

Mario A. Pfannstiel · Christoph Rasche  
*Editors*

# Service Design and Service Thinking in Healthcare and Hospital Management

Theory, Concepts, Practice

 Springer

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Mario A. Pfannstiel  
Department of Healthcare Management  
Neu Ulm University of Applied Sciences  
Neu-Ulm, Germany

Christoph Rasche  
Management, Professional Services  
and Sports Economics  
University of Potsdam  
Potsdam, Germany

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## Preface

Service design and service thinking display the platform of contemporary service management incorporating the seeds of business model innovation. The service-based view of the firm not only accentuates the touchpoints of customer-based service perception but also reflects the corporate perspective co-value generation when actively taking the value contributions of the customer into consideration. Adopting a managerial or entrepreneurial standpoint service design in health care encompasses all value chain activities needed to satisfy B2B and B2C customers in an efficient, effective and innovative way. While service design circles around the configuration aspects of (networked) service architectures that economize on service assets, service processes and final service delivery with respect to time, quality, convenience and competitive prices, service thinking is about new business development and innovation in the service sector. Facing the digitalization imperative healthcare providers must challenge their entrenched wisdom and path-dependent business models to defend their zones of influence and service strongholds. Disruptive service innovations often stem from service thinking initiatives that may lead to radical service designs offering better healthcare value at lower costs and prices. Truly perceived service value is not only a matter of prices, costs or evidence-based quality outcomes as experts tend to insinuate. Moreover, customer satisfaction hinges on acoustic, optical, emotional, olfactory, tactile and gustatory service elements that account for the overall perceived value of a service.

Service design coalesces technical as well as aesthetic features of service infrastructure, services processes and services outcomes having a strong impact on customer psychology when it comes to plastic surgery. On the one hand, many papers evidence that service design involves service engineering with respect to technological service infrastructure consisting of systems, devices and many digital gadgets enabling health care to fully comply with the logic of co-value generation. Digital and smartphone-based service designs ensue 24/7 wireless data transmission among multiple healthcare agents. On the other hand, service design should not be diminished to the technical sphere because it interferes with our lifestyles, habit and traits in the case of wearables or body-implanted devices to control for critical parameters. In the best case, modern service designs assist and ameliorate our 'healthstyle', but in the worst case all-pervading data tracing tracking and profiling may massively intrude on our lives. We make a plea for humanity-driven service

design to benefit from modern technologies while not sacrificing our intimacy and privacy.

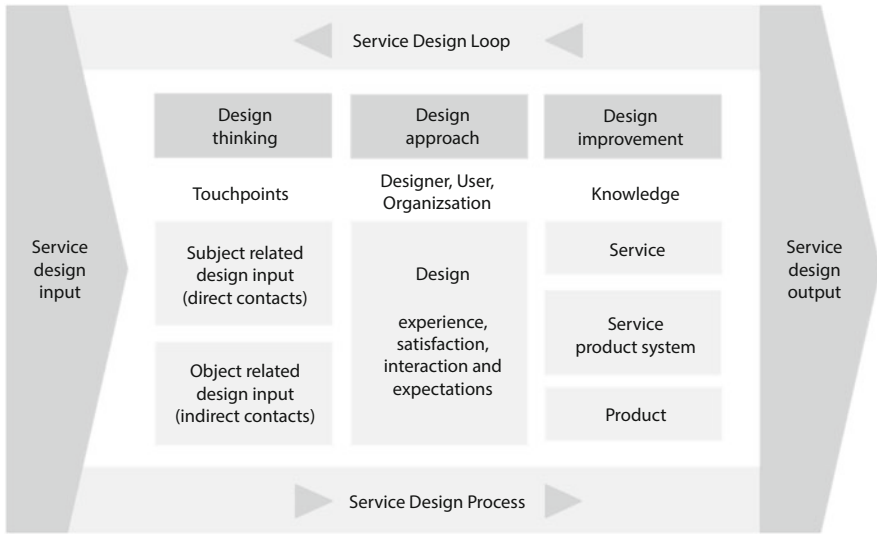
Excellent service designs are lead user driven since they must be braced for a flurry of target segments and heterogeneous users which can be segmented according to socio-demographic, psychographic or observable healthcare preferences. While the born digitals or digital nomads welcome modern service designs, elderly people are often reluctant to accept digitalization as an irreversible matter of fact having already reached the point of no return. But the vast majority of the submitted papers show clear evidence that digitalized, interconnected and intelligent service designs service as preconditions for better, faster and smarter service delivery in health care. They are the enabling business model architectures on which healthcare companies compete for the(ir) future. The reason for this lies in the fact that end services can be competed away easily while underlying service designs incorporate the features of hard to copy core competencies.

Service thinking goes beyond shortsighted daydreaming because of a pre-emptive future approach. Instead of solidly mastering the present, healthcare providers envision the impossible when breaking the rules of their industry. Think of big data applications, the change from simple apps to artificially intelligent bots or machine learning in the shape of self-enhancing data flow transmissions between digital devices. Intelligent services include adaptive therapy infrastructures, precision medicine, bot-assisted therapies, interactive service robots or big data-assisted decision-making tools. The mantra of assisted ambient living propels the idea of smart homes that automatically take care of our well-being. Last but not least, smart service thinking is about permanent high-quality access to healthcare service that can be delivered to rural areas by means of distance-based healthcare services. But bear in mind that service design and service thinking must serve the patient, the customer or the user to avoid the pitfalls of over-engineering and nerdy health-tech freak shows.

Holistic service design is based on an interrelated and systematic approach starting with design thinking having user-driven design in its track. The latter are the outcomes of creative workshops and design meetings bringing together the designer and the user perspective to make both ends meet. Design improvement is akin to KAIZEN, business process engineering or total quality management because of incremental steps towards service perfection instead of radical service leapfrogging (refer to Fig. 1).

Visionary service thinking, pragmatic service design and hands-on service engineering must go for a mix of strategic and piecemeal issues to translate service design blueprint into actions by means of viable healthcare business models. The latter represent the power engines of healthcare institutions due to their embeddedness, social complexity and sophisticated sub-elements. These features make them less vulnerable to imitation, while the danger of service substitution is omnipresent in the digital world. Beyond smart service designs and service thinking, healthcare companies will have to compete for agile, resilient and robust service architectures to survive the next business tsunami.

The contributions of the authors in this anthology are structured in the following fashion: contribution title, summary, introduction, main part, conclusion,



**Fig. 1** Holistic service design thinking. Source: Own illustration (2018)

bibliography and biography. Furthermore, each author sums up his or her explanations and insights in the article for a summary at the end of the article.

We would like to thank the numerous authors of this anthology who brought a wide array of fascinating issues from practical experience and engrossing science topics into our anthology. Finally, we want to extend our warmest gratitude to Dr. Glaeser and Rajendran Mahalakshmi at this point who contributed their ideas to support us in compiling the layout of this anthology and put the whole book with the chapter together.

Neu-Ulm, Germany  
2019

Mario A. Pfannstiel  
Christoph Rasche

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# Contents

<b>Service Design as a Transformational Driver Toward Person-Centered Care in Healthcare</b> . . . . .	1
Lisa Malmberg, Vanessa Rodrigues, Linda Lännerström, Katarina Wetter-Edman, Josina Vink, and Stefan Holmlid	
<b>Changing the Rules of the Game in Healthcare Through Service Design</b> . . . . .	19
Josina Vink, Maíra Prestes Joly, Katarina Wetter-Edman, Bård Tronvoll, and Bo Edvardsson	
<b>Using Small Step Service Design Thinking to Create and Implement Services that Improve Patient Care</b> . . . . .	39
Brenda Gleason and Jennifer Bohn	
<b>Service Innovation by Patient-Centric Innovation Processes</b> . . . . .	55
Christophe Vetterli and Corinne Scherrer	
<b>Service Design During the Later Development Phases: Introducing a Service Design Roadmapping Approach</b> . . . . .	69
Frida Almqvist	
<b>Innovation in Service Design Thinking</b> . . . . .	85
Lesley A. Clack and Rachel L. Ellison	
<b>The Use of Tangible Tools as a Means to Support Co-design During Service Design Innovation Projects in Healthcare</b> . . . . .	93
Karianne Rygh and Simon Clatworthy	
<b>Investigating the “In-betweenness” of Service Design Practitioners in Healthcare</b> . . . . .	117
Jonathan Romm and Josina Vink	
<b>Service Design Empowering Innovative Communities Within Healthcare</b> . . . . .	137
Stuart G. Bailey, Karen L. Bell, and Hans Hartung	



<b>A Design Perspective on Future Healthcare Services for the Home Environment . . . . .</b>	155
Geke D. S. Ludden and Anna Vallgård	
<b>Co-creative Service Design in Municipal Health Services: Reflections and Lessons Learned from a Design Education Perspective . . . . .</b>	169
Marikken Høiseth	
<b>Evaluating Co-production in Mental Health Services as a Support for Co-design Activities . . . . .</b>	189
Francesca Foglieni, Federica Segato, Daniela Sangiorgi, and Marta Carrera	
<b>Strategic Design Abilities for Integrated Care Innovation . . . . .</b>	211
Rafael Canales Durón, Lianne Simonse, and Maaïke Kleinsmann	
<b>Designing the Function of Health Technology Assessment as a Support for Hospital Management . . . . .</b>	233
Gabriele Palozzi, Camilla Falivena, and Antonio Chirico	
<b>It Takes More than a Village: Leveraging Globalized Information, Knowledge, and Resources to Design Services Tailored to an Accountable Health Community for Mental Health . . . . .</b>	259
Patricia Alafaireet and Howard Houghton	
<b>Redefining Touchpoints: An Integrated Approach for Implementing Omnichannel Service Concepts . . . . .</b>	279
Juha Kronqvist and Teemu Leinonen	
<b>Mapping an Ambient Assisted Living Service as a Seamless Cross-Channel Ecosystem . . . . .</b>	289
Bertil Lindenfalk and Andrea Resmini	
<b>4D Wireframing as a Tool for Integrating Digital with Physical Touchpoints for an Elevated Patient Experience . . . . .</b>	315
Florian Vollmer	
<b>Managing Complex Patient Journeys in Healthcare . . . . .</b>	329
Ragnhild Halvorsrud, Annette Lund Lillegaard, Mette Røhne, and Andreas Momme Jensen	
<b>Design for Social Innovation as Designing for Service: The Case of Active Aging in Brazil . . . . .</b>	347
Carla Cipolla, Maíra Prestes Joly, Beatriz Watanabe, Fernanda Benevides Zanela, and Márcia Fernandes Tavares	
<b>Service Design Methods: Knowledge Co-production in Health and Social Care . . . . .</b>	359
Alison Prendiville	

---

<b>Why Hospitals Need Service Design . . . . .</b>	<b>377</b>
Kristine Rise Fry	
<b>Neonatal Care Unit: Special Care for Babies . . . . .</b>	<b>401</b>
Moema Loures	
<b>Alarm in the ICU! Envisioning Patient Monitoring and Alarm Management in Future Intensive Care Units . . . . .</b>	<b>421</b>
Elif Özcan, Dilip Birdja, Lianne Simonse, and Ard Struijs	
<b>Patient Self-Service Paradigms in Hospital and Healthcare Service Design Settings . . . . .</b>	<b>447</b>
Jenny Darzentas and Helen Petrie	
<b>Flying Drones to Exchange Lab Samples: Service Innovation by the Swiss Multisite Hospital EOC . . . . .</b>	<b>463</b>
Federico Umberto Mion	
<b>Service Designing a New Hospital for Lapland Hospital District . . . . .</b>	<b>481</b>
Satu Miettinen and Mira Alhonsuo	
<b>Health Services Design Based on Innovations in Two Hospitals in Mexico . . . . .</b>	<b>499</b>
Leonel Corona-Treviño, Constanza Márquez-Aguilar, and Eva Tecuanhuey-Sandoval	
<b>Dealing with Different Cultures: Overcoming Challenges of Service Design in a Multicultural World . . . . .</b>	<b>525</b>
Neena Gupta-Biener, Sanjeev Kanoria, and Karin Messer-Misak	

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## Editors and Contributors

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### About the Editors



**Mario A. Pfannstiel** is a researcher and lecturer in the field of hospital and healthcare management at the University of Applied Sciences Neu-Ulm. He holds a diploma from the University of Applied Sciences Nordhausen in the field of social management with a major in finance management, an MSc degree from the Dresden International University in patient management and an MA degree from the Technical University of Kaiserslautern and the University of Witten/Herdecke in health care and social facilities management. He worked as executive assistant to the medical director in the Heart Centre Leipzig in Germany. At the University of Bayreuth, he worked as Research Associate at the Department of Strategic Management and Organization. He received his doctorate from the Faculty of Social Sciences and Economics and the Chair of Management, Professional Services and Sport Economics at the University of Potsdam. His research includes numerous articles, journals and books on management in the healthcare and hospital industry. Prof. Pfannstiel holds lectures in Germany and abroad at regular intervals. His current research interests focus on service management, digitalization of services, service business model innovation, service design, service thinking and innovative services.

E-mail: [mario.pfannstiel@hs-neu-ulm.de](mailto:mario.pfannstiel@hs-neu-ulm.de)



**Christoph Rasche** heads the chair of professional and corporate services at the University of Potsdam. He adopted visiting professorships at the Universities of Innsbruck, Alcalá de Henares as well as the Hochschule Osnabrück. He teaches strategic and general management in national and international MBA programmes with respect to subjects connected with the healthcare and hospital industry. Formerly, he consulted with Droege International AG and was co-founder of Stratvanguard and the General Management Institute Potsdam. Prof. Rasche's research subjects circle around the field of strategic and general management in the healthcare and hospital sector, which witnesses an era of professional value creation by means of a strong management and leadership focus. Practically, he consults with healthcare players and is actively involved in executive trainings—ranging from corporate universities to MBA and PhD programmes for healthcare professionals.

E-mail: [chrasche@rz.uni-potsdam.de](mailto:chrasche@rz.uni-potsdam.de)

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## Contributors

**Patricia Alafaireet** University of Missouri, Columbia, MO, USA

**Mira Alhonsuo** Culture-based Service Design Doctoral Programme, Faculty of Art and Design, University of Lapland, Rovaniemi, Finland

**Frida Almqvist** The Oslo School of Architecture and Design, Center for Design Research, Oslo, Norway

**Stuart G. Bailey** The Glasgow School of Art, Glasgow, Scotland, UK

**Karen L. Bell** Head of Research & Development and Innovation Champion, NHS Ayrshire & Arran, University Hospital Crosshouse, Kilmarnock, Scotland, UK

**Dilip Birdja** Critical Alarms Lab, Faculty of Industrial Design Engineering, Delft University of Technology, Delft, The Netherlands

**Jennifer Bohn** Littleton, CO, USA

**Marta Carrera** Department of Design, Politecnico di Milano, Milano, Italy

**Antonio Chirico** Department of Management and Law, University Tor Vergata, Rome, Italy

**Carla Cipolla** UFRJ – Federal University of Rio de Janeiro, Coppe – Institute for Graduate Studies and Research in Engineering, Cidade Universitária, Centro de Tecnologia, Ilha do Fundão, Rio de Janeiro, Brazil

**Lesley A. Clack** University of Georgia, Health Sciences Campus, Athens, GA, USA

**Simon Clatworthy** The Oslo School of Architecture and Design, Oslo, Norway

**Leonel Corona-Treviño** Facultad de Economía UNAM, CEPCyT, México City, Mexico

**Jenny Darzentas** Department of Product and Systems Design Engineering, University of the Aegean, Ermoupolis, Syros, Greece

Department of Computer Science, HCI Research Group, University of York, Heslington, York, UK

**Rafael Canales Durón** Remember to Play, Amsterdam, The Netherlands

**Bo Edvardsson** Universitetsgatan 1, Karlstad, Sweden

**Rachel L. Ellison** University of Louisiana at Lafayette, Lafayette, LA, USA

**Camilla Falivena** Department of Management and Law, University Tor Vergata, Rome, Italy

**Francesca Foglieni** Department of Design, Politecnico di Milano, Milano, Italy

**Kristine Rise Fry** Oslo, Norway

**Brenda Gleason** Littleton, CO, USA

**Neena Gupta-Biener** FH Joanneum Gesellschaft mbH, Graz, Austria

**Marikken Høiseth** Department of Design, Faculty of Architecture and Design, Norwegian University of Science and Technology, Trondheim, Norway

**Ragnhild Halvorsrud** SINTEF Digital, Oslo, Norway

**Hans Hartung** Consultant in Respiratory Medicine, NHS Ayrshire & Arran, University Hospital Crosshouse, Kilmarnock, Scotland, UK

**Stefan Holmlid** Department of Computer and Information Science, Linköpings universitet, Linköping, Sweden

**Howard Houghton** Department of Psychiatry, University of Missouri, Columbia, MO, USA

**Andreas Momme Jensen** Sykehuspartner HF, Oslo, Norway

**Maíra Prestes Joly** Faculty of Engineering, University of Porto, Porto, Portugal  
Dipartimento di Design, Politecnico di Milano, Milan, Italy

**Sanjeev Kanoria** Advinia Health Care Limited, London, UK

**Maaïke Kleinsmann** Product Innovation Management, Delft, The Netherlands

**Juha Kronqvist** Hellon, Helsinki, Finland

**Linda Lännerström** Centre for Clinical Research Sörmland, Uppsala University, Eskilstuna, Sweden

**Teemu Leinonen** AALTO, Helsinki, Finland

**Annette Lund Lillegaard** DIPS AS, Bodø, Norway

**Bertil Lindenfalk** Jönköping International Business School, Jönköping University, Jönköping, Sweden

**Moema Loures** PUC-Rio – Pontifical Catholic University of Rio de Janeiro, Rio de Janeiro, Brazil

**Geke D. S. Ludden** UNIVERSITEIT TWENTE, Enschede, The Netherlands

**Constanza Márquez-Aguilar** Instituto de Salud del Estado de México, Toluca, Mexico

**Lisa Malmberg** FoU i Sörmland, Eskilstuna, Sweden

**Karin Messer-Misak** FH Joanneum Gesellschaft mbH, Graz, Austria

**Satu Miettinen** Faculty of Art and Design, University of Lapland, Rovaniemi, Finland

**Federico Umberto Mion** Ente Ospedaliero Cantonale, Servizio amministrazione e controlling, Ospedale Civico, Lugano, Switzerland

**Elif Özcan** Critical Alarms Lab, Faculty of Industrial Design Engineering, Delft University of Technology, Delft, The Netherlands

Department of Adult Intensive Care, Erasmus Medical Centre Rotterdam, Rotterdam, Netherlands

**Gabriele Palozzi** Department of Management and Law, University Tor Vergata, Rome, Italy

**Helen Petrie** Department of Computer Science, HCI Research Group, University of York, Heslington, York, UK

**Alison Prendiville** LCC, University of the Arts London (UAL), London, UK

**Mette Røhne** SINTEF Digital, Oslo, Norway

**Andrea Resmini** Jönköping International Business School, Jönköping University, Jönköping, Sweden

**Vanessa Rodrigues** Department of Computer and Information Science, Linköpings universitet, Linköping, Sweden

**Jonathan Romm** The Oslo School of Architecture and Design, Oslo, Norway

- Karianne Rygh** The Oslo School of Architecture and Design, Oslo, Norway
- Daniela Sangiorgi** Department of Design, Politecnico di Milano, Milano, Italy
- Corinne Scherrer** Zurich University of Applied Sciences, Winterthur, Switzerland
- Federica Segato** Department of Management, Economics and Industrial Engineering, Politecnico di Milano, Milano, Italy
- Lianne Simonse** Critical Alarms Lab, Faculty of Industrial Design Engineering, Delft University of Technology, Delft, The Netherlands  
Product Innovation Management, Delft, The Netherlands
- Ard Struijs** Department of Adult Intensive Care, Erasmus Medical Centre Rotterdam, Rotterdam, Netherlands
- Márcia Fernandes Tavares** Condomínio Via Barra, Barra da Tijuca, Rio de Janeiro, Brazil
- Eva Tecuanhuey-Sandoval** Innovación y Gestión Tecnológica, Hospital General Dr Manuel Gea González, Cd de México, Mexico
- Bård Tronvoll** Service Research Center (CTF), Karlstad University, Karlstad, Sweden  
Inland Norway University of Applied Sciences, Lillehammer, Norway
- Anna Vallgård** IT University of Copenhagen, Copenhagen, Denmark
- Christophe Vetterli** walkerproject ag, Prime Center 1, Zurich-Airport, Switzerland
- Josina Vink** Service Research Center (CTF), Karlstad University, Karlstad, Sweden  
Experio Lab, County Council of Värmland, Karlstad, Sweden
- Florian Vollmer** Atlanta, GA, USA
- Beatriz Watanabe** Rio de Janeiro, Brazil
- Katarina Wetter-Edman** School of Business, Örebro University, Örebro, Sweden  
FoU i Sörmland, Eskilstuna, Sweden
- Fernanda Benevides Zanela** Rio de Janeiro, Brazil



# Service Design as a Transformational Driver Toward Person-Centered Care in Healthcare

Lisa Malmberg, Vanessa Rodrigues, Linda Lännerström,  
Katarina Wetter-Edman, Josina Vink, and Stefan Holmlid

## Abstract

Increasingly, healthcare systems around the globe are looking to transition toward person-centered models of care. However, how to effectively support this complex transition is not clear. Here we forward service design as a key driver to aid in catalyzing this transformation. In this chapter, we integrate literature on service design (SD) and person-centered care (PCC) to better understand how a SD approach can aid in the transition toward PCC. Synthesized from existing literature, this chapter offers a framework for transitioning from the biomedical model toward PCC, highlighting key changes across four dimensions: contexts, roles, processes, and outcomes. We then show the alignment between PCC and SD across these dimensions and elucidate how SD can help to catalyze related changes with the support of specific methods. In doing so, this chapter offers a guide for healthcare practitioners looking to use SD to support the transformation toward PCC and builds a platform for future research at the intersection of SD and PCC.

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L. Malmberg (✉) · K. Wetter-Edman  
FoU i Sörmland, Eskilstuna, Sweden  
e-mail: [lisa.malmberg@fou.sormland.se](mailto:lisa.malmberg@fou.sormland.se); [katarina.wetter-edman@oru.se](mailto:katarina.wetter-edman@oru.se)

V. Rodrigues · S. Holmlid  
Department of Computer and Information Science, Linköpings universitet, Linköping, Sweden  
e-mail: [vanessa.rodrigues@liu.se](mailto:vanessa.rodrigues@liu.se); [stefan.holmlid@liu.se](mailto:stefan.holmlid@liu.se)

L. Lännerström  
Centre for Clinical Research Sörmland, Uppsala University, Eskilstuna, Sweden  
e-mail: [linda.lannerstrom@dll.se](mailto:linda.lannerstrom@dll.se)

J. Vink  
Service Research Center (CTF), Karlstad University, Karlstad, Sweden  
Experio Lab, County Council of Värmland, Karlstad, Sweden  
e-mail: [josina.vink@kau.se](mailto:josina.vink@kau.se)

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## 1 Introduction

Healthcare is under growing pressure to better respond to patients' needs and integrate their resources. In this context, person-centered care (PCC) is gaining ground as a model for more inclusive, resource-effective, and adaptive healthcare systems, which emphasizes seeing the patient as a person (Mead & Bower, 2000). One example of this development is the introduction of a new patient act in Sweden in 2014 (SFS, 2014), with the purpose of encouraging and ensuring a greater involvement of patients in their own care. However, several years later, reports show that the implementation is far from exemplary (Vårdanalys, 2017). The new directives toward PCC seem to be at odds with the traditional healthcare practices of both management and frontline professionals. In fact, it is argued that such a law requires paradigmatic changes wherein the entire system has to change focus, from an inward organizational focus to an inclusive focus embracing the patient's experiences and role in value creation (Vårdanalys, 2017). Furthermore, reports suggest that presently there exist very few incentives to perform activities that support the suggested transformation (Vårdanalys, 2017).

As the new patient law in Sweden exemplifies, many of the practices recommended by proponents of the PCC approach seem to demand a fundamental transformation of the culture surrounding healthcare, which goes beyond mere shifts in individual service offerings related to the patient encounter (Carlström & Ekman, 2012; Wolf & Carlström, 2014). However, how to support such a transformation within the complex systems of healthcare is not clear. Concurrently, design has been forwarded as an approach to address challenges within the public sector (Bason, 2010; Junginger, 2013; Mulgan, 2014). Specifically, service design (SD) is being recognized as a catalyst for organizational change and transformation (Junginger, 2015; Malmberg, 2017; Sangiorgi, 2011; Yu & Sangiorgi, 2018). Research suggests that involving users or patients through SD may be one way to initiate cultural change (Boström, Hillborg, & Lilja, 2017) and that participation in service design processes may spark individuals to alter their behavior (Wetter-Edman, Vink, & Blomkvist, 2018). This chapter seeks to explore how SD methods can complement PCC. First, we begin with a brief introduction of SD and PCC in healthcare. Second, we offer a framework for supporting the transformation toward PCC through SD. Third, we present the alignment between SD and PCC. Finally, we conclude with how specific SD methods may be used to drive the transition toward PCC.

---

## 2 Service Design in Healthcare

Generally, SD is described as a human-centered, collaborative, creative, and iterative approach (Blomkvist, Holmlid, & Segelström, 2010; Meroni & Sangiorgi, 2011). It involves a process of designing with diverse stakeholders (Segelström, 2013) and includes a varied set of methods, such as ethnographic research (Blomberg & Darrah, 2015; Segelström & Holmlid, 2015), visualizing user experiences (Prendiville, Gwilt, & Mitchell, 2017; Segelström, 2013), and prototyping (Blomkvist & Segelström, 2014).

The service design approach, supported by methods and tools, can help actors collaboratively work toward creating preferred futures (Holmlid, 2018; Meroni & Sangiorgi, 2011; Wetter-Edman et al., 2014). The inclusive and generative capacity of SD purportedly drives and directs change and transformation, focusing beyond specific service offerings (Sangiorgi, 2011). While many healthcare organizations are investing in SD as a means of realizing new services (Burns, Cottam, Vanstone, & Winhall, 2006; Mulgan, 2014; Szücs Johansson, Vink, & Wetter-Edman, 2017; Thomassen & Farshchian, 2016; Yoo et al., 2015), SD often entails transformation on several levels, since service inherently involves the organization, its employees, and users (Malmberg, 2017; Sangiorgi, 2011). As such, there is an increasing awareness of how SD, through its methods and approaches, transforms the systems where it is used (Kurtmollaiev, Fjuk, Pedersen, Clatworthy, & Kvale, 2018; Rodrigues & Vink, 2016).

Furthermore, SD builds on older design traditions, such as participatory design, to work toward multiple emancipatory objectives (Holmlid, 2009) and involve various stakeholders (Björgvinsson, Ehn, & Hillgren, 2012). In SD, a diverse set of techniques are used to engage stakeholders and support the design process (Blomkvist & Holmlid, 2011). In healthcare contexts, SD is explicitly seen as a way to involve patients and their perspectives in the development process (Gammon, Strand, & Eng, 2014) and help patients' and their family members' voices to be heard (Adamson, Pow, Houston, & Redpath, 2017; Bender & Holyoke, 2016). These objectives and the ensuing participatory process are illustrated in the use of experience-based co-design (Carr, Sangiorgi, Büscher, Junginger, & Cooper, 2011), used by the NHS, among others, to ensure stakeholder involvement in the improvement and redesign of healthcare processes (Bate & Robert, 2006; NHS Institute for Innovation and Improvement, 2010). Furthermore, in the example of the cardboard hospital in Finland (Kronqvist, Erving, & Leinonen, 2013; Vaajakallio, Lee, Kronqvist, & Mattelmäki, 2013), drama and participative techniques were used to facilitate ongoing prototyping (Blomkvist & Segelström, 2014) of a new physical space. This process used the material and visualization practices of SD to explore possible futures with diverse stakeholders of a hospital ward.

The participatory practices used in SD enable access to different kinds of knowledge about the future service (Blomkvist & Segelström, 2014), including situated, contextual, and processual aspects (Blomkvist, 2016). When using SD, before creating solutions, efforts are put into framing the problem to be solved (Dorst & Cross, 2001), and solutions are directed toward fulfilling needs. This process of understanding and addressing needs is supported by entering user or patient contexts and involving stakeholders in co-design activities (Sanders & Stappers, 2012; Sleeswijk Visser, Stappers, van der Lugt, & Sanders, 2005). From a SD perspective, grasping a given actor's knowledge at different points in a service process is crucial to understanding what resources can be integrated and how best actors can participate (Holmlid & Björndal, 2016; Holmlid, 2012). In summary, SD offers a promising approach to support transformation in healthcare through cooperative and participative approaches that focus on elevating human needs and experiences. The following section summarizes existing literature on PCC and describes the shift from the current state to the desired model of PCC.

### 3 Person-Centered Care

This section traces the evolution of the concept of PCC in research. Building on the conceptual frameworks derived by McCormack and McCance (2006) and by Mead and Bower (2000), we lay the foundation for an integrative framework highlighting the dimensions of context, process, roles, and outcomes, to support the transition toward PCC.

#### 3.1 Background on Person-Centered Care

The notion of PCC has long been part of healthcare (Morgan & Yoder, 2012). Some argue that it could be traced back to Florence Nightingale, who took an alternative approach to nursing by focusing on the patient rather than the disease (Lauver et al., 2002, p. 246). The language of PCC was introduced in primary healthcare medical research in the late 1960s. Here it was recognized that the provision of care was contingent on understanding patients and comprehending their unique situations (Balint, 1969). Following the introduction of PCC, general practitioners started to incorporate the patient's view and understanding of their illness when making a diagnosis in the care encounter (Holmström & Röing, 2010).

The concept of "person-centeredness" derived from Rogerian psychotherapy has not been consistent or well defined (Hafskjold et al., 2015; Holmström & Röing, 2010; Kitson, Marshall, Bassett, & Zeitz, 2013; Lepage et al., 2007; Scholl, Zill, Härter, & Dirmaier, 2014; Slater, 2006). However, several researchers have gone on to build on these early conceptualizations to examine multiple dimensions of PCC. Registered nurses have developed the concept within the lived experience research in North America and the life-world research in Scandinavia (Edvardsson, 2015). They focused on systemic and contextual issues such as values, prerequisites, organization, and environment (Kitson et al., 2013; McCormack & McCance, 2006). In some cases, clinical consultations have been the main focus for medical research on PCC (Kitson et al., 2013; Mead & Bower, 2000). In studies focused on the person-centered practitioner, interpersonal relationships between the physician and patient have been identified as key to the provision of care (Lipkin, Quill, & Napodano, 1984; Stewart et al., 1995).

The Picker-Commonwealth Program for Patient-Centered Care was the first to recognize that PCC needed to move beyond the interpersonal level and into the organizational sphere in order to provide better healthcare services (Morgan & Yoder, 2012). In furthering this work, Mead and Bower (2000) developed a conceptual framework based on a comprehensive literature review, mostly from a physician perspective and partly influenced by ideas originating from social and behavioral sciences. According to Mead and Bower (2000), the failure of the conventional model of practice in medicine, or what they refer to as the biomedical model, to explain symptoms and experiences of illness has given rise to a patient-centered approach.

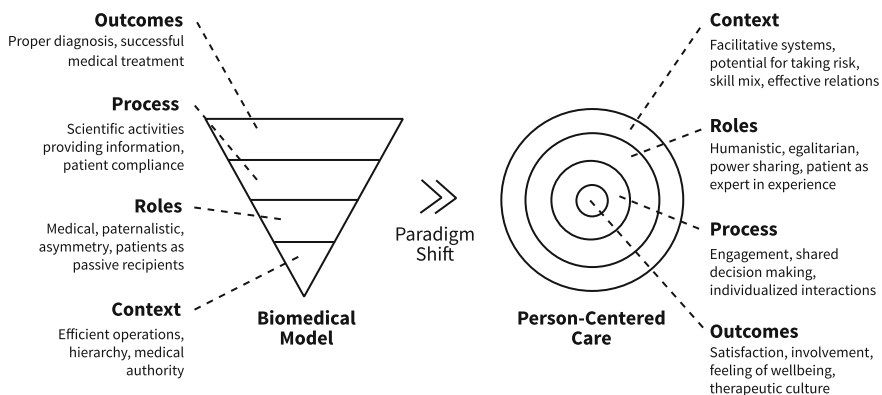
According to the framework, the concept of patient-centeredness comprises five key dimensions: biopsychosocial perspective, the “patient-as-person,” sharing power and responsibility, the therapeutic alliance, and the “doctor-as-person.” Adopting a similar approach but perhaps with a wider scope, McCormack and McCance (2006) mapped original conceptual frameworks against the person-centered nursing and caring literature. Based on this mapping and critical dialogue, they developed a combined framework derived from two abstract conceptual frameworks founded in nursing practice (McCormack & McCance, 2006). Human freedom, choice and responsibility, holism, relationships, different forms of knowing, and importance of time and space are the underlying principles of the combined framework. The framework comprises four constructs: prerequisites focusing on the attributes of the nurse, the care environment comprising the context in which care is delivered, person-centered processes focusing on the activities of delivering care, and expected outcomes which are results of effective person-centered nursing.

### 3.2 Transitioning Toward Person-Centered Care

Based on the conceptual framework of McCormack and McCance (2006) and the dimensions identified by Mead and Bower (2000), we propose an integrative conceptual framework to support the understanding of the transition toward PCC. Figure 1 shows the overall paradigm shift from the biomedical model to PCC, highlighting four dimensions of the transformation: context, process, roles, and outcomes. We discuss each of these dimensions in more details below.

#### 3.2.1 Context

The contextual dimension in the above model refers to both the context in which people experience health and illness and the context of care. The biopsychosocial



**Fig. 1** The paradigm shift toward person-centered care, highlighting four dimensions of the transformation: context, process, roles, and outcomes. Source: inspired by frameworks from Mead and Bower (2000) and McCormack and McCance (2006)

perspective takes into account that factors affecting illness are not limited to biomedical issues. From this perspective, experiences of illness are not always connected to disease, and explanations for illnesses are found in psychology and social sciences. While the biomedical model explains some aspects of illness, it does not fully cover the understanding of how a person experiences illness in their everyday life. Different people with the same disease can react and function very differently in the same situations. Illuminating the personal meaning given to illness and other circumstances of a person's life contributes to understanding the different effects a disease may have on different persons, thereby contextualizing individual experiences. Context also involves the environment in which care is delivered and includes an appropriate skill mix, effective staff relationships, supportive and facilitative organizational systems, and the potential for innovation and risk taking.

### **3.2.2 Roles**

PCC envisions a more humanistic and egalitarian relationship between the medical personnel and the patient. Sharing power and responsibility implies moving away from the conventional paternalistic view of the patient role and relationship with medical professions. Instead the patient's lay knowledge and experience of their own illness are emphasized as equally important as the expertise of medical personnel. Thus, in the transition toward patient-centered care, the patient moves from a passive recipient to active participant and potential critic. The emerging power shift allows for a more balanced relationship, where the patients' "voice of life response" can complement the "voice of medicine."

The turn from the biomedical perspective of "one-person medicine" also brings into question the role of the medical personnel. Within the biomedical model, the physician works objectively in terms of applying therapeutic and diagnostic techniques. In contrast, patient-centeredness inherently suggests subjective assessments. The physician, nurse, and other medical professions become tools to deliver the best care, not just performers of instrumental assessments. Person-centeredness necessitates medical personnel to be professionally competent, develop necessary interpersonal skills, and be committed to their job.

However, subjectivity may affect the patient-personnel relationship both positively and negatively. Thus, in transitioning toward PCC, medical personnel should reflect on their values and beliefs in order to maintain the quality of the relationship. A therapeutic alliance is necessary to assure quality of the relationship between the patient and medical personnel. It consists of the personal bond between patient and personnel, the patient's perception of the personnel as sympathetic, caring, and sensitive, and the patient's perception of potency and relevance of offered interventions and agreement of treatment goals.

### **3.2.3 Process**

Traditionally, the diagnosis and treatment are considered as decision-making and procedural issues sitting firmly within the purview of the medical personnel. The focus within the biomedical model is on patient compliance. Under PCC, personnel

work with the patients' beliefs and values to develop a clear picture of what is important to the patient and in turn help them make sense of what is happening. This also relates to shared decision-making, wherein medical personnel can elicit participation by providing relevant information and assimilating newly shaped perceptions into their current practice. The implementation of PCC is also affected by the level of engagement from the medical personnel ranging from full engagement to complete disengagement. Having a sympathetic presence emphasizes an engagement that acknowledges the uniqueness and value of the individual by responding to cues appropriately. In addition to the social and psychological connection, the physical care provided is also critical to achieving person-centered outcomes.

### **3.2.4 Outcomes**

Within a biomedical model, much of the emphasis is on biological outcomes. Here medical personnel focus on curing individuals to eradicate an illness. A proper diagnosis and successful medical treatment are the key contributing factors to positive outcomes. In the transition toward person-centered care, broader and perhaps more subjective outcomes come into focus. Here the focus shifts from eliminating the disease to supporting patients' feeling of wellness. Key measures of PCC are patient satisfaction and the level of involvement of patients and caregivers in their care. In addition to individual outcomes, PCC also works toward broader outcomes, such as establishing a therapeutic culture. To realize this culture, respect for patient autonomy and shared responsibility are key outcomes of a person-centered attitude.

With a basic understanding of PCC and the key dimensions of a transition away from a biomedical model toward PCC, we can now turn to understanding the connections between PCC and SD.

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## **4 Alignment Between Person-Centered Care and Service Design**

Based on the aforementioned model of the paradigm shift toward PCC as well as the theory and practice associated with SD, we have identified five key areas of alignment in the approaches of PCC and SD. In both PCC and SD:

1. The patient (i.e., the user) is viewed as expert on their own life and experiences.
2. There is the need for a holistic mindset as a person's life is more than their interactions with healthcare.
3. There is a need for a shift in power between the involved actors.
4. Value is co-created between the parties involved in the service situation.
5. There is a focus on needs rather than only on solutions.

This alignment, we argue, is key to why SD works as an appropriate support and driver for the transformation toward PCC. These five themes are not only shared between PCC and SD, but could also be argued to be at the core of both approaches.

Linking the themes to the dimensions in the proposed framework, we will now discuss each of these areas of alignment in more detail.

#### **4.1 Expert of One's Own Life and a Holistic Mindset**

Both the first and the second themes are connected to the context dimension in the PCC model. The notion in PCC that the experience of an illness may vary between patients depending on other aspects than the symptoms relates to the view in SD that each person is an expert in one's own life and one's own experiences. In SD, this requires that the user's needs, wishes, and drivers are taken in, listened to, and understood together with other knowledge needed to develop a valuable solution (Blomkvist et al., 2010; Meroni & Sangiorgi, 2011). SD highlights each individual's role as an expert by taking the individual as the starting point. In most SD processes, a great part of the initial work is focused on creating an understanding of the user's needs and motivations. Similarly, in person-centered care, it becomes important for the caregiver to listen to the narrative of the patient and understand their experiences (Ekman et al., 2011) as they are viewed as the expert on their own life.

A consequence of the understanding that a patient's experience of an illness is not only affected by the symptoms of pathology but also other aspects is the need to take on a more holistic view of the disease and patient experience. Taking a holistic perspective to understand a problem or identify opportunities is one of the core characteristics of SD. Zooming out to understand the use of a service is central to build knowledge of the drivers and needs of a user through the entire service journey. Using the SD approach, participants in the design process seek to understand the user's experiences leading up to the use of a service as well as what happens after and, thus, cannot focus only on the service situation (Sangiorgi, 2011).

#### **4.2 Co-creation of Value**

As noted in the referred models of PCC, a person-centered outcome is the result of a co-created process between patient and personnel (McCormack & McCance, 2006). Mead and Bower (2000) have described patient-centered medicine as "two-person medicine" wherein "the doctor and the patient are influencing each other all the time and cannot be considered separately" (Balint et al., 1993, p. 13 quoted in Mead & Bower, 2000, p. 1091). Value in care is thus co-created by the physician and the patient. Arguably this notion should be extended beyond the physician and the patient to include the entire care team as well as the patients' network of family and friends.

In SD and service management, the co-creation of value is a fundamental cornerstone. It is recognized that value is created in the interaction between the service deliverer and the user and in use within a given context (e.g., Grönroos & Voima, 2013; Holmlid, 2012; Vargo & Lusch, 2004, 2008; Wetter-Edman et al., 2014; Yu & Sangiorgi, 2017). The value that is created is dependent on both service

deliverer and service user, as well as their context, since they are all factors in value co-creation. Therefore, it is important when designing a service to understand the perspective of all involved stakeholders, both users of the service and frontline personnel, as well as other support actors, to design for value co-creation. Working with patient's beliefs and values to lay the foundation for decision-making is one of the processes through which PCC is operationalized. This resonates with how a service design team spends time and effort to grasp the needs and drivers of both users and deliverers. This knowledge helps build understanding of the situation to be designed and potential opportunities for solutions.

### **4.3 A Shift in Power**

The co-creative nature of PCC implies a shift in power as well as new roles for both healthcare personnel and the patient. From a patient-centered perspective, the patient should not be viewed as a client consuming healthcare services but as a partner and an equal (Ekman, Norberg, & Swedberg, 2014). Within the design field, the development of user-centered design and co-creative approaches has implied a similar shift in roles and power among designers, users, and service providers. Designers inviting various stakeholders through co-creative methods into the design process have shifted both the role of the designer and the power dynamics between stakeholders (Sanders & Stappers, 2008). In the co-creative processes, the designer is no longer an expert delivering solutions, but a facilitator who guides the stakeholders through the design process and ensures that the different perspectives are heard (Yu & Sangiorgi, 2017). The designer's role is to collect, listen to, and synthesize different perspectives to support the non-designers' creative efforts and guide the different inputs toward a valuable solution.

The human-centered approach is central to SD. Consequently, service designers have developed several tools and methods to facilitate the participation of different stakeholders in the design process. Co-creative methods and processes in SD strive to invite and involve different stakeholders to make their voices and perspectives heard. This includes stakeholders who traditionally have been given little power in service development although they might be severely affected by the results, for instance, giving patients and their next of kin an opportunity to share their perspective and expertise. The collaborative practices of SD stimulate the creation of a mutual understanding of value creation between multiple stakeholders (i.e., roles). Working with a coach and being coached in SD processes have also been shown to alter stakeholder's mindset and better recognize the expertise of patients (Rodrigues & Vink, 2016).

### **4.4 Focus on Needs Not Only Solutions**

The transition from the biomedical perspective toward the PCC perspective implies a shift from focusing on eliminating the disease to supporting the patient's feeling of



wellness. Thus, the sought-after outcomes in PCC are broader than the ones in the traditional biomedical perspective. It points to the need for a more holistic approach where the solution is not necessarily the most straightforward one, i.e., directly eradicating the disease. This resonates with the approach in SD where an assumed solution to a problem is not the driver of development. In traditional approaches of quality improvement and management, the focus is on improving what exists. This implies a fixed problem and often a known solution, where the objective is to find an application of the known solution. As mentioned previously, in SD, an understanding of needs and expertise as well as knowledge of human actions first helps to frame the problem (Dorst & Cross, 2001) before finding a solution. Thus, the solution cannot be known from the start but might even evolve to something rather different from what was first imagined.

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## 5 Catalyzing the Transformation to Person-Centered Care Through Service Design

As detailed above, the alignment between PCC and SD provides a foundation for why SD is an appropriate driver of the paradigm shift toward PCC. SD as a transformative approach offers methods and tools (Wetter-Edman et al., 2014) that can help healthcare transition toward PCC across the four dimensions of contexts, roles, process, and outcomes. Table 1 summarizes this alignment, the associated transitions catalyzed by SD, examples of supportive service design methods, and the need for design capabilities to support such a transformation across these dimensions.

To support the overall transformation toward PCC, SD offers an approach that helps to catalyze contextual change. Research suggests that SD can help contribute to changes in the overall logic of organizations (Kurtmollaiev et al., 2018) and the social structures that make up the context of healthcare (Rodrigues & Vink, 2016). By working with SD and being coached within SD processes, research suggests that stakeholders can alter their mindset and better recognize the expertise of patients (Rodrigues & Vink, 2016). Methods, like service walk-throughs, where whole services can be understood and enacted (Blomkvist, Åberg, & Holmlid, 2012), can help stakeholders to understand a service holistically and shape the existing context of service.

SD processes have also been associated with changes in roles within organizations (Peltonen, 2017). As mentioned previously, to realize PCC, there is a necessary shift in roles from physician as expert and patients as passive recipients, to patients as experts in their own lives and experiences (Mead & Bower, 2000). Several prevailing SD methods can help stakeholders describe existing roles in a service system and suggest other possible future roles (Overkamp & Homlid, 2017). Stakeholder maps (Stickdorn, Schneider, Andrews, & Lawrence, 2011) allow actors to visualize existing roles and relationships among related actors to support reflection. Other methods, such as those inspired by theater-like role-playing (Stickdorn

**Table 1** Proposed SD methods to support the four dimensions of the transformation: context, process, roles, and outcomes

Dimensions of PCC	Context	Roles	Process	Outcomes
Alignment between PCC and SD	User expertise and holistic mindset	Shift in power	Co-creation of value	Focus on needs
Transition catalyzed by SD	Institutional and structural change (Kurtmollaiev et al. 2018; Rodrigues & Vink, 2016)	Role change (Overkamp & Homlid, 2017; Peltonen, 2017)	Change in habits and routines (Wetter-Edman et al., 2018)	Change outcomes and experience (Trischler, Pervan, Kelly, & Scott, 2017; Zomerdijk & Voss, 2010)
Supportive methods (examples)	Coaching, service walk-throughs	Role-play, stakeholder maps, co-design sessions	Contextual interviews, co-design sessions	Co-design sessions, service blueprints
Facilitator	Design capability (Malmberg, 2017)			

Source: Author’s own illustration (2018)

et al., 2011) and bodystorming (Oulasvirta, Kurvinen, & Kankainen, 2003), help actors to experience and get feedback on possible new role arrangements.

There is recognition of the need to shift processes to enable more engagement and shared decision-making, in order to support the transformation toward PCC (McCormack & McCance, 2006; Mead & Bower, 2000). This implies a need for changing the habits and routines of the involved actors to better enable value co-creation. There have been some links in recent SD literature to changing habits through the engagement of actors in the service design process (Wetter-Edman et al., 2018). It is suggested that by staging experiences for actors that challenge their existing assumptions, SD can help to destabilize the habits of participating actors and open them up for new ways of working (Wetter-Edman et al., 2018). For example, by having primary healthcare personnel complete contextual interviews, which combine observing and questioning (Blomberg, Giacomi, Mosher, & Swenton-Wall, 1993), personnel may see patients through a new perspective than they normally do within the clinic, challenging their assumptions and enabling different ways of co-creating value with patients (Wetter-Edman et al., 2018).

And lastly, SD can also help to realize changes in outcomes within healthcare. While PCC requires a focus on improving outcomes like satisfaction and involvement, existing SD literature recognizes that service design processes can help to improve user experiences (Zomerdijk & Voss, 2010) and enhance participation (Holmlid, 2009). By engaging users in co-design sessions (Trischler et al., 2017), SD can help to enhance the benefit of service concepts for end users or, in the case of healthcare, patients. By engaging with end users to better understand their needs and mapping out their journey and supporting processes, such as through a service

blueprint (Bitner, Ostrom, & Morgan, 2008; Shostack, 1982), service design processes can help work toward the outcomes of PCC.

To realize these changes and ensure this transition can happen in an ongoing way, there is a need for healthcare organizations to build design capability (Malmberg, 2017)—an ability to utilize the SD approach and accompanying methods and tools. When discussing organizational design capability, Lin (2014) emphasizes the need for an organization to understand how and why design methods and skills are used. For a healthcare organization to utilize SD as a driver for transformation to PCC, it must be aware of SD and understand how it can contribute in addressing changes to the context, roles, process, and outcomes. Another aspect of an organization's ability to make use of SD (i.e., its design capability) is its access to design resources—people with service design competence (e.g., Bailey, 2012 ; Bucolo, Wrigley, & Matthews, 2012 ; Micheli & Gemser, 2016) who can apply and facilitate the SD methods and tools to support the understanding and developments required for PCC.

Design resources within healthcare organizations can be developed either through procurement of service design consultants, through hiring people with service design competence, or by training existing personnel in service design (Malmberg, 2017). A final and important aspect of a healthcare organization's design capability is to have a culture and structures in the organization that enable the use of SD (Malmberg, 2017). The changes implied by the transformation to PCC will not be achieved through one or two service design projects. Thus, in order for SD to be able to act as a driver for PCC, healthcare organizations need to find ways to make SD a natural part of their development portfolio and assimilate it into the organization (Body, 2008; Malmberg & Wetter-Edman, 2016; Mutanen, 2008). This often requires developing structures that allow time for understanding the problem and the motivation of different stakeholders, as well as support methods that involve users.

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## 6 Conclusion

In this chapter, we have connected the literature on SD and PCC to show how SD can act as a driver in the transformation toward PCC. Based on existing literature, we have presented a framework for the transition to PCC from the biomedical model of healthcare and highlighted four important dimensions in that transition: context, roles, process, and outcomes. We have also identified core connections between the SD approach and PCC to demonstrate their alignment. Based on this, we have made an argument for and discussed how SD could act as a driver for this transformation across each of the four dimensions, with the support of various methods.

As such, this chapter builds a platform for future research at the intersection of SD and PCC, showing how these two approaches align and interact. It offers a guide for healthcare practitioners looking to use SD in their endeavors by outlining how SD can support the transition toward PCC. By highlighting related literature and practice-based methods, this chapter can aid practitioners in building a transformational, participatory, and needs-based SD process within healthcare. It also opens up questions about the best way to build and sustain design capability to support this

ongoing transition in healthcare organizations. While this chapter aids in advancing the discussion about SD in healthcare, empirical research is needed to refine and further develop our proposed framework.

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