RESEARCH PAPER

Creating value through service innovation: an effectual design thinking framework

Lindie Schuld, Alex Antonites, Dawie Bornman
and Muriel Serfontein-Jordaan

Department of Business Management, Faculty of Economic and Management Sciences, University of Pretoria, South Africa

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ABSTRACT

Research reveals the disjointed nature of service innovation and an overall desertion in studies towards cumulative knowledge development. Studies also show a lack of focus on customers and employees as the fundamental resources for innovation and value creation. The purpose of this study is to investigate how service innovation can be more comprehensive, systematic and focused on the customer and employee resources of the firm. A constructivist paradigm directed this study's research design and methodology. The investigative, qualitative research design incorporates an inductive and deductive approach and utilizes semi-structured interviews as the primary data collection method. Collected data were analysed with a predetermined coding frame by way of a phased thematic analysis process. The data analysed informed four constructs: focus, frame, function and forms – all essential to effective innovation and value creation. The four constructs were developed in a framework for service innovation and value creation that is oriented more towards the employee and customer, and one that is more comprehensive and systematic. The paper provides researchers and business managers with an enhanced understanding of how value is created through service innovation. The study's purpose-driven, human-centred and means-enabled framework affords guidance, both in terms of the service innovation approach and its development process for value creation. The guidance and insights put forward may aid practitioners in their pursuit of service solutions with purpose, contribute to superior performance and have a sustainable impact.

KEYWORDS

design thinking, effectual principles, human-centred, means-enabled, purpose-driven, service-dominant logic, service innovation, qualitative, value creation, wicked problem-solving

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CONTACT: Alex1@up.ac.za
ACCEPTING EDITOR: Martin Meyer

Introduction

Service innovation research continues to grow in both complexity and significance as its potential contributions to economic, societal and organisational advancements become increasingly clear (Singh *et al*., 2020; Tajeddini *et al*., 2020; Oyewo *et al*., 2023; Agafonow, 2024). Toivonen and Tuominen (2009) regard service innovation as 'a new service or such a renewal of an existing service which is put into practice and which provides benefit to the organisation that has developed it'. Yet, despite its critical role, service innovation remains poorly understood, with fragmentation and inconsistencies across the literature (Patrício *et al*., 2018; Taques *et al.,* 2021; Gegenhuber and Mair, 2024). This ambiguity is a result of the complex and multifaceted nature of service innovation, as well as a gap in research that has hindered the development of cumulative knowledge (O'Cass and Wetzels, 2018; Gustafsson *et al*., 2020). A key gap in the current literature is the absence of a unified framework that integrates effectuation theory and design thinking into service innovation research. Furthermore, many studies have failed to focus adequately on the role of customers and employees as essential resources for driving innovation and value creation (Helkkula *et al*., 2018; Heinonen and Strandvik, 2020; Gupta, 2023). The purpose of this study is to investigate how service innovation can be more comprehensive, systematic and focused on the customer and employee resources of the firm.

The development of service innovation has been driven by the concept of service-dominant logic, which emphasizes the creation of value through networks of social and economic actors (Vargo and Lusch, 2008a). This perspective shifts the focus away from traditional tangible resources, directing attention towards operant resources, such as knowledge and skills, and the active involvement of customers, employees and partners in co-creating value (Vargo and Lusch, 2008b; Tregua *et al*., 2021). However, while service-dominant logic has advanced our understanding of value creation, there remain significant gaps in fully integrating this logic into a practical, systematic framework for service innovation (Taques *et al*., 2021).

The motivation for this study stems from the growing need to clarify and systematize service innovation processes, particularly in dynamic business environments where firms face rapid technological advancement, shifting customer demand and unpredictable competition. Despite the significance of service innovation, many existing studies lack a comprehensive approach that effectively integrates customer and employee resources as fundamental drivers of innovation (Helkkula *et al*., 2018; Heinonen and Strandvik, 2020). This research was driven by the pressing need to develop a more structured and comprehensive framework that not only accounts for the complexities of service innovation, but also better utilizes customer and employee resources for value co-creation (Hameed *et al*., 2021). In the context of a rapidly evolving business landscape, understanding how to leverage these resources systematically is crucial for sustaining long-term competitiveness (Alsos *et al*., 2020; Beckman, 2020).

While many scholars have highlighted the importance of integrating effectuation theory and design thinking into service innovation research (Elsbach and Stigliani, 2018; Alsos *et al*., 2020), few studies have combined them in a way that addresses the full spectrum of service innovation processes. Existing research tends to focus on isolated elements of innovation, such as customer involvement or technological adoption, without incorporating a broader view that includes both customers and employees as critical resources (Tajeddini *et al*., 2020; Taques *et al*., 2021). This study addresses the research gap by proposing a comprehensive framework that incorporates all service actors, resources and co-creation activities within an open, dynamic system. By integrating effectuation theory and design thinking, this research offers a systematic approach to service innovation, particularly in terms of leveraging customer and employee resources in unpredictable, complex environments (Lusch and Nambisan, 2015; Tregua *et al*., 2021).

This study aims to make three key contributions. First, to develop a conceptual framework for service innovation that is both comprehensive and systematic, addressing the inherent

complexities of innovation in rapidly changing, uncertain environments. Drawing on effectuation theory and design thinking, the framework offers a structured methodology for problem-solving, idea generation and experimentation under conditions of uncertainty (Sarasvathy, 2020; Liedtka and Locatelli, 2023). Secondly, the study aligned divergent assumptions about the role of operant resources in service innovation, focusing on the integration of customer and employee resources. This approach shifts the focus from traditional product-based models to a more human-centred, service-oriented framework, emphasizing relationships, collaboration and co-creation as the core drivers of innovation (Hameed *et al*., 2021; Tregua *et al*., 2021). Lastly, the research contributes to the cumulative development of knowledge in service innovation by providing a foundation for future studies. The framework proposed in this study offers both theoretical and practical insights for navigating the complexities of service innovation, ensuring that scholars and practitioners alike can explore and apply these insights in diverse business contexts (Furrer *et al*., 2020). Additionally, the framework addresses the need for systematic approaches to wicked problem-solving in environments characterized by rapid change and uncertainty (Rittel and Webber, 1973; Buchanan, 1992). This study fills a critical gap in the service innovation literature by proposing a comprehensive framework that integrates customer and employee resources into the innovation process. By doing so, it provides valuable theoretical contributions and practical guidance for addressing the complexities of service innovation in the current fast-paced, unpredictable business environment.

Literature review

Service innovation

Service research has evolved to view innovation as synthesis, with service-dominant logic as its foundation for value creation (Tregua *et al*., 2021; Baker and Weerakoon, 2024). Service-dominant logic defines service innovation as customer-centred value propositions, developed among social and economic actors, where knowledge and skills (operant resources) drive exchange (Vargo and Lusch, 2008a; Srivastava *et al*., 2024). Four innovation archetypes and value forms are identified. First, the output-based archetype focuses on economic exchange by creating service products with valuable attributes. Second, the process-based archetype sees value in the phases of service development. Third, the experiential archetype recognizes value in relational and co-created interactions. Lastly, the systemic archetype generates value through improvements in the service ecosystem by integrating resources in specific contexts (Helkkula *et al*., 2018).

These archetypes highlight the idiosyncratic, experiential and contextual nature of value (Vargo and Lusch, 2008b). Customers assess value by their unique needs and expectations, and design-in-quality principles offer guidance for delivering market-driven solutions (Wanof, 2023). Service solutions should align with customer needs, adapt to changes and reflect both customer values and the firm's resources. Clear communication is crucial for explaining the purpose and benefits of these solutions, while operational transparency builds trust. Service innovation operates within an ecosystem of networks (Baker and Weerakoon, 2024), involving multiple actors and subjective judgements (Simon, 1980). Given this complexity, firms face challenges in formulating goals, problem-solving and creating value (Srivastava *et al*., 2024). These wicked problems are characterized by ill-defined issues, requiring congruence with the values of customers and service partners (West *et al*., 2018; Tajeddini *et al*., 2020).

Effectuation theory and design thinking are recommended for addressing these challenges. They provide decision-making logic and phased processes suited to conditions of uncertainty, offering human-centred approaches for solving wicked problems and fostering innovation (Elsbach and Stigliani, 2018; Ghorbel *et al*., 2021; Baker and Weerakoon, 2024). These frameworks align with service-dominant logic, enhancing the understanding of innovation and value creation.

Effectuation theory

Saras Sarasvathy, under the mentorship of Nobel Laureate Herbert Simon, developed the theory of effectuation to explain how artefacts – such as ideas, products, services, firms and markets – are created in uncertain environments (de Paula *et al*., 2023; Society for Effectual Action, 2024). The theory posits that while the future is unpredictable, it can be controlled through human action, and goals emerge through negotiated stakeholder commitments (Sarasvathy, 2020).

Effectuation is guided by several principles. First, the means principle asserts that innovation begins with available resources, defined as 'Who I am', 'What I know' and 'Whom I know'. The control principle emphasizes that the future is shaped by actions taken, not by prediction. Strategic partnerships are crucial for co-creating value and reducing uncertainty by engaging with self-selected stakeholders. The affordable loss principle encourages innovators to focus on risks they can bear, evaluating opportunities by potential losses rather than gains. Lastly, the leverage contingencies principle advocates embracing unexpected events as opportunities for innovation (Sarasvathy, 2021).

The effectuation process begins with available resources, which are used to create multiple potential goals and actions. These are refined through interactions with the environment, stakeholders and feedback (Alsos *et al*., 2020; de Paula *et al*., 2023). Human interactions – through negotiation, conflict resolution and shared experiences – allow firms to transform resources, co-create solutions and adapt to new challenges (Sarasvathy, 2021). In this process, failure can be turned into opportunity, and new ends worth pursuing are discovered.

Before products, services or firms existed, there were human imagination and goals, unified through sustained creative and collaborative efforts (Sarasvathy, 2020; Sassenberg *et al*., 2023). The creation of artefacts is not spontaneous; it requires deliberate efforts to establish meaning from available resources. In uncertain and ambiguous environments, effectual logic is necessary, affirming that while the future is unclear, human action, interaction and choice remain powerful tools for innovation and value creation (Sarasvathy, 2021).

Design thinking

Human-centred innovation is most commonly defined through the lens of design thinking, a methodology that bridges both practical and theoretical perspectives. This approach focuses on creating valued solutions, driven by customer needs and desires. Inspired by the practices of professional designers, design thinking offers a powerful way to address ill-defined or complex problems and to co-create value in environments characterized by uncertainty (Elsbach and Stigliani, 2018; Pira *et al*., 2024). It blends creative and analytical thinking, combining exploration with decision-making, and balancing the desirability of solutions for customers with technical feasibility and financial viability for firms (Shapira *et al*., 2017; Rösch *et al*., 2023).

Design thinking is rooted in the concept of 'the artificial', as described by Simon (1980), which refers to phenomena that adapt to their environment. In service innovation, this environment is often filled with wicked problems that defy straightforward solutions, requiring intelligent systems capable of adapting to dynamic and uncertain realities (Gero and Milovanovic, 2020; Srivastava *et al*., 2024). These systems, particularly within service firms, must not only react to change, but also actively shape their processes to achieve goals in unpredictable environments (Simon, 1980; Cross, 2001).

The design thinking methodology emphasizes the importance of creating solutions that are satisfactory rather than optimal (Simon, 1980). This contrasts with traditional problem-solving approaches that seek the single 'best' solution. In design, action precedes theory – meaning that invention and experimentation often come before understanding (Cross, 2001). Key principles of design thinking include empathy, collaboration, tolerance for ambiguity and a continuous process of redesign (Dell'Era *et al*., 2020; Rösch *et al*., 2023). These principles encourage an organizational culture that embraces creativity, iteration and exploration, leading to human-centred and collaborative solutions.

To support this methodology, design thinking employs various tools and methods, such as ethnographic research, brainstorming and prototyping. These tools are used not only to solve

problems, but also to embed the values, norms, and assumptions of the organization into the innovation process (Elsbach and Stigliani, 2018; Pira *et al*., 2024). By focusing on need-finding, idea generation and idea testing, these tools help cultivate a design-driven culture that values experimentation, iteration, and learning from failure (Liedtka *et al*., 2024; Micheli *et al*., 2019).

The design thinking process is typically structured into two main phases: problem-structuring and solution creation. The problem-structuring phase involves reflective observation and the framing and reframing of challenges, enabling a deep understanding of the problem (Beckman, 2020). This process of observation and framing creates a solid foundation for the next phase – solution creation – which is driven by active experimentation. By generating ideas, prototyping solutions, and testing them in real-world contexts, firms can refine and improve their offerings in a continuous cycle (Sjödin *et al.*, 2020).

Liedtka *et al*. (2024) describe design thinking as a hypothesis-driven process that revolves around the central questions: 'What is?', 'What if?', 'What wows?' and 'What works?' These questions guide the phases from data collection and problem definition to idea generation and testing (Liedtka and Locatelli, 2023). The final phase, called the 'learning launch', emphasizes prototyping and testing solutions to assess their viability and refine them further before full implementation.

Design thinking's principles and processes highlight the balance between the impossibility of rigid boundaries and the possibilities enabled by human imagination, decision-making and interaction (Alsos *et al*., 2020; Rösch *et al*., 2023). It is a methodology that embraces the realities of open systems and acknowledges the complexity of service innovation environments, where clear, optimal solutions are rare. Ultimately, the essential agents of this process are the employees and leaders within the firm. These individuals are responsible for navigating uncertainty, leveraging opportunities for innovation, building partnerships and understanding customer needs through empathetic engagement. While all stakeholders play a role in co-creating value, the firm's employees and leaders drive the iterative cycles of decision-making, creativity and problem-solving that lead to successful innovation and service value creation.

Methodology

The methodology outline below provides a robust framework for investigating the systematic integration of service innovation within organizations, with a focus on both customer and employee resources. Guided by a constructivist paradigm, the study's design and methodology involved a thorough literature review and analysis alongside engagements with practitioners from leading South African service firms. These engagements, conducted using a qualitative research design, included 24 semi-structured interviews within a specific timeframe. The purposive sampling method targeted employees and managers from prominent sectors – business consulting services, education services, financial services and technology, media and telecommunications services.

Research paradigm and design

The study followed a constructivist paradigm that supports the idea of reality being co-constructed through human interaction and experience (Man *et al*., 2024). This qualitative approach allows for a comprehensive understanding of the complex dynamics in service innovation, focusing on the subjective experiences of participants. The methodology combined both inductive and deductive reasoning, beginning with the synthesis of the literature into a conceptual framework and progressing towards detailed analysis of the interview data.

Data collection

Data collection was centred around semi-structured interviews conducted with key practitioners from 24 service firms across four major sectors. The purposive sampling technique was employed to ensure the selection of knowledgeable individuals who could provide meaningful insight into

service innovation. The interviews were facilitated online, using Google Meet. Each interview, lasting approximately one hour, was audiovisually recorded with the participants' consent and supplemented by detailed notes.

Data analysis

Data analysis involved a two-phase process. The first phase focused on an inductive literature analysis, synthesizing existing research on service innovation, effectuation theory and design thinking to create a conceptual framework and a coding frame. This provided the foundation for the subsequent phase, where the deductive analysis of interview data was carried out using thematic analysis. Thematic analysis enabled the identification of key patterns and themes related to service innovation and value creation within the data.

Trustworthiness

Ensuring the trustworthiness of the findings was critical to the study. Drawing on Guba and Lincoln's (1994) evaluation criteria, four key elements were prioritized: (i) credibility, (ii) transferability, (iii) dependability and (iv) confirmability (Bell *et al.,* 2022). To establish credibility, the researchers provided rich descriptions of the purposes of the study, as well as the context, allowing readers to understand the setting and authenticity of the data (Hirose and Creswell, 2023). Transferability was supported by connecting the findings to prior studies in service innovation, effectuation theory and design thinking (Pira *et al.,* 2024), while providing detailed descriptions of the research boundaries and purposive sampling methods (Maziriri *et al*., 2024). The dependability of the research was ensured through thorough documentation of the research processes, enabling replication of the study in different settings (Dimov *et al.,* 2023). Finally, confirmability was attained by maintaining transparency throughout the research process and incorporating peer-review mechanisms (Bell *et al.,* 2022; Carella *et al.,* 2023).

In addition, the purposive sampling of participants incorporated industry leaders from diverse sectors, resulting in a heterogeneous sample that enhanced the breadth of perspectives on service innovation. The participants came from different roles, industries and stages of firm maturity, thus contributing to the generalisability of the findings (Naiki and Ogane 2024), although the aim of qualitative studies is not generalizability. Further rigour was achieved by triangulating data sources and employing member checks to validate findings.

Findings

The investigative engagements with service practitioners brought about constructive insights. The practical insights attained are linked to the extant body of knowledge, and inform the findings for this study. The findings are ordered and conveyed according to the coding frame. These include service innovation as systematic – relayed in terms of the service frame, function and value forms; service innovation as focused on customers – relayed in terms of the design-in-quality factors; and service innovation as focused on employees – relayed in terms of the design thinking principles. These findings then suggest a framework for service innovation and value creation that is more comprehensive, systematic and focused on the customer and employee resources of the firm.

Service innovation: a systematic approach

The service innovation approach is described as cyclical, and starts with the purpose of the firm. In starting with the 'why', the service innovation approach challenges the service firm to ask existential questions (Sarasvathy, 2021). Participant 19 captures this by stating, 'Our purpose, our reason for being, it starts with our why …', highlighting how this purpose serves as a guiding principle for

all activities. For the service firm, questions of its reason for being (that is to say, its profound logic) permeate all activities and processes. Accordingly, it is an innovation-motivation and an accountability that are about purpose, empowerment and impact (Sinkovics *et al.,* 2021). It is a purpose-driven approach that not only inspires innovation and guides decision-making, but also appeals to employees, customers and other value-creating partners. As Participant 24 states, The firm's purpose is creating long-term partnerships and transformational engagements; a purpose statement that known throughout the firm, lived by its leaders and shared by its employees. It is this purpose that retains, attracts and establishes connections with employees, customers and value-creating partners through shared institutional logics, service exchange and mutual value creation (Thompson and Schonthal, 2020; Bender-Salazar, 2023).

Directed by this purpose, the service firm focuses its efforts on the prevailing context and its existing resources. Within the context of interacting open systems, increasing information and knowledge, shifting customer needs and wants, rapidly changing technologies and ambiguity regarding future competition and markets, service firms cannot predict the future but can instead take action and make decisions (Zhang and Van Burg, 2019; Szambelan *et al.,* 2020). The leaders and employees of the firm are those who take control of uncertain environments, leverage contingencies for innovation, employ available means, build and maintain customer relationships and value-adding partnership networks, and understand the needs and wants of the customer (Sarasvathy, 2020). The firm's employees and leadership exploit and explore knowledge corridors, understand wicked problems contextually and holistically, perceive customer needs and wants empathetically, integrate diverse perspectives and apply a balanced logic for the resource integration process of problem-setting and solving (Hameed *et al.,* 2021; Srivastava *et al.,* 2024).

Subsequent to the contextually informing and resource-enabling service frame, which informed a preliminary narrative for innovation, is the service function, in which the innovation narrative is further developed. The resource integration process of problem-setting and solving comprises three main development phases: (i) problem exploration; (ii) idea generation; and (iii) prototyping and testing (Pande and Bharathi, 2020; Liedtka *et al.,* 2024). Participant 4 highlights the collaborative approach to problem-solving by emphasizing how different perspectives come together to address issues: 'it is a group of people trying to understand what exactly the problem is and bringing different perspectives in to solve the problem'. Exploration activities are mostly carried out through cognitive efforts, which entail the use of existing data, information, knowledge and current service solutions to evaluate the initial innovation narrative (Nakata and Hwang, 2020). Naturally, these activities also encompass the exploration of new knowledge corridors by engaging with customers and other value-creating networks. In doing so, the initial narrative for innovation becomes increasingly more explicit for the purposes of learning, evaluation and selection (Beckman, 2020). Consequently, the initial, abstract narrative for innovation is transformed into a more concrete hypothesis. This is followed by ideation activities that generate multiple, potential solutions to answer hypothesized problems. These activities are enabled through collective articulation, debate and analysis in order to establish the merits and risks associated with solutions, and the selection of a solution, or multiple solutions, for the purposes of prototyping and testing (Schneckenberg *et al.,* 2019). Prototyping and testing puts solution concept(s) into tangible forms, which are then piloted and tested relatively quickly. Accordingly, prototypes enable early failure in draft form, which is not only more cost effective, but also allows for new or renewed solutions that persist in novelty and contextual relevance (Micheli *et al.,* 2019; Liedtka and Locatelli, 2023).

The implementation of a service solution is best described as a learning launch (Liedtka *et al*., 2024). In other words, the problem-solver can always attempt to improve the problem-solution on offer through a cyclical process of adaptive behaviour, learning and progressive changes in value forms to meet the requirements of both the inner and outer environments of the service firm (Rösch *et al*., 2023). The cyclical process of adaptive behaviour, learning and progressive change towards mutual value creation is innately social and collaborative (Sjödin *et al*., 2020). It is a process that is as emotional as it is rational, striking a balance between solutions that are desirable to people,

technically feasible and financially viable (Tann, 2021). Mutual value creation incorporates a high-technology and high-touch approach, and a development process that is purpose-driven, human-centred and means-enabled. This approach and development process facilitate the creation of novel and contextually relevant service solutions, meaningful engagements with employees, customers and service partners, and the architecture of value-adding practices, processes and systems (Helkkula *et al*., 2018). In conjunction, the contextual, experiential and use value created generates financial and social value for the firm by way of transactional exchange and transformative interchange. In turn, the value and solutions created are continuously scrutinized in relation to the firm's purpose, whereby a new or renewed narrative for innovation is formed, explored and developed.

Service innovation: a focus on customers

Primarily, a focus on customers stems from the purpose of the firm. In this sense, prominent service firms recognize that they exist as part of society, not just in it. Accordingly, these firms strive to stimulate relational and mutual interactions among social and economic actors, foster sustainability and maximize customer satisfaction (Sinkovics *et al*., 2021). Participant 20 confirms this focus by stating that everything they do revolves around serving their customers, 'we exist to serve our customers and we build our business, our processes, and everything we do, around that philosophy'. In the pursuit of maximum customer satisfaction, service firms design solutions that satisfy customer needs and wants, adapt to changes therein and create service solutions that are aligned to the resources of the firm and the values of customers (Wrigley *et al.,* 2020; Wanof, 2023). Value alignment, in this sense, refers to the customer's emotional attachment to, identification with, and involvement in the service firm, and thus, the firm's affective commitment in its establishment and development (Singh *et al.,* 2020).

The firm's commitment to customers is not only embodied in the quality of artefacts and the solutions they create, but also in the intelligence by which these solutions were formed (Cross, 2001; Rösch *et al*., 2023). In this regard, intelligence represents the individual and collective capabilities of the firm's leaders and employees and consists of three types. The first, spiritual intelligence, refers to an ability to understand the 'self', to possess and access higher meanings, values and abiding purposes, and to embed these purposes, values and meanings into all service solutions. The second, emotional intelligence, denotes the ability to be aware and in control of one's own emotions, and to respond to the emotions of customers appropriately, judiciously and empathetically. And the third, business intelligence, manifests itself in the intellectual property of the firm, the knowledge and skills of leadership and employees, as well as the technological and engagement platforms at the firm's disposal to facilitate customer involvement, engagements and reciprocal knowledge sharing and learning (Sjödin *et al*., 2020; Sarasvathy, 2021; Ravet-Brown *et al*., 2024). To this end, service firms invite customers to take part in the design process. They provide guidance to empower customers to create their own journeys in experience centres and they interview, interact and test ideas with customers in order to acquire insights and feedback (*Dell'Era et al*., 2020). By extension, service solutions are made more personable, easy to understand, less aloof, transparent in exchange and seamless in experience. Participant 12 illustrates this process by describing how immersive experiences are co-created with customers to enable them to design their journeys, 'bringing them into a centre, an experience centre, creating a very immersive experience and allow[ing] them … to create their own journey'. In so doing, customers are given a compelling reason and understandable rationale for the solutions that are offered, their desired benefit, the way in which they are delivered and the firm's motivation and purpose in creating and offering these solutions (Wanof, 2023). In essence, customer commitment is about partnering with customers, and leveraging those relationships to create desirable, feasible and viable service solutions of purpose, superior financial performance and sustainable impact.

Customer relationships are cultivated by facilitating experiences of value. These experiences are enabled through relevant resource capabilities, cultural capital, as well as competent and

passionate leaders and employees (Tajeddini *et al*., 2020). Resource capabilities, then, encompass both physical and virtual spaces dedicated to design activities, in particular places and platforms, to engage and interact with customers. In turn, these activities and engagements are enabled by the understanding, knowledge and capability of the firm's workforce, as well as the firm's social assets or cultural capital in relation to human-centred design. Human-centredness, however, is not limited to innovation activities, but rather infuses all business activities and processes. These human-centred beliefs and values are consequent to an empathetic culture and a people-first philosophy. This philosophy starts with the employees of the service firm. Notwithstanding the significance of customers – as without customers the firm would not exist (Zomerdijk and Voss, 2010) – employees are central to the firm's focus on customers. In other words, leading service firms are not customer-centred, but rather employee-centred, and by default customer-centred.

Service innovation: a focus on employees

Congruent with the conclusions made for service innovation being more systematic and focused on the firm's customers, a focus on employees initiates with the purpose of the firm. Accordingly, leading service firms recruit, select and appoint employees who believe in the purpose of the firm and their contribution towards that purpose, who share a firm's values and mindsets and are aligned with the firm's culture. Participant 20 emphasizes recruiting for cultural fit first, then training employees for skills: 'we recruit for culture and then we train skills thereafter'. The culture of the firm is one of innovation and co-creation, which evolves around human interactions, social connections and relationships. In particular, a human-centred philosophy is required, one which recognizes that first priority should be given to the employees of the firm to fulfil the firm's purpose.

The employees of the firm are considered to be its internal customers. As such, priority is given to: (i) their purposes and their alignment with those of the firm; (ii) their support and empowerment, providing guidance during times of uncertainty, and affording the necessary infrastructure and resources for business and innovation activities; (iii) their personal development through mentorships, coaching, training and career path planning; (iv) their organizational well-being, establishing and maintaining a work environment that contributes to their health, safety and welfare; and (v) their recognition, through financial rewards, as well as non-financial incentives, such as personalized acknowledgments from leaders and colleagues (Wrigley *et al*., 2020; Shiferaw *et al*., 2023). In addition to employee commitments, imperatives and responsibilities assumed by the firm, employee-specific attributes also effectuate productive human interaction and innovation effectiveness. Accordingly, leading service firms actively seek employees who are future focused and future fit, who challenge the status quo, are self-driven, resilient, pragmatic and adaptable, have entrepreneurial mindsets, are problem-solvers, think diversely and have the ability to relate and work with others to benefit all employees, the service firm, its customers and partners (Dell'Era *et al*., 2020).

The human principle of design (as discussed above), along with the principles of ambiguity, tangibility and redesign, are explicated in terms of four fundamental drivers for innovation and value creation. These drivers, which are focused on the employees of the firm, consist of the following factors: (i) the environment of the firm; (ii) the organizational structure of the firm; (iii) the leadership of the firm; and (iv) the supporting tools and methods utilized by the firm. At the outset, leading service firms create a fertile environment for innovation; that is, an environment that invigorates the purpose, values, mindsets and culture of the firm among its employees. It is an environment fuelled by a culture of innovation and one which infiltrates all activities and processes. As a result, employees are influenced to act in the same way.

In support of a fertile environment for innovation, a 'flat' and informal organizational structure is employed, creating a culture that is flexible, adaptable and collaborative (Ravet-Brown *et al*., 2024; Wrigley *et al*., 2020). Participant 7 elaborates by describing their organization's informal culture that encourages innovation and allows employees to speak their minds, 'you are encouraged

to be innovative, you are encouraged to speak your mind'. Employees work in diversely skilled work groups, such as cross-functional and interdisciplinary teams, where there is free and open communication among group members (Gero and Milovanovic, 2020). It is a structure and culture where employees have unfettered access to senior management and leadership to share ideas and participate in decision-making; where individuals' perspectives are valued; and where self-expression, experimentation and trial-and-error learning are encouraged (Hameed *et al*., 2021; Ravet-Brown *et al*., 2024). The leadership of the firm plays a significant role.

The firm's leaders lead by example and display the qualities that people want to emulate. Leaders of a firm are tasked with demonstrating a profound belief in human potential, human interaction and social connections. It is the leadership of the firm which encourages change, a culture of improvement, learning and innovation (Singh *et al*., 2020). Participant 15 highlighted that leadership plays a crucial role in setting the tone for values within the organization; 'leadership definitely sets the tone'. The firm's leaders provide employees with a future direction, eliminate barriers between employees and departments and thus organize operations as a constellation of teams, coming together around a shared purpose and mutual goals (Wrigley *et al*., 2020; Ravet-Brown *et al*., 2024).

In addition to the environment, organizational structure and leadership of the firm, leading service practitioners highlight the importance of systems, processes and platforms to facilitate employee communication, feedback, collaboration and information and knowledge sharing. In this sense, several tools and methods of significance are noted. These consist of a blend of both technological and non-technological means. At the outset, regular and relevant communications and engagements with employees are facilitated, by way of email correspondence, online talks, webinars, face-to-face interactions and town hall sessions. The use of innovation platforms and innovation labs empower employees to voice and share their ideas, and partake in the firm's development with the assistance of dedicated innovation teams and field experts within the organization.

Innovation platforms are linked to knowledge repositories that permit a single digital database, which in turn serves as both an innovation collaboration space and a centre of knowledge. The centre of knowledge, which is like the firm's internal version of Google, includes information on current service offerings, system and best practice resources, local, regional, continental and global trends, updates and insights from senior management and the latest employee and team contributions in terms of innovation. This central database permits multiple and continuous feedback loops across the firm and beyond its boundaries. Consequently, employees are enabled to analyse data in real time, act on the data, and feed the data back into the live environment of the firm. Participant 19 emphasizes this 'continuous feedback loop', explaining that the organization must have experts in place to process the feedback and act on it 'in real time'. Employees are encouraged to act their way into thinking differently, and so change existing situations into preferred ones (Rösch *et al*., 2023). To this end, the typical tools utilized for design thinking have proven to be useful. These include visualization tools, such as brainwriting; journey and mind mapping methods, in particular, employees who become customers themselves; brainstorming sessions, which deliver forums for divergent and convergent thinking, as well as interdisciplinary and cross-functional collaboration; and lastly, rapid prototyping and testing, wherein affordable experiments are created in the form of draft service solutions and tested with customers and employees to foster new connections (Micheli *et al*., 2019). Participant 2 noted that these design tools are essential to fleshing out ambitions for both clients and the company itself. Given that all design is redesign, the implementation of new or renewed service solutions is considered to be a learning launch (Liedtka *et al*., 2024). In this sense, a learning launch is a continuous process of learning, adaption and development, and so, a new cycle of problem exploration, idea generation and exploration for innovation and value creation commences.

The cyclical approach startes with the purpose of the firm, and its alignment with the purposes, values and mindsets of employees, customers and value-creating partners. In particular, focus is placed on the firm's employees. In other words, service firms are employee-centred and, by default, customer-centred. This focus on employees is enabled by the establishment and development of a flat and informal organizational structure; a flexible, adaptable and collaborative organizational

culture; leaders who have a profound belief in human potential, human interaction and social connections; and technological and non-technological means which enable communication, feedback and information sharing.

Following the purpose of the firm, the subsequent phase comprises the contextually informing and resource enabling service frame within the wicked context of service innovation. Focus is on the individual and collective capabilities of the firm's workforce, particularly spiritual intelligence, emotional intelligence and business intelligence. In addition, emphasis is placed on taking action; that is, taking control of an uncertain environment and unknown future. Accordingly, leaders and employees leverage contingencies for innovation, employ available means, build and maintain customer relationships and value-adding partnership networks, and take action to understand the needs and wants of the customer.

Subsequent to the contextually informing and resource-enabling service frame, where a preliminary narrative for innovation is formed, the function of resource integration and co-creation for innovation is initiated. In this regard, the initial innovation narrative is further developed and explored. To this end, the phased process of design thinking is employed and consists of four phases: (i) problem exploration; (ii) idea generation; (iii) prototyping and testing; and (iv) the learning launch. This process incorporates the principles of design and its associated core attributes, as well as design thinking's essential tools and methods.

Consequently, the phased process of design thinking enables firms to create novel and contextually relevant service solutions, meaningful engagements with employees, customers and service partners, and value-adding practices, processes and systems. These value forms mark the final phase of the framework, and the commencement of a new cycle for service innovation and value creation. Specifically, a new cycle is derived from the learning launch, with service solutions evaluated in terms of customer commitment and market fit, resource availability and synergy, business/innovation communicability and simplicity, and operational transparency and openness. Most significantly, these service solutions and value forms are scrutinized in terms of their congruence with the purpose of the firm, and whether the firm's purpose was achieved.

The 4F framework of Figure 1 and Table 1 contributes to both theory and practice. At the outset, the framework affords a broadened viewpoint of service innovation research, with the

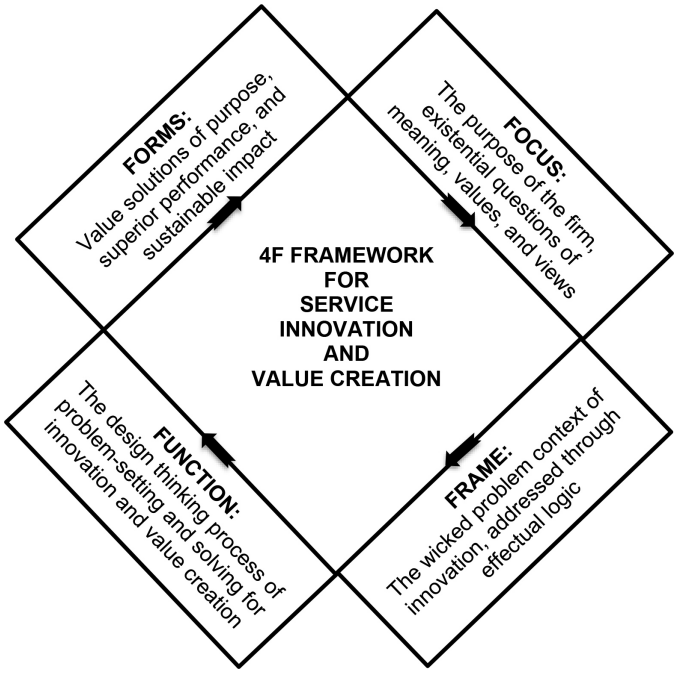

Figure 1. The 4F framework for service innovation and value creation

Table 1. The four constructs for service innovation and value creation

Construct	Construct defined	Foci
Focus	The purpose of the firm, existential questions of meaning, values, and views	Aligning the purpose, values, and mindsets of the firm with employees, customers, and other value-creating partners. Employees' and customers' emotional attachment to, identification with, and involvement in the service firm, and so, the firm's affective commitment in its establishment and development. Establishment and development of a fertile environment for innovation, encompassing: a 'flat' and informal organisational structure, and a culture that is flexible, adaptable, and collaborative; leadership with a profound belief in human potential, human interaction, and social connections; and technological and non-technological means that enable communication, feedback, and information sharing.
Frame	The wicked problem context of innovation, addressed through effectual logic	The individual and collective capabilities of the leaders and employees of the firm, comprising of spiritual intelligence, emotional intelligence, and business intelligence. Effectual logic, whereby leaders and employees: take control of an uncertain environment and unknown future reality; leverage contingencies for innovation; employ available means; build and maintain customer relationships and value-adding partnership networks; and understand the needs and wants of the customer contextually and holistically.
Function	The design thinking process of problem-setting and solving for innovation and value creation	Resource integration and co-creation for innovation that is purpose-driven, human-centred, and means-enabled, towards learning, evaluation, selection, adaption, and progressive change. The phased process of design thinking, comprising of problem exploration, idea generation, prototyping and testing, and the learning launch.
Forms	Value solutions of purpose, superior performance, and sustainable impact	The quality factors for service solutions, that is: customer commitment and market fit; resource availability and synergy; business/innovation communicability and simplicity; and operational transparency and openness. The desirability, feasibility, and viability of service solutions and the value forms created in terms of contextual, experiential, use, exchange, and social value.

inclusion of effectuation theory and design thinking methodology. The broadened view not only expands and clarifies service-dominant logic, but also incorporates the logic, principles and processes of effectuation theory and design thinking to facilitate a better understanding of service innovation and value creation. This is not only important for cumulative knowledge development in the research field of service innovation, but is also significant for service firms engaging in innovation. The framework allows practitioners to consider the various complexities of service innovation in a holistic yet simplified manner. The framework incorporates a structured approach and practical tools and methods to address the complexities and disjointed nature of service innovation experienced by many practitioners. This is achieved by the four constructs, or structured phases of the 4F framework, which include the focus, frame, function and forms essential to the establishment of effective innovation and value creation. The findings emphasize the significance of customers and employees of the firm, and provide a focused approach to these resources. In particular, this study shows that leading service firms are fundamentally employee-centred and, by default, customer-centred. Furthermore, the findings identify four significant drivers of a human-centred and co-created approach to service innovation.

Disussion

Limitations

When interpreting this study's findings, several limitations must be considered. Although the qualitative research design was well-suited to the study, the use of interviews is context-dependent and non-generalizable, meaning the results should be understood within the participant pool. A purposive sampling technique was used to select top service firms in South Africa across four industries, but this limits the findings to these sectors. The study also employed a cross-sectional design, which may introduce biases resulting from the lack of longitudinal analysis.

Given the researchers' constructivist beliefs, the interpretation of phenomena is shaped by human actors' multiple meanings and understandings, making true objectivity unattainable. While trustworthiness criteria – credibility, transferability, dependability and confirmability – were employed to enhance rigour, personal biases may have influenced the interpretation of the findings. During data analysis, several frameworks were revised to integrate new insights, resulting in a final conceptual framework based on the researchers' understanding and participant contributions. This may introduce bias, which should be considered when interpreting the framework. Despite these limitations, the researchers believe the advantages of the study's findings and the framework outweigh its constraints.

The researchers are of the opinion that these limitations also offer opportunities for future research. Future research could explore the study's findings and framework in other contexts, such as different geographies, industries or such fields as product innovation and value creation for manufactured goods. Alternative research designs, including case studies for deeper insight or quantitative approaches with larger samples, could enhance generalizability. Mixed methods may also help reconcile any contradictions between quantitative and qualitative results. Additionally, collecting longitudinal data would allow researchers to examine changes in findings over time and assess the framework's relevance and stability across different periods.

Managerial implications

The study provides key insights for managers aiming to enhance service innovation by focusing on systematic processes, customer engagement and employee involvement. A clear, purpose-driven innovation strategy should guide all organizational activities. Leaders and employees must align their actions with the firm's purpose to strengthen employee engagement and customer loyalty, fostering long-term relationships with value-creating partners. To succeed in a dynamic market, managers should embrace uncertainty as an opportunity for innovation. Flexibility and adaptability should be embedded in the culture, allowing employees to take calculated risks and explore new ideas. By creating a collaborative environment where cross-functional teams share perspectives, managers can ensure creative problem-solving and co-creation with customers.

Customer-centricity is crucial, and managers should involve customers in the innovation process through feedback loops and interactive platforms. Engaging customers in the design process enhances satisfaction and ensures solutions aligned with evolving needs. Equally important is focusing on employees, who should be empowered with tools, resources and support to contribute to innovation. Leaders must foster a flat organizational structure that encourages open communication and cross-department collaboration. Continuous feedback and learning are essential. Systems that allow real-time insights from both employees and customers should be established. Managers should lead by example, demonstrating a commitment to innovation and encouraging risk-taking, creativity and learning from failure. In summary, a holistic approach that aligns organizational purpose, customer engagement and employee empowerment can drive effective service innovation, helping firms navigate market complexities and create sustainable value.

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