Refining the User Journey

Co-creation processes

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Laurea University of Applied Sciences   **Abstract**

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This paper aims to refine user journey processes through the evaluation of a design game. It aims to identify disruptive moments in the facilitation of user journey workshops through the usage of the tool. Additionally, through the iterative development of the tool it aims to answer how these problems can be alleviated. The work is conducted at the Kaufmann service design agency (a part of Nordic Healthcare Group).

The service design methodology of user journeys and the workshops in which they are co-created are investigated. Theories behind value co-creation, facilitation, boundary objects, and design games are utilised in order to try to answer the aims of the paper.

Through three iterative workshops a design game or tool is evaluated. Between each workshop the tool is refined using the group discussion which followed each workshop as well as the observed behaviour of the participants during the workshop. Disruptive moments during the facilitation of user journeys were noticed and identified as participant disengagement or confusion. Additionally, facilitator intervention was identified as occasionally causing bias.

The tool assisted in engaging participants through the usage of gamified board game-like elements. It also removed some confusion through the usage of specific game pieces, which provided their own guidance. Facilitator intervention was reduced, but it can be argued that the game itself provides its own bias.

Further research is needed to utilise the user journey workshop tool in other industries and in other contexts. Additionally, the tool itself can be further refined through additional iterative workshop research.

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1   Introduction

1.1   The objective of the thesis

Service design relies on co-creation with multiple stakeholders. The facilitation of stakeholders is of utmost importance in ensuring the service design process runs smoothly. During the process, often multiple workshops are run in order to compile research and insights; generate ideas and enable communication between stakeholders; and evaluate and execute prototypes. These workshops require designated individuals, facilitators, who do not directly participate heavily in the workshop itself, but instead allow the workshop to run smoothly from one stage to another. The facilitation of workshops is a difficult task even for experienced professionals as it requires multitasking of various tasks simultaneously. There is a multitude of various workshops which require facilitation, and thus to narrow the scope of research user journey workshops have been selected as the core focus of this paper.

User journey maps, and the workshops in which they are co-created, are fundamental to the field of service design. Through user journeys various stakeholders can acquire a holistic view of a user's journey through the service in question. The user is a critical stakeholder in a service. Due to their importance, most service design implementations benefit from recognizing how a user traverses through a service. The method by which these maps are created, user journey workshops, have a large impact on the accuracy of the final user journey map itself. A workshop which is suboptimal will rarely produce an accurately representative map of the user's journey. This paper seeks to assist in the process of facilitating a user journey workshop through a tool. This paper aims to evaluate a tool for the creation of user journey workshops. Through the evaluation of the tool this paper will try to identify disruptive or unproductive moments in the facilitation of the user journey workshops. Additionally, during the iterative development of the tool, this paper will try to assist in the problems faced in the facilitation of user journey workshops. The purpose, aim and research questions are outlined in figure 1.
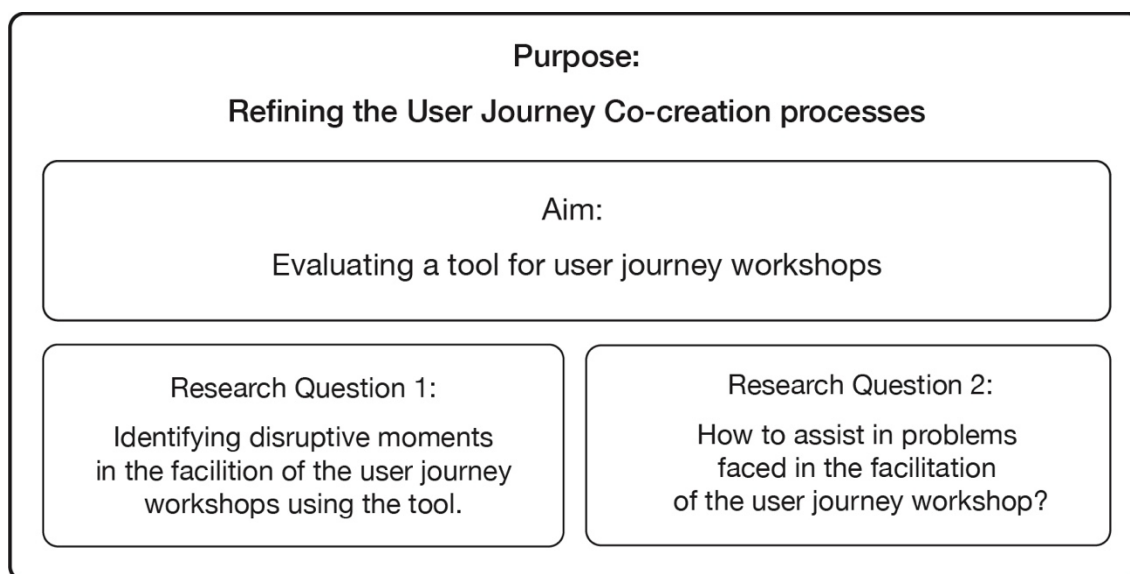
Purpose:

Refining the User Journey Co-creation processes

Aim:

Evaluating a tool for user journey workshops

Research Question 1:

Identifying disruptive moments in the facilition of the user journey workshops using the tool.

Research Question 2:

How to assist in problems faced in the facilitation of the user journey workshop?

Figure 1: Purpose, aim and reserach questions

1.2 Motivation for the thesis

The underlying motivation in this thesis is to evaluate and develop a tool to assist in the facilitation process of user journey workshops. The author is a designer at Kaufmann, a service design agency focused on the health and social care industry in the Nordics and a part of the Nordic Healthcare Group. The Nordic Healthcare Group is a consultancy with various departments focused on providing value in the health and social sector. These departments include data analytics, research, design and more. Acquired in 2018, Kaufmann is the design department within the Nordic Healthcare Group. The Kaufmann team comprises service, graphic, and user experience designers as well as project managers and totals just under twenty individuals. The department uses various design processes and methods to give the end-user of health and social care services greater value. These include: user-experience designing data dashboards to ensure municipalities are using their health and social resources effectively, ethnographic interviews of diverse patients throughout Finland to assess their needs are met and their service is being provided effectively and empathetically, and creating user journeys of patients with a wide variety of ailments.

User journey projects are so common for Kaufmann that they are a fundamental motivation for this thesis. As projects they are frequently undertaken for hospitals, care centres, or pharmaceutical companies in order to provide a clearer overview of the care and value being provided. User journeys at Kaufmann are created in workshops in collaboration with the stakeholders involved. A motivation for this paper is to discover a way to improve these workshops in order create even better user journeys. By looking at how user journey workshops are conducted at Kaufmann this paper creates and evaluates a new tool in order to assist user

journey workshops. Through examining the stages of user journey workshops different tool pieces were created and refined through various user journey workshops. The creation of a new and practical tool which can be utilized in the regular activities of the Kaufmann design department is an important motivator for this thesis.

In summary, the motivation to assist these workshops is thus personal, professional and, due to the them conducted within the healthcare industry, perhaps even moral. On a personal level, if this thesis can assist in facilitating user journey workshops then the workshops themselves will be more rewarding and engaging to attend. Professionally, the better Kaufmann is at facilitating workshops the better it can thrive as an agency and provide value in the service ecosystem in which it operates. Additionally, on a moral level, the more accurately Kaufmann can map user's journeys through the health and social services the better those services can become which can gradually make society healthier.

1.3 Structure of the thesis

This paper is structured in the following way. First, the theoretical background behind various relevant subjects will be discussed. Starting from a wide view of service design and the co-creation of value as a whole, the theory section will gradually narrow towards facilitation and user journey workshops. Following this, the tool is evaluated through a series of three iterative workshops. First the workshops are described in choronological order and then the findings from the workshops and their research implications are deliberated. The paper then concludes with a discussion and a considers possibilities for future research.

2 Theoretical background

Fundamentally, user journey mapping is grounded in service design theory and practice. This section will cover the underlying theory behind user journey mapping. As possibly the most pervasive methodology used in the practice of service design it is worth examining the field in more depth. After an overview of the field, the concept of co-creation is examined due to its relevance in how value as a whole comes about in collaborative endevours such as user journey workshops. From there the research of users themselves will be discussed as the process of mapping of users is what will be improved. Once these fundamentals have been covered, a deeper dive into user journeys will be done. The creation of user journeys often require workshops, and these workshops require a grounding in facilitation theory in order to achieve their intended outcome, and this theory follow the user journey discussion as well as discuss the importance of a specific type of boundary object: the design game. This will conclude the theoretical section of this paper. However, to begin, this paper's theoretical section will discuss service design as this will lay the foundation to understanding the method by with user journey map as co-created.

2.1 Service Design

Service design is a field which focuses on utilizing user-centered processes and methods in the growing world of services. The use of word *design* may lead one to falsely believe it is focused on the aesthic qualities which surround services. Yet, design practices as a whole are evermore shifting from the design of merely physical or digital forms towards the design of the intangible. In contemporary professional and theorectical contexts the word design encompasses the creation or alteration of human systems, interations, behavioural processes, as well as services (Salmi, Pöyry-Lassila, & Kronqvist 2012). True value in today's service-based economy is created not through the usage of natural resources to produce products, but is centred around indepth knowledge of the users' needs, obstacles, goals and overall experience *(Ojasalo & Ojasalo 2015)*. In this contemporary context, service design has arisen to provide a theorectical and practical structure for innovating and developing services (Strickdorn & Schneider 2018) through the focused lens of the end-user experience (*Portigal 2013*, *Reason et al., 2016*).

Service design uses theories and practices from surrounding fields such as user-experience design, enthographic research, design thinking and iterative or agile processes to achieve its goal of making services more valueable for the stakeholders involved. Service design has become evermore prelavant globally in the private sector as well to NGOs, socially innovative organisations, or government services aiming to improve the value they provide to their citizens. As an interdisciplinary practice, it is difficult to concretely define. Stickdorn & Schneider, in their book titled *This is Service Design Thinking* (2010) state that service design can be described through a set of fundamental priciples, a structured process, and a collected toolkit amassing a variety of techniques and methods. They describe these principles as being "user-centered, co-creative, sequencing, evidencing and holistic" (Stickdorn & Schneider 2010, 34-35).

Due to the similarity of the fields, the design thinking double diamond process can be used to describe the overarching steps in service design. It should be noted that the concepts of design thinking and service design are similar, but not exactly the same. Service designers use a variety of frameworks including design thinking, to co-create value with their user whereas design thinkers utilise their process for problem solving on a much broader scale, not necessarily restricted to services. Vargo and Lusch (2016) have made the arguement that *everything* is a service. As a generalisation however, service design has methods which are more action-oriented and focused on design *doing* rather than design *thinking* (Reason et al. 2013).

One of the most concise depictions of the double diamond process was originally created by the U.K. Design Council and a version of it can be seen in Figure 2. Various other depictions

conveying similar processes exist, but this minimal visualisation is sufficient to provide the overview currently required.
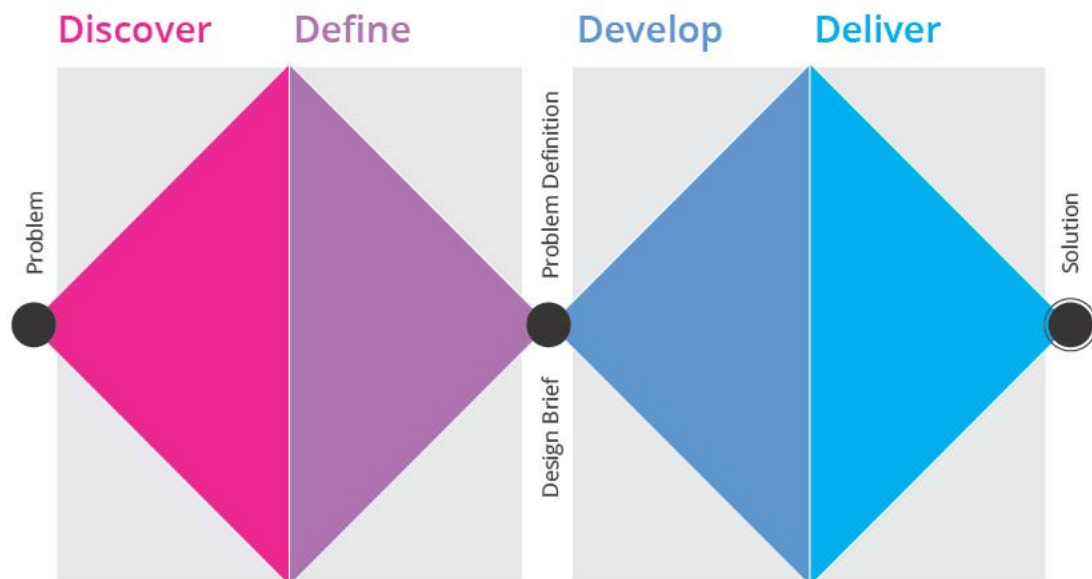

Figure 2: The simplified design thinking double diamond (Design Council 2019)

The design thinking double diamond is comprised of two diamond shapes, which can each be divided in two. This creates the Sub-divided the four stages are: Discover, Define, Develop, and Deliver. Each stage has its own various methods which can be utilised in order to achieve the desired results. As a brief summary of the entire process: at first, a problem is *discovered* and broad insight of the problem is sought; second, the insight is narrowed down and a focus is *defined*; third, the wide-ranging possible solutions to the problem are *developed;* finally, the solutions are iteratively tested, executed and *delivered* (Design Council 2019). This describes the process in theory, however, in reality, the application of this process is undertaken deliberately flexibly in order to accommodate for perpetually shifting stakeholders, environments and scenarios. The following of pre-set instructions too strictly is counter-productive and restrictive as the service design process and its methods are best uitlised as a loose framework rather than as a fixed recipe (Stickdorn & Schneider 2010). Service design – as a field of study with multiple stakeholders, overlapping systems, and often conflicting interests (Segelström 2013) – is inherently human-centred and when applying its methods needs to be treated as such. As a it is human-centred, the value that is created is inherently created collaboratively.

Collaborative creation, or co-creation, as a concept differs from creation etymologically through its co- prefix. The *co-* in co-creation is an important signifier. In linguistics, it designates "together, mutually, jointly" (Merriam Webster Dictionary) or "sharing things or doing things together" (Collins). More specifically, in a design context co-creation is defined by

Sanders and Stappers (2008, 6) as "any act of collective creativity, i.e. creativity that is shared by two or more people." The idea of co-creation has permeated the design industry, and it it noticeable in how the term *design* itself has shifted from the tangile to the immaterial. This did not happen in isolation, but rather went hand-in-hand with the rise of theories such as service dominant logic (Vargo & Lusch 2004; 2006). In this seminal paper the authors postulated a shift from a traditional goods dominant perspective of value creation to a service dominant logic view more in line with co-creation. Vargo and Lusch (2004) state value is co-created when service offerings are utilised by the consumer. This implies that firms are no longer simply producers of value, which are then purchased as used up by consumers, but that both producers and consumers are stakeholders in a value co-creation process.

Others have then taken this argument forward by stating the value creation dynamic has shifted even further towards the consumers and that firms facilitate value co-creation by providing necessary resources as a platform for consumers to define and realise their own value (Grönroos 2006; 2008; Ojasalo & Ojasalo 2015;). Specifically, Ojasalo & Ojasalo (2015) stress the need to fully comprehend the customer and co-create services which facilitate their personal processes. Heinonen et al. (2010) expand the theory originating from goods dominant to then service dominant and then further to customer dominant logic. This theory places utomost contextual importance on the customer: their lives, experiences, and perspectives in the value co-creation process. Through the gradual evolution of these theories it is apparent the customers' role is of more ever-greater importance in the development of service and their contextual lives need to be not only taken account, but also involved during the service development process. Additionally, value itself is fundamentally co-created and, as a conceptually entity, constructed by the customer (see e.g. Prahalad & Ramaswamy 2004; Grönroos 2006; 2008; 2009; Gummesson 2008).

In any system, through interaction, various stakeholders utilise the tools at their disposal to co-create value (Vargo Lusch 2004). Using an example from health care, this covers value co-creating interactions such as the micro-level (a patient, nurse, and doctor); the meso-level (collaboration between different hospital disctricts as well as their interactions with their governments); and the macro-level (extra-governmental bodies such as the Wolrd Health Organisation and their diverse partnerships). To further expand on this concept, one can also observe it not only in terms of the number of interacting actors, or organisations' size, but also using the scale of *time.* Actors co-create value over the scope of an individual meeting, a multi-year partnership, or a decade-long institutional collaboration.

Within the scope of this paper, the smaller scale time-frame will be focused on: the conceptual and tangible tools individual actors - be they facilitators, external consultants, front-end staff, upper-management or other various stakeholders – use to co-create value specifically in

the context of co-creating user-journeys. The value co-created can manifest in many various forms, which Orlikowski (2006) describes as scaffolding in her paper *The Scaffolding of Human Knowledgeability*. This is much like the scaffolding in the traditional usage of the word: a frame built to hold up the collaborative construction of a building.

A scaffold is an apt metaphor which is defines as having the characteristics of being emergent, embodied, embedded and material (Orlikowski 2002). It is emergent: scaffolding arises structured atop other forms of knowledge and generative daily interactions. It is embodied: the value is co-created through different actors' conscious or subconscious knowledge and experience. It is embedded: value is intrinsic to its specific social, political, cultural, and economic contexts. And it is material: in it manifests in a physical (or perhaps digital) form outside of abstracted conceptual theories (Orlikowski 2002). Through these scaffolding properties it can be concluded that knowledge and value is interwoven with the objects in which materialises (Hannula & Irrmann 2016). In the analysis of value, the intrinsic physical form which it embodies can not be separated from its conceptual abstractions. However, depite Orlikowski's scaffolding theory of value's emphasis on the materiality of the value co-creation process, objects alone, of course, cannot collaborate (Nicolini, Mengis & Swan 2012), but require users to interact with them.

2.2   User Research

Understanding the user of a certain service is perhaps one of the most crucial elements of service design. In fact, service design itself is similar to, or perhaps argueably even a subset of, a field labelled *User-Centered Design* (Keinonen 2010). One definition of service design highlights it as a design practice which "generally results in the design of systems and processes aimed at proividing a holistic service to the user" (Stickdorn & Schneider 2010). Service designers utilize their users' needs to justify decisions and orient the course of their design work. Thus, a deep understanding of users is required (Portigal 2013). The understanding of the user sets the foundation for most important ideas and decisions which are made during the process. Services are experiential in nature (Voss & Zomerdijk 2007) and only truly co-create value during moments of interaction with users. Thus, a deep understanding and empathy with the user is needed in order to increase the value co-created. Ojasalo and Ojasalo (2015) stress the importance of using user insight in the co-creation and improvement of services in order to best suit their needs and to correlate designs with their natural processes. Without a rich understanding of who is using a service, service designers would be basing the direction and outcome of a project on a combination of their own experiences, assumptions and biases. Designers, management, front-line staff, and all other stakeholders who are involved in a certain service may well have expertise in their own specific fields, but only the users can offer valid perspectives on the value being co-created (French, Teal, & Raman 2016).

Who are these users? Users of *products* are more simple to define, for example the person who cuts with a knife or drives with a car. Users of service are more complicated, as they exist on the dimensions which services operate: over the scale of time and within a network of interdependent persons. As Sundbo and Toivonen (2011) elaborate, *"the notion of user in itself can be elusive in services, as it collapses the different categories of customer, client, consumer, end user and citizen which can overlap partially or not at all, such as in the case of public services"* (Sundbo & Toivonen 2011, 7*).* As services are experiental and subjective, it is essential to try to understand another person's experiences. Deeply understanding and empathizing with the user and the other stakeholders is crucial to the value co-creation process of service design. Empathy itself is important and can be described as seeing through another person's eyes. This is the "ability to identify and understand another's situation, feelings and motives. In design it may be defined as: identifying with others and, adopting their perspective" (Curedale 2016, 15).

It should be noted that for the specific scope of this paper, *users* are those who take part in a user journey workshop. Everyone present at the workshop can be considered a user. This is an important statement to highlight as user journeys, and the workshops in which they are co-created, concern themselves with their own service's users. As a clarifying example, a user journey workshop concerning car rental will mostly deal with mapping the person who is wishing to rent a car. This paper itself is concerned with the method of by which the user journey workshop itself is conducted, and so the users of the workshop are all the attendees of the workshop. In upcoming sections, the distinct roles of who is present at such workshops – participants and facilitators - and a deeper dive into the theories underlying workshops, user journeys and facilitation will be examined.

The importantance of the user has been established, but specifically *how* can users be researched. There are various methods, but two common methods for conducting research into users will be discussed: user interviews and observation. Making sure that the service offering provides value to its users is the best approach to enabling its success (Strickdorn & Schneider 2010). The field of service design has embraced various tools and methods to achieve its goal of co-creating more valuable service solutions for its users. These diverse techniques (such as moodboards, personas, ethnographic probes) allow designers and other stakeholders to ideate towards new service offerings and empathetically gain indepth knowledge about users' experiences (Miettinen & Koivisto 2009).

Observation (during the workshops) and interviews (after the workshops) have been chosen as two user research methods to use. This paper is concerned with improving user journey work-

shops. As per the service design process, the improvement of the workshops will occur itera-
tively until reaching a certain end goal. In between each interation, feedback must be ac-
quired in order to know which direction to take.

Ethnographic observation as a method within the context of service design is used when trying
to determine how a user behaves during their natural processes (Segelström & Holmid 2009).
Simply put, in ethnographic observation designers watch how users act in certain situations.
For example, if the user is a young mother the researcher could observe as she takes her chil-
dren to school and travels to work – this would be observing the daily routine. Alternatively,
the observation can be of a more specific act such as seeing how exactly she traverses
through the aisles of a local supermarket. The researcher or designer will take notes (written
or sketched) or other recordings (photos, videos or audio recordings) of the happenings. In
these situations researchers can take a *participating* or *non-participating* role in the situa-
tion. This implies they can choose to take part in what the user is doing, and through this get
an active understanding of the users' momentary position. By participating, the researcher
gets closer to the action, but also simultaneously loses some impartiality (Stickdorn & Schnei-
der 2018). Non-participant observation is less influenced by the researchers' own bias as he /
she is literally and figuratively more distant from the user. By observing without direct partic-
ipation the researcher has more opportunity to see how the user makes decisions or reacts to
events.

Interviews are a method of researching users through simply engaging them in a structured,
though not outright scripted, conversation. There are numerous 'best practice' guides for in-
terviews which this paper does not aim to cover. Instead, as an overview of this research
method, interviews are conducted between designers and users; and can be conducted
throughout the entire service design process: from the beginning when trying to determine
core user needs and grievances to near the end during the iterative execution stage when de-
signers are honing in on refining the service prototype precisely (Knapp 2016; Portigal 2013,
Stickdorn & Schneider 2018). As this paper deals with the iterative refinement of a user jour-
ney workshop method through the creation of a tool, the latter end of this range of inter-
views will be utilized. During interviews users are asked to describe their thought process ei-
ther during the usage of a service (Knapp 2016) or after having used a service prototype.
These interviews are not attempting to guide users towards specific predetermined answers,
instead they aim to get users to tell stories or explain their decision making processes fully
permitting the conversation to flow in an unforeseeable fashion. Through an empathetic in-
terview designers gain the perspective of their users and empathetically walk in their shoes
(Segelström & Holmid 2009) to discover their hidden needs or determine if their service pro-
totype provides value to their user.

The theoretical aspects of service design and users has been discussed. The following sections will continue the theorectical section of this paper through a more specific look at user journey maps and facilitation.

2.3   User Journey maps

User journey maps are a visualization of a specific users path as they utilize a service from initial contact with the service (known as a touchpoint) through the usage of the service and its conclusion. User journey mapping is a methodology to help discover, understand, visualise, and enhance a user's service experience (e.g. Curedale 2016; Følstad et al. 2014; 2018; Reason et al. 2016; Stickdorn & Schneider 2010). As Zomerdijk & Voss (2010) concluded in *Service Design for Experience-Centric Services*, it is a methodology which is widespread throughout the design of services and their management. The idea of describing services from the user's persective over time has been utilized since at least the early nineties (Følstad et al. 2014), and it is now a common practice amongst service design firms (Kimbell 2011). Despite this duration of time and wide adoption, much academic writing remains still only loosely defined or agreed upon (Følstad et al. 2018).

As an aside while on the topic of terminology, it should be noted that despite the term *customer journey* being the most widely used throughout design theory (Følstad & Kvale 2018; Zomerdijk & Voss 2010), this paper intentionally uses *user journey* as the term to designate the methodology. This is simply because the method being researched is to be tested and developed specifically within the context of healthcare, and the word *customer* may not always be appropriate in this industry. Alternatively the term *patient journey* could be used (Ponsignon et al. 2018). However, this term has very limited usage in academia as it is restricted purely to healthcare. *User* is deemed appropriate here at it is common enough to not be too restrictive, but manages to side-step any moral discussions of the usage of the term *customer* in a healthcare context.
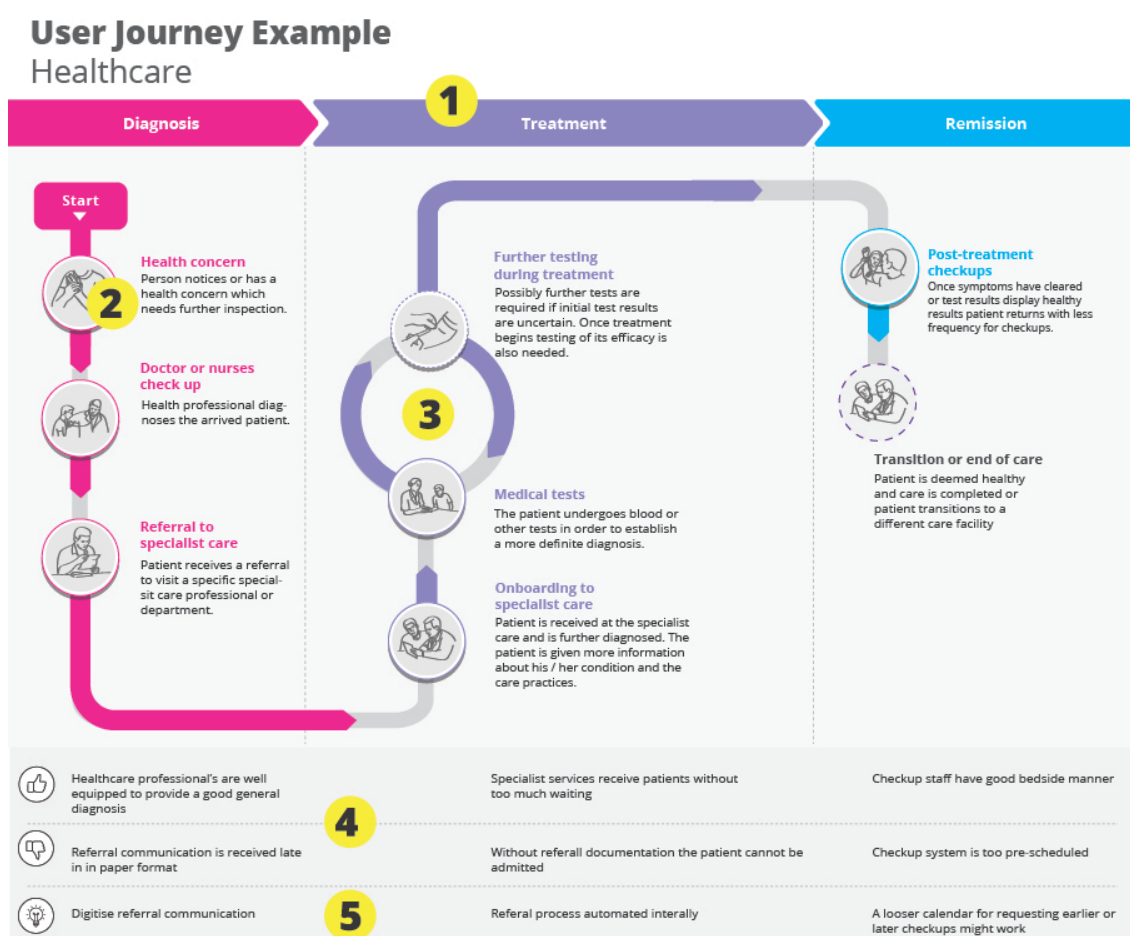
Figure 3: An example user journey map

See Figure 3 for an example of a user journey map. A user journey map overall is a timeline of events which can be read chronologically, left to right. The map can be broken down into a handful of separate elements. At the top of Figure 3, the larger phases of the journey divide the users path into sections (1). As the user travels through the service each distinct moment of interaction, known as a touchpoint, is plotted (2). Traversing through a service is not always a simple chronological process and so occassaionally a user will loop around and have to repeat certain touchpoints until they or the service provider are able to continue (3). A healthcare example of this could be a patient with a chronic condition in need to repeat treaments or checkups. Once the phases and touchpoints have been mapped it is useful to try to track the moments in a user journey which are working well or failing (4). Additionally, there is a possibility to add yet another horizontal lane in which ideas to solve user-perceived bad moments during the service (5). The example depicted here is just that: an example. Occasionally, journey maps will only depict the users' journey itself without any additional information. It should be noted, the specific areas highlighted in this image also outline the stages in the co-creation workshops in which they are co-created.

Despite the loose academic discussion concerning agreed upon terminologies, the creation of user journeys can be summarized in one simple statement: User journey maps are co-created in workshops with facilitators (see e.g. Reason et al. 2016; Følstad & Kvale 2018; Ponsignon et al. 2018; Stickdorn and Schneider 2010; 2018; Zomerdijk and Voss, 2010).

2.3.1 User Journey maps are co-created

User journey maps are not the product of one single individual. Instead they are a combined, collaborative effort between various stakeholders. User journey maps require many, or at miniumum more than one, participants' input in order to effectively co-create. As noted previously, service design in general in both theory and in practice is described as a co-creative field. It is a field in which decisions are made and action is taken collaboratively. User journey maps, as an integral part of the field, are not an exception to this generalism. User journey maps' value and accuracy is in their depiction of a certain users' passage through a service. Because of this, it is simply not possible to create a user journey map which isn't in some form co-created.

Considering co-creation is crucial to user journeys, techniques to increase the amount of co-creation are abundant concerning how the facilitation of the method be conducted. Initially, it should be noted that user journeys' co-creation require stakeholders be in each others' presence. Despite the abudance of digital technology, currently user journey maps are still ideally and intentionally created with all attendees present in the same physical space (Reason et al. 2016; Koning, Manschot, & Steen 2011). For this reason, user journey maps are co-created in workshops.

2.3.2 Co-creation in workshops

Despite its abundant usage, no single accepted and settled definiftion of the term workshop exists in academic literature. It is a term which many use on a regular basis, and yet it lacks an agreed upon usage. A general definition can be found in various dictionaries: the Cambridge Dictionary (2019) states a workshop is "a meeting of people to discuss and/or perform *practical work* in a subject or activity"; and according to the Collins dictionary (2019) it is a "period of discussion or practical work on a particular subject in which a group of people share their knowledge or experience". The addition of *practical work* in both definitions makes a workshop different from a simple meeting, or in another context, different from a conference or symposium. Workshops are gatherings with not only a certain objective in mind, but also a form of practical work to attempt to achieve the objective.

In order to work towards an objective, workshops need individuals to designate the goal and guide the process in the right direction (Kaner 2014). These individuals, known as facilitators,

guide workshops, and they are the subject of the final concluding assertion concerning user journey mapping.

2.3.3   Facilitation of workshops

User journey workshops are co-created in workshops attended by the stakeholders of the service offering. These stakeholders can include the users, the frontline staff providing the service, managers and decision-makers of the service provision, and designers facilitating the process (Reason et al. 2016; Stickdorn & Schneider 2010; 2018). Vargo and Lusch (2014) argue that the more a service can be co-created between the users and the providers the overall more valuable the service will become. Assuming the ideal co-creation is between the user and the provider of a service, the service designer or facilitator should be only there not to provide input, but to guide the process (Kraner 2014; Cruickshank & Evans 2012). However, such guidance by its very nature alters the process. This is often touted as a positive. Afterall, the thinking goes, if user journeys are an intrisincally service design method then who better to be involved than service design profesionals? Why and how would users and providers self-organise towards seemingly abstract concepts such as *co-creating value*, and use a service design method which the majority of them will be unfamiliar with? Because of this it can be concluded that service designers or facilitaros are needed to co-create user journey maps, but their role must be gentle and feather-light in order to guide the process but not hijack it (Cruickshank and Evans 2012; Kraner 2014). Facilitation is an area which calls for a more indepth analyses. The following section concludes the theorectical section of this paper and concerns a deeper investigation into facilitation theory, including the concepts of boundary objects and a specific type of boundary object known as design games.

2.4   Facilitation Theory

Workshops in which which user journeys are co-created have two distinct overall categories of individuals in attendance: the participants and the facilitators. The participants can range from the users of the service to the clients paying to explore their service be they in the front-end of the service or more upper-management. Participants require facilitation as they cannot solve a certain large issue by themselves. Without facilitation, participants have no combined scaffold on which to construct mutual new knowledge (Kraner 2014). Even if participants have the same end-goals, they will struggle without frameworks to guide them as they may never be able to see through eachother's eyes. Facilitation can resolve this issue.

The facilitators, are often third-parties such as external designers (Wardale 2013), but they can also be internal facilitators taking on the role for the project at hand. The role of facilitating is elegantly summarized by Sanders (2002, 3): "to understand the dreams of ordinary

people in order to create scaffolds that help people realize their dreams". Facilitators construct the scaffolds of experience (Sanders 2002) which allow participants to come together and co-create in a mutually intelligible language.

To define the term more concretely, to facilitate is "to make easier [or] assist the progress of" (Collins). Facilitaiton itself is "the art of moving people through processes to agreed-upon objectives in a manner that encourages participation, ownership and creativity from all" (Sibbet 2002). In the preparation for a workshop, as well as during it, the facilitator manages stakeholders, objects and processes (Light & Miskelly 2008) towards an certain objective (Cruikshank & Evans 2012; Nelson & McFadzean 1998). The facilitator's role is of neutral guidance (Cruikshank & Evans 2012). This neutrality is critical to the successful facilitation of workshops (Schwarz 2002; Wong 2005). The act of facilitation is as a guide, allowing the participants to choose a path and then signalling the path for them, though not actively forcing them to walk down it. They are not to get too involved in the substance matter of the workshop itself or voice outright opinions (Rasmussen 2003) as doing this would blur the distinct line between the roles of the facilitator and the participant and create biases which would improperly affect the course of the project. The facilitator intentionally is often an individual or individuals with no influence or expertise in the specific subject of the workshop and thus purposefully without decision-making authority (Wardale 2013). In the context of this paper, a facilitators' role is to ensure a workshop runs smoothly, the participants avoid confusion, and to provide a structure and neutrally guide the workshop as a whole.

Neutral guidance is an apt, succinct summary of what a facilitator offers to participants (Cruikshank & Evans 2012; Kaner 2014; Rasmussen 2003; Schwarz 2002; Wardale 2013; Wong 2005). This paper aims to find a way to enhance both of these summarized, positive factors of facilitation - *neutrality* and *guidance* - specifically in the context of user journey workshops. A good facilitator offers the balance between guiding the process and yet not being so actively involved that the he or she actually affects the outcome of the process (Rasmussen 2003). While the facilitator doesn't need indepth expertise in the subject matter of the workshop, and indeed may even wish to actively abstain from knowledge about it, he or she does require a way to mutually communicate with the participants effectively (Wardale 2013).

Communication between people with differing areas of expertise occurs across specific technical or knowledge-based boundaries (Bechky 2003; Levina & Vaast 2005). The specific topic which the workshop is covering may prove difficult or even impossible to facilitate if the facilitator has no means to breach the boundary of understanding between him- / herself and the participants as well as any boundaries which may exist between the participants themselves. Workshops may be very technical, for example a user journey workshop concerning a

patients' knee surgery, a workshop about innovating in the car-sharing industry, or a workshop designed to increase employee experience within an NGO. In these examples some form of assisted mutual communication is needed to enable the facilitators to achieve their goals. In order to cross these subject-specific boundaries and bridge the gap the facilitator makes use of boundary spanning objects (Paavola & Hakkarainen 2009), as will be covered in the following section.

2.4.1 Boundary-spanning objects

Facilitators must be able to effectively communicate with a wide variety of stakeholders without specific knowledge in the subject matter being facilitated. Successful facilitators will have a set of methods, or their own curated facilitation tool kit, which they will utilize to guide the participants while themselves remaining mainly in the background (Heron 2000). These tools, which are used as communicative bridges between inviduals or groups not sharing the same expertise, are so-called boundary-spaning objects (Bechky 2003; Carlile 2002; Levina and Vaast 2005; Paavola & Hakkarainen 2009). As knowledge co-creation is of a scaffolding nature, then boundary-spanning objects are bridges which connect different scaffolded buildings of knowledge and enable the flow of communication.

According to Levina and Vaast (2005), facilitators themselves can be classified as having boundary roles. They have the ability and role of assisting in the communication between various other groups each with their own siloised, specialist areas of knowledge. Facilitators can develop the competencies of spanning across boundaries between different areas of expertise (Pawlowski and Robey 2005). One of the keys competencies required to be an expert in a boundary role is empathy (Salmi, Pöyry-Lassila & Kronqvist 2012). This ever-important skill is needed not only in understanding users, but also in understanding other all stakeholders' perspectives while facilitating or planning a workshop.

Facilitators themselves have boundary spanning competencies and use boundary spanning objects (Levina & Vaast 2005). Boundary spanning objects can take many forms, but occasionally these take the shape of specific design games which the facilitator will initiate in order to simultaneously develop the topic at hand, under the guise of work which is more informal or playful. Design games, which will be covered in the following section, have been shown to be successful tools in the communication of competencies and the sharing of knowledge across boundaries (Sproedt & Boer 2011).

2.4.2 Design games

As *design game* is not a colloquially understood term, a definition will be sought. A definition of what is meant by the word *game* will be given and then *design game* as a subset of this

definition will be outlined. The usage of the world *game* can be confusing, as it may lead one astray when considering the vast world of gaming and the current state of the growing games industry. Indeed, *gaming* as an industry is now a cultural force on par with Hollywood (Griffith 2018). Games are now played by virtually every segment of society (Brown 2017) and in any physical or digital space imaginable. From the rise of popular indie board games (Boycott-Owen 2018), to quick mobile phone games played on a commute; E-sports spectatorship booms (Ingrahm 2018) to gaming being labelled a mental disorder (World Health Organisation) the pervasiveness of the gaming industry is unquestionable. Games now permeate our every-day lives. This full integration into mainstream life has blurred the definition of what it means to be a game. Montala (2012) describes games as breaking outside of its traditional definitions, breaking the barrier between playing and not-playing; player and non-player. As games have broadened their reach and expanded into new facets of life it has made the very word *game* difficult to define despite many decades of attempts to do so (Stenros 2017). There are those who define the term game broadly as systems which necessitate involvement between users (Huotari & Hamari 2011; 2012; 2017) or in the words of reknowned game designer Sid Meier they can be defined even as simply as "a series of interesting choices" (Rollings and Morris 2004, 61). However, most definitions concur on the use of specific predefined rules (Stenros 2017), such as Costikyan's (1994) definition: "A game is a form of art in which participants, termed players, make decisions in order to manage resources through game tokens in the pursuit of a goal." (Costikyan 1994, 25). Salen and Zimmerman (2004, 9) conducted a study to compile an overall list of attributes which can be used as a guide in deciding what the word *game* actually means. These attributes are the following:

"1) they proceed according to rules that limit players; 2) they involve conflict or contest; 3) they are goal-oriented/ outcome-oriented; 4) they involve an activity, process, or event; 5) they involve decision-making; 6) they are never associated with material gain; 7) they are artificial/safe/outside ordinary life; 8) they are voluntary; 9) they are uncertain, make-believe/representational; and, finally, 10) they are inefficient, system of parts/resources and tokens."

These attributes can be utilized in determining if something can be defined as having the attributes of a game. There is now an expanding usage of these attributes outside of their traditional contexts (Hannula and Harviainen 2018; Harviainen, Vaajakallio & Sproedt 2016; Klapztein & Cipolla 2016) which has become known as *gamification*. Gamification can be defined succinctly as "the use of game-like elements in nongame environments" (Eyal 2014, 74). This concept even further blurs the edges of what it actually means to be a game (Deterding et al. 2011). The world of academia has taken note of gamification: Hamari, Koivisto, and Sarsa (2014) marked an increase in papers on the topic in the years preceding the publication of their paper. The authors specifically highlighted how studies revealed gamification's capacity

to positively affect engagement, enjoyment, and motivation (Sol, Klapztein & Carla Cipolla 2016).

Gamification has had an impact on digital platforms and services as a whole. Examples of this can be seen in the awarding of points on social media, services such as Slack which provide fun gifs and emojis to communicate with colleagues, the Strada app which tracks and challenges cyclists to compete with others, and countless others. These routine activities – socializing, communication, exercise - which were considered outside the realms of gaming and are now evermore being gamified.

Consiering their loose definitions, a link can be made between services and games. Both games and service systems have co-creating, interacting stakeholders with specific procedural rules and objectives. Gaming and design alike are social interactions based on set contraints in which the activity changes over the course of time (Brandt 2004). Greer, Vargo and Lusch (2016) argue that "society (and what holds it together), is service-for-service exchange among the entities in society. In brief, service exchange and society are inseparable". Through the perspective of service-dominant logic:

"A service ecosystem is a relatively self-contained, self-adjusting system of resource-integrating entities that are connected by shared institutional logics and mutual value creation through service exchange." (Greer et. al 2016, 3)

The ease with which one can replace the term *service ecosystem* with the word *game* in the statement above highlights how service ecosystems can simply been seen as being games:

"[A game] is a relatively self-contained, self-adjusting system of resource-integrating entities that are connected by shared institutional logics and mutual value creation through service exchange." (Greer et. al 2016, 3)

Through this logic, games can be thought of as service, and service systems can equally be labelled as games (Sol Klapztein and Carla Cipolla 2016).

Games and service share many similar attributes, and in the design of service systems games and gamification are useful tools. The broader contemporary definition of design mentioned earlier- in which designers no longer simply aesthetically create new physical or digital objects, but plan the flow of the system and establish the rules contained within it (Brandt 2006) – lends itself well to the usage of gamification. Specifcally, service design - as a human-centered, co-creative practice - is a suitable fit for gaming. Gamification has been utlisied in service design, and the games which have been designed have been labeled Service Design

Games. The broader term of Design Games (DGs) is more commonly used in academia, but its exact definition is debated (Eriksen et al. 2015). DGs as a whole are difficult to invesitage, or debate due to their there being a lack of clarity in what exactly they are. Without a singular agreed upon academic framework, the discussion surrounding DGs is patchy (Vaajakallio & Kirsikka 2012). DGs are easier to define through their contextual appropriation rather than through specific, inherent, or procedural characteristcs (Eriksen et al. 2015). DGs differ from other types of games most perhaps in their participants' objective: With DGs there is no clearly defined winner or loser (Brandt 2006), or even a disctinct win condition outside of a predetermined goal. Instead, DGs can be considered tools for facilitating the collaboration process (Harviainen et al. 2016). DGs create a frame of laws within which participants are free to interact through tactile game pieces, they pave a path to compel the users forward toward an established aim. Like in all games, there are predefined rules, but in DGs they are not intended to constrain possibilities, but instead they hone participants' experiential collaboration (Brandt 2006).

Vaajakallio and Mattelmäki (2014) propose the following four central traits of design games:

 "(1) creating a common design language; (2) promoting a creative and explorative attitude; (3) facilitating the players in envisioning and enacting 'what could be'; and (4) helping to define the roles of participants in the interaction during a session" (Vaajakallio & Mattelmäki, 2014, 66)

Through this definition already many currently utilised methods in service design – or the processes by which the methods are undertaken co-creatively fall under the definition of design games. For example, the methodology behind stakeholder maps, personas, and user journey maps are all co-creative, rules-guided activities with various stakeholders. Design games, similar to service design methods, are useful in allowing participants to collaboratively share experiences and conceptualise new possibilities (Vaajakallio & Mattelmäki 2014).

It is through the theorectical insight of the similarity between games and service design methods that the following research created a design game or tool to assist in refining the method by which user journey maps are created.

3   Refining User Journey Methodology

The user journey methodology is refined through the development and evaluation of a design game, or tool. This is done through three separate workshops. In each workshop the user journey tool is used to create a user journey. After the first two workshops changes are made to the tool based on feedback and observed participant needs. The following sections with

describe the steps which each workshop went through. The evaluation, changes, and reasons for the changes made to the tool will then be discussed in the empirical findings section.
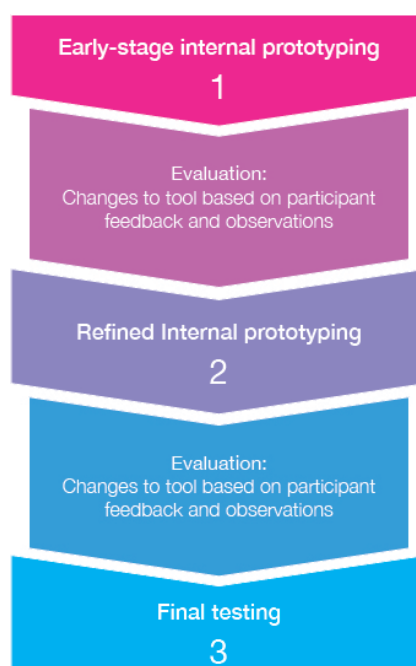

Figure 4: Process by which the user journey tool was refined

3.1   Early-stage internal prototyping

The first workshop to prototype the tool was facilitated interally within the service design department of Kaufmann, a service design agency and part of the Nordic Healtchare Group. Participants were all familiar with service design processes and many had run their own user journey workshops. In terms of professional titles they included both senior and mid-weight service designers, project managers, sales heads, user experience designers and graphic designers. The following steps were followed by the facilitators in order to test the early-stage prototype of the tool; the participants themselves were not shown all of the steps at once but were guided through the steps one at a time by the facilitators.

The workshop began with participants being told to put themselves into the role of doctors, nurses, other caregivers, or patients. The participants were told they would be using the early prototype of the tool in order to create a user journey for a chronic health condition. The facilitators allowed the participants a moment to discuss which chronic condition was most familiar to them, and they chose rheumatism. From their roleplayed caregiver perspectives they were given a brief introduction and an overview of the workshop, and then the workshop's various stages began.

3.1.1   The meta-stages of care

Participants were instructed to consider what the overarching stages of care for their patient's journey would encompass. The stage pieces of the tool, see Figure 4, were put on to the table and pens were provided. The participants discussed different ways to begin. After a short time they wrote three distinct stages of care on to the stages pieces and placed them in order on the table.

Figure 5: Overall stages of care in the first workshop

3.1.2   Touchpoints

The participants were then told to use the provided touchpoint pieces of the tool, see Figure 5, and to write out specific steps the patient would go through in the journey. They were instructed to start in the first stage of the patients' journey as this is the standard practice when creating user journeys (Reason et al. 2013).

Oire huomattu

Yleislääkärin vastaanotto

Figure 6: Simple touchpoint cards

3.1.3   Detailing of touchpoints and connecting them

Participants were given the details pieces of the tool, see image Figure 6. Using these sets of icons they were told to add further detail to their touchpoints. No initial instructions were provided as to *where* on the journey map participants should place the icons.
After the icon cards were placed, participants were told to connect the different touchpoints into a journey.
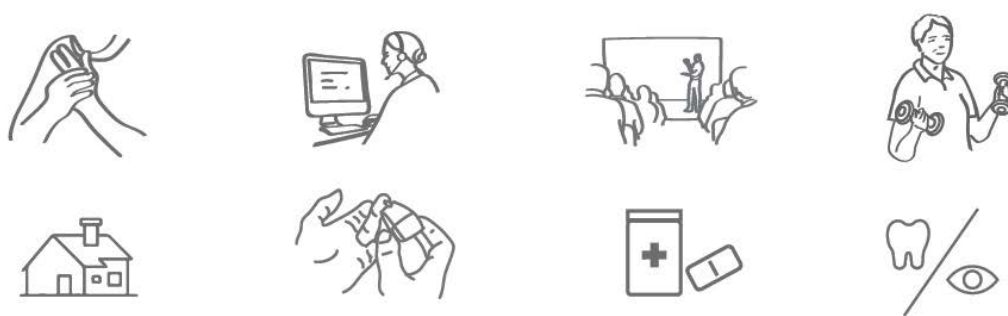
Figure 7: Icons used in the details cards

3.1.4   Stakeholders

Stakeholder cards were provided to the participants. These cards contain imagery and words describing different types of caregivers and other stakeholders, see image Figure 7.

Figure 8: Example of stakeholder cards used

3.1.5   Positive moments

Participants were given the positive moment cards, which contain a thumbs up icon as seen in image Figure 8. Using this card participants were instructed to identify specific moments, areas or touchpoints on their user journey which were positive and going smoothly.
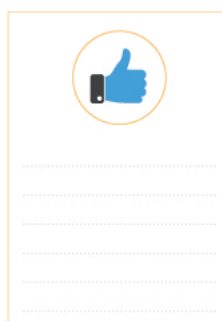

Figure 9: Positive cards used in the first workshop

3.1.6 Negative moments

Participants were given the negative cards, seen in image Figure 9, which depict a thumbs down icon. Through the use of these cards they were instructed to identify and designate moments, areas or touchpoints on their user journey which they felt were negative and not serving the users or other stakeholders' needs.
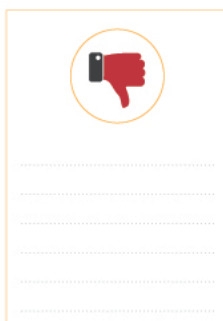

Figure 10: Negative cards used in the first workshop

3.1.7 Ideas for improvement

Participants were given the idea cards. These cards have a lightbulb icon and an area for writing as seen in the image Figure 10. Participants were told to write their solutions to specific problems which were discovered in the user journey during the workshop. Unfortunately, during this first workshop time ran out and this stage of the workshop was introduced but not executed.

Figure 11: Idea cards used in the first workshop

The Workshop was then concluded, the participants thanked and the pieces of the tool were collected.
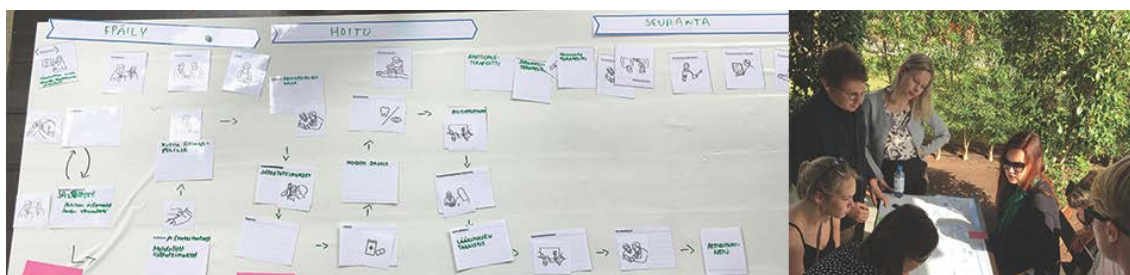
Figure 12: Photos of the workshop in progress

3.2 Refined Internal prototyping

The participants of the second workshop were various staff from the Nordic Healthcare Group (hereafter NHG). This firm owns the Kaufmann service design agency, but these specific participants are not a part of Kaufmann. This workshop was conducted at the offices of NHG, in a meeting room in which the participants were given very little prior information outside of the knowledge that they would be assisting in the refining of a certain workshop tool.

After a brief introduction, participants were given a brief introduction concerning the subject of the workshop. They were specifically informed that it was not the content of the actual user journey which was being examined, but the tool of creating the journey itself. This information was given to alleviate any anxiety about not knowing a specific step in the user's journey. As in the first workshop, the second workshop was prepared and led by two facilitators. The following stages of the second workshop play out very similar to the first workshop due to the iterative nature of this process. After the introduction was made to the participants, the first stage of the workshop began.

3.2.1 The meta-stages of care

Participants were instructed to consider what the overarching stages of care for their patient's journey would encompass. The stage pieces of the tool, see image Figure 12, were put on to the table and pens were provided. The participants discussed the different stages of care overall. After a short time they wrote four distinct stages of care on to the stages pieces.

Figure 13: Overarching stages of care element with title

3.2.2 Touchpoints

The participants were given a Touchpoints border piece and it was placed on the left of the table under the overall stages. The participants were then told to use the provided touch-point pieces of the tool, see Figure 13, and to write out specific steps the patient would go through in the journey. They were instructed to start in the first stage of the patients' journey and to keep the stages within the horizontal row created by the border piece.
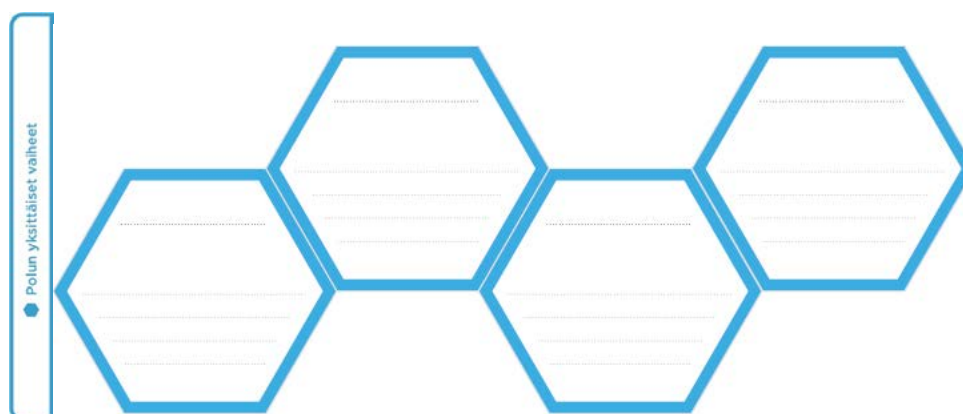

Figure 14: Touchpoint hexagonical cards and touchpoint border piece

3.2.3 Detailing of touchpoints

Participants were given the details pieces of the tool, see Figure 14. Using these sets of icons they were told to add further detail to their touchpoints. Some of these icons were blank and participants were told to draw new icons to if they wanted to.

Figure 15: Hexagonical detail elements

3.2.4 Stakeholders

Stakeholder cards were provided to the participants, see Figure 15. They were instructed to place them by the touchpoints.
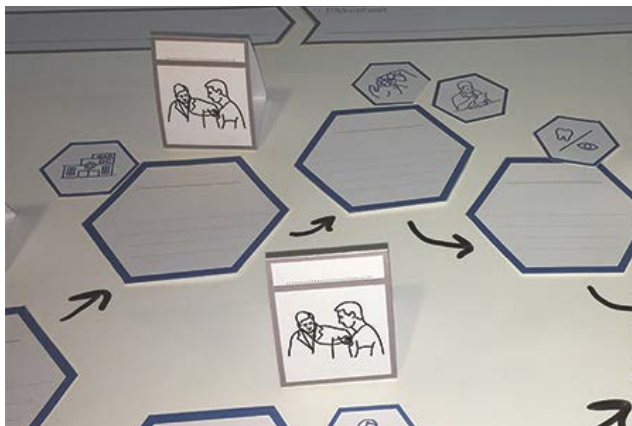
Figure 16: The stakeholder cards stand three-dimensionally

3.2.5 Positive moments, negative moments, and ideas for improvement

Particpants were given the positive, negative, and idea border piece, seen in Figure 16 and Figure 17, and told to place it under the touchpoint border piece. Participants were given the positive cards, negative cards, and idea cards all simultaneously. These cards can also be seen in Figure 16. Using these cards participants were asked to discuss and designate specific sections in the users' journey which were going well, or going badly, as well as to see if any specific immediate ideas would come from the discussion.

The second workshop was then concluded, the participants thanked and the pieces of the tool were collected.
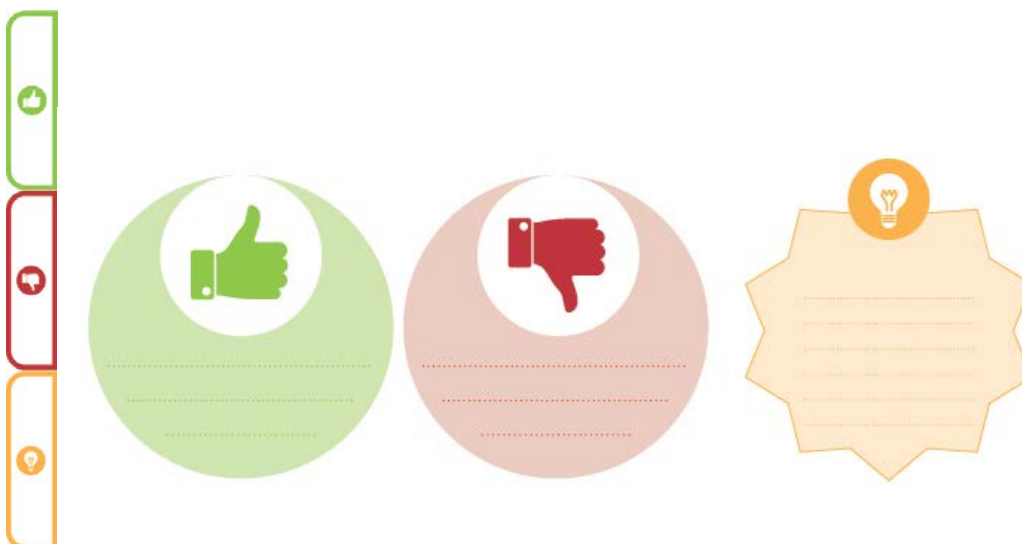

Figure 17: Positive, negative, and idea elements with their border

After the workshop participants were briefly asked for feedback towards the improvement of the tool and the behaviours of the participants was discussed.
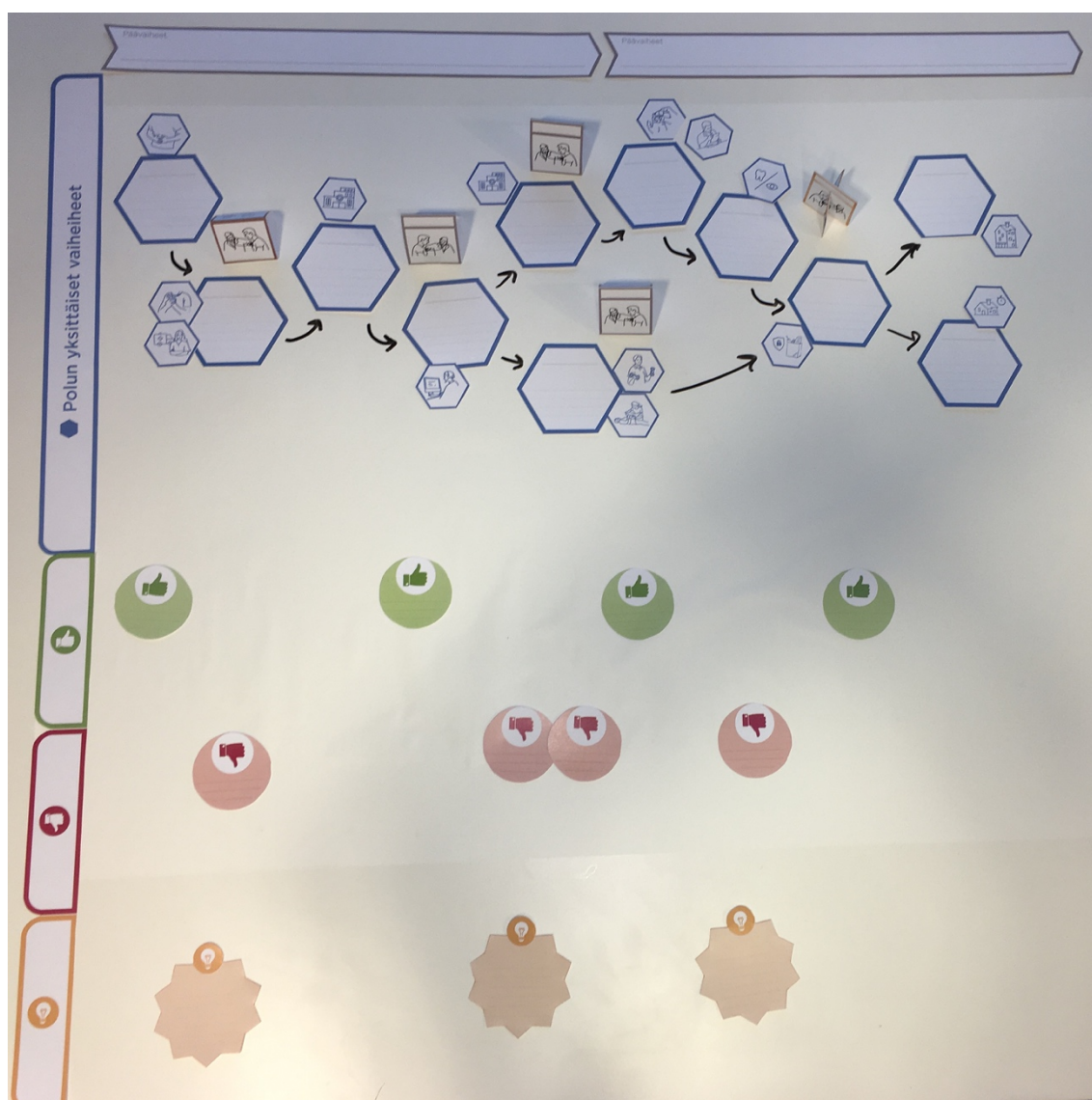
Figure 18: Overall example showing how the left border piece creates horizontal lanes

3.3   Final testing

The third and final workshop was conducted with various doctors at a conference in Vantaa, Finland. The doctors' names and the conference itself will remain anonymous due to requested and contractual reasons.

3.3.1   Overall stages of care

Participants were instructed to consider what the overarching stages of care for their patient's journey are. The stage pieces of the tool, see Figure 18, were put on to the table and pens were provided. The participants discussed the different stages of care overall. After a short time they wrote the distinct stages of care on to the stages pieces.

Figure 19: Titled overarching stages of care element

3.3.2   Touchpoints

The participants were instrucated to use the provided touchpoint pieces of the tool, see Figure 19, and to write out specific steps the patient would go through in the journey. They were instructed to start in the first stage of the patients' journey.
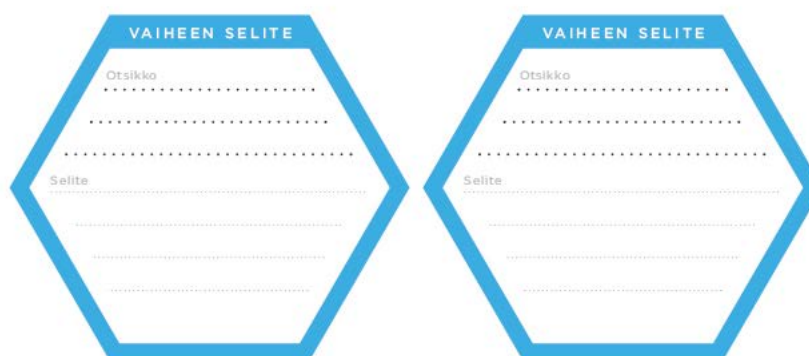

Figure 20: Touchpoint with designated and titled areas to write

3.3.3   Detailing of touchpoints

Participants were given the details pieces of the tool, see image Figure 20. Using these sets of icons they were told to add further detail to their touchpoints.

Figure 21: Example of detail hexagonical elements

3.3.4   Stakeholders

Stakeholder cards were provided to the participants, see image Figure 21. They were instructed to place them by the touchpoints or wherever they deemed appropriate.

Figure 22: Example of stakeholder cards

3.3.5   Positive moments, negative moments, and ideas for improvement

Participants were given the positive cards, negative cards, and idea cards all simultaneously. These cards can be seen in Figure 22. Using these cards participants were asked to discuss and designate specific areas in the users' journey which were going well or going badly. Additionally, the idea cards were kept handy in case any specific ideas for improvement arose from the conversation being held.
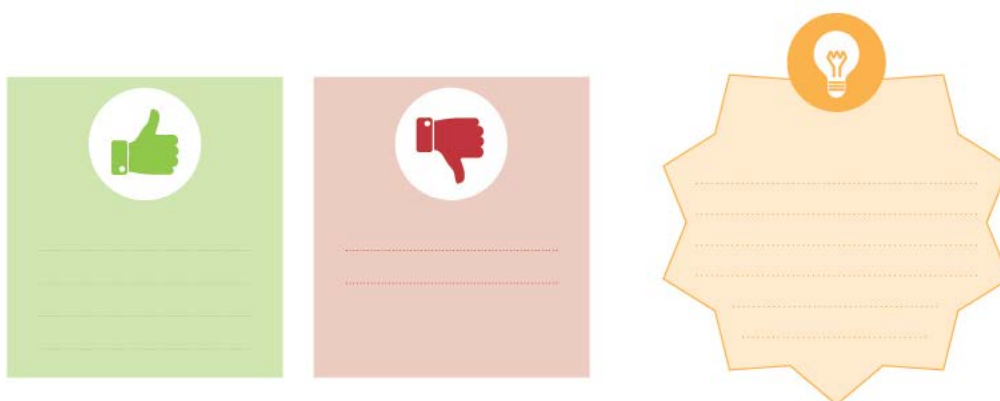

Figure 23: Positive, negative, and idea cards

Figure 24: The tool in use

3.4   Empirical findings

The findings from the development and evaluation of the tool will first be broken down for each workshop and then the overall findings will be discussed.

3.4.1   The tool causes engagement

Creating the very first prototype of the tool to be tested was a matter of breaking down each individual step of the user journey workshop (such as touchpoints, connecting touchpoints, etc) and making rough-draft boardgame-pieces out of them. Following the principle of testing a prototype early on (Knapp 2016), only just enough time was dedicated to making the pieces. This became the minimum viable product or early stage, testable prototype which was trialled at the first workshop. The tool was thus intentionally simple in terms of its visual nature and its functionality. Rather than drawing on postits to name stakeholders or touch-points, laminated cards with lines for text or imagery signifying various stakeholders was used. Instruction towards how to use the tool was intentionally also kept frugal. It was assumed, if the tool was to do its job of assisting to create a user journey, then it should ideally be able to do so with minimal instruction.

The following table breaks down individual cards or elements of the tool and compares the feedback received or observed for them.

Early-stage internal prototyping Evaluation of Tool Elements	
Elements used in the workshop	**Participant feedback and facilitator observation**
1. **Overall Stages elements**	• Observed: Participant question arose where to put the elements • Observed: Participant wondered how many stage elements to use. • Participant offered feedback: Include titles or descriptions on all cards to avoid confusion.
2. **Touchpoint elements**	• Participant was a bit confused, and thought they they looked too simple • Participant offered feeback: Don't make them the shape and size of postits

		• Observed: Participants spent time trying to write small and neat as the elements' contained too small lines for writing or the pens provided proved too thick and cumbersome.
3.	Details elements	• Participants were unsure where to place these, they spent time discussing if they should be placed on top or next to the cards • Facilitators gave guidance for them to simply decide so they could move forward • Oberved: Participants began to connect the touch-points during the slight confusion of the details stage. After asking if this was ok, and being given a nod of permission, participants began connecting the touchpoints with thick arrows.
4.	Stakeholder cards	• Observed: Participants placed occasionally one, but occasionally more stakeholders per touchpoint. It was assumed that at least one stakeholder be dis-trubted to each touchpoint but participants were not specifically instructed either way. • Participant feedback: The pieces need to be more different looking, as they seem all too similar and its getting messily cramped.
5.	Positive / Negative / Idea cards	• Observed: Participants visibly enjoyed the up and down thumb imagery of the cards • Observed and feedback: there was simply not enough room on the table to fit the whole journey • Observed: it was unclear where these cards were supposed to be placed • *Time ran out during this step, the idea cards were mostly just displayed to the participants.*

Table 1: Findings of each type of tool element in the first workshop

Post-workshop feedback and discussion

After the workshop participants were asked to provide feedback towards the improvement of the tool. It was emphasized that the actual user journey which the participants had created was not what was being critiqued, but the tool with which the participants created it. More detailed feedback regarding each individual game element can be found in Table 1 above. Participants were asked in a conversational manner whether the tool met their needs and

would be useful in their future workshops as well. The feedback overall was positive. In general, according to the participants the tool was a good way to assist the facilitation of the user journey workshop, but would still need at least a couple more workshops to fine tune.

3.4.2   The tool can be used to guide participants

After the first workshop, refinements were made to the tool using the feedback provided. In workshop 1, there were definitely moments of confusion which occurred in which the tool was not being as self-descriptive as intended. Because of this, for workshop 2, the elements were given titles. Additionally, the pieces were all modified to be more different from each other. This change was made from the feedback that they were too similar and caused confusion.

The participants of workshop 2 were various staff at the Nordic Healthcare Group. This is relevant to note as most of the participants did not have any or much contact with user journey methodology overall. Testing the tool on these participants is thus ideal, as they would not neccasarily be comparing the tool to any previous user journey experiences. While the participants may not have familiarity with the user journey methodology, they all work in the healthcare industry as data analysts and team leaders. This implies knowledge of the health care journey which the theoretical patient in the workshop would travel through.

The following table breaks down individual elements of the tool in workshop 2 and compares the feedback received or observed for them.

Refined Internal Prototyping Evaluation of Tool Elements	
Elements used in the workshop	Participant feedback and facilitator observation
1. Overall Stages elements	• Observed: Confusion as to how many stage cards should be used was minimized due to the provision of up to 6 stage cards. Facilitators also mentioned that often these kinds of journeys have between 3 and 5 overall stages. This small instruction reduced confusion, but arguably created a bias.
2. Touchpoint elements	• Observed: Arrows were drawn connecting touchpoints without being prompted. These arrows were

		redrawn a few times during the course of the work-shop during the discussion between the participants
		• Participant feedback: Not enough space to write the title of each touchpoint
		• Observed: A left-hand border section was placed to keep the touchpoints contained within a specific horizontal row.
3.	Details elements	• Observed and feedback: Participants were not sure how many different icons existed. They spent time frustrated trying to establish an overall picture before starting this step in the workshop. An image displaying all possible icons needs to be given to participants to avoid this.
		• Observed: New hexagon shape of details elements makes their placement more intuitive next to each touchpoint
		• Observed and feedback: Only one blank card was drawn on.
		• Participant feedback: The detail pieces should be a different colour than the
4.	Stakeholder cards	• Observed: Without specific instruction as to the number of stakeholders participants naturally placed one or two by each touchpoint
5.	Positive / Negative / Idea cards	• Observed and feedback: Participants were given the border piece, but it seemed to take up too much space on the table. Considering the number of positive, negative, or idea cards it frustrated the participants that there was so much space allocated to it.
		• Observed: Participants were given positive, negative and idea cards simultanesouly in workshop 2. This change allowed participants to more openly discuss how touchpoints or occurences in the user journey were affecting their user. This change from workshop 1 caused a considerable amount more discussion into these asects of the user journey.
		• Participant feedback: There was not enough space to write on the cards.

	• *Due scheduling issues, many participants had to speed up this step in the process.*

Table 2: Findings of each type of tool element in the second workshop

Post workshop feedback and discussion

The main positive feedback included that participants stated they enjoyed the conversation at the end, and found the tool helpful. They found the tool helped guide the process well. Additionally, participants were visibly pleased with the three-dimensionality of some of the tool pieces, such as the stakeholder cards, and overall playfulness of the process itself. The best negative feedback received was the lack of time, the too-small size of many of the tool's pieces, as well as the repetition of the icon cards which caused frustration when trying to find the correct one to use. The border pieces also took up unnecessary amount of space and were not deemed helpful. Overall it can be said the amount of discussion which occurred was noticeably higher than in workshop 1 which was an encouraging insight. This was especially true during the positivie, negative, and ideas section. However, as mentioned the border pieces were unhelpful and it was believed that not restricting the users from placing their positive, negative or idea cards to certain locations may encourage them to think even more freely.

A noteworthy finding from this workshop came from the usage of blank icon cards. The intention with these pieces was to allow participants to fill in missing icons or create new ones. These blank cards were hardly ever used. Perhaps there were already enough tool pieces available for the participants and new ones were not needed. Alternatively, the act of drawing of an entirely new piece may contain within it certain social and psychological barriers. Drawing in front of others for some may require a level of confidence or at-ease which the participants may not have felt. Additionally, drawing onto a laminated and finished-looking game-piece may have similar barriers pertaining to not wanting to ruin something which is blank and pristine. Perhaps here some positive intervention through facilitation or by making the blank pieces less finished-looking is called for.

3.4.3   Combining engagement with guidance is key

Using the feedback and findings from the previous workshops the tool was refined and in the final workshop was utilsed with doctors. There were two facilitators who were in charge of the workshop.

	Final Testing	
	Evaluation of Tool Elements	
	Elements used in the workshop	**Participant feedback and facilitator observation**
1.	**Overall Stages elements**	• Observed: This step was simple and intuitive to the participants
2.	**Touchpoint elements**	• Observed: Participants like the playfulness of the pieces and had no problems writing on them. The cards now had the following (translated) words written on them: *step, title, explanation.* The words themselves were kept very basic in order to be easily understood. Specifically, the use of the word touchpoint was intentionally not used in order to avoid technical service design jargon. Particpants understood unprompted where to write and what to use the cards for.
3.	**Details elements**	• Observed: Participants were only occasionally and briefly unsure of where to place the pieces, but ended up placing them near or on the relevant touchpoints • Observed: Now that the details elements are a different colour, there was no confusion between these pieces and the touchpoint pieces as occurred in workshop 2.
4.	**Stakeholder cards**	• Observed: Participants remarked how nice the three-dimensional cards were. They placed the cards next to the relevant touchpoints without specific instructions to do so.
5.	**Positive / Negative / Idea cards**	• Observed: Participants opened up and discussed their experiences at length, describing relevant moments in users' journey which had gone well or badly.

Table 3: Findings of each type of tool element in the third workshop

General Findings

Overall it can be stated that the method by which user journey workshops are conducted was investigated and, through the creation of a specific tool, one way in which they can be improved has been discovered. Iteratively through a series of workshops the tool itself was refined and the facilitators' use of the tool was bettered. Users without any knowledge of service design or user journeys were assisted by the tool, and even enjoyment in its use was observed.

The creation of the tool improved user journey workshops in multiple ways. Through academic research, professional experience, and through the workshops themselves one of the problems noted in facilitation as a whole was the intervention by the facilitator. This intervention is sometimes positive, as the facilitator needs to intervene in order to guide the workshop toward its goal and keep everyone within the predefined parameters. However, it can also cause unwanted bias to affect the results of the workshop making the end-result not purely in-line with the participants' vision or intention. The tool created in this paper assisted in removing some of this unwanted intervention through providing a clearer physical structure to base the user journey workshop around. Through the tool the workshop ran more overall independent of the need for facilitation. The tool pieces were intentionally created in a way which would guide the participants, removing the need for excessive facilitator intervention which may cause bias. Of course, the tool itself may be causing its own bias as will be discussed in section 4.

An additional problem noted in workshops is the lack of engagement in participants. For many reasons, participants can feel disengaged from the process. They can feel confused, and then disengage. They can feel frustrated, and then disengage. They can even feel overwhelmed, and then disengage. Especially in fields such as health care which are beset with regulations, beauracracy and a feeling of system-wide slow pace of change, participants can additionally have decided that their contribution won't make a difference either way, and they disengage. The usage of gamification in the creation of the tool assisted reducing many of these disengagements. Presenting the workshop as a playful experience with boardgame-like pieces increased the engagement in participants noticeably. Through observing the usage of this tool it is a markedly enjoyable experience for participants to use through encouraging a playful gamified experience.

As a whole, user-journey mapping workshops were improved through the usage of the tool. The three workshops iteratively improved on the tool over time. This tool will continue to be utilized and refined through usage at the Kaufmann service design agency.

3.5   Research implications

The research contained in the creation of the user-journey workshop tool has implications for user-journey workshopping, workshops and service design as a whole. These three areas will now be discussed.

As user journeys are one of the most fundamental methodologies in service design, the workshops here aimed to improve the method by which they are created. Through applying elements of the theorectical and practical understanding of gamification to the method has been improved through the creation of a workshop tool to assist facilitators and participants. The research could be furthered by iteratively continuing the usage of the tool and evaluating the workshops in which it is used. Using this cyclical working process the tool would be further and further refined.

The creation of this tool has implications for workshops as a whole. If a tool can be made to improve user-journey methodology, then it is possible other methodologies could be enhanced through gamified tools of their own. There are various design games which do already exist, of course. Remaining within the field of service design, a tool for stakeholder mapping, service blueprinting, or the creation of personas can be envisioned as possibilities through the results of this research. Additionally, the results also point to highlighting some key negative aspects in workshop facilitation, such as the facilitator bias and participant disengagement which could be improved in ways outside the creation of a design game.

The research results here have implication for service design as a whole. As a tool which enables not only a more playful workshop, but also one with less facilitator intervention, it further emphasizes the importance of inter-stakeholder communication. In design history, perhaps the most oft uttered maxim was stated by the architect Lois Sullivan (1896): "form… follows function". It is a proclamation which has implications for all design discliplines. As service design is a maturing field, it can take note of previous design history and utilize their theorectical and practical acquired knowledge. Thus, the *form* of a service design user-journey workshop must follow its *function.* The fuction is to have a user journey which is accurate. The *form* which these workshops take must then remove all obstacles in order to get to this outcome. In this research, these obstacles were deemed partiality caused by the process of facilitation and the disengagement of participants. Of course, the creation of a tool is not the only way in which these obstacles could have been overcome. The following section will discuss this and conclude the paper with alternative methods and questions for further research.

4   Discussion and conclusions

The purpose of this paper was to find a way refine user journey co-creation processes. To achieve this end it aimed to evaluate a tool for usage in user journey workshops. Through the evaluation of the tool the paper sought to identify distruptive moments in the facilitation of the user journey workshops and to find a way to assist the problems faced in the facilitation of the user journey workshops.

In evaluating the tool during the workshops a few generalised disruptive moments were noticed. Disengagement or confusion in the process causes disruption through the participants not actively getting involved, not understanding where in the process they are or what they must do. These moments are assisted by the tool as it is an engaging design game. Through a combination of playful appearance and functional guidance the tool – with minimal facilitation – naturally guides participants through a user journey workshop. Another disruptive moment which was noticed was facilitator bias. This moment is harder to notice as facilitators are necessary to workshops and yet they can occasionally bias the results of them through incorrect or over-intervention. The tool aimed to assist this problem through being able to be used with very little facilitator involvement. However, it can be argued that this tool simply replaces the possible bias caused by the facilitator with the bias caused by the tool.

This paper has attempted to research one way of improving the workshop method by which these maps are co-created. There are numerous other ways in which the methodology could be improved as there are near infinite variables from the micro-level (size of workshop, number of facilitators, etc) to the meso-level (industry in question, demographics of stakeholders, etc). Specifically for this research, the journey mapping workshops being improved concerned the healthcare industry through the use of a gamified workshop tool. It is very likely different results would have been reached had the research been conducted in, for example, tourism through the use of various facilitation styles.

There are improvements which could have been made in this research which call for further research. The workshops were conducted in *real-life* settings through the usage of a real business case and the use of a variety of professionals' time. Due to this reality, one consistent bit of feedback received fromt the participants was the lack of time to during the workshops. Perhaps in a more clinical or academic setting the user journey methodology could be improved to a greater extent in theory, as there may not be as much time-pressure as in normal working days.

An additional improvement to this research could have been made through the usage of doctors or patients at a much earlier stage in the process. Once again this decision was made due to the research being conducted through an actual business case and simply not having the

resources to allocate to this. As critical stakeholders in a healthcare user-journey workshop their contribution earlier on may have changed the end result.

Despite these retrospective possible improvements, the tool created does improve user journey workshops. The tool will continue to be utilized at the Kaufmann service design agency and most likely will be improved and added to through its usage. The gamification of a workshop is also a concept which has sparked interest and will be investigated further. There are plenty of other methods which could be enhanced through the usage of gamification, especially as the user journey methodlogy proved successful. Through the creation of this tool user journey workshops were were improved.

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6   Appendices