narratives comes the episodic, integrative knowledge that is needed to furnish a foundation for solution ideas" (Dorst, 2015). Hello might have thought the same, because they use complete experience stories, rather than just principles imagine both the current and future experiences.

Why We Build - Experience Stories at Hello Group

Hello believes that the hardest part about innovating strategically is to first get a deep understanding of "why we build what we build" (Hosbond, 2017). They believe this big *why* is best answered by distilling insights into experience stories to create profound meaning. In experience stories, they describe a persona in a situation, then the potential friction or problem that the persona experiences in the situation and lastly, the experience that Hello wants to create is described. With experience stories, Hello makes sure that the problem(s) they have identified are not hypothetical but rather "a real problem for a real person" (Hosbond, 2017).

At the same time, the experience story is meant to ensure that the designers always have an abstract vision in mind throughout the rest of the process, that in very broad terms states the experience they want to create. The personas used in the experience story can fittingly be taken from the persona exercise earlier analyzed. Carrying insights from the research ensures that the SDCs build with meaning.

To exemplify the usage of experience stories better, we have included an example from Hello: The Cruise Ship experience story: "Two days on the cruise ship is a time filled with experiences. Guests come on board with the expectation to make the best of this time." This is known as the setting. Next follows the friction: "But we demand a lot from our guests: Remember to bring your boarding pass, remember which card was for breakfast and which was for dinner, remember whether you have paid for the dinner or not etc." Lastly, the vision for the experience that they want to create,

the “experience vision”: “A good experience would be when all of these details disappear and guests flow through the cruise ship from check in to check out.” (Hello Group, 2017). Notice how the vision leaves ample room for interpretation (Hosbond, 2017).

Experience stories help Hello to envision the overall job-to-be-done, as coined by Christensen (2003), but keeps it abstract, and leaves room for later exploring different ways to solve the job. Furthermore, Hosbond states that, “the good experience continues to remind Hello Group of the *human* insights throughout the process instead of simply focusing on functionality and aesthetics“ (Hosbond, 2017, 00:07:25). Another advantage is that experience stories are not as mechanical as classical programming user stories, in which there is no room to ask “Why?” (Klement, 2013). Instead of jumping into functionality, experience stories leave imaginative space to tell a human narrative(s).

Imagining the Future Together

They get together In some of the traditional design thinking processes described in the literature review, the design teams often wait long before they potentially engage their clients in the process. In contrast, all the big SDCs (Designit, Fjord, Frog and Hello), seem to engage their client in identifying opportunity areas and envisioning what could be early on. This is after the SDC and client has understood what problems and potential opportunities are, for example by use of presenting themes and current user journeys. For example, Fjord runs another rumble, where they again gather all stakeholders and users in one room to imagine “the perfect situation”. They call this the “to-be rumble” (Rathje, 2017, 00:17:37). Hello also does design sprints with the client where they come up with potential solutions accompanied by business cases (Hosbond, 2017, 00:15:21). Similarly, Frog and Designit engage their clients in envisioning futures.

Generally, the SDCs benefit from bringing the client in. When innovating on a strategic level, to design new offerings or transform the client’s BMs, the SDC needs the client to provide a thorough and realistic view on the client’s current capabilities, competitive, institutional frame, and their vision/business objectives (an inside-out in perspective). This might help them to align and potentially activate current competitive advantages as part of a new solution. In addition, in order to innovate strategically through alternative means to meeting the vision or redefining the vision, the SDC needs to understand ‘the existent’.

Looking for Opportunities Rather than Limitations

However, with ‘the existent’ comes also the risk of taking an inside-out perspective, which can lead to a focus on limitations and constraints rather than opportunities. According to Timothy Morey, Vice President and Global Head of Innovation Strategy Consulting Practice at Frog, traditional management consulting firms and client organizations alike often get very caught up with ”what is” and let that strongly influence their ideas for “what could be”. Frog believes that such an analytical approach easily kills ideas too soon, but worse than that, analytical approaches are usually too constraining to generate truly radical ideas (Morey, 2016). Firstly, the research phase is completed with the use of very few traditional analytical tools. Secondly, new ideas for concepts are creatively generated. And then, finally, SDCs employ more traditional strategy tools to evaluate the ideas and to get a sense of what the client needs to do in order to turn an idea into reality (Morey, 2016).

“If you start by seeing the world as a given, you inevitably end up simply tweaking it a bit. This is the mindset that benchmarks its way to mediocrity” - Timothy Morey (2016).

To get around the limiting bias, Frog is always on the outlook for inspiration that can help clients think about the future as it “should be” rather than as it is. As this thesis also shows, inspiration can come from within an industry or outside of it, be triggered by a societal trend or driven by ethnographic research of observing current or potential customers (Morey, 2016).
Therefore, the client must also be ready to change radically, or transform. This comes back to the theory of “creative destruction” coined by one of the founding fathers of innovation, Joseph Schumpeter, who holds that revolutionizing an economic structure from within takes incessantly destroying the old one, incessantly creating a new one (Schumpeter, 1943). Such radical change can be difficult to imagine if you are, as the client, bound by limiting biases. Therefore, they need others to provide an outside perspective that does not take departure in ‘the existent’ in the form of the business itself or its industry.

The most important outside-in perspective that you can get is from the user, as emphasized by Drucker and Brown (Drucker, 1974; Brown, 2008). We believe that this is also Fjord’s reasoning for gathering both client and users in rumbles to, together, envision in the future. We think this essentially enables a negotiation between both the inside-out perspective and the outside-in perspective, to reconcile human values and the creation of economic value in one future scenario. According to John Heskett, the reconciliation of these two “poles of value and values” are of utmost significance for designers (Heskett et al. 2017).

To manage and balance these two simultaneously, Frog and the other SDCs frequently apply what if thought experiments to take ideation beyond organizational inertia or myopia and the pitfall of creating incremental solutions. The zero-based organization thought experiment is brought in again. Similarly, Holstein-Homann from Designit and Bundvig from 1508 ask their clients: "If Amazon were to create a telco, how would they do it?" (Holstein-Homann, 2017, 00:32:53). Holstein-Homann and Bundvig both use digitally-born companies such as Amazon and Google as examples, because they frequently move into new markets, un-restricted due to their focus on digital and exponential technology (Holstein-Homann, 2017, 00:32:53; Bundvig, 2017, 00:29:20).

Liedtka and Ogilvie refer to this as "Pretend to be somebody else" and they add a mission to the mix such as "What if your firm was Virgin and was by nature fun, irreverent, youthful, and engaging?" (Liedtka and Ogilvie, 2011, p. 100) "How would we tackle that situation and what could we apply to our own context?", the firm should ask itself. It enables the client to challenge its view of its own industry of for example telcos. When the client goes: "We are a telco and this is how we have always done it" Holstein-Homann keeps pushing until ideas begin to emerge (Holstein-Homann, 2017, 00:32:53). Using analogies for thought experiments adds perspective to the client's situation, especially when igniting this kind of thinking with comparison to actors who excel in radical strategic innovation. Like Clayton Christensen illustrates with his Innovator's Dilemma model, disruptors can quickly surprise with a radical new idea, enter one or more industries and scale to industry dominance within a few years or even months. Examples are manifold: Uber, Amazon, Airbnb, Spotify, Netflix etc.

The same kinds of thought experiments can also be applied to actively shape the organizational design. Now, when the SDCs asks the client: "what if you were a scalable startup?", they become aware of new capabilities that could be developed, external services that could be tapped into or technologies that could be implemented. Instead of keep building on legacy systems, outdated capabilities, or the same competitive advantage as always (Mogi, 2017, 00:12:07). For a given disruptive strategy to work, it will most likely require that the client organization has such capabilities. Secondly, changing the business practices of the organization might ensure that the solution will be able to live within the organization and its institutional frame after handover. Hogrebe argues that sometimes it is about teaching the client to defeat their own 'cultural antibodies' which is often what is holding back the organization from thinking differently, i.e. innovating (Hogrebe, 2017, 00:44:43).

Future Vision

Before going into concrete solution mode, the first diamond in the Double Diamond model would conclude with a project sign-off from the client decision makers, if they accepted the product vision. Similarly, Designit reaches what they call “Future Vision”. Holstein-Homann explains that this is where expectations between them and the client are matched and not only the vision but also the scope of the project is agreed upon. In Designit’s earlier work, it was not always clear for the client that Designit could challenge their vision for the corporate-wide strategy (Holstein-Homann, 2017, 00:19:00). Later Designit has felt compelled to explicitly include the phase in their official process. Rathje similarly states that it is important to define the vision and strategy for the project to align the expectations, before moving on (Rathje, 2017, 00:27:27).

Determining the scope or vision of the project can only be done after an initial research and sense-making, since the SDC here gauges whether the client’s view of reality (and the adjusted strategy) is relevant and up-to-date. If the SDCs spot that the client faces severe problems or identify opportunities that the client could take advantage of, the project can quickly evolve from being focused on for example designing an app, to suddenly redesigning the entire corporate strategy (Bundvig, 2017, 00:06:13). Essentially, client and SDC need to agree on the frame for the project, because herein they also agree on what the problem is, what the opportunity is and how the problem may be solved or the opportunity seized.

Presenting Visions

When aligning with clients, it seems the SDCs most often present a few different things to them. Most of the SDCs boil their overall vision down to one sentence: “purpose” at Hello (Hosbond, 2017, 00:07:25), “vision” or “value proposition” at Designit (Tolj, 2017; Holstein-Homann, 2017, 00:37:07) and “value proposition” at Fjord (Rathje, 2017, 00:18:39). This sets the overall direction. The ‘one sentence’ should ideally be easily associated with their idea of the ”good experience” of the future, which is most often the entrance into discussing the scope of the project.

To illustrate their idea of the good “the good experience”, the SDCs respectively present: experience principles at Designit (Holstein-Homann, 2017, 00:28:24), experience stories at Hello (Hosbond, 2017, 00:07:25), service vision at Fjord (Rathje, 2017, 00:18:39), or principles for the experience at Frog (Mogi, 2017, 00:19:58). In doing this, the SDCs argue that providing X experience will activate user value or satisfy human values. Next is positioning - so how to differentiate? And on what market? (Holstein-Homann, 2017, 00:37:07; Rathje, 2017, 00:18:39). And equally important, how

does the experience vision relate to the current overall BM? Followed by potentially redefining KPIs (Rathje, 2017, 00:18:39). Additionally, is the question of the brand direction - where to go with the brand? (Rathje, 2017, 00:18:39).

By displaying the complete user journey of current customers, the SDC presents how the current situation looks like and portray their idea of what the problem or risks may be. “This is who your customer is now and this is how they feel about your offering. At this point of your user journey, he or she experiences pain or friction. That is *why*, you need to do something.” Alternatively, the SDC can go “this disruptor is going to take over your industry with this type of business model”. Or “this technology or new cultural paradigm will fundamentally change your business”. However, while untapped needs, new BMs, new cultural paradigms and new technologies might cause a problem or be seen like a threat for the client, they can also represent opportunities.

The visions presented can explore different scenarios for how the client organization might exploit opportunities to grow (Holstein-Homann, 2017, 00:37:07; Hosbond, 2017, 00:07:25). The vision is accompanied by the SDC’s idea for positioning: how to differentiate from competition, what market should you address, what customers? And finally, what experience principles should be activated to create value for both the user and the business (Holstein-Homann, 2017, 00:37:07; Tolj, 2017, 00:40:53). As such, the SDCs forces the client organization to ask themselves--and propose a new vision for “where do you wanna play and how do you wanna play?” (Sniukas et al., 2016, p.29), or said differently: “what should your new vision be and how will you achieve that vision to both create value your user and yourselves?”

According to Tolj from Designit, creating a new offering for an existing market is “The simplest way is differentiation from competition” (Tolj, 2017, 00:36:01). The additional benefit of presenting such a scenario is that limited proof is needed to get the client to believe in the potential in such a vision, because it's automatically connected to their business (Tolj, 2017, 00:36:01). The SDC would present a situation already familiar to the client. For example: “BMW is doing so, and is selling more to a higher price (Tolj, 2017, 00:36:01). Therefore, you should design this offering with this different value proposition. By differentiating from competition, while creating value for users, the vision is not hard to grasp for the client management. The SDC could also be a bit bolder with an innovative new experience in combination with economic rationale (Tolj, 00:04:50). Or if the main experience was fine, the SDC could suggest a new type of BM to provide the same product as part of a

subscription service, to give the customer a better experience and increase profitability by capturing more value.

The above scenarios for change can be considered strategic innovation, but they are merely concerned with how you play (Sniukas, 2016), and can deal more or less with the corporate wide strategy. Diego Rodriguez and Ryan Jacoby, two business designers from IDEO, call it evolutionary, when disrupting an existing market, or creating a new offering for existing customers. In other instances, the SDCs challenge the more fundamental aspect of a strategy, namely where to play (Sniukas, 2016), which naturally has more corporate wide implications. This implies potentially redefining the client's role within the market, their idea of who their customer is, what market they should target or potentially create an entirely new market. In many cases, this leads the SDC to suggest changes in both *where* to play and *how* to play. Rodriguez and Jacoby call such changes (a new offering for new customers) revolutionary (Rodriguez and Jacoby in Brown, 2009, p. 161).

In one case, Designit used knowledge about analogous markets to move a client into new markets towards an "unexplored" group of customers (Sniukas et al., 2016, p.29). Here Holstein-Homann gives some advice to a client bank: "[...] The barrier between industries become smaller and smaller, and a we don't think that a bank will be a bank as we know it in two years. It can be both a bank and a telco, and they also handle your data (Holstein-Homann, 2017, 00:22:45). By presenting such a situation and idea of both blurry industry boundaries as well as new cultural paradigm in which data is a valuable resource, Designit opens the client's eyes to a completely new market as a "handler of data." This is related to what Verganti has termed Meaning Innovation, basically spotting a New Cultural Paradigm--a societal change--to come and innovate accordingly to provide users with new meaning.

In contrast to the simple differentiation scenario, the more radical visions may be harder to sell (Tolj, 2017, 00:36:50), because the clients will require proof (Mogi, 2017), or because it might appear to fluffy for them (Holstein-Homann, 2017, 00:35:40). To overcome this the SDCs try to bring magic to the table by showing engaging video or tangible objects that show how an offering could look like. Holstein-Homann argues that tangibilizing the vision is important since words are highly open to interpretation (Holstein-Homann, 2017, 00:35:06). Therefore, they often make videos of their vision. This is also when it is important that the SDC explains its approach to the client: "Look, we are going to do small experiments. We got to do this experimentation and we got to be lean/agile, a learning organization, and we got to be able to adapt to the learning" (Mogi, 2017, 00:12:07). This is the way

that the SDC ensure their client that the outcome will have strategic relevance. In addition, the parties agree upon what KPIs the solution will be measured against. In many cases, the experience principles, or design criteria, formulated by the SDC often come to act as yardsticks (or KPIs) for how to judge the concepts that they followingly come up with (Liedtka & Ogilvie, 2011, p. 85). Other KPIs for the business operations may also be formulated to understand whether they progress (Rathje, 2017, 00:18:39).

All of the above is to ensure that the SDC get the necessary mandate from the c-suite in the client organization. Without the proper mandate, the best product or well-formed strategy will never live. In one of the cases from the PLUS programed managed by Danish Design Center, the CEO of Cramo and Gramstrup+CO gave a design consultancy, Permanent Beta, mandate to redefine the future of their business and chose to enter and drive the innovation process forward himself. This sent strong signal to both internal stakeholders and the design consultancy, showing that the bet was serious (Dansk Design Center, 2017b).

When the frame is agreed upon and the c-suite has given their mandate, the more concrete ideation can begin.

> "Once this [frame] has been agreed upon, the proper design process can begin, creating an outcome that will suit the future context. The client organization, which has been closely involved in envisioning the future context, will see the proposed design in light of this fresh context rather than the original one— this view makes it easier to accept quite radical designs." (Dorst, 2017, locations 1266-1269).

Vision to Strategy

In the previous phase, the design team went through extensive research to map out pain points of the users, understand the client business and identify potential opportunities and threats. On the basis of this the client has possibly bought into a new vision. In the following phase, the SDCs work to get a more concrete idea of how the means might look like: potential offerings, technologies, capabilities, BMs and revenue models, that individually can represent strategic innovation, but together form a coherent strategy.

How Might We Deliver on the Future Vision?

The following depends on what was decided in terms of scope. Designit refers to the following phase as Experience Roadmap (Holstein-Homann, 2017), Design Thinking at Frog (Mogi, 2017) and Definition at Fjord (Rathje, 2017). The purpose is to arrive at concrete and prioritized ideas, which can followingly be tested. The ideation will dependent on whether they are to design a new offering for the client or designing a new corporate strategy. We assume a case where the SDC has developed a new vision for what should be a new corporate strategy. It will most often be made up of a new experience design and a transformation of the existing BM and revenue model (Mogi, 2017, 00:12:07). Holstein-Homann refers to an experience strategy which is concerned with designing the offerings and a business strategy necessary for delivering the experience (Holstein-Homann, 2017, 01:02:28).

The business strategy involves taking a more systemic view of the business. These aspects are related to business design or organizational design. It is about checking how the experience strategy plays together with the overall business (Holstein-Homann, 2017, 01:07:08). While the experience is mainly concerned with a satisfaction of human values, the business strategy is concerned with enabling the experience and maximizing economic value. To innovate strategically in a successful manner, it is important that the two go well together (Holstein-Homann, 2017, 01:02:28). An experience will not come to live if there isn't any business model for it (Holstein-Homann, 2017, 01:07:36). This argument is congruent with what several scholars argue about the utilization of design in a strategic manner. Human values and economic value need to be reconciled (Heskett, 2017). In order to win, you must create both user value and business value (Sniukas et al, 2016, p. 166).

The reconciliation of the two in the ideation phase is largely enabled by the SDCs' multidisciplinary teams (Tolj, 2017, 00:37:53). Some team members, often the service designers, tend to focus on the human values by delivering a good experience. "They don't care if someone makes money, they don't want to think about money" (Tolj, 2017, 00:37:53). Considering the Venn diagram earlier described, they ensure and will often argue for the desirability and the usability of the offerings. At the same time, business designers are more concerned with creating economic value and transforming businesses, for example Linda Tolj, who told us: "For me I also have a drive to change industries and to change markets, and get companies to think about their business in a different way" (Tolj, 2017, 00:37:53). Furthermore, the SDCs were all engaged in digital work. Therefore, they employ creative technologists that look into different technologies that potentially can empower the

SDC and client to reconcile human and business value. This diversity in professions and backgrounds helps the SDCs to integrate all three perspectives into the coherent strategy.

Let's Get Real

Throughout their process, the SDCs visualize a lot, and this phase is no exception (Holstein-Homann, 2017). During our visits, we saw entire walls filled with colorful post-its that represent ideas that easily can be moved around and recombined. According to Liedtka and Ogilvie, the ideas act as building blocks that are to be put together into concepts (2011, p. 104). These ideas or insights can be concerned with many different areas of the new strategy that is to be formed, but many of them are attached to user journeys, which act as the main guidance for coming up with concrete concepts for the experience. In the problem space, the SDCs mainly mapped user journeys to identify pain points, frictions, and looked at worst and best practices, but they have also developed a few abstract user journeys as they *should* be to follow "the good experience". Throughout this phase and in the rest of the process the SDCs say that they continuously work with these user journeys to "come up with ideas" (Hosbond, 2017, 00:10:27), "to show how a customer journey could be" (Holstein-Homann, 2017, 00:44:35), "to identify the needs and innovate" (Mogi, 2017, 00:06:29), and "to get ideas on how it could look in the future" (Rathje, 2017, 00:17:37). As such, it also acts as the common point of departure for SDCs' concrete ideation (Holstein-Homann, 2017).

The user journey approach differs from the brainstorming exercise for idea generation, which Liedtka and Ogilvie proposes as part of their process (2011). Brainstorming in itself can be a great tool for coming up with various ideas, visualize them and link them together. However, Liedtka and Ogilvie suggest the usage of design criteria when brainstorming, as opposed to complete experiences. An inherent problem with brainstorming with no clear frame is that you quickly lose the sense of why (as emphasized by Hosbond) you are building a given solution. What the SDCs, and especially Hello Group, do by developing an experience vision before brainstorming, is to make sure never to forget the human element (values, the friction, the pain points). Without such a guide, a brainstorming session quickly turns into a list of technical features (Hosbond, 2017). "Understanding customer needs is attained by focusing on the objective to be achieved, the outcome to be attained, the customer experience, and the process the customer goes through in order to come to this outcome" (Sniukas et al., 2016, p. 37).

Designit, Frog and potentially also others of the SDCs include not only the view of the customer, but create holistic user journeys by including the perspective of multiple users within the same

experience (Holstein-Homann, 2017, 00:40:39; Mogi, 2017, 00:06:29). Designit make a full mapping of the customer journey, but also for the B2B customers and even the client's internal account managers: "Orientate, order and get and all the other steps there are in a customer journey. Primary user, B2C, B2B, account managers, retail customer service." (Holstein-Homann, 2017, 00:40:39). Heskett et al. argue that ensuring acceptance to users at all levels is determining for market success (Heskett et al, 2017 p. 166). This is backed up by Sniukas et al. who say that: "Only by creating value for a multitude of stakeholders does your company have the potential to be successful" (Sniukas et al., 2016, p. 29).

As said, Designit refer to the current phase as "experience roadmap", because the abstract experience journey evolves, gets updated and is made more concrete, as the SDC ideates and learns (Holstein-Homann, 2017, 00:39:03). Along the experience is a series of touch-points across devices that will be imagined as services, products, digital interfaces or potential capabilities necessary to deliver these. It is concretized, how each of these should be (Holstein-Homann, 2017). Then a prioritization takes places to find out what touch points need to 'come alive' first, hence which ones are the most important. According to different parameters, Designit rate them in terms of whether they provide the "the good experience". Each touchpoint needs to live up to the previously established experience principles (Holstein-Homann, 2017, 00:28:24).

Either before or after the prioritization, concrete ideas for minimum viable product (MVP) are formulated for touchpoints or complete journeys, which are going to be tested (Mogi, 2017, 00:06:29; Holstein-Homann, 2017, 00:41:50). We explain further what a MVP is later in the thesis. At Designit they define different release stages for a touchpoint or journey (e.g. release 1, 2 and 3), and identify must-wins among the MVPs (Holstein-Homann, 2017, 00:41:50).

Business Design

While concrete ideation around the designed experience takes place, the SDCs will consider whether the design makes sense in terms of the existing BM or a new BM (Holstein-Homann, 2017, 00:12:06 & 01:07:08). Doing this, the SDCs take a systemic view on the business as emphasized by many scholars (Brown, 2009; Schmiedgen, 2013, Sniukas et al., 2016). This is particularly important when the SDCs are involved in transforming the whole client business. Holstein-Homann refers to this as business strategy and business design (Holstein-Homann, 2017, 01:02:28), while Hogrebe talks about a multitude of 'tracks' that run in parallel with designing the experience, most of which are

concerned with the organizational design (Hogrebe, 2017, 01:05:57). One of the additional tracks is concerned with maximizing revenue, or the revenue model (Hogrebe, 2017). According to Sniukas et al., the revenue model is one of the strategic components you can innovate (Sniukas et al., 2016). In addition, taking a holistic view on the whole client business enables the SDC to figure out whether the design will fit into the institutional frame of the client business, fit existing capabilities and if new capabilities have to be build (Brown, 2009).

The above-mentioned is primarily the job of business designers and strategists. Tim Brown states that business designers can bring in a series of analytical tools like portfolio theory and prospect theory, and can help design teams to think responsibly about constraints, even as designers test those constraints as a project moves along (Brown, 2009, p. 161). Technology is the responsibility of both business and service designers. Adding to the 'magic' or desirability potentially created by the other designers (Tolj, 2017, 00:22:50), the three dimensions should together make up a good innovation outcome (Brown, 2009). While accounting for all three dimensions is ideal, the SDCs put prime importance to always remember both the satisfaction of human values and the creation of economic value (Rathje, 2017, 00:25:53). According to our interviewees the business designers and strategists are often guided by canvas tools such as the Business Model Canvas (Osterwalder & Pigneur, 2013). According to Holstein-Homann, her colleague Danny, a lead business designer from Designit in Tel Aviv, is a self-declared business model canvas 'evangelist' (Holstein-Homann, 2017, 01:06:48).

While Designit's prioritization exercise described above mainly was concerned letting the good experience come alive, the business designers and for example creative technologists engage in the prioritization with a focus on business viability and feasibility. In Tim's Brown book Change By Design, he mentions an example in which a business designer at IDEO evaluates alternative revenue streams for e-banking concept to prioritize them (Brown, 2009, p. 161). Similarly, Mikkel Rathje, business designer at Fjord, told us that he often prioritizes concepts on a two axes diagram with economic value on one axis and ease of implementation on the other. This enables the prioritization of those concepts with high economic value and easy implementation, separating out the "low hanging fruit" (Rathje, 2017, 00:18:39). Obviously, this will often happen in a collaborative process with the rest of the design team (Brown, 2009, p. 161).

Business designers need to think about rationalization and effectivization (Holstein-Homann, 2017, 00:12:06.29). Tolj states that she works a lot with Value Propositions, with which she brings the

economic rationality into the project (Tolj, 2017, 00:15:31). However, at the same time she tries to include customer-orientation through the following question: What are the three things that you as a customer at the end of the day will feel if you own this product or use this service? (Tolj, 2017, 00:10:48). She once led a project at Sony Ericsson with their first compact touch-phone for which she defined the value proposition as: 'pocketable' and ‘one-handed’. To her delight, she later overheard a conversation about the phone between two people: One person asked: "So what do you like about this phone?" To which the other person said: "Well, I can have it in my pocket and when I write I can do it using only my thumb" (Tolj, 2017, 00:12:25). That for Linda Tolj, is a perfect value proposition. It seems like for Tolj, the value proposition (VP) can be considered the rationale for both satisfying human values and creating economic value for the client. Rathje from Fjord sees it a bit differently. He thinks that the value proposition is mostly on the business side and needs to be matched with the design principles: “How do the design principles fit the value proposition we are making? Can they work together? If not, then we are going off the rails.” (Rathje, 2017, 00:24:30).

For both Tolj and Rathje, it is very important to merge economic rationale with a good experience (Rathje, 2017, 00:25:53; Tolj, 2017). This is a point that has also been emphasized by Jan Schmiedgen, an innovation strategist and user evangelist. He illustrated the merging with a business model canvas where “the good experience” and economic value come together in the middle, where the value proposition sits. One side is concerned with value creation while the other mainly is concerned with value capturing (Schmiedgen, 2013, p 25).

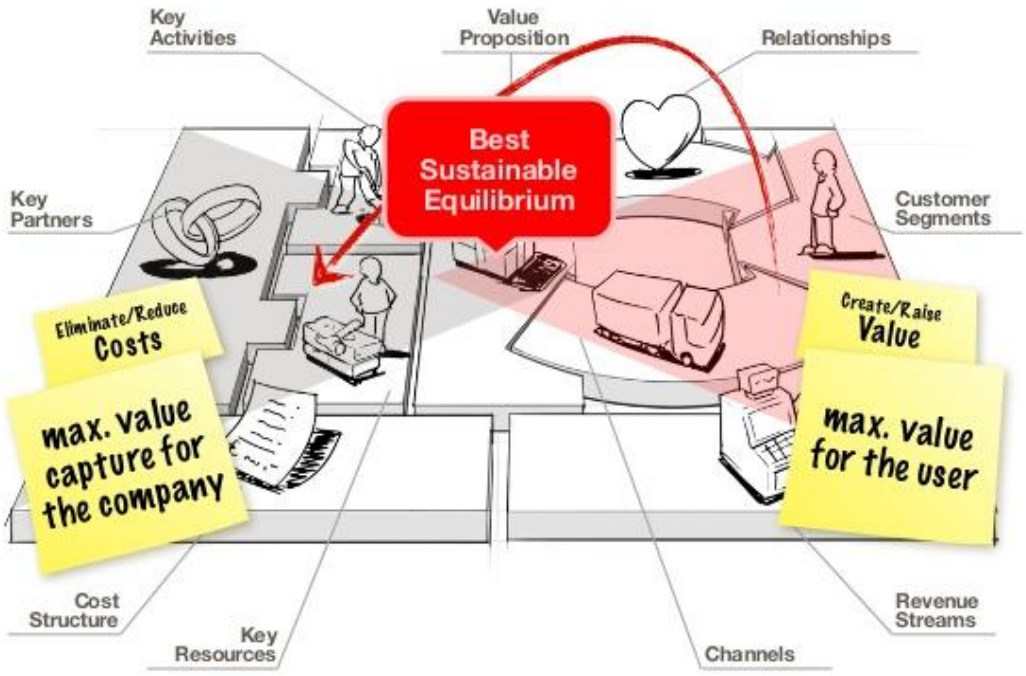


Figure 11. (Schmiedgen, 2013, p 25).

The SDCs work towards more detailed strategies. Holstein-Homann thinks one of their advantages as opposed to traditional design bureaus, is their ability to make detailed business cases at this point in the process (Holstein-Homann, 2017, 00:08:50). She also points out that their ability to build a better economic rationale throughout the process, is crucial for successful strategic innovation (Holstein-Homann, 2017). Nevertheless, it is not all about economic rationale or figuring how to make money. Business Viability can also be a question of handling the institutional structures of business. By thinking in BMs, the business designers together with the rest of the design team, need to remember that everything needs to function within institutional structures of various kinds that enable and constrain their endeavors (Heskett et al., 2017, p. 138). Several of the interviewees talked about making sure that the experience design fit the overall business objectives (Rathje, 2017, 00:25:53; Tolj, 00:01:37).

The SDC continues the ideation concerned with what new capabilities the client businesses might need, building on the abstract ideation they did earlier. They may still apply “what if you were (...)” thought experiments like in the first phase. Much focus will be on enabling the client to develop the necessary capabilities for delivering the experiences.

The abovementioned is one of the three clear areas that designers should be concerned with when attempting to create value, according to current trends in economic thinking, and mainly the dynamic New Growth perspective (Heskett et al, 2017 p.141). In addition, it is considered a vital role of not only designers, but design as an activity, to translate technological opportunity into innovative reality (Heskett et al., 2017, p. 141). A close harmonization of design and technology is essential (Heskett et al, 2017 p. 140). Therefore, designers should have the ability to work in close relationship with technological specialists instead of being confined to the trivialities of what is often called 'felt-pen design'. To best understand technological opportunity requires technological competence. This explains why there are many technologists (creative technologists, developers and programmers) on the SDC teams as well as designers with tech competences. This integration makes designers capable of being involved with the corporate strategy, not just visual appearance (Heskett et al, 2017).

Building to Think

Facilitating the debate between disciplines can be done using boundary objects. Building metaphors and using them as boundary objects to communicate across disciplinary boundaries can be an effective way of understanding each other's thoughts, especially when working in multidisciplinary settings. In the following example, Mogi from Frog Design was explaining to us the concept of zero-based organizations: "I don't know if you have heard about this term "zero-based organizations"? [silence] You know "zero-based budgeting"? "- "Yes!" we answered. "Well, it's very similar.. [what] if you start from nothing, how would you rethink your [organization]?" (Mogi, 2017, 00:12:07). Mogi was looking for a common point of reference, and knew that we as management students would know the concept of zero-based budgeting, hence he drew the analogy between the two concepts. Within seconds a new concept and though-experiment was transferred to our vocabulary.

The learning devices help both the SDC and client organization to better wrap their heads around how a possible solution could look like. In the words John Arnold, they are 'building to think' (Sonalkar, 2016). By forcing fuzzy ideas onto paper or other mediums, the designer is moving the idea closer to reality. At the same time, seeing a physical artefact as the manifestation of one idea has the power to catalyze inspiration for another related or even unrelated idea, which essentially creates a richness of ideas. Maximizing the amount of ideas and the richness of them also helps to ensure the validity of ideas and to some degree kill the question of whether we could solve this challenge in a better way. In a sense, the research phase is kept alive and assumptions are still questioned, even though the experience vision and principles continue to act as universal guidance. Early stage learning devices will often consist of low-cost materials and can be as simple as a drawing

that will make you better understand each other's ideas and thoughts. As iterations happen, it develops into something more elaborate (Hosbond, 2017, 00:10:27).

Experimentation & Strategy Formation

> "It is one thing to talk about prototyping material objects and even intangible services, but there is also a role for prototyping more abstract challenges, such as the design of new business strategies, new business offerings, and even new business organizations. Prototypes may bring an abstract idea to life in a way that a whole organization can understand and engage with." (Brown, 2009, p. 100).

At this point the SDC might have changed the vision for the client's future role or redefined which customers and market the client should target. In this phase, the SDCs engage in loops to shape the new offerings for this existing or new market and to test and transform the client business simultaneously. The loops enable them to test concrete ideas, and start the implementation of some, to form a coherent strategy. The coherent strategy is made up of the experience design (ensuring validity on the user/customer side) and business strategy (ensuring viability for the business). Frog refers to the constant iteration between design and market as "immersion" - constantly validating with the stakeholders, redesign, repeat.

User journeys still work as the guidance in this stage. At Designit and Frog Design they refer to this stage of the process as "Experience Design" because they start to form and test the different products and/or services which the experience design will consist of. The SDCs can craft MVPs to test whether their assumptions for designing a given product or service are valid by presenting them to customers, and find out whether a given idea satisfies human values in the market. Simultaneously, the same MVPs or modified versions can be used to ensure business viability with internal stakeholders. We will call these learnings devices, when for internal use, while we will consider MVPs as used for market validation. As the experiments go, the SDC and client will also figure out whether a given idea is technologically feasible. This part of the experimentation is similar to the build-measure-learn loops described by The Lean Startup. Throughout the loops, the SDCs attempt to take a systems view in which the experience design and BM are seen in relation to each other. While doing this, the SDC will take a look at the whole BM.

“The core aspect separating invention from innovation is the marketplace. For an invention to become an innovation, it must create economic value. Invention doesn’t produce revenue growth or profit growth - only innovation does that.” (Liedtka and Ogilvie, 2011, p. 136). But how can we know whether our ideas will create value in the marketplace, for our stakeholders and for our business? We can increase the odds by experimenting with learning devices and Minimal Viable Products (MVPs). An example is 1508 setting up a scam site to inform them whether their assumption holds and if they can continue to develop more elements of the idea or it should be discarded. This is the same methodology as explained in The Lean Startup (Ries, 2011). The purpose is strictly to validate the idea with the market.

Before experimenting, the SDCs think carefully as to how the experiment should be conducted. For example, Tolj argues that when conducting a Google 5-day Sprint, which can be considered an experiment, it is important to think of the purpose and outcome of the sprint. “Do you want to align internally or do you want something that is ready to test in the market [MVP]?” (Tolj, 2017, 01:03:12). Which type of experiment is it?

Testing the Experience design means to validate the assumptions on which the business ideas are based. Bundvig from 1508 explains his thinking about it: “If you can formulate a problem, then we can formulate a hypothesis which we believe is the correct way to solve the problem. The creative part consists in how you are going to set up the laboratory experiment. Which ‘flasks’ are you going to use and which answers will you get? This is similar to science and actually quite creative. How do we get an answer which somehow can give an indication with the largest possible certainty?” (Bundvig, 2017, 00:22:36). Crafting a testable hypothesis for a strategy is like setting up an experiment and which ‘flask’ to choose depends what we are testing. Are you testing the appeal of an idea for a specific type of user? Do you want to learn which are the killer features? Do you need to generate revenue? Choosing from a variety of MVPs can be difficult. The type of MVP is limited by the type of business idea we want to test. Examples of MVPs are “Problem-solution interview using mock ups”, “Fake your product: Wizard of Oz”, “Single Featured MVP” (Scalemybusiness.com, n.d.). Here we analyze how SDCs use different types of MVPs to validate the market potential or user desirability of their idea.

For 1508 and their car importer, testing a concept for a new contractual arrangement of how to own a car was done by a method called “Fake your product” (Scalemybusiness.com, n.d.). In this case, the

fake product was a landing page, or a “scam site” which means that there is no product or service to be purchased. The customer might get the chance to subscribe for an email which will tell them (if or) when the product or service is available. 1508 set up the site and monitored the number traffic and number of “buy” clicks (Bundvig, 2017, 00:06:13).

The SDC should also consider how high a degree of fidelity is needed to convey the value proposition of the solution. The higher the fidelity, the longer it will take to develop and the less “lean” it might become. The trade-off is clear. Furthermore, the link between the testing variable of our solution and the data we want out of the experiment is also important: do we want the MVP to feel like, look like, work like, or interact like the real thing? (Schmiedgen, 2013). At Fjord they think differently about their MVPs. Normally a MVP is only functional and scores nothing on other parameters such as emotional, valuable, and user friendliness. Fjord calls their MVP a Minimum *Loveable* Product because, as Rathje argues, it needs to have elements of those other parameters so that they can truly gauge whether it will be a success (Rathje, 2017, 00:38:21). Naturally it should not be a finished product, but thinking about which small elements of the other parameters that can be included to provide a better sense of the finished product/service will increase fidelity and the validity of the feedback.

While still setting up the experiment, the SDC needs to consider how it will measure the feedback from various stakeholders. Feedback can consist of unobtrusive and indirect information such as traffic and clicks, but direct interviews and user tests are also valuable sources of feedback. The designer is sensitive to the difference in what people say they do, and what they actually do (Nejrup, 2017, 00:23:35). Maybe what the user says he does tells something about what he should think, i.e. the norms of society, while what he actually does says something about human nature. Testing the MVP with the market yields valuable insight. As mentioned earlier, 1508 set up the scam site and monitored the traffic and number of “buy” clicks (Bundvig, 2017, 00:06:13). The question is at which point the experiment can be validated with a “proof of concept” (Tolj, 2017, 01:05:25) the SDC needs to decide this, maybe in cooperation with the client.

Testing MVPs on the market validates the ideas in terms of user desirability. However, the experience design also has to be viable for the business and feasible technologically, hence the MVPs are sometimes turned into learning devices which can act as boundary objects between SDC and client.

Ensuring Relevance with Boundary Objects (Gain Empathy)

John Heskett et al. (2017) argue that design can be utilized to ensure relevance for everybody in a strategic project. According to them, the reality of a design and building something upfront as perceived by users at all levels determines market success. “The role of design--in a strategic process--is to make innovation acceptable to users within the producing organization, and at various levels in the targeted markets.”(Heskett et al, 2017, p. 166). Here we will analyse how learning devices can ease communication between SDCs and clients - two domains of knowledge. As we saw with the “Zero-based Budgeting” metaphor, boundaries between domains can be syntactic relating to language or words. As we will see now, boundaries can also be semantic, relating to meaning; and pragmatic, relating to practice (Carlile, 2004).

The semantic boundary is more complex than the previous in that it deals with translating meaning. Due to ‘dependence’, the action by one actor might change the outcome for another actor down the line in a product development situation. The actor at the end of the line could in this case be the client for which the SDC is proposing an experience design. Holstein-Homann says that words are fluffy and open for different interpretations. Therefore, she makes sure to have a couple of mock-up screens for an app for a client. “To be able to make that translation [between experience design and mock-ups] makes is a lot easier for a [client] to understand what the impact of our solution would be.” (Holstein-Homann, 2017, 00:35:06). Holstein-Homann will explain the strategy to clients, but she often has difficulties being understood until she shows the visuals. Presenting a learning device to the client facilitates a conversation which enables empathy. From the conversation, the SDC can learn about potential issues the experience design might have in fulfilling business requirements (viability) and fitting into the institutional structure (Heskett et al., 2017, p.140-1). This goes to say that “show, don’t tell” is a powerful technique ensuring relevance for multiple aspects of the business.

The last boundary acknowledges that new challenges might affect actors differently, and that resources like time and energy is invested in the knowledge, hence it is “at stake” (Carlile, 2004). Through these theoretical lenses, a clear trend presented itself to us which lends itself well to this example. As mentioned, Designit requires that each project has a vision on which balancing of expectations can take place. After an initial research, Designit would come up with learning devices communicating the scope of the project. Clients who did not share the required level of ambition for a project would be turned down (Holstein-Homann, 2017, 01:02:28). Why did the clients not agree to the scope of the project? One could think that the SDC in this case did not manage to

communicate the gravity of a situation - recommendations from an SDC often require quite a leap of faith (Tolj, 2017, 00:07:42). What we posit is that the unwilling clients did grasp how quickly their offerings could be deemed irrelevant, however, they simply had too much at stake in terms of resources invested in the knowledge needed to produce the offerings. This might be related to a competency trap which underscores the importance of making sure that the client understands the gravity of the situation (Helfat, 2010). Furthermore, in order to convince the client, the SDC should ensure not to speak too ”designerly” (using too many design terms) when communicating with the business people and remember to speak to the business (Hosbond, 2017, 00:29:06; Hogrebe, 2017, 00:29:53).

Boundary objects can potentially facilitate debate and negotiation across a boundary separating two worlds as different as management and design. We believe many objects, tangible as well as intangible, can act as boundary objects and learning devices when they are considered transmitters of knowledge. Design Thinking and the workshops can also help the SDCs to break down this boundary. We have found that the SDCs experiment with workshop that facilitate the bridging of the two fields.

Hello Group used a Lean Startup approach for a workshop with one of their clients. They would spend a week researching areas where they thought improvements could be made. Next, they would present the areas and hypotheses to the client c-suite. The c-suite would vote on the hypotheses they liked the best, and the winning hypotheses would be granted $5000, five employees and five weeks to create a MVP “which can create additional knowledge of whether this hypothesis is true or false.” (Hosbond, 2017, 00:15:21). The point here is that the workshop facilitated the bridging between validity of the hypothesis developed by the designers, and the business viability and feasibility for the client. They spoke the same ‘language’.

Small Scale Experiments provide Client with Proof

In our interview with Toshi Mogi, he sounded very frustrated when he explained how clients often want to see working examples of new solutions: “Show me some analogies, why should I invest this much in it? You don't have any proof” the client says. “But if we have to show you examples, you are not going to invent the next new thing.” Mogi will respond (Mogi, 2017, 00:12:07). The different ways of reasoning create obstacles for innovating strategically together. Managers are used to deductive or inductive methods basing their reasoning on something they already know (Boland and Collopy, 2004). This is also one of the reasons why incumbents fail to do strategic innovation and get

caught on a sustaining trajectory, as it is described by Clayton Christensen in the innovator's dilemma (1997). To overcome this, SDCs performing small experiments and present findings to the client, to provide proof for a new strategy and thereby reinforce the mandate and move forward (Mogi, 2017; Hogrebe, 2017, 00:43:16). By applying the lean startup approach, as well as lean/agile development methods, to test, learn and validate markets with small-scale systematic experiments, the SDC can provide the client with proof relatively quickly and on an ongoing basis (Mogi, 2017, 00:12:07; Hogrebe, 2017, 00:40:35; Hosbond, 2017, 00:15:21).

Avoiding Path Dependency

Despite the above arguments for presenting learning devices to the client, doing so has to be performed with caution. The SDC has to be explicitly about that whatever they present on this early stage is only a catalyzer for inspiration rather than necessarily the final concept in the first version. The risk and danger lies in embarking on a path where you perform many iterations on an idea that should have been killed early on. Creating a physical object around which all stakeholders can gather may cause them to continue along the same path in their thinking, also known as path-dependency. To avoid this, the SDC and the client need to be able to discard a MVP completely and start over again; they need to be able to kill their darlings. At Frog, they try to avoid the path dependency, but Hogrebe says that as some point you need to commit to get concerned with what the thing will looks like in the end, and more importantly what change that you are implementing in the company by creating these things (Hogrebe, 2017, 00:48:59).

All of the above MPVs and learning devices are used in experiments to test the validity of the idea, hypothesis or assumption. Another type of experiment is concerned with the client's business, i.e. the client's short-term capabilities and capacities necessary to deliver the new experience. Potential gaps are included as points of transformation in a coherent strategy. We add the word "capacity" to include labor and capital (Heskett, 2017, p. 178).

Transformation

Tying Offerings to the Business Model

The strategy for the experience design has to come together with the business strategy for the facilitation of the experience (Holstein-Homann, 2017, 01:02:28). The business strategy is concerned with the overall BM, capabilities, capacity and organizational design necessary to deliver the experience design. According to Hogrebe, Frog bridges these two throughout the entire process, more specifically: the workshops conducted together with the client, the ongoing presentations,

conversations, and most importantly the boundary objects that are put in the hands of the client become physical manifestations of 'craft' and strategy coming together. The learning devices, or boundary objects, come to facilitate a common discourse that bridges experience design and business strategy (Hogrebe, 2017, 00:33:34).

This bridging seems to be of utmost importance for the SDCs' ability to innovate strategically. Design cannot stand on its own when concerned with the overall business strategy. Schmiedgen (2013) visualizes this exercise by putting the Venn diagram known from design thinking on top of the overall BM (see figure 11). Both Mogi and Hogrebe talked about design and business that happen "on top of one another" (Mogi, 2017, 00:06:29; Hogrebe, 2017, 00:33:34). Therefore, we believe this captures well how the SDCs use the envisioned experience to guide changes in the BM. As Dorst puts it, the SDC and client will now engage in "[...] an exploration to unearth changes that are needed in the proposed ideas as well as in the practices of the participating organizations, to make it all come together." (Dorst, 2015, locations 1563-1570).

The abovementioned learning devices could facilitate realizations of such gaps. At one point, Designit used an "explainer video" to convey a concept to the c-suite of a client company (Scalemybusiness.com, n.d.). The video can for example include testimonials of customers talking about how a concept would feel like (Holstein-Homann, 2017, 00:34:08). Other times they will create an explainer video which mimics a concept solution such as an app facilitating a new customer experience (Holstein-Homann, 2017, 00:34:08). These two learning devices help communicate what is required from the client's capabilities. When there is a gap between what is required and the existing capabilities, the SDC could for example develop software in cooperation with the client. Using agile methods in cooperation between the SDC and client ensures that the client learns how to develop in an agile manner, as well as truly understanding the new technology or system (Rathje, 2017, 01:13:38).

The SDC will enable the client to develop new customer flows, screens and structures for online experiences. Examples of this could be Designit developing "atomic design" (essentially building blocks for a website) to allow the client to create their own websites for a given service after the project hand-over (Holstein-Homann, 2017, 00:47:21).

An example of necessary change within the capacity of the BM could be the improvement of capital or funding for new business. The SDC could potentially help the client with alternative ways of

allocating its capital or alternative ways of funding new innovation. Mogi calls this “venture style funding” (Mogi, 2017, 00:12:07). For example, they could create a MVP to test whether it is possible to raise funds from customers (Scalemybusiness.com, n.d.). Tolj used this example when explaining her cultural paradigm of consumers wishing to “influence” their products and services (Tolj, 2017, 00:31:46). Using a crowdfunding site like Kickstarter.com will not only validate whether the market is willing to pay for a concept, it will also raise money for development and improve the client’s liquidity.

Learn To Transform

Learning is a highly important part of this phase. This is where we decide to “pivot” or “persevere” with a new experience design (Ries, 2011). What is important to remember in the learning phase, after having “put something out there”, is that learning can happen at two levels. It can happen on the “low” level of the offering: the solution is based on the right assumptions, but small adjustments need to be made to the offering. In LS terms this is to persevere. When something fundamentally is wrong, we might have to step back and reconsider our assumptions, our value proposition, experience vision, maybe even our frame. In this case, we might have build *it right*, but we have not build the *right it*. In this case, the SDC has to reflect on its implicit knowledge base (Schön, 1983) by taking a double loop back to the basic assumptions or objective of their idea (Argyris & Schön, 1978). This is also what Frog does with their concept of “immersion”, they “keep the research alive” and are open to changing their assumptions (Hogrebe, 2017, 00:40:35). By learning through this iterative process, both SDC and client come closer to answering the question of “What products or services to offer”, which is a one of the fundamental questions of strategic innovation.

As the SDCs conduct different experiments, both market tests capability and capacity tests, they learn which elements should constitute the coherent strategy. Through these tests, they slowly begin to reconfigure and transform the client company. One of the clear-cut goals for Hogrebe, when working with a new client, is to improve the client’s internal decision making process (Hogrebe, 2017, 00:53:52), which seems to be one of the important learning aspects. Rathje from Fjord similarly argues that one of the main ideas with their process and tools is to improve the client’s way of making important decisions (Rathje, 2017, 00:33:09).

Frog also talks about digital transformation and mention that it happens through agile and lean development methods (Toshi, 2017, 00:06:29; Hogrebe, 2017, 00:17:26). This means that as the iterations go, the strategy takes shape, and through agile and lean development they are beginning to develop new digital interfaces and new methods for the client. This also makes the client more

agile. We have observed the other SDCs also emphasize the digital work which empowers clients to be digital. “I think what we try to do is that we move companies through design” (Hogrebe, 2017, 00:09:30). In a presentation by Schmiedgen (2013, p. 163) he similarly implies the new role for design in business: to guide transformations towards meeting the needs of customers, while also taking a differentiated competitive position, that enables the business to charge premium prices.

An important aspect of the LS methodology is that companies should continue to build on and learn from their MVP and not discard them which historically was what often happened with prototypes (Tolj, 2017, 01:16:20). Bundvig from 1508 claims that many organizations, due to their project-based modus operandi, do not manage to diffuse the learning from one project throughout the whole organization. He emphasizes the continuous learning based on feedback from launches of offerings and visualizes it as follows (see Appendix L) (Bundvig, 2017, 00:40:49). Tolj similarly argues that companies should look at their MVPs as learning devices, and not forget to look back at what they have earlier created. “This is the MVP philosophy, and I think a lot of companies have misunderstood that” (Tolj, 2017, 01:06:20). Firms must dare to ask the fundamental questions of whether your offerings truly satisfy the expectations of the selected customer, or whether you are in fact targeting the right customer. When asking such questions, the client and the SDC have engaged in learning with potential of forming a new coherent strategy.

A few years back, Designit outlined a complete visual experience journey and its corporate-wide implications to the c-suites of a large telco from both Denmark and Hungary. With them, they also brought a one pager embodying the extensive research, ideation and testing that they had gone through together to form a new strategy. As the telco’s CEO saw this coherent strategy in front of him, he went: “OK, if we agree that the sum of all these touchpoints is where we want to be in 2018, then that is our strategy, and if anything is missing, now is your time to say so” (Holstein-Homann, 2017, 00:39:03). No-one spoke up. Followingly, the c-level people from both countries ended up signing the one-pager and committed to the experience map, including the touch points and its goals, as their new official strategy (Holstein-Homann, 2017, 00:39:03). This was the culmination of a project in which Designit had completely changed the client’s vision of what the future role of a telco should be. A new market, a blue ocean, was formed by suggesting a new meaning to users, accompanied by a new experience embedded in a set of offerings as well as a complete transformation of their business model (Holstein-Homann, 2017, 00:39:03). This proves the points of John Heskett and Roberto Verganti. Designers as originators, of not only products but also strategies,

are capable of significantly changing existing markets, or even creating new ones (Heskett et al., 2017, p. 140).

Strategy to Execution

As strategy turns into reality, the tasks of the SDCs shifts from creating value, to capturing value and executing the strategy. Until now we have seen how the SDCs build a new vision based on insights from various sources. The guiding star from the vision was the "good experience" boiled down to abstract experience journeys as well as a high-level plan for how to transform the client's business. This was followed by ideation to come up with concrete ideas and technologies. These were prioritized and experimented with which lead the SDC and client to form a coherent strategy that ideally both satisfies human values and creates economic value. However, the client should not only leave the project with an experience design and the business strategy to execute it. The SDCs also engage in developing the client's long term ability to innovate strategically. Briefly restating, in our view this encompasses being able to again radically redefine or fundamental change the company's vision: its future role and/or markets and customers, or the company's means by which it achieves the vision: its offerings, BM and revenue model.

Open For Change

Deeply embedded in the nature of the SDCs work is the acknowledgement that environments are not static but rather change rapidly. To account for this, they seem to do what Heskett et al., (2017) suggest in their new book: build flexible systems that dynamically adapt to user demands. Similarly, Teece et al. (1997), Helfat (2010) and others, contend the need for building dynamic capabilities. SDCs do in fact put a large emphasis on building capabilities that will enable the client to continually redesign their offerings and adapt and modify their BM according to changing environments. Dynamic capabilities can be considered an integrative approach to allow the client to continually balance the identification of new sources of competitive advantage with thoughtful corporate-wide strategic integration (Teece et al. 1997).

Dynamic Capabilities

As with the client's current capabilities, the SDC will experiment with different processes for developing the client's dynamic capabilities. Examples of dynamic capabilities can be processes for better decision making (Hogrebe, 2017, 00:44:43; Hosbond, 2017, 00:15:21), idea generation (Hosbond, 2017, 00:15:21), establishing internal design laboratories (Rathje, 2017, 01:13:38) or changing the client's approach to validating new business ideas (Bundvig, 2017, 00:17:29; Hogrebe,

2017). The SDCs are increasingly blending disciplines such as strategy and organizational design based on a foundation of design, and using this to push the client organizations and their capabilities. To illustrate this, Hogrebe uses the analogy of a doctor using a small hammer to test the reflexes of a patient. The hammer is design and the patient is the client. Frog uses design to experiment as to how to get the client to react the way it needs to and then train it again and again (Hogrebe, 2017, 00:09:47).

Sensing

Through our analysis, we have identified that many of the SDCs try to build the dynamic capability to sense important changes or opportunities for innovation that present themselves outside the client business. These opportunities could be related to current users or larger cultural paradigms. Bespoke calls this ability "strategic foresight". In general the SDCs seem to emphasize the importance of being able to spot new cultural paradigms, new BM practices and new technologies. Firstly, spotting new cultural paradigms can enable the client to "meaning innovate" by designing offerings or new BMs that account for and tap into changes in what the society at large will desire (Verganti, 2009, p. 54-55). Furthermore, the organization can benefit from the ability to look at analogous markets or disruptors for inspiration in terms of new business practices or models that change can generate both user value and business value, for example more efficient workflows or a new decision-making process that increases the speed with which new ideas are introduced (Tolj, 2017; Holstein-Homann, 2017; Hosbond, 2017).

Bespoke works to create strategic innovation by teaching their clients to identify new cultural paradigms through strategic foresight (Toldam, 2017, 00:09:13). Why does Bespoke teach one of their clients to identify new cultural paradigms? Because the client already knows that their business is done - their industry faces substantial changes and they want to understand what those changes will be. Furthermore, they wish to keep doing this on an ongoing basis (Toldam, 2017, 00:52:09). Therefore, they need not only to know how to spot new cultural paradigms in the present moment but the dynamic capability to identify them continually as they arise. Verganti refers to identifying new cultural paradigms as a capability (Verganti, 2009, p. 54).

This is also congruent with Teece et al., they argue that in order to learn--which means that an organization can perform tasks quicker and better, while also identifying new production opportunities--you need a "coordinated search procedure". This search procedure facilitates ongoing learning to prevent strategic blind spots and enable reconfiguration and transformation in

rapidly changing environments (Teece et al., 1997, p. 520). “Strategic foresight” can enable the client to spot new sources of competitive advantage, but the client also needs the ability to internalize and learn from the new knowledge.

Learning

Apart from a coordinated search procedure, Bespoke has also helped their client to establish what Teece et al. calls “common codes of communication” which facilitates the organizational learning by disseminating knowledge throughout the organization (Teece, 1997, p. 520). Toldam explains how the client now has people employed to do nothing but scan the environment. The knowledge from the scanning is spread through newsletters and internal magazines. But it does not stop here. The client has also developed an app which facilitates knowledge or “signals” to run in the opposite direction as well, from the people on the floor to the top (Toldam, 2017, 00:52:09). An example of a signal could be autonomous driving. Viewing this from the lenses of the Learning School, it becomes visible that the client acknowledges the complexity of the time to come, and is now able to sense the need to change its asset structure (Teece et al., 1997, p. 520).

Once an organization has established search procedures and common codes of communication, it can internalize the new knowledge and technologies. Adopting new technologies to significantly change offerings or development processes, for example by using agile methods, can move the boundaries for what is technologically feasible or economically viable for the client. “Learning”, in Teece et al.’s understanding means that an organization can perform tasks quicker and better (1997, p. 520). Contemporary examples could be scalable outsourcing using e.g. Amazon Web Services (Mogi, 2017, 00:12:07) enabling the client access to high powered computation which previously required owning the machinery. Once the knowledge of the changes has been internalized, the organization can afterwards easier reconfigure or innovate according to the changes.

Reconfiguring

It is well recognized that path dependencies restrict a firm’s technological opportunities (Teece et al., 1997). Old technological legacy systems can impede the speed of change and opportunities available to clients. “They have these legacy systems, they are the slowest movers [...] So how progressive can we be versus their capabilities?” (Tolj, 2017, 00:28:48). Taking the client’s path into consideration is important to understand current technologies in the business, however according to Teece et al. (1997) it is equally important to be open to new technologies. This is where the designers act as translators of technological possibility into innovative reality (Heskett et al., 2017).

They experiment with different technologies which can get the client up to speed and create more customer value as well as business value. Examples of technologies can be Software as a Service (Mogi, 2017, 00:12:07) and chatbots (Rathje, 2017, 00:47:58; Tolj, 2017, 00:30:21). Why does it make sense to look at these technologies? Because these technologies are often the ones paralyzing and disrupting the clients. New technologies act as a source of competitive advantage and open the door for more technological opportunities.

Mogi similarly expressed how General Electric (GE) needed to develop a better customer experience across their offerings. A digital transformation led to the creation of a User Experience design department (Mogi, 2017, 00:07:20). The new design department and their newly established focus on customer experience allowed GE to dynamically reconfigure their customer experience and offerings. Fjord, will similarly bring their own team to a client for an extended period of time and coach the client in developing their own innovation lab. Teece et al. (1997) emphasize the ability to reconfigure and transform asset structures. In the case with Bespoke's Norwegian car importer, they might engage in meaning innovation as a response to a newly identified cultural paradigm. Toldam explains how the car importer redefines its future role from being in the industry of "cars" to "mobility". The client transforms its business accordingly by selling off buildings and instead investing in the train running from the capital to the airport (Toldam, 2017, 00:52:09). The "signals" in the industry were strongly indicating that a big shift was coming, and the scanning led to the client to internalize the knowledge and transform its asset structure.

Experimentation as a dynamic capability. Just as the Experimentation and Strategy Formation chapter showed, design is exemplary as a means of validating through small-scale experiments. One of the things the SDCs are trying to teach the clients is the build-measure-learn methodology. By involving the client and showing him how to run these small-scale experiments, the client can use this to improve his innovation capabilities. Hosbond from Hello used the methodology from The Innovator's Hypothesis (Schrage, 2016) which is very similar to The Lean Startup, with a large B2C client of theirs. The client loved the method and is now able to use similar methods and probe the market, resulting in improved processes for decision making and idea generation (Hosbond, 2017, 00:15:21). According to Mogi, Frog Design teaches the Lean Startup approach to their clients, so they can do small experiments in a systematic way by testing validity of ideas involving only small investments and risk (Mogi, 20 17, 00:12:07). This can allow the client to turn away from its sustaining trajectory of innovation (Christensen, 1997) and provide small scale proof for radical new

strategies, which seems necessary in order to satisfy traditional reliability-driven management mindsets.

Rub-off of institutional learning. The SDCs hope that their way of thinking rubs off sufficiently on the client during a project. “[...] these paths are messy and something will stick to them and that is what will pull the company forward. [Maybe] as much as it is the design of the artifact in the end. Sometimes the artifact will be wrong [...] that is not really what it is about. But the process, the push, the institutional learning that you are putting upon your client, those are intangible results.” (Hogrebe, 2017, 00:48:59). Naturally a full transfer of knowledge is not wanted by the designers, since this would make them unemployed (Rathje, 2017, 01:13:38). Even if the project does not result in radical success, the client might still consider using a SDC for their next challenge. In that case Frog Design has ‘sold’ design thinking as a solution to challenging problems which Hogrebe considers a small victory for the industry (Hogrebe, 2017, 00:48:59). Hogrebe compares their clients to oil tankers and themselves to a shrimp: “[...] you are pushing these companies, and if the companies are big enough you are a shrimp pushing an oil tanker [trying] to change its direction.”(Hogrebe, 2017, 00:48:59).

Development & Hand-over

Apart from building the building capability for the clients, the SDCs also need to finish the implementation of the given business transformation or hand it over to another party. What happens from here depends to a large extend on the development and implementation capabilities of the client. These capabilities have been tested, debated and assessed throughout the previous phase. If the client is not capable of developing the full-scale solution and implementing it themselves, the process will go straight to hand-over.

Both Designit and Fjord are backed by bigger consultancies: Wipro and Accenture respectively, who are often brought into final phase of the process (Holstein-Homann, 2017, 00:53:14; Rathje, 2017, 00:40:24). Wipro is very technical, while Accenture deals with both technical issues and more quantitative business issues. When Wipro is too technical, Designit will sometimes pass a project to Qvartz & Co, who will then facilitate aspects of the implementation which Designit’s process “should not be able to do” (Holstein-Homann, 2017, 00:51:17). In this regard, the two companies’ capabilities can be said to be complementary from a relational view (Dyer & Singh, 1998).

Not to re-invent the wheel, the SDCs will conduct API analysis as well as tap into existing design libraries such as Bootstrap and Google Material Design (Rathje, 2017, 00:52:44). The SDC will also facilitate the collaborative development of the source code for applications through e.g. Bitbucket. Building and testing using Lean Startup methods continue, and "client Q&As" are also facilitated to ensure viability. Here the business designer's role begins to resemble a management consultant's since points such as "manage risk assumptions" and "risk mitigation" were on Rathje's checklist (Rathje, 2017, 00:52:44).

At handover, it is important to guarantee the accurate translation of idea to reality. All project details are specified, documented and handed over to the client. Implementation can sometimes be done in collaboration with a third-party, and in this case Designit will be there to ensure the correct implementation (Holstein-Homann, 2017, 00:21:54). We sensed an urge from the SDCs wanting to influence the implementation in order to ensure the quality (Holstein-Homann, 2017, 01:04:14).

Quality Assurance

The experience principles developed in the Mystery to Vision phase are used by the SDCs as a benchmark for quality assurance. Once the project has been completed and the delivery either has or is about to take place, the experience principles can be used to gauge the solution provided by the SDC. Holstein-Homann says: "Even if it is [the client's] retail, branches, their banks, packaging or insulin administrator, we expect there to be a vision, because that is where we can ensure a high quality in the final concept - are we delivering on the expectations?" (Holstein-Homann, 2017, 00:20:15). Similarly, Hello Group uses their experience stories for quality assurance. The last part of the experience story, the "good experience", acts as a yardstick for final test (Liedtka and Ogilvie, 2011) (Hosbond , 2017, 00:35:10). Has the experience materialized as the SDC had imagined it?

Coming back, again, to the issue of satisfying human values illustrates an important point about the strategic work of the SDCs. Like designers of other sorts, the SDCs are driven by an urge to bring good experiences to real people. SDCs take up the responsibility of hammering on the crucial anvil on which the human environment in all its details is shaped and constructed for the betterment and delight of all (Heskett, 2003, p. 2). This allows for a constant guidance in their strategic endeavours unlike any yardstick or KPI that managers may apply.

5 Discussion: Enabling Incumbents to Apply Strategic Design

We will now be discussing the relevancy of our findings. As already said, generalizing about a strategic design process will not result in a one-size fits all process. But through the deep inquiry into commonalities between the processes of the different SDCs, we believe that we have been able to identify themes with general relevance for SDCs and incumbent firms when attempting to innovate strategically.

Interestingly, we have found that what holds the SDC back from innovating at scale is most often the balance between taking an inside-perspective (the client perspective) or an outside-perspective (user or change perspective). On one hand, an outside-in perspective helps the SDC to ensure that the innovation process is based on a thorough understanding of what meaning and value users attribute to certain situations, products and services in order to satisfy those values. A view held by all our interviewees. In addition, the SDC needs to look for threats and opportunities outside the client's industry, which potentially can empower beneficial changes of a client's vision or a transformation of their business model and revenue model. Rune Toldam and Bespoke did so for a client of theirs, a Norwegian car distributor, when they foresaw a New Cultural Paradigm; a shift in the meaning that users attribute to a car: from car to mobility (Toldam, 2017).

On the other hand, it is important for the SDC to understand the deep mechanics of the client organization: core capabilities, its supply chain etc. as well as its competitive advantages and positioning in the given industry in order to tap into what already is. However, such an inside-out perspective comes with the risk of being influenced by whatever biases the client may have, which can cause incremental thinking. Among them are reliability biases, inertia and competency traps that all involve building on and exploiting existing competitive advantages and technologies (Helfat et al., 2010; Martin, 2009), rather than creating new markets, blue oceans, away from the existing competition (Mauborgne & Kim, 2004). Because of the importance of the balance of perspectives, we will discuss this aspect further and draw on prior attempts that incumbents have made to achieve the balance, before going into specific recommendations of our own.

We have found that the SDCs are very careful of the inside-out perspective that incumbents or entire industries may take. Linda Tolj from Designit provided us with a very vivid picture to understand this, the rugby team. All huddled up, they can see one another clearly and are constantly copying each other's moves as well as equipment (Tolj, 2017). In the meantime, the

customers can unnoticed flock to the disruptor when they enter the field and solve the job-to-be-done in better way (Christensen & Raynor, 2003). Judging from the stories of our interviewees, they very much struggle to open their clients' eyes to the outside world, or rather "open their minds", as both Tolj and Holstein-Homann said (2017).

Dorst (2016) notes that inductive or deductive reasoning often limits the ability to radically innovate, because it assumes validity of what already exists, either about what elements should be included in the solution to a problem or the pattern that bind those elements together. Strategy formation, as we have described in the Literature Review, can be more or less planned and more or less open for the emergence of relevant threats and opportunities (Mintzberg, 2005). When devising a strategic plan and applying inductive or deductive reasoning, you will most likely feel an urge to base it on past performance or another type proof, and be less open to what could emerge. We think this was what our interviewee Mogi saw play out, when one of his clients required proof for his strategic suggestion. To this Mogi exclaimed: "if we have to show you examples [proof], you are not going to invent the next new thing" (Mogi, 2017, 00:12:07). The benefit of the client's approach in this case, is what Roger Martin (2009) describes as exploitation. You specialize in what already exists, innovate incrementally, gain efficiencies and maximize the economic output that can be extracted from the given situation. Seemingly with better odds than what Mogi's idea could provide, at least at first glance.

However, as Scott Cook, the former CEO of Intuit, once said "For every one of our failures, we had spreadsheets that looked awesome" (Cook in Bason, 2015). Exploitation can easily turn out to be as just risky as exploration. According to Martin (2009), exploitation has to be balanced by exploration, which entails searching for new knowledge that can emerge and allow for the 'reinvention' of business. As opposed to induction and deduction, exploration is based on abduction and the validation of new ideas through future events (Martin, 2009). This also showed in Mogi's following comment to his client: "Look, we are going to do small experiments. We got to do this experimentation and we got to be lean/agile and we got to be able to adapt to the learning" (Mogi, 2017, 00:12:07). Similarly, Martin argues that abduction is necessary to find validity in what can emerge, hence change and mysteries (2009), even more so in a world that is facing increasingly wicked problems (Buchanan, 1992; Dorst, 2016).

In sum, if we assume that incumbents need to open their eyes to what happens outside their organizational boundaries, explore and apply abductive reasoning in order to innovate strategically,

then how can this be achieved? The answer that a few of our interviewees gave was: become a Learning Organization (Bundvig, 2017; Mogi, 2017). The term Learning Organization was coined by Peter Senge in 1990. He holds that organizations must enable its members to create, acquire, and transfer knowledge. As such, members can help their organizations cultivate tolerance, foster open discussion, and think holistically and systemically, to enable an organization to continually reinvent itself in the light of the *unpredictable* (Senge, 1995). Almost 30 years later, this still sounds like a culture that would be able to balance inside and outside views, experiment abductively, learn and strategically adjust accordingly. However, according to Harvard Business Review, "the ideal of the learning organization has not yet been realized" (Garvin et al, 2008).

In current times, "the unpredictable" has not become less of an imperative. John Heskett argue that design can be used as a strategic planning tool in times with highly volatile conditions or uncertainty (Heskett et al., 2017). We found this to be the case in our analysis as well. For example, with the cases of Designit helping a large telco transform or Frog helping GE to 'servitize' their business model (Holstein-Homann, 2017; Mogi, 2017). The particularity of these examples is that they both started with a fundamental question: "Who is our customer? And what does our customer value?" Design can powerfully add a human-centered perspective. The benefit of this is best said by Peter Drucker: "The question, What is our business? Can, therefore, be answered only by looking at the business from the outside, from the point of view of customer and market" (Drucker, 2007, p. 24). It allows the incumbent firms to take an outside view and challenge their own vision. Having such potential, an intriguing thought is whether strategic design could enable incumbents to transform into learning organizations with the ability to dynamically innovate and strategically adjust to changing environments.

Strategic Design Cycles

As our interview with Tolj from Designit was coming to an end, she brought up the topic of a new strategy process that she was soon to suggest to a client of hers. The idea was to work for two weeks to form a vision Version 1.0 after which they would go through three design cycles of two weeks each with the purpose of testing the market validity and ensuring the relevancy of the vision (Tolj, 2017). During the same time, they would also explore into potential relevant changes that might happen in parallel with the innovation effort. Then when the design cycles are over, Designit and the client would gather to zoom out again, take a holistic view and formulate Vision Version 2.0. Here, the learnings from the design tests would be assessed. In addition, potential changes (e.g. a new technology), are presented in case they challenge the fundamental assumptions on which the first

version was build, or if a new superior opportunity has emerged during the period. This has inspired us to suggest a similar process. We choose to call them Strategic Cycles and we will now through some fundamental aspects for making them work.

A sense of urgency

Firstly, important for innovating strategically, is a sense of urgency, as emphasized by Tolj (2017). Incumbents need to acknowledge that a scalable startup may come out of nowhere tomorrow and disrupt the entire industry. Tolj argues that a sense or urgency is necessary to be motivated to "think big thoughts" and open one's mind (2017, 00:52:30). Such an attitude at the highest possible level, can possibly remove an incumbent from the comfort of the 'rugby team' and take a position that minimizes the risks of commoditization and disruption (Chesbrough, 2011; Christensen, 2003). But the incumbent must be ready to innovate radically, through meaning innovation, technological innovation or business model innovation, because that is what it takes to create a new market (Heskett et. al., 2017; Brown 2009; Verganti, 2009).

On the other hand, Heskett et al., also argues that designers tend to challenge strategy fundamentals even in stable times when not necessary (Heskett et al., 2017). This supports the view of Martin, that sometimes the time is appropriate to exploit (2009). Holstein-Homann similarly told us that, sometimes, especially when working with very large customers, it does not make sense for them to challenge the overall vision (2017). Heskett et al. hold that when circumstances are well known, design can be used as tested procedures, while in uncertain or unknown circumstances, design can be used either as an exploratory process or flexible trial and error (Heskett et al., 2017, p. 163). We think the compromise between these two views is a sense of urgency that at least enables you take changing environments seriously. In some periods, the incumbent firm may let exploitation and incremental innovation dominate, but it is important to constantly explore at some level and take changing environments seriously, so that if a threat or opportunity deems a business transformation necessary, the incumbent is ready to act.

The Strategic Cycle Group

Composition of the Group

Secondly, the incumbent must compose a group who participates in the strategic cycles as well as the design cycles. One aspect of this is whether external parties should be involved in the process or not. The obvious risk of not involving external parties is to exclusively take an inside-out perspective. Allowing consultants, experts and most importantly users to frequently join, will ensure that outside

perspectives are considered and logical leaps of mind are easier to take (Martin, 2009). Furthermore, by including internal and external technologists in the business model audit meetings, the C-suite is made aware of the paths taken and the paths open, e.g. exponential technologies.

If also involving SDCs or other types of consultancies, the incumbent could similarly benefit from their knowledge brokering capability, as it is also argued by Boztepe (2016). Working in many different industries, they are often able to see tendencies arise across industry boundaries. This is very important, as many of our interviewees mentioned that industry boundaries become more and more blurry (Mogi, 2017; Holstein-Homann, 2017; Bundvig, 2017). Due to the complexity of applying strategic design, the incumbent may also need to bring in a SDC to facilitate the majority of the work to begin with, in order to get the cycles started. Fjord already does similar work when helping clients set up design labs (Rathje, 2017).

As opposed to a group that nurtures an inside-out perspective, involving too many externals in strategic cycles might limit an incumbent's ability to exploit at times that deem it appropriate, as well as facilitating a large knowledge inflow that may misguide the firm. In addition, the externals might lack sufficient knowledge about the business itself. Lastly, externals that get to close to the core of a business, may increase the risk of activating organizational antibodies that can cause the firm to 'freeze up', as Hogrebe put it (2017). According to Senge, antibodies or biases could include: 'reinventing the wheel', 'not invented here'. 'underwhelmed' or 'arrogance' (Senge, 1995).

We believe that the incumbent essentially needs to decide on its balance between exploitation and exploration and let that decide the balance between externals and internals. The more internal, the more likely the cycles will involve reliability-driven exploitation with incremental innovations. And the more external, the more open to emergent opportunities for strategic innovation and the creation of new markets. The essential message is, balance your group like you want to balance your innovation portfolio.

In addition, the incumbent needs to decide what professions to include in the group or essentially how diverse it should be. With very diverse groups in terms of professions, the firm would decrease the likelihood group-think. It would enable the inclusion of different perspectives to accomplish considers aspects of user desirability, technological feasibility and business viability (Brown, 2009). More specifically, the probability of customer adoption, the probability of sustaining business and probability of technical completion (Dubberly, 2017). In addition, Heskett et al., (2017) argue that

ensuring relevancy for users at all levels determines market success. This includes all types of users, internal and external. On the other hand, many different viewpoints might reduce efficiency and be cause friction between different mental models or difficulties of communication.

Empowering the Group

The incumbent also needs to decide on the level of engagement that the c-suite should have in the cycles, which also can be related an important choice of whether the group and cycles should by authority-driven or learning-driven (Senge, 1995).

The advantage of having the C-suite participate is the mandate that most likely follows. Participation could signal that they are open to fundamental changing the business. In addition, on the issue of innovation labs, Bundvig stated that with high-level engagement, the necessary money, time and space are also likely to follow (2017). In addition, if intending to question the vision and strategy of a firm, the c-suite needs to be present, otherwise, even the best ideas won't live long (Nejrup, 2017).

On the other hand, involving managers from different levels and departments in the group is the issue of hierarchy and top managers that potentially enforce rules to control the innovation efforts. Hosbond pointed out for us that they often see different departments and levels arrive at workshops with different agendas, and it can followingly play out ugly (2017). An alternative to this is to foster a culture that focuses on learning. This requires KPIs that enhance learning, for example number of experiments executed (Bundvig, 2017). According to Senge, the two key governing ideas that should be articulated in Learning Organization are localness and merit. While the first encourages local, individual decision making, the second stipulates that the criterion for good decisions was what most benefited the business as a whole (Senge, 1995). Brown touches upon the same topic in his book in which he argues that "empowering employees to seize opportunities when and where they see them and giving them the tools to create unscripted experiences is an essential element of transformation an organization's culture to be more design-oriented (Brown, 2009).

A Collaborative Room

We find that it is important to make room for diversity as concerned with external vs. internal, professions and management levels when innovating. A diverse Strategic Design group and flat hierarchy in the meetings would ensure the integration of knowledge from many different parts of the organization, R&D, marketing, finance etc. Ideally the same knowledge sharing would also foster learning among especially the c-suite, which would enable it to openly discuss possibilities with employees and followingly make strategic decisions. Including designers may be a way to

commensurate diversity (Schmiedigen, 2011), or connect floating fields (Jonas, 1999). Most importantly, however, is it to bring in tools that originate from the design world. Participants must build to think and think visually through post-its, sketches, artifacts, etc. According to Hogrebe, artefacts have the power to create common discourses (2017), to essentially work as boundary objects (Carlile, 2004). Secondly, Hogrebe finds that the process as a whole is important for bridging potential gaps between designers, managers and other disciplines (2017). Ideally, this would allow strategic innovation to be driven by "widespread commitment, involving the aspirations and capabilities of the many people involved in it" (Senge, 1995).

Cycles and Dynamic Capabilities

In our analysis, we found that the SDCs are often concerned with business transformations not only to strategically adjust to a given situation, but also increase the mobility and agility of incumbents to potentially transform again if necessary (Mogi, 2017). As noted in the analysis, we have considered these dynamic capabilities, another key piece of literature within the Learning School of strategy (Teece et al., 1997). We think that many Strategic Design processes are vital for the capacity to renew competence so as to achieve congruence with the changing business environment, for which reason we consider them dynamic capabilities.

Search & Sense

Core processes that incumbent firms will need are related to sensing or exploration. This is a prerequisite for innovation when dealing with changing environments. Sensing and search mechanisms are meant to provide the necessary knowledge inflow to enable the strategic cycles and design cycles to foster both radical and incremental innovation.

Firstly, incumbents should conduct design research or ethnographic research (human-centered research). Interviews and observations are important in order to understand the pains, frictions, problems, and potentials for gain there might be (Osterwalder et al., 2013). Such a department could potentially take the form of an UX design department like in the Frog case of GE (Mogi, 2017). One of the advantages of such a department is that the intelligence gathered about users can be used to followingly build value propositions and experience design that enables the incumbent to better target its users with incremental improvements and potentially sell assisted experiences (Mogi, 2017). A limitation of such a department, however, is the risk of it merely adapting to the evolution of socio-cultural models, which according to Verganti will only foster incremental market pull innovation (Verganti, 2009).

To understand changes that can foster more radical innovation, incumbents will also need research approaches that can take a broader perspective on society and search across blurry industry boundaries, what Designit calls macro trends (Holstein-Homann, 2017). Interestingly, Senge noted in his second book that all boundaries are ultimately arbitrary. When applied internally, the same idea can also help knowledge diffusion (Senge, 1995). Incumbents should try to sense New Cultural Paradigms in order to suggest new meanings to users in the form of new visions or offerings (Verganti, 2009). Ways to do so could be by calling upon "interpreters" - experts who deeply understand and shape the markets they work in (Verganti, 2009), by use of a structured Strategic Foresight process like Bespoke (Toldam, 2017), or mirroring expectations from one industry to another like Designit and Fjord (Holstein-Homann, 2017). These procedures can similarly help an incumbent to identify new technologies or novel business practices/business models that provide opportunities for radical innovation. On the other hand, signals and opportunities that lead to radical innovation will likely to the simultaneous 'creative destruction' of current capabilities and competitive advantages (Schumpeter, 1943). Another downside of this type of research, is the vast amount of research you may get in pointing in many different directions and potentially 'blinding' you.

To keep a sense of its immediate context, the incumbent must also conduct thorough research about its business and industry to constantly understand positioning and the deep mechanics of the business, current competitive advantages, supply chain etc. Nevertheless, such research does also come with a risk of getting caught up by competency trap trying to exploit the same competitive advantage for too long (Helfat et al., 2007). Generally, incumbents need all three types of research to get a balanced view from both inside and outside. Only with a balanced view will the incumbent be able to determine if the time is appropriate for exploitation and incremental innovation or exploration and radical innovation (Martin, 2009). Most importantly, is the diffusion of knowledge across the organization which will allow both the individual and the organization to learn from each other, for mutual benefit. Again, employees must feel empowered to share to knowledge that pose a threat or opportunity for the satisfaction of human values and creation of economic value. Bespoke managed to create such a system for a client, which is now using an app on which all organization members can post "signals" that they spot, and send them either in the direction of 'the floor' or the top (Toldam, 2017).

All the types of research mentioned above need to be laid out clearly before embarking on the actual experimentation cycles and continue throughout the cycles. Schmiedgen refers to this as an

abstract model of what is (2015). Tolj argues that having done human-centered research is particularly important because otherwise you risk ideating around and building something without value for the user (2017).

Experiment & Learn

The most important processes for incumbent firms are those that allow them to experiment and learn from the experiments to potentially innovate strategically. The experimentation has two levels: (1) testing the assumptions on which the vision is based: who is your customer? Could it potentially be someone else? Could we create a new market? (2) testing the market validity of offerings and ensuring the relevancy of capabilities necessary to provide those offerings as well as tying the offerings and the business model closely together.

The strategy cycles would involve testing throughout two weeks in which the new vision is formed together with concept ideas and an abstract idea of how the business model and revenue model might look like.

Followingly, the incumbent should go through design cycles with continuous launches of MVPs with the purpose of testing market validity. One of the main benefits of such an approach is to avoid wasting too much time on research development, as it is often the case with a typical waterfall approach that expands over a longer period of time (Ries, 2014). Testing the concepts in the minimum viable form, also allows for tests with small investments and instead of one large investment over a lengthy period. In addition, you get a sense of whether users find the idea desirable early on, compared to the waterfall approach that would let the market test come down to a ‘tadaa’ moment by the end of the development (Ries, 2014).

According to Tolj, one of the risks of applying the lean startup approach, is that many companies scale the concepts down a minimum without any true value for the user. In other words, you risk basing your ideas on assumptions that are fundamentally wrong. Followingly, the incumbent might be influenced by path dependency without the ability to again imagine a solution and take a "let's just only fine-tune this" attitude (Tolj, 2017, 01:07:34). This is more likely to play out if the client has not done proper research beforehand to get a good sense of what the given user values and potential opportunities (Tolj, 2017). However, even when that has been done, SDCs put a lot of emphasis on making sure they remember the humans for whom they are building an experience, and more importantly *why* they are building the given experience (Hosbond, 2017).

They try to do so by creating principles and stories that describe “the good experience”, which can act as yardstick, when they engage in actually designing that experience (Holstein-Homann, 2017; Mogi, 2017, Hosbond, 2017)). In addition, it might be beneficial to think in Minimum Viable Experiences rather than a products (Damgaard, 2017). As Brown says, “an experience carries us beyond the comfortable world of measurable utility and into the hazy zone of emotional value” (Brown, 2009). Another risk related to MVPs is to release a MVP’s, move on to the next area and then “never look back” (Tolj, 2017). As Tolj says, that it is not the Minimal Viable Product philosophy, which emphasizes the importance of iterative “build-measure-learn” loops that allow for pivots or incremental improvements of the concepts, following feedback from users (Ries, 2014). For the same reason, there needs to be three design cycles of each two weeks.

While incumbents often build too early, we have observed have started to build earlier and earlier. Crafting early on, even in the vision cycles, would allow the incumbents to also use artifacts as learning devices or boundary objects, with which they can ensure the relevance of “users at all levels”, which Heskett says determines market success (Heskett et al., 2017). Learning Devices can be formed and presented at workshops both during the vision cycle and the design cycles to people ‘on-the-floor’ as well as managers, and techies to ensure the business viability and technological feasibility of the vision, as well as the imagined means for achieving the vision. Relevancy insurance can also be achieved by visualizing the user journeys of not only the customer, but also employees or managers that might be involved in delivering the offering (Holstein-Homann, 2017). The main purpose all these exercises is to assimilate the experience design of the offerings (the good experience) with the overall business and revenue models. This works to ensure the dual aim of satisfying human values and creating economic value, and possibly the negotiation and reconciliation between the two, sometimes opposing poles (Heskett et al., 2017).

In sum, crafting exercises and loops must be undertaken with great caution. You can build too early but you can also build too late. When building early before having done research, it must be thought of not as way to test market validity of an idea, but as a way to test assumptions that will form the basis for an abstract model what *could* be. Incumbents should be ready to “kill of their darlings” and get caught in path dependency and a reliability bias. For the same reason, Sonalkar made an important point, when we talked to him at Stanford d.school. In between crafting exercises, prototypes need “time to breath” (Sonalkar, 2016). This comes back to the issue of assumptions. Again, learning happens on two levels. With solid assumptions, it is fine to craft with the purpose of making incremental improvements to concepts. However, most often, you need to be open for

learning regarding the assumptions on which the vision is based. We compare this to the difference between single-loop learning and double-loop learning (Argyris & Schön, 1978).

Strategic Innovation

According to Sniukas et al., when crafting your strategy, it is important to reflect and learn about what already works well, and what needs to be changed to increase performance." (Sniukas et al., 2016 p. 117-8). In his book, he suggests a process similar to ours which continual loops that enable the formation of a coherent strategy (For illustration, see Appendix L). With each cycle the incumbent should act, learn and design. As such the strategy gets more and more mature over time. We basically suggest that every fourth cycle should be a vision cycle with room for truly questioning the fundamentals of the strategy, while the design cycles enable the incumbent to slowly transform as needed. That may include changing all means to achieving the vision: offerings, business model and revenue model, or single components. At best, this will enable the incumbent to continually 'reinvent' itself to increase demand in existing markets and create new markets, while always aiming to reconcile human values and economic value.

In our analysis, we found that the SDCs have a hyperdynamic attitude towards the different strategic issues or clients they face. Similarly, they are far from religious about their process, try out new methods all the time and work in fluid manner - shifting back and forward between mental modes and different stages of the process. In a similar fashion, incumbent firms need to be hyperdynamic in order innovate dynamically and strategically adjust to changing environments. Our recommendations might be based on and driven by strategic design, but it is important that incumbents continually try out different methods, as each strategic mystery they face will be unique and wicked in nature.

6. Conclusion

In the following, we will conclude on how the Strategic Design Consultancies (SDCs) chosen for our analysis work to create strategic innovation. Firstly, the SDCs approach strategic problems with a critical stance towards assumptions that their clients may have made, consciously or unconsciously, about their situation. They insist on taking a step back and ask the fundamental question of who the client's customer is, could be, and most importantly, what that customer values. This approach often leads to progressive or even radical ideas, because it allows the SDCs to question the client's vision with point of departure in human values.

Followingly, the SDCs gather signals and insights from a variety of sources. Herein is research into the client business and industry to get a good sense of competitive positioning, current solutions and the client's current ability to dynamically innovate and strategically adjust to changing environments. Moreover, the SDCs put a large emphasis and general search to identify emergent threats and opportunities of strategic importance. This happens by use of distant search into analogous markets, mirroring expectations across blurry industry boundaries and engaging 'interpreters' with potential of spotting new cultural paradigms.

Commensurating and accounting for many opposing signals, interests and requirements is critical for strategic innovation. The SDCs handle this by devising a dynamic approach unique to the project and deploying a multidisciplinary project team that fits the client's needs. In addition, the process of the SDCs is iterative, enabling them to integrate newly discovered insights on an ongoing basis and maximize the validity of their work. After exploring the problem and opportunity spaces, they sense-make to create an 'abstract model of what is' before engaging the client (and potentially users) in creating an 'abstract model of what could be' with the extensive use of "what if" thought experiments. This model allows for a vision to be formulated, which also determines the sign-off and scope of the project.

Furthermore, the multidisciplinarity of the teams allows for ideation, negotiation and prioritization to happen around three essential dimensions: human desirability, business viability and technological feasibility, that together allow for the innovation of holistic strategic concepts. A variety of designers and social scientists care for the design of a meaningful experience, which is likely to consist of an unique blend of products, services and digital touchpoints. Business designers particularly care for the design of a business model and/or revenue model, which should be closely tied to the overall experience. While the experience is meant to ensure the satisfaction of human

values, the models should provide the client with an economic rationale for the strategy. The SDCs, followingly build Minimum Viable Products meant to validate the experience design and test capabilities and other elements of the business model. Through several iterations, the SDCs slowly start to enact a business transformation, which is continued when the final strategy is implemented or handed over to another party.

Balance is a recurring topic in the work of the SDCs. We have found that what often holds the SDC back from innovating at scale is the balance between taking an outside-perspective (user or change perspective) and an inside-perspective (the client perspective). On one hand, an outside-in perspective helps the SDC to ensure that the innovation efforts are based on a thorough understanding of what meaning and value users attribute to certain situations as well as changing environments, while an inside-perspective ensures relevancy for the client.

However, with the inside perspective comes also the risk of reliability biases, inductive/deductive reasoning, and lack of willingness to innovate radically. For these reasons, SDCs frequently immerse themselves into the client organization to 'open the client's mind'. They try do so with artifacts that can serve as boundary objects and make ideas tangible. Through tests they provide proof for 'reliability mindsets', while being very clear on where the insights originate from. Furthermore, they engage the client in as many workshops as possible and try to speak into whatever business objectives the client c-suite may have. As such, a common discourse between the designers and managers is created.

Lastly, we found in the analysis that SDCs are increasingly engaged in building the client's long-term innovation capabilities. More specifically, the SDCs try to build dynamic capabilities that increase client's ability to sense, learn and reconfigure to changing environments. This carried over to a discussion of our findings, in which we suggested the adoption of vision cycles and design cycles to dynamically innovate and strategically adjust to changing environments. In addition, we arrived at a number of balanced recommendations on how a work group for such cycles could be composed and empowered. Including, but not limited to, the establishment of a collaborative room, the necessary attitude and dynamic capabilities for searching, sensing, experimentation, learning and continual transformations.

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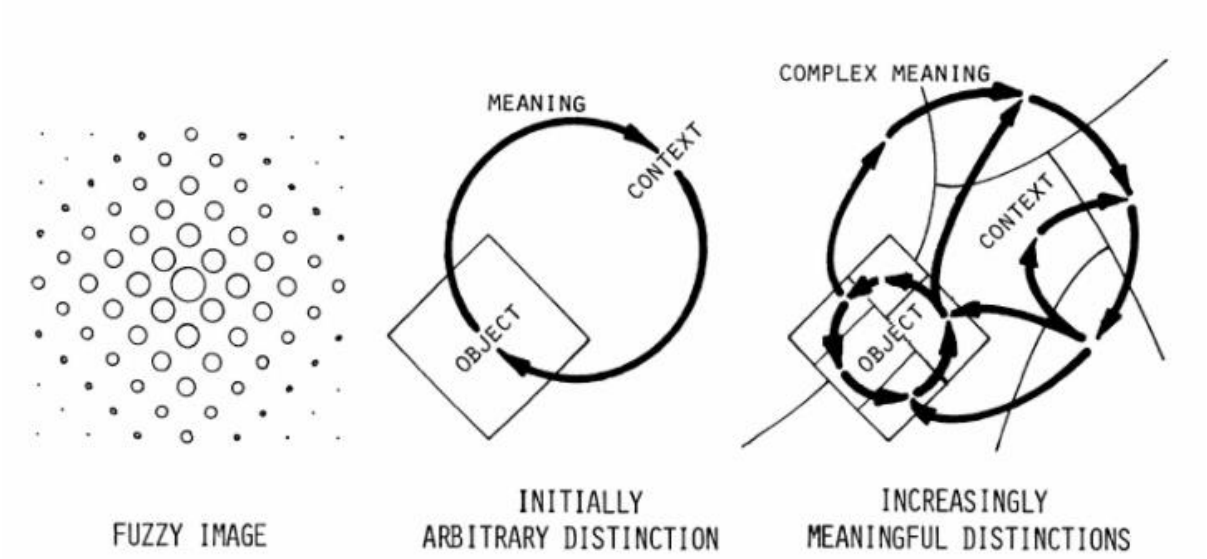
8 Appendices

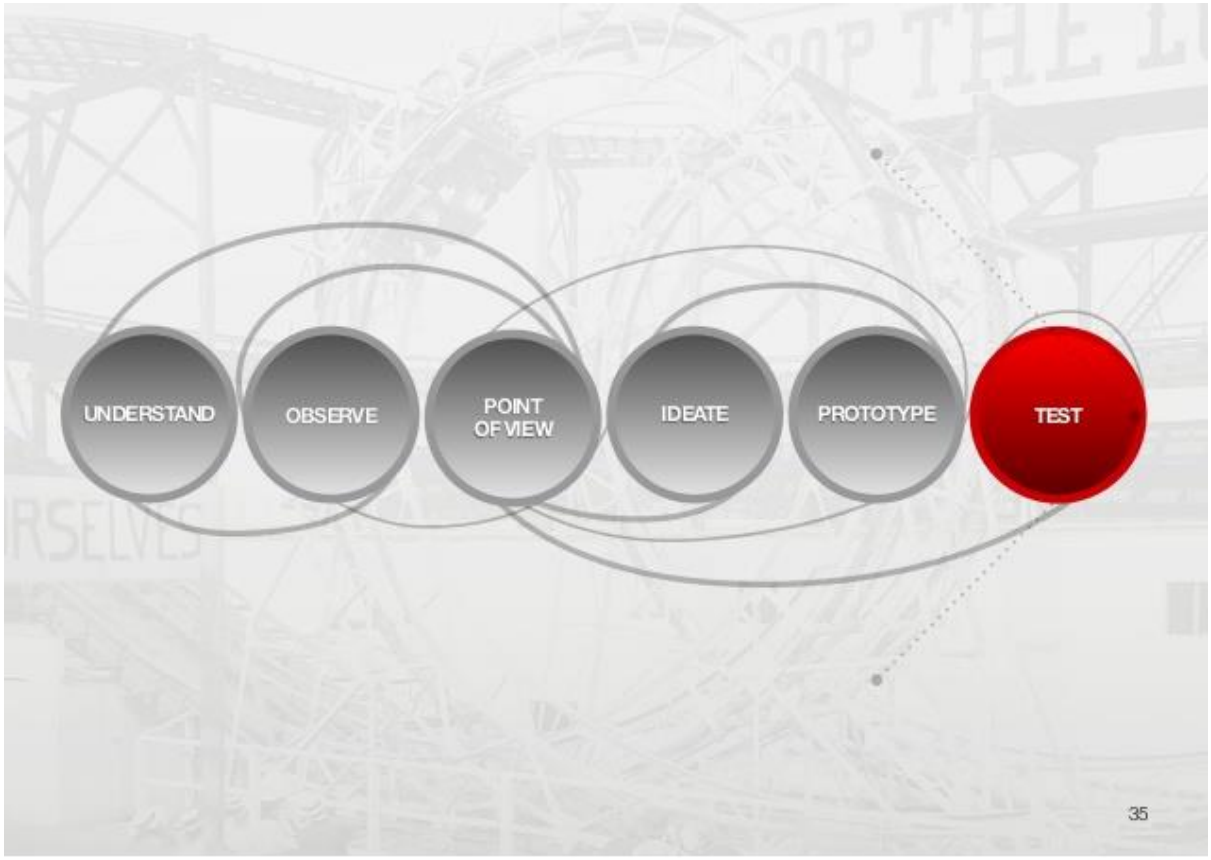
Appendix A



(Krippendorf, 1989, p. 13)

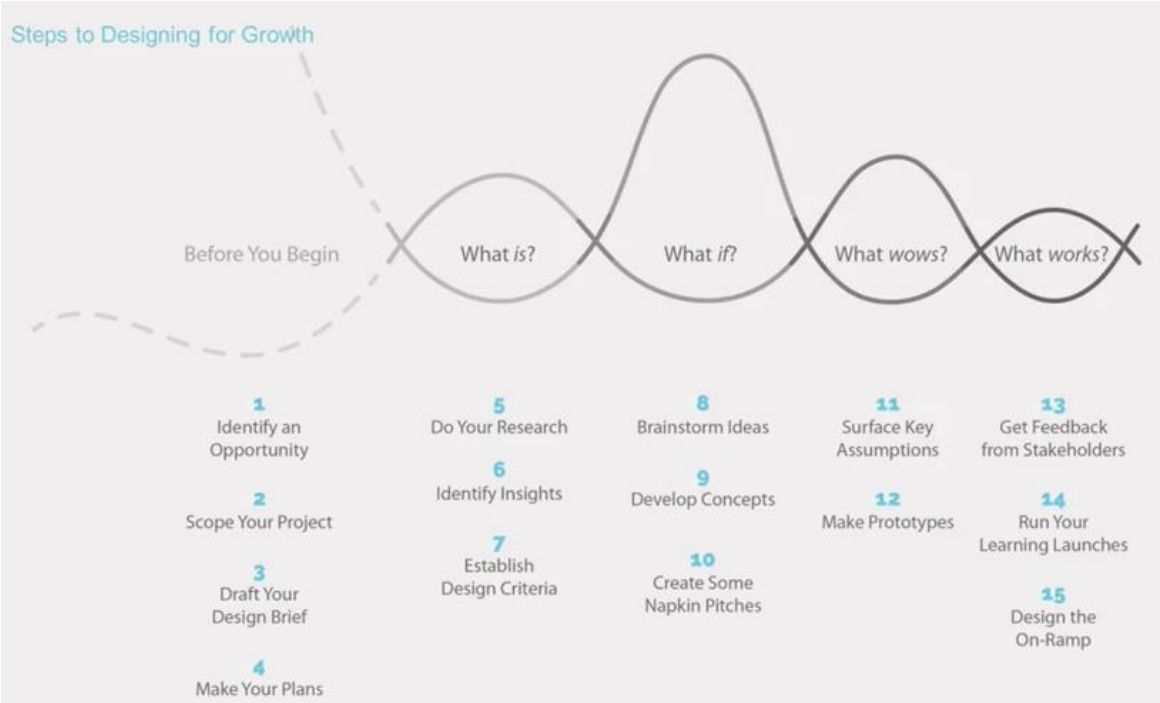
Krippendorf outlines four essentially different contexts in which objects may mean in different ways: the operational context (in which people are seen as interacting with artifacts in use), the sociolinguistic context (in which people are seen as communicating with each other about particular artifacts, their uses and users, and thereby co-constructing realities of which objects become constitutive parts), the context of genesis (in which different stakeholders are seen as participating in creating and consuming the designed artifacts), and the ecological context (in which populations of artifacts are seen as interacting with one another) (Krippendorf, 1989, p. 16). They are suggested here as four principle types of cognitive models for designers to create forms that make sense for others. “Its concepts of meaning enable designers to communicate through the designed world with other fellow human beings and to participate responsibly in contexts that are, at least in part, their own creation” (Krippendorf, 1989, p. 38).

Appendix B



Source: Schmiedigen, 2016, p. 35

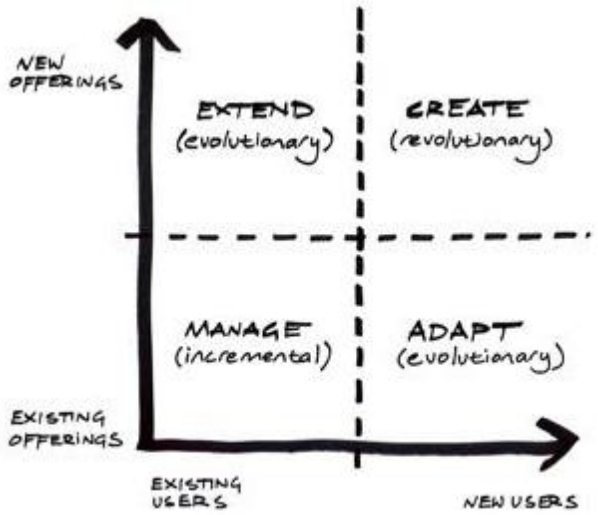
Appendix C



Source: Liedtka & Ogilvie, 2011

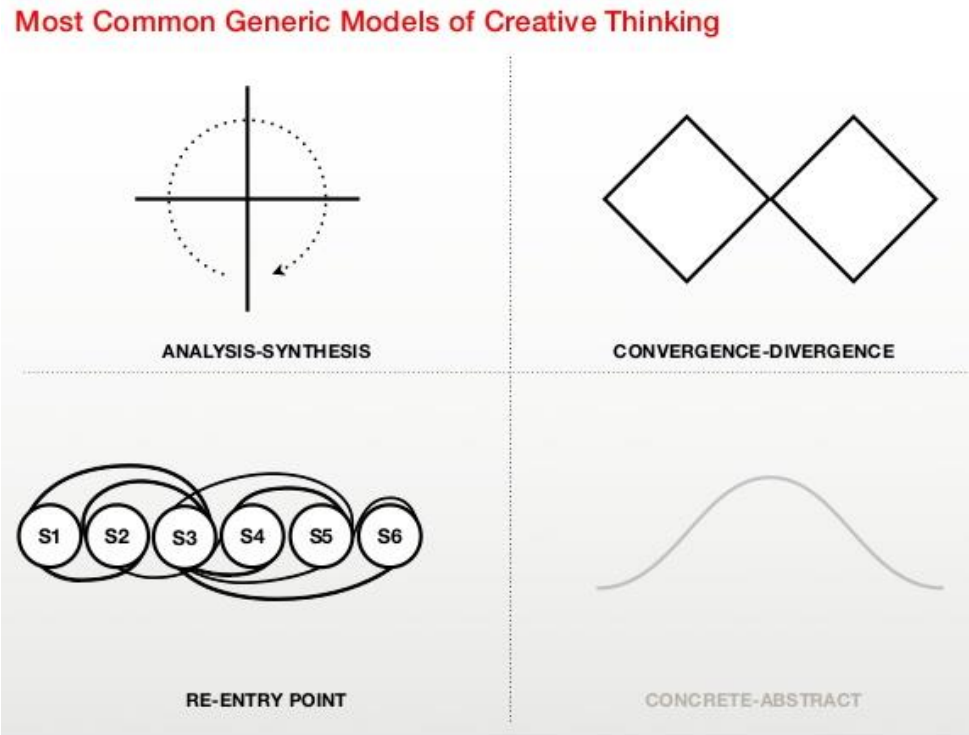
Screenshot taken from online Coursera course in Darden Business School's approach

Appendix D



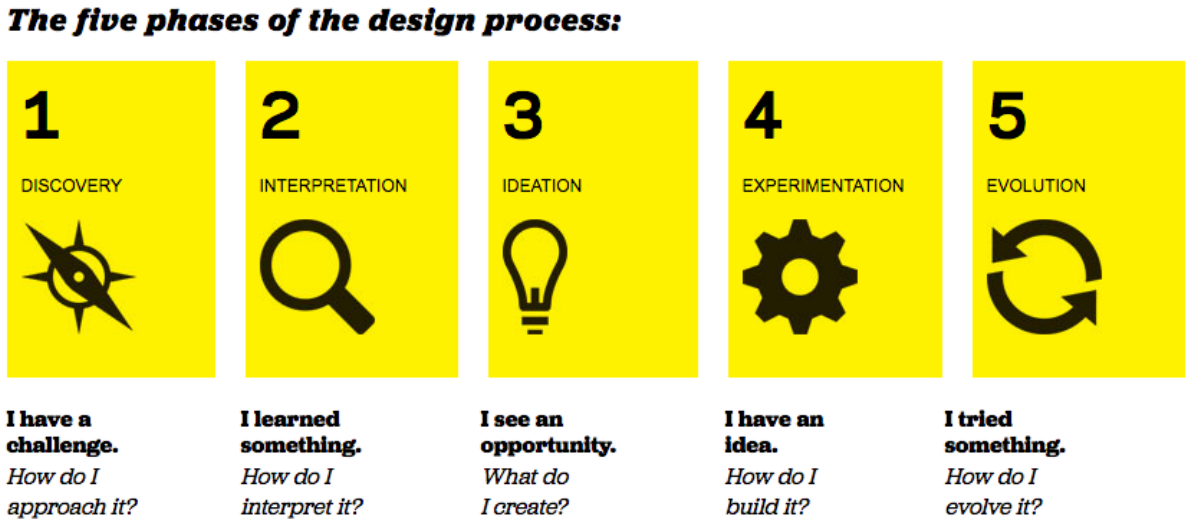
Source: Brown, 2009

Appendix E



Source Schmiedigen , 2013, p. 43

Appendix F



Source: IDEO

Appendix G

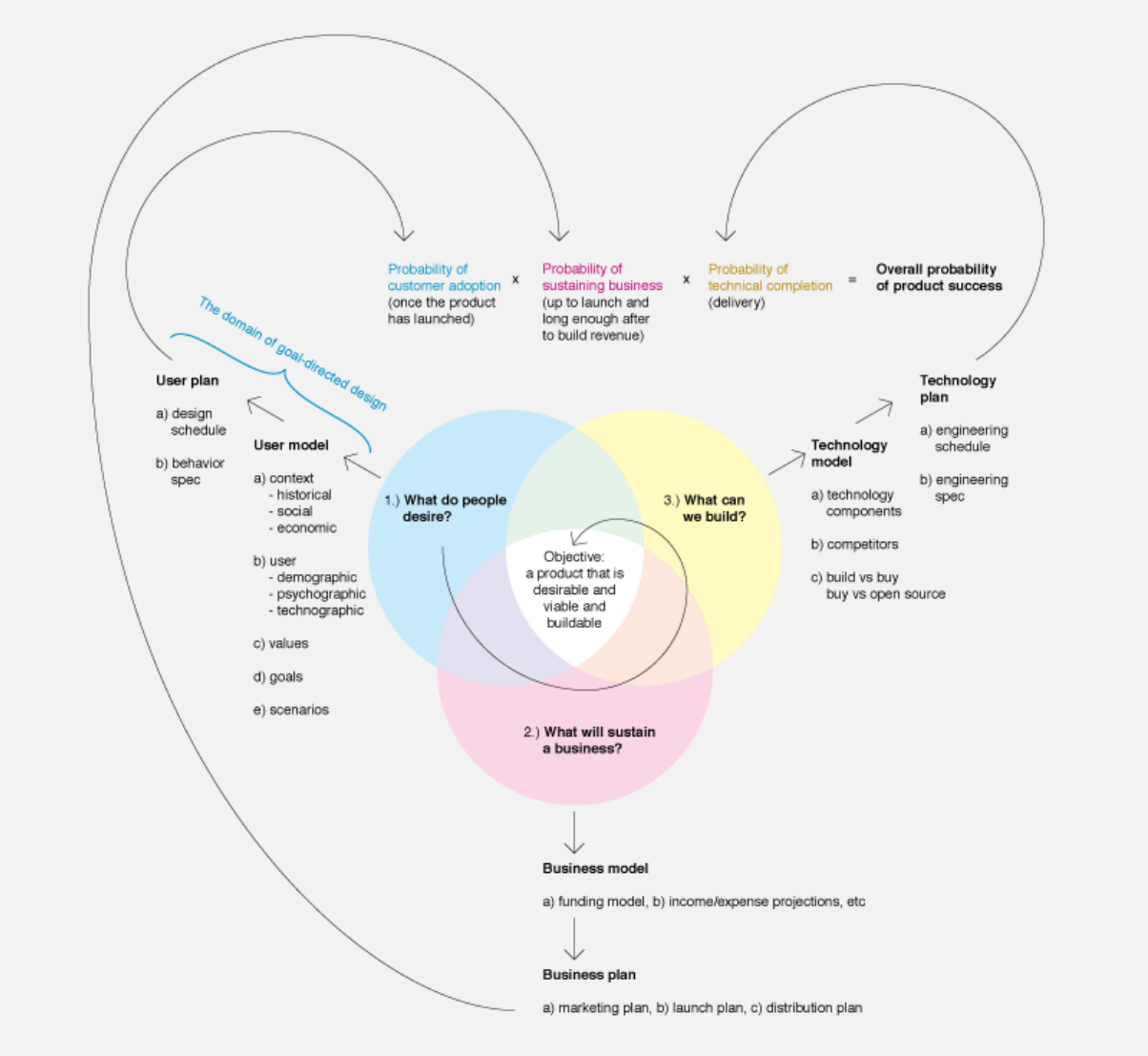
When to Build

It seems there are two “Schools” with regards to when to build and test an idea. The Lean Startup belongs to the School arguing to build and test as early as possible - if can you make a hypothesis you can also test it. This stands in contrast to Brown (2009), Liedtka (2011), Dorst (2016), and Sniukas (2016) who argues for comprehensive research before testing. However, the Lean Startup would arguably be criticized by the other viewpoint for the risk of building the wrong it due to a lack of research into understanding the human in the situation. Interestingly, designers are often the ones to criticize managers for analyzing too much and acting too little, but here it is the manager’s (Ries) viewpoint that calls for more action (see the The Clash). To put this into the perspective of some of the big scholars of design, building early can possibly lead you quicker to a solution which is “good enough” and satisfies the problem situation, what Herbert Simon (1969) describes as satisficing. While if you first go through a cognitive process of making sense of the context in which the designed object will live, you may be able to design a solution that captures the meaning which the user is looking for - what is described as “sense-making” by Krippendorff (1989).

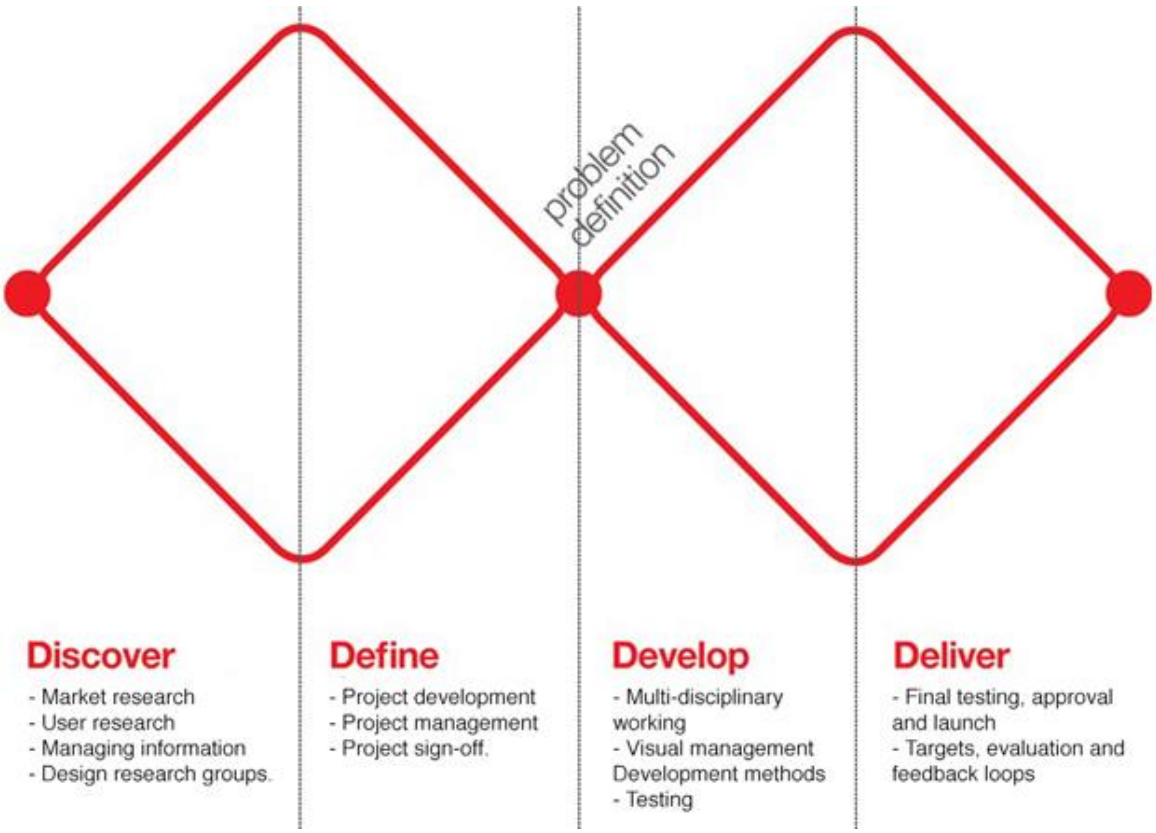
Appendix H

Referred to in discussion

(Dubberly, 2001)



Appendix I



Source: Design Council 2007

Appendix K

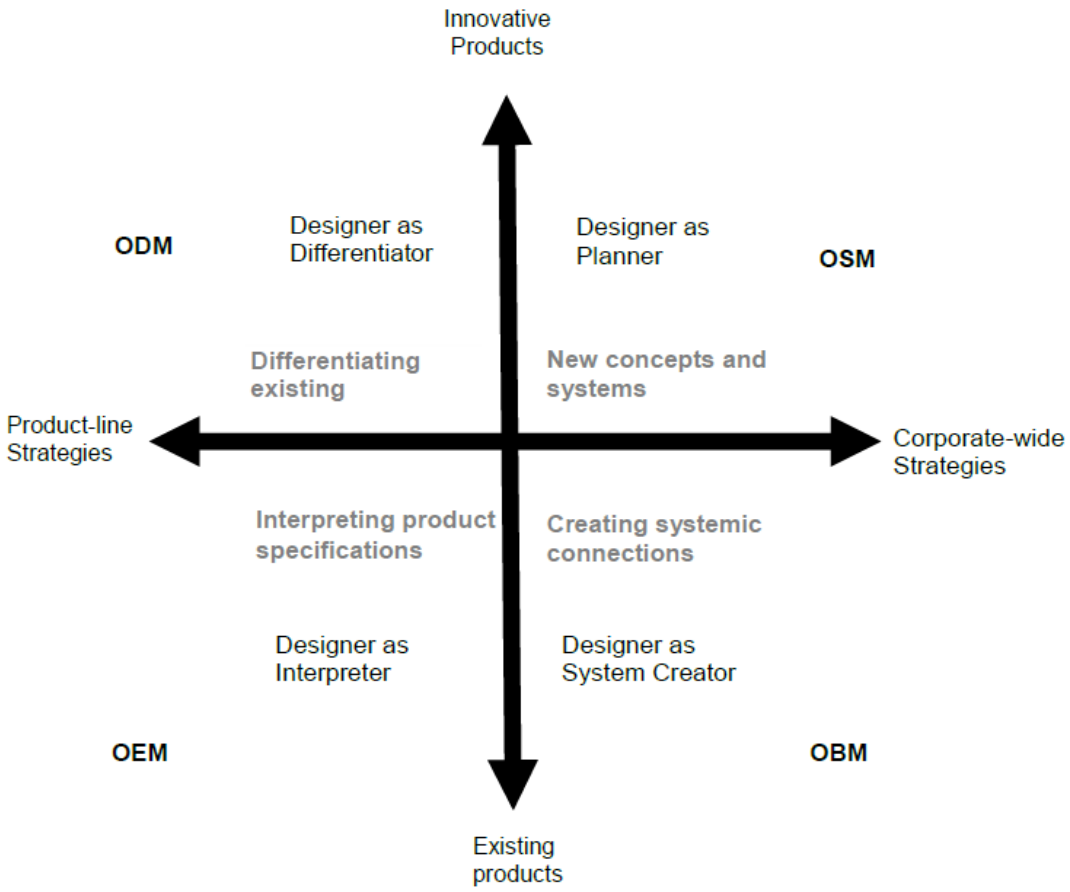
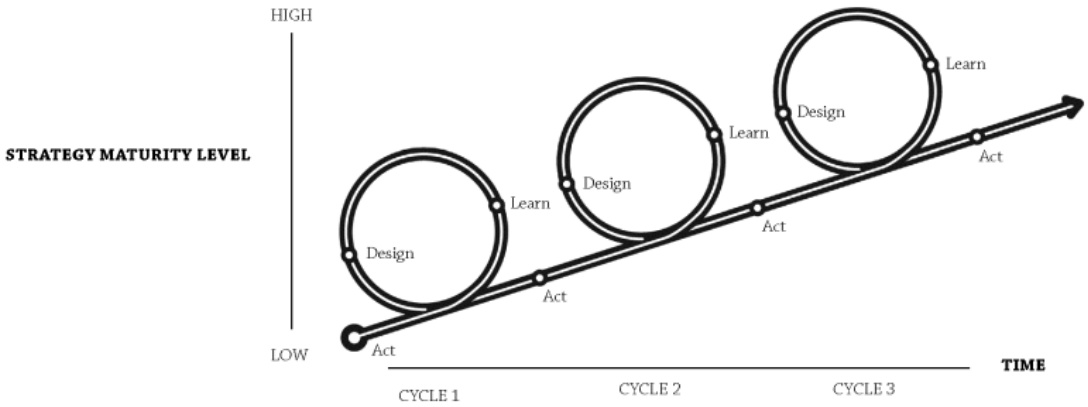


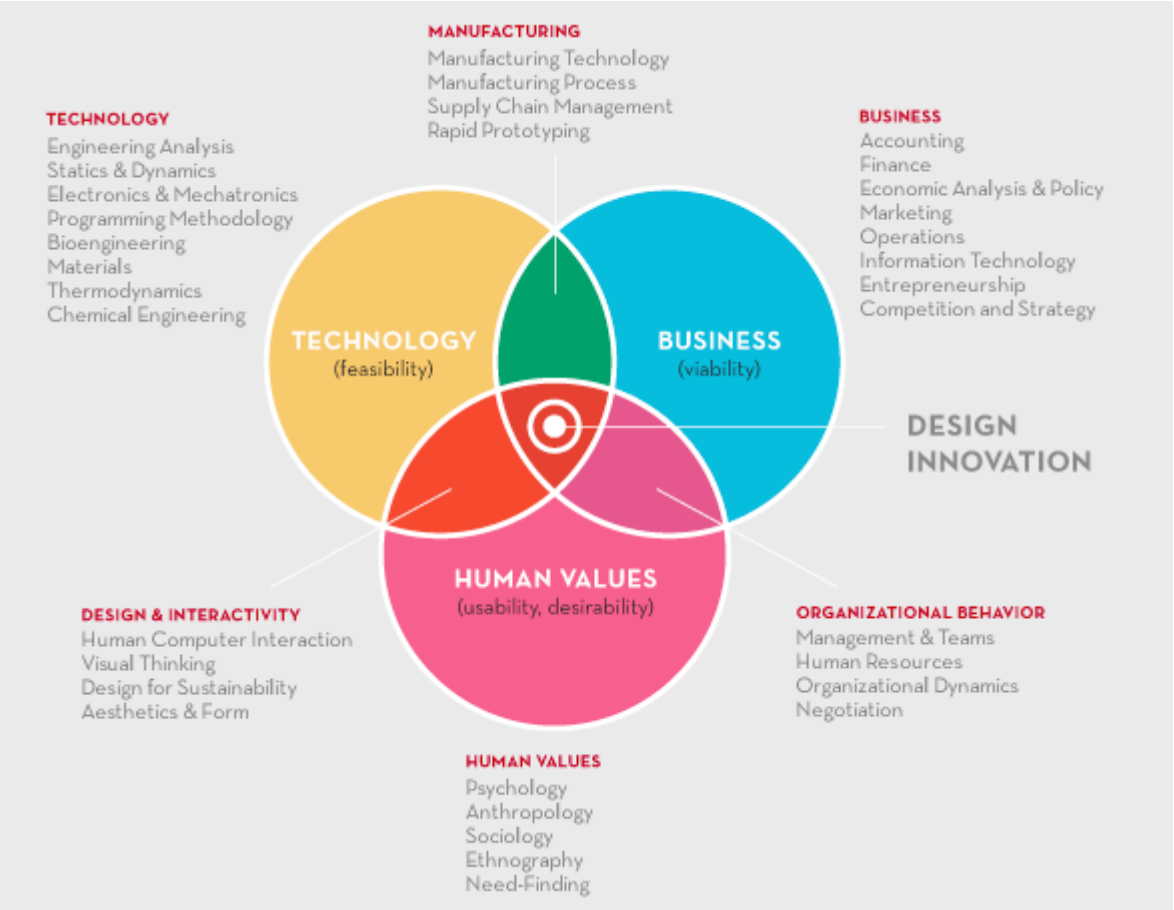
Figure XXX "Design utilization in different organizational contexts" (Heskett, 2003 in Boztepe, 2016, p. 4)

Appendix L



Source: Sniukas et al., 2016

Appendix M



Source: Schmiedgen, 2011