Service Designing a New Hospital for Lapland Hospital District

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Abstract

This chapter focuses on a service design development project carried out in the Lapland Hospital District. Research was conducted on how to foster more agile, human-centred services using the service design approach. The hospital design process thus had to consider localised challenges and offer specialised healthcare and state-of-the-art management processes that are human-centred and that motivate the hospital staff. This chapter examines two different case studies of development projects related to the Lapland Central Hospital. The first one involved developing management processes for the new hospital using a benchmarking process. The second case study examined the children's rehabilitation programme in Lapland and used service design tools to visualise the existing healthcare ecosystem surrounding municipalities' rehabilitation facilities and to tackle local challenges in this programme.

1   Introduction

This chapter focuses on a service design development project carried out in the Lapland Hospital District. Research was conducted on how to foster more agile, human-centred services using the service design approach. The Lapland Hospital

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District is building a new hospital for the Lapland region as the old hospital has become too small for the needs and size of the user population. Lapland presents specific challenges because of its location within the Arctic region, in which distances are long and extremely few people live. Currently, Lapland is the most sparsely populated area in Finland.

The hospital design process thus had to consider localised challenges and offer specialised healthcare and state-of-the-art management processes that are human-centred and that motivate the hospital staff. In addition, the Lapland Hospital District needs to consider ongoing reforms of health and social services seeking to ensure the quality, effectiveness and timely availability of services, as well as supporting the stability and sustainability of municipal economies. The official Scandinavian welfare state model renders this a quite complex and challenging process (Timonen, 2003). The reforms are still in progress, making the project process and design problematic. Thus, both regional challenges and national social policy reforms affect the new hospital's design.

Lapland is the largest, northernmost region of Finland, with an average of 180,000 residents. The biggest town in Lapland is Rovaniemi, where the Lapland Central Hospital is situated. The Lapland Hospital District is a joint municipal authority that oversees 15 municipalities in Finland's Lapland region. This authority provides special healthcare services, treatment and rehabilitation for the local population. The district faces challenges regarding long distances, a low population density, an ageing population and increased tourism. The general population suffers from type 2 diabetes, cardiovascular diseases, cancer (i.e. breast, prostate and lung cancer) and diseases of the musculoskeletal system and connective tissue, as well as mental health problems.

This case study research was carried out through participatory observation, interviews and group discussions in selected healthcare organisations (Meyer, 2000). After benchmarking site visits, participants were interviewed, and the recorded interviews were transcribed and analysed. The service design project was thus carried out based on well-documented workshops and interviews that were subjected to content analysis.

This chapter examines two different case studies of development projects related to the Lapland Central Hospital. The first one involved developing management processes for the new hospital using a benchmarking process. Benchmarking establishes standards of excellence and compares businesses' functions, activities and products or entire enterprises to those standards. Benchmarking has been used increasingly by healthcare institutions to reduce expenses and, simultaneously, improve product and service quality. This is a continual process of developing hospital management processes by evaluating these against leading healthcare organisations (Benson, 1994).

The goal of the present benchmarking process was to learn about hospital management practices based on lean, agile and human-centred approaches. The United States' Silicon Valley was chosen as a clear innovation leader against which to benchmark the processes under study. Leadership and excellence can often be highlighted through auditing (Böhme, Williams, Childerhouse, Deakins,

& Towill, 2013), and the benchmarking organisations have been audited and received excellence awards.

Benchmarking was included in the present study to identify state-of-the-art practices and find out what can be learnt or implemented from these when developing hospital procedures. In this case study, benchmarking was carried out through in-depth group discussions and observations during location visits. A secondary goal was to develop a benchmarking process that the hospital's management could use as an adaptable tool, since benchmarking should be part of continuous development processes. The resulting benchmarking framework is described later in this chapter.

The second case study examined the children's rehabilitation programme in Lapland and used service design tools to visualise the existing healthcare ecosystem surrounding municipalities' rehabilitation facilities and to tackle local challenges in this programme. The research was conducted with healthcare professionals working in the field of children's rehabilitation. Service design tools were used to create a shared vision of the customer journey through rehabilitation and generate commitment to enhancing the development and management of this children's rehabilitation programme. The outcome was a strengthened rehabilitation ecosystem that makes customers' service journeys more user-centred.

This chapter addresses the following questions:

- How can the benchmarking process be used to develop hospital management practices?
- How can service design tools and collaborative practices help create a vision of and commitment to developing customer journeys in hospitals?
- Can visualisation facilitate a fuller analysis and understanding of hospital ecosystems?

Nearly every interaction in healthcare procedures is part of larger healthcare service ecosystems (Jones, 2013, pp. 140–141). Due to this complexity, including different stakeholders in development processes becomes even more important. An outcome of the present case study presented in this paper is how involving users in service design processes can stimulate the development of innovative healthcare services, increase equality of healthcare and generate empathy among participants.

Both case studies were part of the critical communication, safety and human-centred services of the future research project, which ran from 2016 to 2017 and which was funded by Tekes, the Finnish Funding Agency for Technology and Innovation. The Lapland Hospital District was a partner in this project, facilitating the case studies with Lapland Central Hospital's support.

2 Service Design in Healthcare

Healthcare services have been traditionally considered . . . processes aimed to deliver care to patients. However, patients are increasingly gaining an active role in shaping their outcomes as demonstrated by the growing attention . . . [given to] relying on patient-centered approaches to health solutions. (Porter & Lee, 2013)

The above quotation shows that service design is a newcomer to healthcare and public service development. Service design's role has become important because it enables a holistic understanding of service ecosystems. Service design provides tools and methods for human-centred and participatory approaches, and it is used to improve existing services or create new ones (Miettinen, 2016; Oosterom et al., 2010). It creates a new kind of outside-in understanding whenever service developers and experts need to examine their service ecosystem from the perspective of patients or clients. Service design places humans at the centre of development processes and enables designers to include the users' voice and data in projects.

Services are relationships between customers and providers, so, in healthcare, professionals are also users and providers of internal healthcare ecosystems (Polaine, Løvlie, & Reason, 2013, p. 36). Designing for services is a human-centred approach in which designers have a deep understanding of and respect for human behaviours and the capacity and methods to gain insights into individuals' experiences and engage these people in design and transformation processes (Meroni & Sangiorgi, 2011). In addition, the physical environment of healthcare facilities, such as layout, signage and other elements, is an important part of service design as this environment can provide better experiences to users (Rodrigues & Tavares, 2015).

The designer's role is to listen and facilitate discussions between actors, but sometimes he or she must also provoke and propose (Manzini, 2011). Service design strongly emphasises using research to come up with improved design solutions that can be either concrete objects or service concepts. For example, Judice's (2014) research embraced users as participants of the product or service development process, placing healthcare agents and the Brazilian Vila Rosario community at the heart of the design project in question.

The designer's role is thus not only to ensure a user-centred but also community-centred design process that includes multiple phases. These comprise developing a contextual understanding, identifying design drivers, developing solutions, testing and evaluating these and following the course of local development within the community. Contextual understanding is most probably the only way for transformational change to succeed in community settings (Judice, 2014).

In health-related development processes, codesigning healthcare services implies a partnership between patients, professionals and communities (Sanders & Stappers, 2008) to ensure everyone understands the entire development process. Service design is a creative hands-on development approach based on iterative development through a continuous cycle of working with users to prototype, test and evaluate ideas, which can be applied when developing services in the healthcare sector.

Service design, therefore, has iterative learning cycles (Saco & Goncalves, 2008) in which users are involved in a co-creation process.

This creative and iterative approach challenges all parties' views and seeks to combine professional and local expertise in new ways (Cottan & Leadbeater, 2004). This process's innovative component is the outside-in (Guey, 2016) approach to analysing and developing customer journeys from the users' point of view, focusing more closely on how healthcare services are experienced and used. Thus, in the research done in the Lapland Hospital District, the service designers played an important role in bringing users and user representatives into the development process.

Previous case studies conducted at the Lapland Central Hospital had followed these iterative, creative cycles, but, in some cases, the participants were selected based on what made sense primarily in that healthcare ecosystem. For example, the second case study discussed later in this paper focused on the rehabilitation processes of children living in Lapland, but the study's participants were municipality healthcare professionals. This was due to the challenges of understanding the existing ecosystems and resources and the ongoing issue of health and social services reforms. To make the case study easier to conduct, the research team focused first only on understanding ecosystems from the healthcare professionals' point of view.

Visualising and concretising ideas are key tools during development projects, so all participants need to understand the complex, multi-level processes and ecosystems involved. More specifically, concretising service ideas through service prototyping is a tool for learning about and implementing transformative changes (Kuure, Miettinen, & Alhonsuo, 2014). This tool was also used in this development project to reflect stakeholders' actions and needs more accurately in different service scenarios.

3   Service Ecosystems in Healthcare

The service-dominant logic developed by Vargo and Lusch (2004, 2017) identifies service ecosystems as the 'unit of analysis' in value co-creation. Institutions generate nested and overlapping service ecosystems, which should consider the questions proposed by Gambarov, Sarno, Hysa, Calabrese and Bilotta (2017). These are 'how the service ecosystems assemble or adapt, how services can be integrated and fostered by the service ecosystem, and what the institutions capable of holding together and functioning service ecosystems are' (p. 908) (see also Vargo & Lusch, 2017).

In addition, Beirão, Patrício and Fisk (2017) suggest that ecosystems emerge out of interactions on the micro, meso and macro levels. Value is thus co-created on these three levels. Physicians and customers exchange services at the micro level. Hospitals and other healthcare organisations interact at the meso level. Governments and other organisations act at the macro level. Frow, McColl-Kennedy and Payne (2016), in turn, argue that policymakers and public and private healthcare service providers should not consider healthcare an isolated system. Instead, it is an

ecosystem in which the involved parties (e.g. industries, governments, environmentalists and customers and/or patients) can survive together only by co-creating value and integrating the required resources.

Healthcare systems can be seen as service ecosystems that only work when the different parts of each system work together. Service design can contribute a holistic view that creates an understanding of this complexity through visualising and concretising ideas. Currently, the level of complexity and variety of interactions in these ecosystems are daunting. They are made up of different areas of healthcare and the management, development, evaluation and information and communication technology (ICT) systems that provide support.

According to Vargo and Akaka (2012), the concept of service ecosystem offers a framework for research that focuses on resource integration as an important means for connecting people and technology within and among service systems. This concept can thus be used to study resource integration, value co-creation and especially service system reform. This framework also provides important insights when systematically innovating services. In the present case study, this concept was especially useful because of the strong focus on reforming healthcare service systems.

In addition, the ecosystem approach can be used in healthcare contexts to identify high-level requirements for different technologies providing, for example, ICT-hosting environments (Chang, Chou, & Ramakrishnan, 2009). The ecosystem concept can be applied to describe healthcare environments more accurately since not only healthcare processes need to be considered but also social welfare and public service structures have to be given their place and role in development processes. The ecosystem framework can, therefore, incorporate both aspects of the Scandinavian healthcare model.

For the present research, six healthcare experts were interviewed from the Lapland Hospital District: the development manager, the chief administrative nurse, a project manager and a development process designer. A doctor and a nurse from the children's unit of the Lapland regional hospital were also interviewed. All interviewees offered a different perspective on Lapland hospital ecosystems, thereby reflecting their varied points of view.

The research team asked the interviewees to draw a picture of this ecosystem. Three of them made customer-centric drawings, and the other three placed a Lapland hospital in the middle of the picture. In addition, one interviewee said that the ecosystem could be drawn from various points of view. This outcome shows that the interviewees sought to address the problem of a lack of both internal and external definitions and understandings of the Lapland healthcare ecosystem. The Lapland Hospital District was seen as fragmented, as well as lacking communication and knowledge between and about different units and services.

However, information and know-how sharing is, nonetheless, seen as a strength. The district's own internal network is understood as a separate ecosystem that should be extended externally to make this complex ecosystem more fluid and functional. Service design can have a clear role in creating a more holistic understanding of the entirety of the Lapland Hospital District ecosystem, as well as offering tools to improve communication and patient-centric customer journeys. In particular,
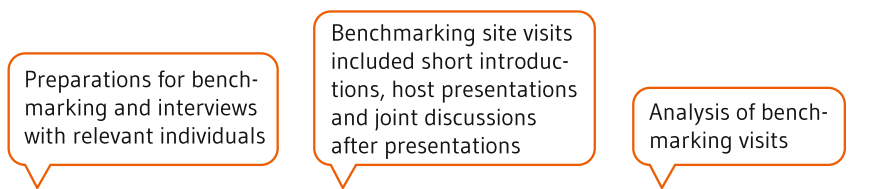
visualising the ecosystem is a tool that would allow experts and management not only to discuss their different views and standpoints on development strategies but also to create an understanding among stakeholders of how the ecosystem operates.

4 Case Study One: Benchmarking Healthcare in the Silicon Valley

Lapland Central Hospital is facing new demands for more agile management and healthcare processes. Wellbeing standards and hospital service environments are changing and becoming more competitive because of social system reforms that give citizens the right to choose their healthcare providers. Experts argue that public service providers are somewhat slower in responding to customers' needs, and these providers are only now realising that customers are part of service creation and delivery.

The hospital's management chose to use the benchmarking tool in order to adapt both the tool and the process involved for the district under study. The management wanted to benchmark lean and human-centred care processes. Through benchmarking, the hospital staff could study new ways of designing and delivering services to customers. The benchmarking team consisted of the development manager, the chief administrative nurse, a project manager from the Lapland Hospital District and the development manager from Oulu Hospital District (i.e. a neighbouring region). The Lapland Hospital District participates actively in national and regional projects, working with clinical experts, implementing various projects and conducting research with the University of Lapland. In addition, most of the benchmarking visits were monitored by a senior researcher from this university.

As a result, the team had a good composition. In particular, the Oulu representative added useful feedback and criticisms to discussions. After the benchmarking process was complete, the participating experts were interviewed to get their views on two questions: how well benchmarking as a tool worked and whether benchmarking contributed to the development of new services. The benchmarking process was divided into three parts: (1) preparations for benchmarking, (2) benchmarking site visits and (3) analysis of benchmarking visits (see Fig. 1).

Preparations for bench-marking and interviews with relevant individuals

Benchmarking site visits included short introductions, host presentations and joint discussions after presentations

Analysis of bench-marking visits

Fig. 1 Case study structure: benchmarking. Source: Authors' own illustration (2018)

5   Preparations for Benchmarking

The literature on innovation management reports that Silicon Valley has been a cradle of innovation for decades (Delbecq, 1994). Benchmarking is an important tool with which to drawn on this area's experience because this tool can examine wellbeing standards and hospital services from different perspectives, evaluating them and learning from best practices. Benchmarking facilitates concretising new ideas about practices and evaluating which ideas have proven to be good or bad.

A major part of the present benchmarking process was preparing for site visits. This included researching potential sites and contacting them. Identification of the sites was done through discussions with medical experts at Stanford University and a local expert who directs the Healthcare Design Research programme at the Stanford Center for Design Research. Practical arrangements for site visits took a considerable amount of time, and, because of people's busy and frequently changing schedules, many alternative plans and flexibility were needed to make the most of opportunities.

The benchmarking process included visits to various local healthcare providers. These included Kaiser Permanente's service design team in San Francisco, Stanford Healthcare and Zuckerberg San Francisco General Hospital's service delivery management, Zen Hospice Project for palliative care in San Francisco, HanaHaus Design Thinking Meetup in Palo Alto and the Healthcare Design Research programme at the Stanford Center for Design Research. Preparations included planning for the site visits and interviews with relevant individuals. Site visits and preparations were conducted in collaboration with a senior researcher located in Palo Alto and the project manager of the Lapland Hospital District. Without a local point of contact, it was quite hard to make the practical arrangements. Benchmarking in Silicon Valley, where people are extremely busy, required inside contacts and enough room in agendas to set up appointments.

6   Benchmarking Site Visits

To learn from site visits requires enough time on site and prior to and between visits as valuable new contacts may be identified during visits and some visits may be cancelled. Nonetheless, the benchmarking process ran smoothly. The site visits included short introductions, host presentations and joint discussions after presentations. In addition to this, the research team processed the meetings in numerous group discussions after visits.

Two topics were emphasised in discussions evaluating the benchmarking trip. The first was human-centred service journeys and models in hospitals. The interviews underlined the need to develop more service-centred thinking and patient-centric processes. For example, discussions brought up the idea of developing an appointment booking system around the patients' point of view on the entire service journey—from when the healthcare starts until rehabilitation ends. Another idea is to organise more customer service training for hospital staff that especially

emphasises a human- and patient-centred viewpoint, to support smoother customer journeys.

Other topics mentioned were lean and 'true north'. True north describes a lean organisation strategy that places patients at the centre of service processes. Toussaint and Berry (2013) define lean healthcare as 'an organisation's cultural commitment to applying the scientific method to designing, performing, and continuously improving the work delivered by teams of people, leading to measurably better value for patients and other stakeholders'. Lean management resonates well with service design as both set clear goals to place human experiences at the centre of processes, communicate and manage strategies with visual tools and work through continuous improvement and development.

The site visits provided opportunities to see lean and human-centred thinking implemented through healthcare processes not only at the management level but also in daily practices. These visits also enabled the visiting research team to evaluate and appreciate their own existing successful experiments, patient-centred practices and development processes.

7   Analysis of Benchmarking Visits

The benchmarking visits successfully produced useful outputs, and some ideas were quickly developed into practical experiments. One of the practices implemented was constructed around the idea of a 'huddle'—a quick stand-up meeting to discuss the hospital's daily management. The proposal was to conduct an agile experiment to find out whether the intensity of nursing care (Fagerström & Rainio, 1999; Fagerström, Rainio, Rauhala, & Nojonen, 2000) could be managed better by using huddles to evaluate where resources are needed the most. This innovation sought to manage resource use better and facilitate day-to-day management. In addition, the idea was to use huddles to protect the patients' right to similar standards of care and to help prioritise what should be done each day.

The experiment was conducted in two hospital units. Their resource use was measured and followed up with later assessments. The new procedure was implemented just before the summer holiday season, which is characterised by temping and which affected both the implementation and evaluation of the experiment. When the innovation was discussed, the right timing and good planning of evaluations were identified as an important aspect of the development process. As metrics for evaluating lean management experiences, interviewees mentioned patients' throughput time (Kujala, Lillrank, Kronström, & Peltokorpi, 2006), response time (Wankhade, 2011), patient experiences of benefits (Lorig, Mazonson, & Holman, 1993) and effectiveness (Lemieux-Charles & McGuire, 2006).

The challenge of developing the benchmarking tool itself was clearly strategically important. Implementations of and commitment to new practices developed during and after benchmarking were experienced as difficult parts of the process. In addition, the interviewees reported that they needed a mandate to engage and commit people and the required set of tools necessary to put ideas into practice. Those in

management expressed a clear need to find visual ways to disseminate and communicate benchmarking information to larger audiences in their home communities.

In response to these results, service design could focus on using video personas and short commentaries and statements from individuals met during the site visits. Service designers could also develop tools for both designing and evaluating agile experiments based on benchmarking. This would also be an opportunity to enhance the role of facilitators, who could use digital tools to capture the content and ideas generated during the benchmarking process.

Benchmarking proved to be a good way to stimulate experts from the Lapland Hospital District to discuss both service design and lean practices in healthcare contexts. Seeing practical examples from not only a hospital management perspective but also service design practitioners' viewpoint enabled the research team to understand how service design development would look like in hospitals. In some of the sites visited, experiments were run first for some weeks in the health centre unit and later scaled up to include more units. The scaling up step is one of the challenges in service design and human-centred development. Change processes require extensively peer-to-peer learning, so transformational change in organisational cultures and management's strong commitment to benchmarking is needed to ensure the results of service design processes are seen. In addition, all stakeholders should understand how the scaling up step can take innovations from experiments to implementation and strategic day-to-day management.

8   Case Study Two: Rehabilitation Processes of Children Living in Lapland

Developing and conducting the case study of the rehabilitation processes of children living in Lapland started in February 2017. In rehabilitation programmes, client participation is a basic principle, requiring patients to feel self-confident and autonomous. Rehabilitation professionals such as physiotherapists and nurses need to allocate more attention to clients' emotional expressions, thereby enhancing their self-efficiency and self-management skills (Reunanen, Talvitie, Järvikoski, Pyöriä, & Härkäpää, 2016).

In addition, the use of technology, especially virtual reality and gaming technology, has generated increasing interest in rehabilitation programmes (Powell, Powell, & Simmonds, 2014). This case study sought to examine the existing rehabilitation ecosystem in the eight municipalities of Lapland and develop new solutions for better and more efficient services that can provide equal healthcare to all families and their children in this remote region. The research focused first on developing a fuller understanding of the municipalities' ecosystems, so the research team started the development project with healthcare professionals.
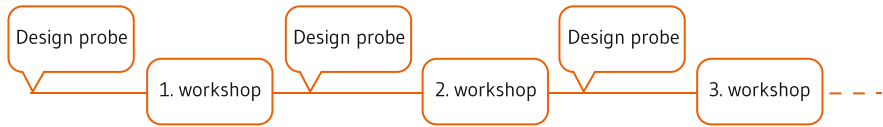
Fig. 2 Case study structure: rehabilitation process of children living in Lapland. Source: Authors' own illustration (2018)

9   Case Study Structure

Three service design workshops were organised during the spring of 2017 with municipality healthcare professionals, and three design probes were used before each workshop to gather more details about the resources, challenges and needs of every municipality. The design probes also sought to recruit participants for the case study and ensure better quality data were collected. The data from each design probe was used in the workshops, visualising the results with an expansive template to make the complex service ecosystem under study more understandable to everyone (see Fig. 2).

The first design probe was a survey of municipality healthcare professionals who were working in children's rehabilitation in Lapland. The objective was to collect data on existing needs, resources and challenges. For example, one question asked for the number of customers served in previous years. In total, 25 questionnaires were completed by municipality professionals, some of which were filled out individually and some with colleagues. All answers were analysed using an expansive printed template (i.e. a resource blueprint), which was presented during the first workshop. This material ended up being crucial as it explained the service ecosystem framework, which was important since all eight municipalities needed to understand each of the other ecosystems.

The first workshop in February 2017 had 24 participants from the healthcare sector from different municipalities. This workshop focused on presenting the data collected and the resource blueprint, as well as filling it out more completely. The research team quickly realised that the resource blueprint would take more time than expected, but it was considered worth the extra effort. Notably, some divergences appeared between definitions developed by municipalities and roles of healthcare professionals regarding how they perceive children's rehabilitation in Lapland. This meant that more time was given to general discussion during the first workshop. Regardless of these delays, one useful outcome of this workshop was six development challenges, which were generated in the form of mind maps in small groups.

The second design probe was also a questionnaire ($N = 9$), but this focused on eliciting different solutions for more adaptive services in rehabilitation and identifying existing resources, such as the children's schools or hobbies. The questionnaire thus sought to gather ideas for designing new service solutions. In addition, the research team wanted to investigate how families experience rehabilitation processes, so the Lapland Hospital District sent 30 questionnaires to customers, namely, families who were or had been part of the rehabilitation programme.
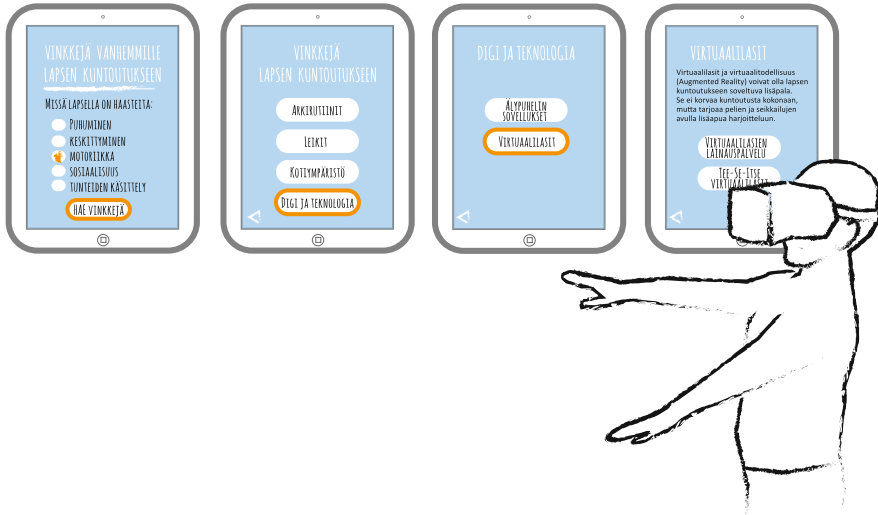
Fig. 3 An example of a service idea created for families and healthcare professionals during the workshop—a digital platform to provide different rehab services for families without a doctor's referral. In this idea, families could, for example, use virtual reality as a new way to motivate children with movements (in Finnish) Source: Authors' own illustration (2018)

The district received 11 completed questionnaires providing positive feedback, while most complaints mainly focused on long, slow queues during the rehabilitation process. However, many things could be done better in the rehabilitation programme, and one of the biggest challenges is regional barriers. Information is missing from municipality to municipality, which makes the services slower or even unattainable.

In the second workshop, 22 participants created a service journey, visualising it as six main phases: (1) worrying, (2) contacting a service provider, (3) assessing the child's functional capacity, (4) creating a rehabilitation plan, (5) implementing the plan and (6) controlling and assessing rehabilitation results. The service journey exercise played a crucial role in both defining the entire rehabilitation process and understanding the most important needs involved.

The last design probe focused more on iterating ideas further and voting on the best ideas. Digital services got the most votes, followed by the idea of involving schools more in the rehabilitation programme. In addition, digitalisation was identified as an easy and effective service tool to link the municipalities' separate healthcare ecosystems into a shared ecosystem.

In the last workshop held in June 2017, prototyping and role playing were used to iterate service ideas with 26 healthcare professionals. This was done based on two scenarios, in which these professionals acted out different users' roles in service processes. Through this type of exercise, concrete service ideas can be more easily adapted to service ecosystems, and ways these ideas can become a part of these systems can be devised. The ideas were visualised as service concept pictures and presented in a subsequent healthcare seminar. The ideas will be adopted as part of the ongoing reforms of social and health services (see Fig. 3).

As an outcome of the entire case study, visualisations were crucial to developing a more accurate perception of the municipalities' complex service ecosystems. The design probes also enabled the research team to organise the next workshops better. Time was saved by having some material done before the workshop so that the participants felt more motivated not only to see the results but also complete the next design probe. The participants felt a positive pressure to see who had answered and who had not. The most challenging phase in this case study was visualising the complex healthcare ecosystems in question.

10   Findings

Benchmarking can support the development of hospital services and customers' service journeys. In this research project, the most significant impact was felt through the supporting evidence found for developing lean management and true north thinking. The benchmarking process contributed to the elaboration of agile experiments and evaluation practices. In addition, the case studies showed that service design tools can be used to create and develop more effective benchmarking and dissemination processes to generate more support and commitment for ideas, which affects the overall success of development projects. A bolder use of visualisation and concretisation tools (Koh, Slingsby, Dykes, & Kam, 2011; Shneiderman, Plaisant, & Hesse, 2013) enables better communication and participation in development processes.

Service design tools—especially visualisation tools—offer a way to create a shared understanding of healthcare ecosystems. These tools can also be used to implement lean strategies in healthcare processes. Furthermore, service design workshops bring professionals together and give them opportunities to 'finally' meet each other. At the beginning of the first workshop in the present research, the participants saw great value in having enough time to get to know other professionals in their field. Some met for the first time after many years of emailing each other as part of their professional duties.

During the workshops, the participants were curious to find out how many resources each municipality had for children's rehabilitation. These healthcare professionals were unsure how many professionals each municipality had. In addition, much time was dedicated solely to defining the rehabilitation processes and the services and actions included in these. In the second workshop, the participants were interested in learning how resources were distributed in municipalities. This also led to discussions about how to share knowledge and resources with those who had limited resources. More empathy was developed through this common understanding, and these professionals shared the need to make their healthcare ecosystems work better together.

All the above-mentioned points highlighted that, even though municipality healthcare professionals are actively working together, they still lack knowledge about the processes, services and the entire district's ecosystem surrounding rehabilitation services. Workshops are thus a great platform for meeting people and

discussing issues. This also generates value for further development projects since participants are motivated to serve the common good—in this case, future services for the new hospital through which innovative processes will facilitate the provision of efficient, flexible and equal services all around Lapland. Visualisation can help professionals to analyse and perceive municipalities' ecosystems as a one expansive ecosystem, which, in turn, creates visions of new service processes.

Service design thus can contribute greatly to the strategic management of healthcare through visualisations of ecosystems, processes and customer journeys. This approach can also disseminate information and generate commitment. Furthermore, service design can contribute to creating both participatory and codesign (Donetto, Pierri, Tsianakas, & Robert, 2015) practices when developing services, as well as stimulating innovation in the day-to-day management of processes.

11   Discussion

Service design, therefore, enables the development of collaborative practices in healthcare, offering practical tools that can be used in this process (Reay et al., 2017). Hospital ecosystems are complex, so understanding them holistically is challenging for healthcare professionals. Given that governments are currently forcing hospitals to make changes through social and healthcare reforms, service providers urgently need to have a shared understanding how other healthcare ecosystems are organised. Otherwise, these ecosystems might overlap, and service providers may fail to support each other or value professionals and customers appropriately.

Service design and its multiple methods are a good option when designing new healthcare services, especially when these combine various healthcare ecosystems. Service design tools create entry points and platforms for developing shared understandings and insights and negotiating reforms of healthcare practices and patient-centred processes. Service design offers practical tools with which to understand the issues at the core of patient-centred care (Kitson, Marshall, Bassett, & Zeitz, 2013).

Service design can thus facilitate the development of new human-centred services, resonating well with lean hospital practices. In the process of designing the new hospital in Finland's Lapland region, this approach enabled the inclusion—and strategies addressing the needs—of all stakeholders. Service design provides the tools, structure and process needed for transformational change, generating the necessary commitment to scaling up experiments and implementing more strategically innovative management in patient-centred care processes.

12   Conclusion

The healthcare sector is facing increasing challenges that remain unaddressed. The ongoing reform of social and health services in Lapland forces hospitals to use new methods to understand complexities, emerging trends and ecosystems. In addition, new technologies have pros and cons: on the one hand, people can be reachable and services equal through technology, but on the other, knowledge of using services for transformative change in the field. Changes in services and systems are slow and expensive. This paper discusses service design practices in health-related development work by presenting two case studies conducted in Finnish Lapland. The two case studies aim to develop hospital management practices by benchmarking and clarification and redesign of rehabilitation service ecosystems in Lapland.

Service design and its tools and methods can be viewed as a way of codesigning agile and human-centred services as well as perceiving services and systems. Benchmarking supports the development phase by analysing the benefits and evaluating lean management and 'true north' thinking practices. Benchmarking enables peer-to-peer learning, understanding state-of-the-art and implementing good practices. Codesign workshops and visualisation tools help to perceive complex healthcare ecosystems, which through shared understanding enable the creation of new service solutions where ecosystems are combined or mutually supportive.

The cooperation with Lapland Hospital District is continuing. Service design and its tools and methods in health-related service development work will be used in the future. This ongoing reform and its national challenges in the healthcare sector challenge service design in the field, addressing the needs for new approaches where stakeholders are involved in entire development processes.

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