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A model of service design elements to understand innovative service processes

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This paper aims to provide an understanding of innovative service design processes by comparing service design logic with the entrepreneurial logics of causation, effectuation and bricolage (CEB). The paper draws upon empirical data to show how both service design logic and entrepreneurship logics may help us to create more innovative service design outcomes. In this process, we hope to understand how the creation of value enters into the service innovation process through co-creation between customers, organisations, ecosystem members and society. Data used within this paper includes deep qualitative interviews with key stakeholders, written documents and participative observation. From our analysis, we develop a model of service innovation design that shows how design logics and entrepreneurial logics influence the development of new and innovative services.

keywords: service design; service innovation; effectuation; bricolage

Introduction

This paper explores innovative service design processes by comparing service design logic with the entrepreneurial logics of causation, effectuation and bricolage with the aim to better understand how innovative services are designed. The intention is to enhance the understanding of how applying both service design and entrepreneurship logics may help us to create a more desirable entrepreneurial outcome. Therefore, this research explores the process of service innovation design and draws upon Venkataraman, Sarasvathy, Dew and Forster (2012) to suggest that markets and opportunities are the products of a



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designing process, constructed through the actions and interactions of service entrepreneurs and stakeholders. The conceptual framework deployed herein as specific to design is based on understanding design as something that brings change (Borja de Mozota, 2003) and facilitates strategic innovation (Rieple & Pitsaki, 2001). Moreover, with regard to identifying what can be considered as design and who is able to design, the study draws upon Simon's (1969) definition of design which states that "Everyone designs who devises a course of action which is aimed at changing existing situations into preferred ones" (p. 111). The theoretical approaches deployed within the framing of the argument and the subsequent analysis arise both from the literature related to service design and from the entrepreneurship literatures.

Our research takes place within the lively discussion that studies the processes deployed by entrepreneurs in identifying, exploiting and operationalizing an opportunity for a new service (Arend, Sarooghi & Burkemper, 2015; Wiltbank, Sarasvathy, Dew & Read, 2016). Through using service design logic as a lens, as well as comparing it with three alternate sets of cognitive logics as associated with entrepreneurship (causation, effectuation and bricolage (CEB)) the aim of this paper is to understand how innovative services are designed. It follows Whetten's (1989) suggestion to use journalistic questions in order to describe building blocks for theory that explore the elements of: What is being designed, how and why? Who is designing, when and where? In justification of the theoretical framing it is pertinent to note that Fisher (2012) also compared and contrasted causation, effectuation and bricolage using Whetten's building blocks for theory and did so by utilising a deductive research approach. We contend that a combination of service design logic and entrepreneurial logics offer a new understanding of how the value related to the range of stakeholders (customer, organisation, ecosystem and society) enter into opportunity creation within the design process, but also that service design innovation processes are more complex than is suggested by using only the CEB or service design logic as a pre-set framework. Applying a synthesised service design logic and entrepreneurial logics as a lens may shed new light on how the different levels of stakeholder value in relation to customer, organisation, ecosystem and society, enter into the service innovation process (Buchanan, 2001; Den Ouden, 2011).

The research is conducted within a new service venture called Health Company (a pseudonym, as are all other names), which was established in 2014. The firm offers occupational healthcare and wellbeing services to knowledge workers by deploying the business model as advocated by Den Ouden (2011) which describes the offering as being a meaningful and transformational innovation which address the different levels of stakeholder value. The service which aims at changing behaviour, disrupts the traditional structures in the ecosystem, and requires a long-time period for value to be realised; and quite importantly, as a radical solution, it is not yet evident if the business model is a viable one that will be accepted by the customers. However, Health Company aims to challenge the traditional design of the services for occupational health care by focusing on the design and provision of preventive services, offered for a fixed monthly fee, and by handling approximately 65% of their services digitally through eHealth solutions. This is in stark contrast to the traditional face-to-face service delivery methods typically found in occupation health service providers.

During one year of participant observation research at Health Company we conducted semi-structured interviews, engaged in informal discussions, attended meetings, events, and development days and to some extent also became involved in the everyday work of the service. We also had access to internal e-mail communication, presentations materials, meeting memos, customer research material as well as internal and external social media channels (Brewer, 2010). This enabled us to get close to people working in Health Company to understand the processes, meanings and everyday practicalities of service design and service provision within the organisation.

Literature review

Defining services

There are different perspectives in service marketing and management literature as to how to define the service concept and how to articulate what services are. Service research has historically focused on studying the provision of service tasks in a specific context (Chandler & Lusch, 2015). As the context of services has changed quite rapidly so too have the priorities of service research which has moved towards enhancing the understanding of value creation in complex systems, multi-actor networks and collaborative contexts as well as investigating the changing roles of customers, employees, and technology in the value creation process (Ostrom et al., 2015).

Importantly, the service concept has developed from meaning merely the service activity or process towards understanding service as customer service logic, provider service logic or customer dominant logic. Logics then tend to underlie how services are now understood. Service as an activity is where a service provider assists a customer in everyday activities. Customer service logic changes the focus and emphasises the role of the customer in value creation and how they create value for themselves. Provider service logics focuses on creating a business model which is based around the customer's own value creation processes, so that the customer becomes more involved in the design and co-creation of the service to enable the service provider to more specifically meet their needs and to engineer out non-value adding elements (Clark, Johnston & Shulver, 2000; Grönroos, 2008).

Most recently the service concept has increasingly been defined by a focus on the customer's processes and touchpoints, a perspective known as customer dominant logic (Heinonen & Strandvik, 2015). This is in contrast to the provider service logic which focusses on the provider's activities (Edvardsson, Gustafsson & Roos, 2005; Grönroos, 2008). Notably, a customer dominant logic focuses on how customers embed services within their own ecosystem and processes by engaging with different providers (Heinonen & Strandvik, 2015). Due to the inherent complexity of the service context, the service experience may be affected by different dispositions and ecosystem participants leading to unique, changing and fleeting service experiences (Chandler & Lusch, 2015).

As the definition of service concept has evolved and recognition of service complexity has grown, service design has emerged as a new field (Mager, 2009; Patricio, Fisk & Constantine, 2011). Many of the complex problems that we face today are not well addressed by fragmented knowledge and specialisation (Buchanan, 2001) and service design theory is currently unable to address the requirements of a services sector

dominated by customer-dominated logics theory. We argue that a more inclusive service design philosophy, which brings in the logics of entrepreneurship and innovation, offers a holistic approach to considering the service offering thereby enabling us to understand the connections and interactions in complex ecosystems (Buchanan, 2001; Mager, 2009).

Service design

Service design, as an outcome-based practice, focuses on bringing about a service that is: usable, desirable, efficient and effective. In order to do this the design process should be: human centric and holistic in nature; and involvement in this process should be: systematic, iterative and user-oriented (Mager, 2004). Service design when described as a human centric approach, emphasises the need to apply techniques to foster ‘user understanding’ for the service designer to understand the actual context of service use (Buchanan, 2001). This is to develop new service ideas and solutions as well as providing guidance towards implementing them (Moritz, 2005). In line with customer dominant logic and the role of other stakeholder within the ecosystem, Mager and Sung (2011) provide a justification for service design which emphasises co-creation with users, employees and other stakeholders. Pertinently it determines that there is a need to strive to innovate new service solutions by using creative and visual methods to explore the whole series of interactions within the customer journey.

Theory on service design has developed from focusing only on the outcome and process into precursor factors: “Service design is the design of overall experience of a service as well as the design of the process and strategy to provide that service” (Moritz, 2005, p. 39). Design has also been seen as means for communicating values to the employees and acting as a glue in multidisciplinary projects as well as enabling better connections (Pitsaki & Rieple, 2011). Service design is not just a short-term project but an ongoing process which aims at continuous evolution; it affects the whole organisation, business structures and processes (Moritz, 2005).

Service design research has typically been approached from the service marketing and service management literatures (Holmlid & Evenson, 2006; Edvarsson et al., 2005; Wetter-Edman, 2010; Sangiorgi & Prendiville, 2014; Sangiorgi & Meroni, 2011) with the aim of trying to position the concepts as well as providing theoretical grounding and advancement for the discussion of service design. However, even though there is advanced knowledge about how organizations manage services, few researchers have explicitly used design theories (Kimbell, 2011) to understand the service creation and development process. The design process if mentioned at all has merely been seen as a component of new service development (Scheuing & Johnson, 1989) or the redesign of existing services (Berry & Lampo, 2000). Instead of seeing design, and design thinking (Liedtka, 2013) as something that can create new concepts and knowledge (Kimbell, 2011), its role has rather been that of an adjunct. Applying CEB logics is a new approach to conceptualising service design and service innovation and has the potential to enhance the power and influence of service design. A better understanding how service design and entrepreneurial logics may help us to create more desirable service innovation outcomes, as well as understand how customer, organisation, ecosystem and society value can usefully enter into the service design and innovation process.

Entrepreneurial processes

For many years, entrepreneurship research relied largely on theoretical frameworks that were imported from other domains (Fisher, 2012). The focus of entrepreneurship research was on the relative performance of companies and individuals, which had already been explored by strategic management scholars and was arguably not an appropriate basis from which to understand entrepreneurship processes and performance (Venkataraman, 1997). Another weakness was the definition of entrepreneurship itself as most researchers defined it solely in terms of the entrepreneur as an individual: who they are, and what they do (Venkataraman, 1997).

The focus for entrepreneurship research was subsequently extended to include not only the individuals but also the opportunities that they seek. Venkataraman (1997) defined entrepreneurship research as a scholarly field which studies how, by whom, and with what consequences opportunities are discovered, created and exploited into future products and services. Since then entrepreneurship researchers have begun to form their research questions around the conceptual domain of opportunities, asking how the creation of new products and services come to be, why certain people find and exploit these opportunities while others don't, and what are the different modes of action that are utilized to exploit entrepreneurial opportunities (Shane & Venkataraman, 2000).

Over the last two decades emerging theories of entrepreneurship have extended the traditional focus to understanding entrepreneurial action through economic thinking, demand–supply imbalances (Casson, 1982; Kihlstrom & Laffont, 1979) and opportunity exploitation (Shane & Venkataraman, 2000) in order to understand how entrepreneurs exploit and identify opportunities. This describes the differences between the traditional planning approach (causation) and emerging theoretical perspectives of effectuation (Sarasvathy, 2001) and bricolage (Baker & Nelson, 2005).

These theoretical approaches to entrepreneurship have mainly evolved and developed independently of one another even though they have much in common (Fisher, 2012; Archer, Baker & Mauer, 2009; Chandler, DeTienne, McKelvie & Mumford, 2011; Fisher, 2012). These new theories suggest that opportunities can be constructed, created through iterative learning processes rather than through exploiting existing known opportunities (Alvarez & Barney, 2010). Effectuation emphasizes the uncertainty of market conditions, which lead to dynamic and interactive process of creating new artefacts. Instead of focusing on identified pre-existing opportunities effectuation includes the very creation of the opportunity (Sarasvathy, 2001). In a dynamic environment goals change and the entrepreneur has control over the means only. Focusing on means when making decisions entrepreneurs ask questions such as: Who am I? What do I know? Whom do I know? in order to uncover opportunities (Sarasvathy & Dew, 2005). The means consists of personal knowledge, skills and networks on individual level and physical, organisational as well as human resources at a company level (Barney, 1991). Effectuation and causation processes don't exclude one another, but on the contrary they overlap and intertwine depending of the actions and context of decisions (Sarasvathy, 2001).

Part of this emerging approach to entrepreneurship is based on the concept of bricolage, which was used by Levi-Strauss (1966) to say that there may be many mechanisms that can be used to achieve a certain state. Bricolage as an entrepreneurial process can be

defined as making do by applying combinations of resources at hand to new problems and opportunities (Baker & Nelson, 2005). Entrepreneurs who enact bricolage consider new value for forgotten, discarded, worn or single-use items, engaging customers, suppliers and hangers-on in the project, creating services by amateur or self-taught skills, creating markets by offering otherwise unavailable services as well as refusing to consider standards and regulations as limitations (Baker & Nelson, 2005).

Venkataraman et al. (2012) suggests that entrepreneurship, and which we argue also applies to service design, has three premises:

1. Opportunities are made as well as found. Markets and opportunities may be the product of a design process, constructed through the actions and interactions of entrepreneurs and stakeholders.
2. Transformations are a central concept. If we consider the environment not as a given and static, then the inter-boundary may be radically transformed.
3. In order to understand entrepreneurial processes, we need to look at both inner and outer environment: actions, relationships and interaction.

Service design logic differs from the CEB logics by assuming that the customer or the user is the starting point for opportunity design. However, effectuation and service design have several processes in common. Both of them consider the opportunity construction process to be iterative, including stakeholders and taking place in a changing environment.

Bricolage and service design also both deal with problems that have to be solved using creative or innovative solutions. Effectuation, bricolage and service design all emphasise the openness of the process and the importance of interaction with stakeholders.

Comparing the different approaches, it seems that causation is clearly distinctive from the other processes as it has rather different philosophical underpinnings (Sarasvathy, 2001). Summarising we could say that causation is linear, effectuation is experimental, bricolage is flexible and that service design logic implies constant reframing. We believe that a more complete model of new service development, or service innovation, should incorporate all of these logics into one overarching framework.

Research Methodology

The research is conducted within a new service venture called Health Company, which was established in 2014. The service offers occupational healthcare and wellbeing services to knowledge workers. Health Company aims to challenge the traditional design of the service for occupational health care practices by focusing on the design and provision of preventive services, offered for a fixed monthly fee, and by handling approximately 65% of their services digitally through eHealth solutions which is in contrast to the traditional face-to-face service delivery methods.

During the one year of participant observation research at Health Company we conducted semi-structured interviews, engaged in informal discussions, attended meetings, events, and development days and to some extent also became involved in the everyday work of the service. We also had access to internal e-mail communication, presentations materials, meeting memos, customer research material as well as internal and external social media channels in the manner of ethnography (Brewer, 2010; Hammersley, 2013, 2016) which enabled us to get close to people working in Health Company to understand

the processes, meanings and everyday practicalities of service design and service provision.

Findings

In this section, we explore to what extent different logics associated with causation, effectuation and bricolage as well as service design logic enhances our understanding of the service innovation design process of Health Company.

When the two founders of Health Company described their behaviours, and reflected on their thoughts during the early stages of the new venture, processes associated with causation were almost totally missing from their accounts. In contrast with their own stance, they argued that competitors had used a causation-based approach in which they designed their business models around the constraints that they perceived in the environment. They regarded many of the existing actors in the occupational health care industry as inflexible and blinkered, seeing the environment as static and linear, and as a result failing to spot changes that were coming to the payment system or increasing digitisation of service processes. The founders considered that their new venture challenged conventional thinking and the dominant view of the market. The other founder, with previous experience of new ventures, suggested that they explicitly tried to avoid written and long term planning:

As I had practised service design a little bit, so I got an idea that instead of doing the same as we did in Company X (the company he had established earlier) that we sat in a room behind the closed doors and sometimes we made hundred PowerPoint slides, sometimes 30 and other things. We knew some five years ahead how we are going to run the business. Here we did the other way around in that sense that the first thing we did after deciding to start a new venture we started contacting our old acquaintances.

The only evidence of causation processes related to systematic information gathering, which was aimed at learning from the international actors in the healthcare business, knowing about the laws and regulations in healthcare business and learning about the occupational health care market in general. Instead of causation, Tables 1-3 show examples of effectuation, bricolage and service design within the company.

Table 1 Effectuation processes in Health Company

Effectuation	Effectuation processes in Health Company
The primary set of means is formed by who the decisions makers are, whom and what they know, selection criteria based on affordable loss or acceptable risk (Sarasvathy, 2001)	Opportunity design influenced by heterogeneous educational backgrounds, knowledge and experience from different fields and from earlier ventures, as well as by the wide network Investing only own work input and a small amount of capital

	Choosing alternatives with smaller capital requirements (technological systems, premises, doing by yourself)
People identify new means-ends relationships that arise from change to discover entrepreneurial opportunities (Shane & Venkataraman, 2000), experimenting with different strategies, effectuation processes may even start without an intentional decision of starting a business (Sarasvathy, 2001)	Increasing number of knowledge workers with new requirements for health care, changing work culture with the emphasis on employees' well-being and digital tools opening new service options Experimenting with different service ideas, channels and service concepts Experiencing dissatisfaction with how things are run in the present job both from customer's and employee's point of view
Focus on the controllable aspects of an unpredictable future (Sarasvathy, 2001)	Creating market by bringing in stakeholders who buy into the idea (shared values)
Due to rapid change the future is unknown; entrepreneurs have to make decisions about companies, markets and industries that do not yet exist (Sarasvathy, 2001)	Law changes: national level social and health care sector reform, digital services in health care, government compensation models Environment changing due to governmental changes, explicit goal to disrupt the market
New markets created through strategic alliances and other stakeholder precommitments (Sarasvathy, 2001)	Cooperation with different service providers to reduce entry barriers Customer precommitments

While causation processes seem to be absent, all the basic principles of effectuation (Sarasvathy, 2001) can be found within the opportunity design processes of Health Company (Table 1). The question 'who am I and what do I know' came up continuously in the service design conversations from both of the two founders at the very early stages of the new venture process as indicated in three incidences:

What can a person do if his both grandparents were doctors, brother is a doctor, cousin is a doctor and uncle is a doctor and I'm the black sheep. And to add to that, my wife has worked in occupational health care.

We started talking that what if we would do the same as Company X (the earlier company established by the other founder) had done in law services. What if we would start building right from the beginning a concept in occupational health care and wellbeing that we ourselves believe in.

We discussed a lot at home, what were the means, which Company X utilised when it disrupted the market.

Also, the network that both founders had developed, played an important role in enabling them to get access to new people. The two founders were also frequently asking themselves ‘who should I know?’ and finding ways to get access to these new contacts. Their guiding principle was to be open and talk about their idea with the people they met. They soon found out that many questions and problems were solved through these informal discussions.

Table 2 Bricolage processes in Health Company

Bricolage	Bricolage processes in Health Company
Making do by applying combinations of resources at hand for new purposes (Levi-Strauss, 1966), rejecting the limitations of the environment. (Baker & Nelson, 2005)	Using human resources, digital channels and systems in a new way and new combination Interior design partly with used furniture Disregarding assumed rules, standards and practices in the healthcare sector
Capable of creating innovative solutions in resource constrained environment (Senyard et al., 2014)	Disrupting the market with a new business model
Involved employees, customers, suppliers, and hangers (Baker & Nelson, 2005)	Employees, customers, suppliers and other stakeholders as co-creators, suppliers as customers, customers as suppliers
Opportunity exploitation through other means too expensive (Baker & Nelson, 2005), resource constraint and competitive environment (Senyard et al., 2014)	Limited resources as a new firm; trying to find innovative ways of solving the problems Very competitive market, large companies as competitors, traditionally heavy investments required

Health Company can also be seen to have engaged in bricolage by using resources in a new way, involving stakeholders in the opportunity design process and trying to cope with limited resources by coming up with creative solutions (Table 2).

Bricolage processes are argued to enhance innovativeness in resource constrained environments (Senyard et al., 2009). The occupational health care sector in Finland is a regulated and highly competitive, with a few large service providers who all have rather similar business models. The legal environment sets many boundaries concerning required documents, licenses and expertise, all aimed at ensuring quality and safety in health care services. Another group of boundaries set by law concerns the operational implementation of occupational health care services. As the whole healthcare sector is rapidly changing it sets pressure on interpretations of the law and constant reframing of instructions. However, these new interpretations tend to be applied reactively. Pertinently, Health Company has rejected these limitations by introducing digital services and a fixed payment model, which innovation has allowed it to become a forerunner

among its competitors. A third group of boundaries are assumption of regulations or assumptions of how services should be. Health Company has tested the limits of codes, standards and professional norms concerning processes, roles, premises and primary value of the service. One example of assumed regulations took place when the design of the premises started. As all the health care centers in Finland tend to share much the same outlook, it was assumed that it is due to the regulations. However, after investigating legal requirements, it became clear that there are rather few statutory limitations to how a health care center should look like which enables much wider service design possibilities.

When looking at the opportunity design process by applying service design logic (Table 3), we are able find out how the initial and rather vague idea based on effectuation logic (who am I, what do I know, who I know) turned into something that is of value for the customer/end-user, organisation, ecosystem and society.

Table 3 Service design logic in Health Company

Service design	Service design processes in Health Company
<p>Assumes the customer/user as the starting point or lens into a specific service models how the service can be performed (Holmlid & Evensson, 2008), integrates the possibilities and means to perform a service with the desired qualities, within the economic and strategic intent of an organization: strategies, structures, processes, interaction (Holmlid & Evensson, 2008), a holistic approach (Mager & Sung, 2011)</p>	<p>Experiencing the gaps in the 'old' service model as a customer, gathering customer understanding, designing services by thinking what creates value for the owner him/herself, customer/end-user, organisation, ecosystem and society</p> <p>Focus on customer experience and employee experience</p> <p>Channels: several different channels available for customer contact (emphasis on digital channels)</p> <p>Payment model: from the accrual payment to fixed monthly payment</p> <p>Process: designing new service processes</p> <p>Service offering: moving the focus from medical treatment to preventive health care</p> <p>Premises: designed to be part of the desired customer and employee experience, from sterile hospital environment to cosy, relaxed, home feel</p> <p>Roles: from hierarchy to equality (employees), from object to subject (end-users)</p> <p>Emotions: relaxed, friendly, positive, personal</p> <p>Communication: designing a distinct, value-laden story, emotions embedded in the communication</p>
<p>Creative, human-centered and user-participatory methods,</p>	<p>Customer profiles and customer service paths</p>

interdisciplinary and visual (Mager & Sung, 2011), constant reframing (Saco & Concalves, 2011)	Ideation, experimenting fast with different service ideas Mentor group meetings ('oracles') Co-creation with founders, suppliers, potential customers, design professionals and mentors Visual customer profiles, customer service paths and interior design Iterative process: Listening customers actively, testing fast, emerging business model, which is constantly reframed
Capable of dealing with "wicked problems" for which there is no single solution and in which stakeholders play roles in defining the nature of problem (Buchanan, 1992), to create usable, desirable, efficient, effective, human centric and holistic services (Mager & Sung, 2011)	Increasing social and health care costs: government and public interested in preventive health care solutions Knowledge workers as users of health care services: companies interested in preventive health care solutions Knowledge workers as subjects in health care services: end-users interested in alternative solutions Designing easy to use, fast, low-threshold personalised services as well as long-term health plans with a focus on preventive health care services
"Everyone designs who devises a course of action aimed at changing existing situations into preferred ones" (Simon, 1969), co-creation (Mager & Sung, 2011)	The founders were explicitly thinking how to solve the problems within occupational health Actively contacting and talking to people thereby increasing the opportunity for serendipity Discussing the first ideas, alternative solutions and competence needs with potential users and decision makers to develop the ideas further Customers as developers and innovators, suppliers as customers Health Company as innovator and developer for the suppliers
Sustaining change, redirecting practices towards sustainable futures (Fry, 2009)	Change at personal level: willingness to do something purposeful Change at industry level: Conscious aim of disrupting a conservative industry/market, modernisation of services

Change at national level: Improve health, wellbeing, working ability and life expectancy

Change at organisational level: Disrupting the hierarchical work culture in the industry, creating a good workplace

In Health Company the choice of business sector (occupational health care) was affected by the founders' education, work and entrepreneurial experience as well as the presence of close relatives working in the sector. However, these effectuation processes did not particularly address the question, 'how does value enter into the design process?'. The owners had decided that they would start a new venture in occupational health care, but they did not yet have an idea about scope of the new venture and what it would be like.

After deciding on the sector, and deciding that they wanted to start a new venture, the two founders proceeded with a question: 'what is the change I want to make?' When answering this question, the two founders applied metacognitive processes to the design of their services. Metacognitive processes enhance adaptable cognitions which enable us to 'think beyond or reorganize existing knowledge structures and heuristics' (Haynie, Mosakowski & Earley, 2008, p. 217) in uncertain and new situations. Metacognitive strategies are learned strategies, thinking about thinking; these affect how one reflects on one's own motivation and environment, then formulates and evaluates multiple alternatives based on experience, knowledge and intuition (Haynie, Mosakowski & Earley, 2008). The metacognitive processes led to the question of 'what is the change I want to make?' In the case of Health Company these related to:

- Experiencing the gaps in customer value in the previous work place and reflecting on the causes for those gaps and thinking about different alternatives to offer better customer value
- Dissatisfaction in leadership style in previous work place and reflecting that earlier experience with Company X as a great place to work
- Reflecting on the earlier experience of disrupting the market and thinking about the disruption alternatives in occupational health care sector
- Reflecting on the experience and knowledge of service design and thinking about the alternative paths to opportunity design
- Reflecting on own experiences as a customer and end-user of occupational health care services
- Reflecting on own motivation: what is it that I want to achieve?

Answering the question of 'what is the change I want to make', enabled the founders to scope their idea a little bit further; having already established that they wanted to enhance wellbeing and health in Finland, and to help companies to have healthy and productive employees, including their own. They also wanted to disrupt the occupational health care market by creating new value for the customer and solving the present bottlenecks in the service. Notably, one of the biggest bottlenecks from the customer side seemed to be the accrual payment system therefore the owners started thinking about the design of a fixed payment system. By exploiting service design logic they started

openly discussing about their idea with their contacts. In one of these discussions one of their contacts had said:

It is like, have you ever heard about the story of the Chinese doctor. People in the village paid for the doctor, but by no means did they pay based on number of clinical visits and operations. Instead, all the healthy villagers paid. According to the principle, the better the villagers felt, the better the doctor earned. He had financial incentives to keep the villagers healthy.

This became the story and vision of Health Company. In the proceeding co-creation event called *Oracles' Evening* the question to be discussed was: what would the services be like if the aim was to keep people healthy? In this event, the first ideas for the new services were discussed. However, the founders wanted to get a deeper understanding of the customers and conducted 50 interviews among potential customers who were mainly managing directors, HR managers or financial directors. These interviews enabled the founders to design their emerging business model, which included choices of channels, payment model, customer processes, service offering, premises, roles, emotions and communications. The initial ideas were tested in discussions with potential customers and other network. Also, a short workshop was organised by a service design agency around customer profiles and customer paths; all adding to the overall design activity.

Discussion

Effectuation and bricolage logics seem to share similar philosophical underpinnings and enabled us to understand how service opportunities were recognised and developed. However, service design logic, as a lens, revealed several new elements in the opportunity design process which were not covered within any of the CEB logics. When we attempt to understand how service innovations can be designed, we can determine that by combining the CEB logics with service design logic, this enables us both to understand and develop the process (Table 4).

Table 4 A model of service innovation design

	Causation	Effectuation	Bricolage	Service Design
What	Effect as given; focus on selecting between means to create that effect, a given goal to be achieved or a decision to be made: usually well-structured and specific (Sarasvathy, 2001)	A given set of means. The primary set of means is formed by who the decisions makers are, whom and what they know. Selection criteria based on affordable loss or acceptable risk (Sarasvathy, 2001)	Make do with what is at hand (Levi-Strauss, 1966)	Assumes the customer/user as the starting point or lens into a specific service models how the service can be performed (Holmlid & Evensson, 2008)

How	Systematic information gathering, making plans, setting goals and implementing, linear process (Kotler, 1991)	People identify new means-ends relationships that arise from change in order to discover entrepreneurial opportunities experimental and iterative process (Shane & Venkataraman, 2000)	Making do by applying combinations of resources at hand for new purposes (Levi-Strauss 1966), rejecting the limitations of the environment (Baker & Nelson, 2005)	Creative, human-centered and user-participatory methods, holistic, interdisciplinary and visual (Mager & Sung, 2011), constant reframing (Saco & Concalves, 2011)
Why	Focus on the predictable aspects of an uncertain future (Sarasvathy, 2001)	Focus on the controllable aspects of an unpredictable future (Sarasvathy, 2001)	Capable of creating innovative solutions in resource constrained environment (Senyard, Baker, Steffens & Davidsson, 2014)	Capable of dealing with "wicked problems" for which there is no single solution and in which stakeholders play roles in defining the nature of problem. (Buchanan, 1992)
Who	Rational entrepreneur who seeks for profit maximisation (Sarasvathy, 2001)	Decision makers as who they are, whom they know and what they know (Sarasvathy, 2001)	Involved employees, customers, suppliers, and hangers-on (Baker & Nelson, 2005)	"Everyone designs who devises a course of action aimed at changing existing situations into preferred ones" (Simon, 1969), co-creation (Mager & Sung, 2011)
When	Constraints on possible means, more useful in static, linear and independent environments (Sarasvathy, 2001)	Due to rapid change the future is unknown; explicit assumptions of dynamic, non-linear and ecological	Opportunity exploitation through other means too expensive (Baker & Nelson, 2005)	Sustaining change (Saco and Goncalves, 2008), redirecting practices towards sustainable futures (Fry, 2009)

environments (Sarasvathy, 2001)				
Where	Market share in existing markets through competitive strategies (Sarasvathy, 2001)	New markets created through strategic alliances and other stakeholder precommitments (Sarasvathy, 2001)	Resource constraint and competitive environment (Senyard et al., 2014)	Wicked problems (Buchanan, 1992)

Service design logic strongly advocates the importance of change (Fry, 2009; Saco & Gonsalves, 2008), which in turn leads to a better future, which is at the core of opportunity design. Notably, within Health Company the change that was taking place touched the founders themselves, along with customers/end-users, organisation, society and the whole ecosystem. The idea of the change was the premise from which the opportunity design started to take form and thereby further developed by utilising customer understanding and finding more concretely what creates value for the customer and where the gaps were (Texeira et al., 2012). The ideas about what needed to be changed was combined with ideas of how things should be changed to create value at different levels (Euden, 2011). The ideation and experimentation approach continued during the entire design process in an iterative manner, sometimes in more formal setting, but often in informal discussions and meetings too. Overall the service innovation process was an open, iterative and constructive process which invited different actors from the ecosystem to participate in the process. Through the open and co-creative process which was shaped by the founders cognitive and metacognitive processes, customer, organisation, ecosystem and society value entered into the service innovation process. The outcome of the service innovation process was an emerging business model in line with the approach advocated by Saco and Concalves (2011), which was considered not to be final but under constant reframing.

In considering the behavioural comparison of emerging theories of entrepreneurship, Fisher (2012) argued that bricolage and effectuation logics ignore market needs in uncovering an opportunity and refers to the argument for transformation as determined by Sarasvathy (2001) and Baker and Nelson (2005). However, it could be argued that both effectuation and bricolage build on customer needs, and that the information does not come through formal market research as it comes in ongoing interaction with people. Pertinently, service design logic aims to go deeper into understanding what people value and what the gaps are. Therefore, when applying service design logic ideation starts from what makes value for different stakeholders instead of focusing on the explicit needs. Service design logic includes people with different competences, experience and knowledge in the co-creation process and the outcome may be something that the customer or user was not able to imagine as one of the founders put it:

If we had asked the customer, what they want, we would have never come up with our present business model. People are not able to imagine different futures.

Our model of service design innovation can be used by design researchers and service designers to understand how design logics and entrepreneurial logics influence the development of new and innovative services. To conclude with Euden's (2011) words "If they are well designed, transformational and innovative solutions create value for their users and for the organizations involved in developing and delivering them, and as a result they generate sustainable value for society at large" (p.13).

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