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Enhancing Service Innovation: A Strategic Framework for Improved Healthcare Delivery



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ABSTRACT	
Keywords: service innovation; medical schemes; national health insurance; value co-creation; digital health; market competitiveness; regulatory adaptation Conflict of Interest Statement: The author(s) declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest. Copyright © 2025 ACSR. All rights reserved.	Purpose: To develop a strategic framework that enhances service innovation within South African medical schemes by examining micro- and macro-level factors influencing innovation capacity and competitiveness, addressing the need for accessible and affordable healthcare. Research Design and Methodology: A literature review guided by Willie’s Service Innovation Enabler (WSIE) framework was conducted, drawing on peer-reviewed articles, policy documents, and case studies relevant to South Africa’s healthcare system, focusing on digital transformation and regulatory trends. Findings and Discussion: Key enablers included leadership support, favorable regulation, and scheme size. Smaller schemes leveraged technologies like telemedicine effectively. COVID-19 accelerated digital adoption, though regulatory complexity and organizational resistance often impeded innovation efforts. Implications: Leadership-driven innovation strategies, supported by digital tools, are essential for improving service delivery. Supportive policy environments and further research are needed to assess long-term impacts on patient outcomes while addressing internal barriers to change within medical schemes.

Introduction

Service innovation involves developing and introducing new or substantially improved services, processes, or business models within an organization. It serves as a pivotal mechanism for achieving competitive advantage and driving market growth (Mahavarpour, Marvi, & Foroudi, 2023). Beyond creating new offerings, service innovation reshapes firm-level capabilities and broader market dynamics, generating value for organizations and their customers while influencing industry trends through imitation and market adoption (Snyder, Witell, & Gustafsson, 2020). It involves novel service offerings, enhancement of existing services, and integration of advanced technologies to optimize delivery and customer experience (Tukker & Tischner, 2006; Chen, Tsou, & Huang, 2009). In increasingly competitive markets, continuous innovation is essential for differentiation and long-term organizational growth (Damanpour & Aravind, 2012; Adewumi *et al.*, 2024).

Significantly, service innovation extends beyond technological advancement to encompass new business models, process improvements, and enriched customer interactions that collectively create organizational and societal value. Firms implementing service innovation can cultivate a distinct market identity, open new revenue streams, and enhance customer satisfaction (Wirtz & Lovelock, 2016). Leveraging emergent technologies such as artificial intelligence, automation, and data analytics allows organizations to improve operational efficiency while providing personalized and responsive

service experiences (Adewumi *et al.*, 2024). However, the efficacy of these innovations is contingent on a firm's capacity to accurately interpret customer needs and align innovation initiatives with market expectations; misalignment can result in wasted resources, customer dissatisfaction, and missed opportunities (Mahavarpour, Marvi, & Foroudi, 2023).

The drivers of service innovation are both technological and non-technological. While technological advancements facilitate digitalization and process optimization, non-technological factors such as organizational culture, leadership, and regulatory frameworks play an equally critical role in enabling innovation (Deep, 2023; Tagscherer & Carbon, 2023; Sacavém & Dos Santos, 2025; Ryu & Lee, 2018). Organizations that foster creativity, experimentation, and employee engagement are more likely to generate and implement innovative solutions effectively (Ghani *et al.*, 2023; Cheong *et al.*, 2024). Empirical studies demonstrate that employee engagement, particularly when mediated through proactive voice behavior, is a key enabler of innovation, highlighting the importance of internal stakeholder involvement (Ghani *et al.*, 2023). Equally, collaboration with external stakeholders, including customers, industry partners, and regulatory bodies, provides critical insights that enhance the development, implementation, and adoption of innovative services, reinforcing sustainable competitive advantage (Damanpour & Aravind, 2012).

Enablers of service innovation, including access to market intelligence, investment in research and development, adaptive leadership, and supportive regulatory conditions, constitute the foundation upon which organizations build their innovative capabilities (Tien, 2007; Baporikar, 2014; Dasgupta, 2016; Makgopa, 2021). Continuous evaluation of emerging trends and evolving customer expectations is essential to ensure that innovations remain relevant, effective, and impactful (Garrido-Moreno *et al.*, 2024). In essence, service innovation is a dynamic, iterative process requiring organizations to embrace change, cultivate new capabilities, and instill an innovation-driven culture to sustain competitive advantage in an ever-evolving market landscape (Damanpour & Aravind, 2012). This study aims to develop a strategic framework that enhances service innovation in South African medical schemes by leveraging technological, organizational, and market-level enablers to improve competitiveness, resilience, and member value.

Literature Review

Service innovation entails developing new or significantly enhanced services that address evolving customer needs and dynamic market demands. It encompasses novel service offerings, improvements to existing services, and the integration of advanced technologies to optimize service delivery (Chen, Tsou & Huang, 2009). Crucially, service innovation extends beyond technological advancements to include business model transformation, process optimization, and enhanced customer engagement strategies, all of which create added value for organizations and their stakeholders (Verhoef *et al.*, 2020). In competitive and rapidly changing markets, continuous innovation is essential for differentiation, resilience, and long-term organizational sustainability (Hermundsdottir & Aspelund, 2021; Lopes *et al.*, 2021). Practical service innovation relies on multiple enablers, including access to market intelligence, investment in research and development, leadership support, and an adaptive regulatory environment. Garrido-Moreno *et al.* (2024) argue that service innovation and organizational resilience function as interrelated dynamic capabilities, enabling firms to navigate market fluctuations and enhance overall business performance. Their study further highlights the strategic role of digital tools and external networks, particularly social media, as critical drivers of innovation that support adaptability and competitiveness in volatile environments.

Technological advancements, such as artificial intelligence (AI), automation, blockchain, and the Internet of Things (IoT), offer significant opportunities to improve service quality, operational efficiency, and value propositions (Adewumi *et al.*, 2024). However, successful adoption requires more than technology; it demands a supportive organizational culture, strong leadership, and collaborative engagement with internal and external stakeholders to ensure alignment between innovation initiatives, organizational capabilities, and market expectations (Swartz *et al.*, 2021; Ghani *et al.*, 2023; Cheong *et al.*, 2024). A culture that promotes creativity, continuous learning, and experimentation is pivotal for fostering an innovation-driven environment that can sustain competitive advantage.

Empirical research identifies employee engagement, external stakeholder collaboration, and digital tool utilization as key drivers of service innovation (Garrido-Moreno *et al.*, 2024). These factors collectively enhance creativity, market responsiveness, and the capacity for continuous adaptation. However, challenges such as high implementation costs, skill gaps, and organizational inertia can impede the effective integration of emerging technologies, underscoring the need for strategic planning and targeted capability development (Adewumi *et al.*, 2024). While service innovation is widely acknowledged to positively influence firm performance, particularly in terms of customer retention, acquisition, and market competitiveness, evidence regarding its direct impact on financial outcomes remains mixed (Damanpour & Aravind, 2012; Feng, Ma, & Jiang, 2020; Sethibe & Steyn, 2016). This highlights the need for further research, especially in regulated sectors where innovation adoption must balance regulatory compliance with market responsiveness.

In South Africa, medical schemes operate within a highly regulated environment, offering private healthcare coverage through pooled member contributions (Council for Medical Schemes [CMS], 2024, 2025). These schemes face challenges such as rising healthcare costs, regulatory reforms, and the impending implementation of the National Health Insurance (NHI) system (Christmals & Aidam, 2020; Rammila, 2023; Mkhwanazi, 2024). To remain competitive and sustainable, medical schemes must leverage key enablers of service innovation, including digital health solutions, telemedicine, and personalized benefits packages, while ensuring stakeholder collaboration, regulatory compliance, and investment in digital infrastructure. Doing so can enhance member experiences, improve healthcare accessibility, and support long-term organizational resilience and performance (Damanpour & Aravind, 2012; Rammila, 2023).

Theoretical Framework

This study is grounded in the theoretical foundations of Service Innovation and Marketing Strategy, specifically focusing on the healthcare sector. Central to the study is Willie's Service Innovation Theory, which integrates macro- and micro-environmental factors to explain how medical schemes can effectively drive service innovation (Willie, 2024). The theory posits that sustainable and impactful innovation emerges from the interplay between internal organizational capabilities and external environmental forces. At the macro level, healthcare policies, regulatory frameworks, and economic conditions shape the strategic context within which innovation occurs. At the micro level, factors including scheme type, operating models, organizational practices, and resource allocation determine an organization's capacity to design and implement innovative services (Willie, 2024). By simultaneously considering these layers, the framework situates service innovation within a holistic context that supports long-term sustainability, competitiveness, and responsiveness to market demands.

The study further incorporates the Service-Dominant Logic (SDL) principles proposed by Vargo and M. Lusch (2003), which foregrounds value co-creation between medical schemes and beneficiaries. This perspective reconceptualizes healthcare as a dynamic, collaborative process rather than a one-dimensional transaction, emphasizing the reciprocal creation of value as a core driver of innovation. Willie's framework also identifies key innovation enablers such as technology adoption, market segmentation, and organizational culture as critical levers for fostering practical innovation (Ghani *et al.*, 2023; Cheong *et al.*, 2024; Willie, 2024). Applying these enablers, this study examines how medical schemes can strategically leverage internal resources and external insights to develop service models that align with the evolving expectations of healthcare consumers.

Research Design and Methodology

This study employed a literature review methodology to investigate service innovation within South African medical schemes. The review synthesized existing scholarship on the enablers, mechanisms, and strategic approaches to service innovation, particularly technological advancements, customer insights, and regulatory influences (Randhawa & Scerri, 2015; Tidd & Bessant, 2021). It further differentiated between incremental and radical healthcare innovations, highlighting their contributions to enhancing service delivery, fostering organizational adaptability, and achieving sustainable market differentiation (Sounderajah *et al.*, 2020; van den Hoed *et al.*, 2022).

Findings and Discussion

Findings

Enablers of Service Innovation

Leveraging enablers and drivers allows organizations to cultivate a dynamic, innovation-oriented environment that supports the development and implementation of novel and enhanced services, thereby improving competitiveness and customer satisfaction (Arku, Shao, & Ankrah, 2023; Garrido-Moreno *et al.*, 2024). Practical service innovation requires synthesizing multiple factors and assessing their capacity to drive organizational outcomes. For instance, Arku *et al.* (2023) identify service value creation as a primary enabler of service business model innovation (SBMI), essential for sustaining organizational performance. Key enablers include human capital, technological infrastructure, and value-based pricing, which underpin sustainable business practices.

Adopting breakthrough technologies, such as artificial intelligence and automation, presents substantial opportunities to enhance service quality and operational efficiency (Verhoef *et al.*, 2015). However, the benefits of technology integration must be evaluated to address potential challenges related to scalability, data privacy, and ethical considerations. Similarly, collaboration and co-creation with external partners and stakeholders provide vital insights to accelerate innovation processes (Rodríguez-Espíndola *et al.*, 2022). Organizational culture plays a central role in this context: fostering experimentation, continuous learning, and openness to novel ideas is essential for embedding innovation as a core capability (Ghani *et al.*, 2023; Cheong *et al.*, 2024). Leadership is equally pivotal, as it shapes an environment where employees are empowered to contribute ideas and actively engage in innovation initiatives (Swartz *et al.*, 2021; Garrido-Moreno *et al.*, 2024).

Customer insights emerge as a critical driver of service innovation, offering a foundation for understanding evolving market needs and preferences (Stremersch *et al.*, 2024). This study addresses fragmentation in existing literature by making four key contributions:

- Providing a clear conceptualization of customer insights for innovation,
- Introducing a structured “customer insights process” for generating, disseminating, and applying insights,
- Synthesizing knowledge across ten domains, including crowdsourcing, co-creation, observation, and tracking, and
- Evaluating the managerial and research significance of these insights (Stremersch *et al.*, 2024). When effectively operationalized, customer insights inform service innovation by translating data into actionable strategies, enhancing customer engagement, and fostering sustainable competitive advantage.

Investing in employee engagement and skills development is essential for equipping the workforce with the capabilities required to drive practical innovation (Ghani *et al.*, 2023). Equally important is the systematic monitoring of market trends, competitor strategies, and regulatory frameworks, which allows organizations to identify opportunities, mitigate risks, and respond proactively to changing conditions (Deep, 2023; Abubakar *et al.*, 2024). Supportive regulatory environments further facilitate innovation by reducing barriers and providing incentives for creative and adaptive solutions (Katz, 2021; Nel-Sanders & Thomas, 2022).

The COVID-19 pandemic has been a significant catalyst for innovation, particularly in adopting digital and remote service technologies (Leyens *et al.*, 2022). Leyens *et al.* (2022) identified three key areas impacted by the pandemic: the rapid uptake of mobile and remote services, accelerated digital technology integration, and the heightened importance of stakeholder collaboration to maintain safety and operational continuity, as illustrated in Figure 2. These developments underscore organizations’ need to adopt adaptable, fit-for-purpose innovation strategies capable of responding effectively to unexpected shocks, whether from public health crises or policy changes.



Figure 1. Expanded Stremersch et al. (2024) domains of customer insights for innovation

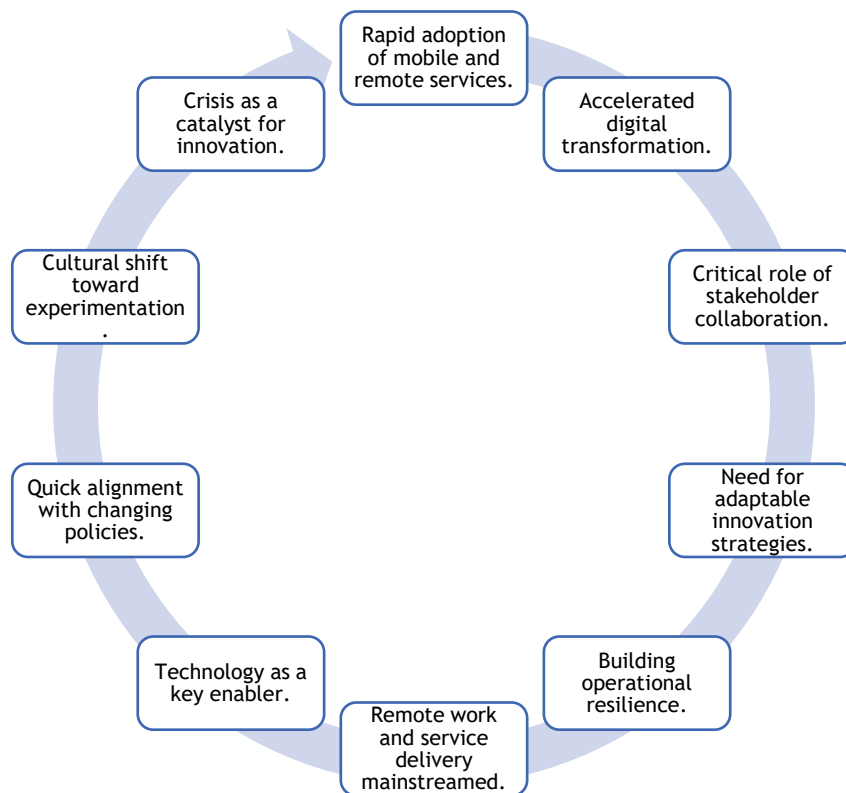


Figure 2. Key Learnings: COVID-19, Innovation, and Digital Transformation
Source: Leyens et al., 2022

Service Innovation in Medical Schemes

Medical schemes in South Africa are crucial in providing private healthcare coverage to individuals who can afford it, operating alongside the public healthcare system (CMS, 2024). These schemes function as non-profit entities, pooling members' contributions to cover medical expenses based on pre-defined benefit structures (McLeod & Ramjee, 2007; Kaplan & Ranchod, 2014). The Medical

Schemes Act (No. 131 of 1998) regulates the industry by setting guidelines for governance, pricing, and benefit design to ensure fairness and financial sustainability (Medical Schemes Act [MSA], 1998).

Despite their importance, medical schemes face challenges such as rising healthcare costs, regulatory changes, and the impending implementation of the NHI, which seeks universal health coverage (UHC) (Pauw, 2022; Rammila, 2023; Mkhwanazi, 2024). Medical schemes have struggled to expand their coverage, currently reaching just under 15% of the South African population, despite accounting for approximately 50% of health expenditure as a proportion of the Gross Domestic Product (McIntyre & McLeod, 2020). Figure 3 below illustrates membership growth trends between open and restricted schemes, showing that both have maintained relatively stable membership levels since 2012. Although open schemes have the potential for membership growth due to their unrestricted nature, not limited to a specific sector or employer, they have struggled to expand their market share (CMS, 2024). Additionally, membership in medical schemes, a significant revenue stream, will be impacted by the policy change towards the full implementation of the NHI (McIntyre & McLeod, 2020). This is particularly true as benefit offerings are reduced, potentially decreasing coverage and adversely impacting the sustainability of these schemes.

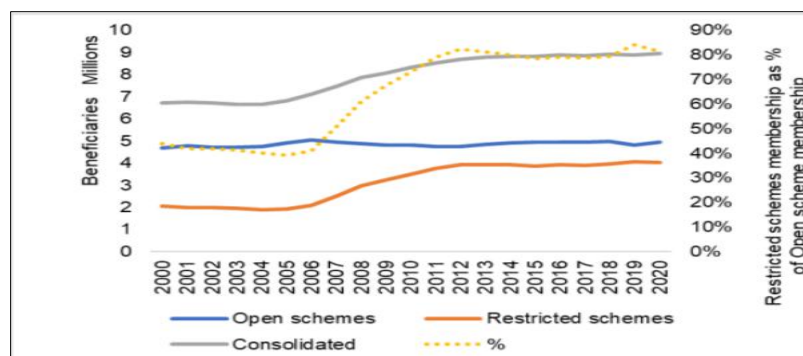


Figure 3. Medical scheme membership trends 2000-2020.
Source: Adapted from Willie (2023)

Willie's Service Innovation Enabler Framework

Building on the micro- and macro-level enablers, this study will develop a strategic framework integrating the WIE model to enhance service innovation within South African medical schemes (Figure 4). This framework provides actionable insights for medical schemes, administrators, and stakeholders to improve healthcare accessibility through structured innovation initiatives. Willie's study highlights key micro and macro factors that drive innovation within medical schemes, emphasizing the importance of various internal and external elements that influence the success and sustainability of innovation strategies, as seen in the figure below (Willie, 2024).

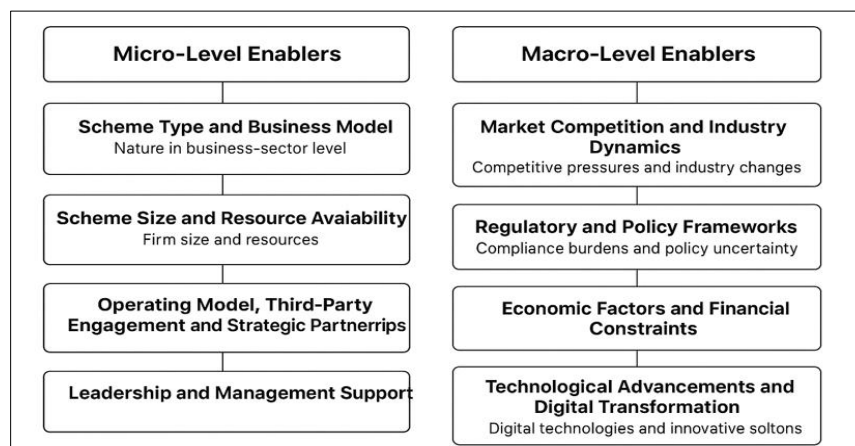


Figure 4. Willie's Service Innovation Enabler Framework
Source: Adapted from Willie (2024)

Micro-Level Enablers of Innovation in Defined and Closed Markets

Scheme Type and Business Model (Nature in business- sector level)

The market structure of restricted medical schemes limits innovation by confining them to specific regulations and a defined beneficiary pool, restricting their ability to adopt novel solutions or scale. These schemes operate under strict regulatory frameworks that dictate service offerings, hindering market expansion. The type of medical scheme and its business model significantly influence innovation adoption (Willie & Nkomo, 2014; Willie, 2024). However, restricted schemes can still explore innovation opportunities, such as personalized health management programs, digital health tools, and value-based care models. These innovations can improve service quality and operational efficiency, driving growth within their defined market (Willie, 2024).

Scheme Size and Resource Availability (Firm size and resources)

Small medical schemes often face significant barriers to innovation due to limited resources, reliance on external administrators, and a lack of infrastructure. With smaller budgets, these schemes struggle to invest in research, technology, and new healthcare solutions (Schumpeter, 1934; Costa *et al.*, 2024). Their dependence on administrators for key operational tasks increases costs and slows down innovation (CompCom, 2019; McIntyre & McLeod, 2020; CMS, 2024). Moreover, without dedicated personnel or strategic partnerships, smaller schemes often cannot adopt advanced digital solutions (Ghobakhloo *et al.*, 2012). However, digital technology presents a valuable opportunity to level the playing field for smaller schemes. These schemes can reduce costs, improve efficiency, and enhance service offerings by optimizing affordable digital solutions like telemedicine, mobile apps, and automated administrative tools (Willie, 2024). Technologies such as electronic health records, data analytics, and patient engagement platforms enable smaller schemes to provide competitive services, including personalized healthcare management and better patient outcomes. This allows them to compete with larger, more resource-rich organizations (Pawelek *et al.*, 2022; Motsi, 2024). Additionally, collaborating with technology startups or academic institutions can reduce development costs while enhancing innovation capabilities.

Operating Model, Third-Party Engagement and Strategic Partnerships

Barriers to innovation in medical schemes stem from rigid internal structures, outdated processes, and limited resources, particularly in medical schemes that rely on external administrators. These constraints hinder the adoption of new technologies and service innovations, as financial and human capital shortages prevent investment in digital tools or the development of in-house expertise (Cohen & Levinthal, 1990). Regulatory compliance and cultural resistance to change exacerbate these challenges (Damawan & Azizah, 2020). However, opportunities exist for schemes to innovate by leveraging digital health technologies, collaborating with technology firms, and adopting value-based healthcare models. By optimizing digital solutions and adapting their operating models, medical schemes, even those with limited resources, can enhance service delivery, improve patient outcomes, and remain competitive (Willie, 2025).

Leadership and Management Support

Effective leadership plays a pivotal role in driving innovation initiatives, as the commitment of senior management is instrumental in creating a culture that supports experimentation and embraces risk-taking. A study by Swartz *et al.* (2021) highlighted that leadership's endorsement of the value of digital health solutions is vital for their successful scaling and sustainability. Despite challenges like limited investment, insufficient human resource capacity, and inadequate monitoring systems, strong leadership remains crucial for overcoming these obstacles and ensuring the long-term success of digital health initiatives (Swartz *et al.*, 2021). Support from management ensures the alignment of innovation strategies with organizational goals (Crossan & Apaydin, 2010; Tidd & Bessant, 2021).

Macro-Level Enablers of Innovation in Defined and Closed Markets

Market Competition and Industry Dynamics

External competition is pivotal in driving innovation within medical schemes, as it pushes organizations to adapt and evolve to sustain or enhance their market position (Porter, 1980). A

competitive strategy should rest on an understanding of industry structures and the way they change. Porter argues that the strategist aims to recognize and manage a competitive environment by directly examining competitors or by considering a broader perspective, competing against the organization (Porter, 1979). The pressure from competitors forces medical schemes to improve their service offerings continuously, emphasizing cost efficiency, better customer experiences, and more comprehensive healthcare solutions to remain relevant (Damanpour & Aravind, 2012). These dynamics foster the need for agile strategies that respond to shifting market demands and evolving consumer expectations, leading to enhanced product differentiation and innovation in service delivery (Jerab & Mabrouk, 2023). Moreover, the increasing competition provides opportunities for medical schemes to explore new market segments, improve their operational efficiencies, and integrate technology-driven solutions. This integration ultimately positions them to capture a more significant share of the market while meeting the growing healthcare needs of consumers (Javanmardi *et al.*, 2024).

Regulatory and Policy Frameworks

Regulatory frameworks shape medical schemes' innovation capacity, balancing consumer protection and financial stability with compliance burdens that can slow technological adoption and limit agility (Pisano, 2006; Harrington, 2010; Blind, 2012). Uncertainty, fragmented policies, and lengthy approvals deter investment and risk-taking (Christensen *et al.*, 2009; Teece, 2010). However, industry collaboration with regulators through sandboxes, pilot programs, and co-created policies can refine implementation methodologies, foster innovation while ensuring compliance (Attrey, Leshner & Lomax, 2020; Andreini *et al.*, 2022). These initiatives enhance efficiency, service offerings, and adaptability in a shifting healthcare landscape.

Economic Factors and Financial Constraints

Macroeconomic conditions significantly influence the availability of resources for innovation, with financial constraints often hindering medical schemes' ability to invest in new technologies and service models, especially during economic downturns (Nelson & Winter, 1982; Hall & Lerner, 2010). Limited funding, fluctuating economic stability, and inadequate financial risk tolerance further impede the implementation of innovative strategies, creating barriers to growth. However, opportunities exist for schemes to explore alternative funding sources, partnerships, and innovative financial models that promote investment in new technologies, fostering long-term sustainability and adaptation to changing market demands (Teece, 2010).

Technological Advancements and Digital Transformation

Technological advancements drive innovation by enabling medical schemes to improve operational efficiency, service delivery, and member engagement (Brynjolfsson & McAfee, 2014). However, barriers to innovation exist, such as the high costs of implementing digital health solutions, lack of technical expertise, and resistance to change within organizations (Porter & Heppelmann, 2014). These challenges can slow down the adoption of transformative technologies. Despite these obstacles, opportunities emerge for medical schemes to leverage partnerships, invest in training, and adopt scalable digital solutions, driving continuous improvement and enhancing healthcare delivery in the long term.

Pandemics: Impact of the COVID-19 Pandemic on Innovation

The COVID-19 pandemic spurred rapid innovation within medical schemes, driving the adoption of digital healthcare solutions and remote service delivery to meet urgent demands (Bailey & Breslin, 2021). However, the crisis also revealed barriers, such as limited technological infrastructure, inadequate digital literacy, and financial constraints that hindered full-scale implementation (Sagan *et al.*, 2021; Topp, 2023). Despite these challenges, the pandemic created opportunities for medical schemes to invest in digital transformation, develop more resilient systems, and prioritize accessibility and efficiency, ultimately fostering long-term improvements in healthcare delivery.

Expanded WSIE Framework - Strategic Framework for Service Innovation

Building on Willie's original Service Innovation Enabler Framework (WSIEF), this study presents an expanded model integrating key micro- and macro-level enablers that influence service innovation within South African medical schemes. At the micro level, factors such as scheme type, business model, size, resources, leadership support, employee engagement, and customer involvement shape a scheme's capacity to implement innovative solutions. In contrast, at the macro level, market competition, regulatory frameworks, economic conditions, technological advancements, industry networks, and external shocks like pandemics influence innovation outcomes. **Table 1** summarises these enablers, their attributes, and the opportunities they provide. It offers actionable insights for medical schemes, administrators, and stakeholders to enhance service delivery, foster innovation, and maintain competitiveness in a regulated healthcare environment.

Table 1. Willie's Service Innovation Enabler Framework (Expanded)

Level	Enabler	Key Attributes	Opportunities / Implications
Micro-Level	Scheme Type & Business Model	Open vs. restricted schemes, value proposition, service offerings, beneficiary base	Personalized care, digital health tools, value-based services, targeted market growth.
	Scheme Size & Resources	Budget, staff capacity, IT infrastructure, research capability	Affordable digital solutions, partnerships, telemedicine, and resource optimization
	Operating Model & Partnerships	Internal processes, reliance on third-party administrators, and collaboration networks	Collaborate with tech firms and academic institutions, adopt value-based care, and improve efficiency.
	Leadership & Management	Vision, commitment to innovation, risk tolerance, support for experimentation	Build an innovation-friendly culture, align strategies with organizational goals, and empower staff.
	Employee Engagement & Skills	Staff involvement, training, innovation mindset, and digital literacy	Enhance creative problem-solving, support the adoption of new technologies, and increase organizational adaptability
	Customer Engagement	Feedback systems, needs assessment, and co-creation of services	Generate actionable insights, improve service quality, and increase member satisfaction
Macro-Level	Market Competition	Industry dynamics, rival strategies, customer expectations	Explore new segments, differentiate services, and enhance competitiveness
	Regulatory & Policy Frameworks	Compliance requirements, policy flexibility, and the approvals process	Co-create policies, use regulatory sandboxes, and balance compliance and innovation
	Economic & Financial Factors	Funding availability, macroeconomic stability, investment appetite	Seek alternative funding, adopt innovative financial models, and ensure sustainability
	Technology & Digital Transformation	AI, automation, mobile platforms, data analytics	Implement scalable solutions, train staff, improve service efficiency, and outcomes.
	Pandemics & External Shocks	COVID-19, health crises, socio-economic disruptions	Accelerate digital adoption, develop resilient systems, and expand remote service delivery
	Industry Networks & Partnerships	Collaboration with peers, tech companies, and research institutions	Access new knowledge, share resources, and co-develop innovative solutions
	Social & Cultural Factors	Organizational culture, societal attitudes, and member behavior	Foster an innovative mindset, adapt services to social needs, and enhance engagement

Discussion

This study aimed to explore and develop a strategic framework for enhancing service innovation within South African medical schemes, focusing on micro- and macro-level enablers as articulated in the WSIE framework (Willie, 2024). Situated within the regulated healthcare environment, the study sought to understand how internal capabilities and external pressures interact to drive innovation. The findings reveal that scheme type, business model, and size critically shape the capacity for innovation, confirming that restricted schemes, despite regulatory constraints, can leverage digital health tools, personalized care initiatives, and value-based models to improve service delivery and operational efficiency (Willie & Nkomo, 2014; Ghobakhloo *et al.*, 2012). Smaller schemes, constrained by limited resources and reliance on third-party administrators, can mitigate these barriers by adopting scalable technologies, forming strategic partnerships, and focusing on cost-effective innovation solutions (Pawelek *et al.*, 2022; Motsi, 2024). These findings underscore that innovation depends not solely on resource abundance but also on strategic alignment and adaptive capacity.

Leadership and workforce engagement emerged as pivotal micro-level enablers, highlighting the importance of organizational culture and managerial commitment in translating strategy into action (Swartz *et al.*, 2021; Crossan & Apaydin, 2010). Effective leadership fosters a culture of experimentation and calculated risk-taking, enabling employees to contribute to innovation processes

and co-create services that meet evolving beneficiary needs (Ghani *et al.*, 2023; Cheong *et al.*, 2024). Similarly, continuous training, digital literacy, and proactive employee involvement enhance the adoption of new technologies, support creative problem-solving, and increase organizational adaptability. Critically, these findings reveal that human capital investment is not merely operational but strategically central to sustaining innovation in highly regulated sectors.

At the macro level, external drivers, including market competition, regulatory frameworks, economic conditions, and technological advancement, shape opportunities and constraints for innovation (Porter, 1980; Damanpour & Aravind, 2012; Brynjolfsson & McAfee, 2014). Competitive pressures compel schemes to continuously differentiate their service offerings, enhance operational efficiency, and meet evolving consumer expectations. Regulatory flexibility and collaborative engagements with policymakers, such as through sandboxes or pilot programs, can mitigate compliance-related barriers and enable innovation without compromising governance (Attrey, Leshner & Lomax, 2020; Andreini *et al.*, 2022). Moreover, external shocks such as the COVID-19 pandemic accelerated the adoption of digital healthcare solutions, remote services, and resilient operational models, demonstrating the interplay between environmental volatility and organizational responsiveness (Bailey & Breslin, 2021; Sagan *et al.*, 2021).

The expanded WSIE framework synthesizes these micro- and macro-level enablers, offering a strategic lens through which medical schemes can navigate a complex, regulated healthcare environment (Willie, 2024). By integrating leadership, workforce capabilities, technology adoption, regulatory engagement, and market responsiveness, the framework provides actionable insights for administrators and stakeholders to enhance service innovation, member experience, and competitiveness (Garrido-Moreno *et al.*, 2024; Stremersch *et al.*, 2024). Critically, this study contributes to the literature by highlighting that sustainable innovation requires a holistic approach, balancing internal enablers with external contingencies. It also emphasizes that contextual understanding—particularly within the South African healthcare sector—is essential for translating innovation theory into practice.

Conclusion

This study developed a strategic framework for enhancing service innovation within South African medical schemes, building upon the WSIE framework. The research highlighted the critical role of micro-level factors, such as scheme type, business model, leadership, and resource availability, as well as macro-level influences, including regulatory frameworks, market competition, and technological advancements. The findings underscore the importance of digital transformation, organizational culture, and stakeholder collaboration in enabling innovation, particularly in the context of constraints faced by smaller or restricted schemes. By providing insights into internal and external enablers, the study addresses a significant gap in the literature regarding service innovation in regulated healthcare environments. While limitations exist, including the study's contextual scope and the absence of longitudinal outcome assessments, the research offers practical and theoretical contributions for enhancing innovation capacity, sustaining competitiveness, and improving service delivery in South African medical schemes. Implementing the outlined recommendations can support schemes in navigating regulatory changes, technological shifts, and evolving member expectations, thereby promoting resilience, sustainability, and long-term value creation.

Despite its contributions, this study has several limitations that should be acknowledged. First, the research is confined to the South African context, which limits the generalisability of the findings to countries with different healthcare systems, regulatory environments, and market dynamics. Second, while the study provides an extensive analysis of enablers and drivers of service innovation, it did not assess the effectiveness or measurable outcomes of specific innovation initiatives implemented by medical schemes. Consequently, the sustainability and long-term impact of these innovations remain unclear. Third, the study focused primarily on established medical schemes, excluding new entrants or disruptive business models that may offer alternative pathways for innovation. Finally, while organizational, technological, and regulatory barriers were examined, the research did not explore the psychological, cultural, and team-level factors hindering innovation, representing a gap for future investigation.

Based on the study findings, several recommendations are proposed. Medical schemes should enhance digital transformation by investing in technologies such as telemedicine, artificial intelligence, and mobile health solutions to improve service delivery, operational efficiency, and member engagement. Leadership must strengthen organizational culture by fostering innovation, encouraging experimentation, and promoting continuous learning and employee participation. Additionally, schemes should leverage customer insights through systematic collection and analysis of feedback to co-create services that align with evolving member needs. Policymakers are encouraged to ensure regulatory frameworks remain flexible to support innovation while safeguarding member protection and financial sustainability. Finally, future research should explore the impact of service innovation on patient outcomes, satisfaction, and cost efficiency. Longitudinal studies should assess the sustainability of innovations and the influence of disruptive entrants in the healthcare market.

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