Shared Value Co-Creation in Addressing the Grand Challenge of Aging Population: A Digital Health Case Study

LEE OMAR

Lancaster University, UK

omarl1@lancaster.ac.uk

MARYIA ZAITSAVA

University of Cagliari, Italy

maryia.zaitsava@unica.it

Abstract

This study explores how shared value is co-created in response to the grand challenge of ageing population and how cross-sector collaboration contributes to both social and business values creation. The study examines the Safe Steps healthcare digital platform, deployed across care homes in Greater Manchester in the UK. Drawing on a participatory observation method, we identify a three-phase process of shared value co-creation: (1) Establishing a Foundation of Shared Priorities, (2) Operationalising for Collective Action, and (3) Realising Impact through Value Synergy. The study shows that to be realised, shared value needs to be established through shared priorities, then operationalised through collective action, and only after can it be realised through social and business values synergy. The study further unfolds intrinsic organisational practices that enable shared value-cocreation. The present research highlights the importance of integrated stakeholder collaboration and value-based care models in addressing complex health challenges.

1. Introduction

Traditional approaches to innovation are proving insufficient as organisations deal with increasingly complex societal challenges, such as health and well-being, sustainability, ageing populations, or public health crises (Ferraro et al., 2015; George et al., 2016). Health and well-being, identified as one of the seven grand challenges facing society today (Franco et al., 2021), require more innovative and collaborative approaches that align the efforts of diverse stakeholders to create meaningful solutions with sustainable impact. In healthcare, one such challenge is the rising incidence of falls among older adults, which remains a leading cause of injury and hospital admissions, contributing to significant financial strain on healthcare systems worldwide. In the UK, falls among older adults cost the UK National Health Service (NHS) an estimated £2.3 billion annually, and they account for over 40% of nursing home admissions (NICE, 2015). Addressing this issue requires a rethinking of how healthcare organisations innovate and collaborate to meet the needs of an ageing population.

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Grand challenges by nature suggest the focus on both social and business or economic value creation (Eiselein & Dentchev, 2021) or in other words, the creation of a shared value. Shared value—conceived as "*a meaningful benefit for society that is also valuable to the business*" (Porter & Kramer, 2006, p. 6)—enables organisations to create business value (e.g., sales, profit) but also simultaneously tackle pressing social issues (Menghwar & Daood, 2021; Dembek et al., 2016). Existing studies mainly regard two streams of research on how shared value is created. The first stream suggests that society and business combine independent social and business values and, thus, shared value is created (e.g., Dembek et al., 2016). The second approach is focused on the co-creation of shared value among different actors (e.g., Spieth et al., 2019).

Specifically, scholars highlighted the importance of co-creation in driving innovation that aligns both societal needs and business goals (Porter & Kramer, 2011; Breuer & Lüdeke-Freund, 2017; Rashkova et al., 2024). In this view, studies focus primarily on user input in product development (Von Hippel, 2007; Baldwin & von Hippel, 2011). Yet the complexities of grand challenges and the digital health context require a stakeholder-oriented approach. Moreover, the advancements in digital health technologies, such as the integration of AI-powered diagnostics, real-time data-sharing platforms, or remote monitoring technologies, further emphasise continual collaboration across diverse stakeholders (Gassmann et al., 2010; Roszkowska-Menkes, 2017). Unlike consumer-driven product innovation, healthcare innovation involves constant stakeholder interaction across all the process of a new product or service innovation, from the design to implementation and assessment phases. While existing literature has conceptually examined shared value creation in traditional or social business settings (Ilmarinen & Akpinar, 2018; Lichtenthaler, 2021; Rashkova et al., 2024), little is known about how it unfolds in public health systems facing grand challenges. In particular, the organisational co-creation and cross-sector collaboration practices that enable shared value creation in response to grand challenges such as ageing and health crises remain underexplored.

This study examines how diverse stakeholders collaborate to co-create shared values to address the grand challenge of the elderly population's well-being. Specifically, the study explores the case of Safe Steps, the digital fall prevention platform deployed in Greater Manchester care homes. This platform utilises real-time data for personalised interventions, resulting in a 38% reduction in serious falls and demonstrating healthcare savings and improved patient safety. This success led to Safe Steps being shortlisted for the Health Tech Awards 2024 in the Best Use of Digital for Social Care Award category.

Our findings contribute to the organisational studies literature by illustrating how organisations can reimagine their products and services to address societal needs, aligning social and business goals in the process with a strong focus on ethics. Moreover, this study provides a case study of how public health organisations can leverage digital innovation and collaborative strategies to address pressing health challenges.

2. Literature review

2.1. Shared value in value-based healthcare

Grand challenges imply the importance of collaborative power among all actors, enabling the creation of shared values between businesses and societies (Dembek et al., 2016; Porter &

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Kramer, 2006; 2011). In specifics, shared value allows the combination of both social and commercial logic to guide modern businesses and societies (Dembek et al., 2016; Porter and Kramer, 2006, 2011). Scholars often refer to two approaches to how shared value can be created. According to the first approach, it is an unsaid agreement between society and business that allows them to create different types of values (economic and social) and reach different goals simultaneously. In this view, the process of shared values creation might require a slight redesign or even more drastic changes in the whole business system (Spieth et al., 2019; Wilson & Post, 2013), such as changes in the supply chain and reconsideration of resource use (Porter & Kramer 2011), the stakeholders' recomposition (Spieth et al., 2019; Wilson & Post, 2013), or redesign of existing products with the grand challenge to tackle in mind (Menghwar & Daood, 2021). The second approach suggests the importance of collaborative power among stakeholders in creating shared values. Interestingly, Spieth and colleagues (2019) found that organisations that responsibly stick to their values more probably find partners who share the same values. In this view, networks and communities that grow based on shared values are crucial for attracting different stakeholders, especially when it comes to businesses with social aspects (Breuer & Lüdeke-Freund, 2017a, 2017b). In line with this, the joint between employees' beliefs is one of the key determinants of an organization's ability to create shared value (Porter & Kramer 2011). Therefore, while it is common sense that it is not possible to solve all pressing social issues through shared value creation (Porter & Kramer, 2011), it is also true that a grand challenge aligned to a core value chain can create a better response for both society and organisation (Menghwar & Daood, 2021).

The importance of shared value in healthcare is reflected in the need for collaborative efforts between diverse stakeholders to enhance the quality of care and health outcomes (Porter, 2008). As healthcare systems face grand challenges such as ageing populations, rising chronic disease burdens, and inequality in healthcare access, *value-based healthcare* (VBHC) emerges as a crucial framework for aligning societal and healthcare needs. VBHC, as proposed by Porter (2008), emphasises the creation of shared value by focusing on delivering patient-centric outcomes and improving overall healthcare efficiency. This approach prioritises the well-being of patients while also addressing resource limitations and ensuring value creation for all stakeholders involved, such as healthcare providers, patients, or society at large. Thus, the VBHC approach highlights the crucial importance of co-creation across healthcare systems, where patients, care providers, but also, policymakers work together to ensure that health services are designed to meet the actual and existing needs of individuals.

In this vein, digital health solutions, including telemedicine, data analytics, and remote patient monitoring, play a pivotal role in enabling VBHC. Through real-time data collection and analysis, healthcare workers can deliver evidence-based care that not only addresses immediate medical issues but also improves long-term health outcomes and quality of life for patients (Fürstenau et al., 2109; 2021). Specifically, in tackling grand challenges, these technologies can reduce the divide in access to care, or enhance preventive healthcare. Digital health solutions, however, must be designed with the VBHC principle of shared value in mind, focusing not only on efficiency but also on creating long-lasting improvements for patients and the healthcare ecosystem. Merely driving cost savings without ensuring improved patient outcomes can lead to misaligned incentives and unintended consequences for the healthcare system, as value-based care emphasizes that all stakeholders must benefit in the long term for true shared value to be realized (Porter, 2008).

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2.2. Co-creation in digital health innovation

To enable the realisation of shared value in the context of grand challenges, more collaborative approaches emerged (e.g., Gond & Brès, 2020; Carollo & Guerci, 2018; Girschik et al., 2022) as they enable new products' or services' real-world potential (Laursen & Salter, 2006; Kohler et al., 2009; Baldwin & Hippel, 2011; Ramaswamy & Ozcan, 2018; Cassiman, Di Guardo & Valentini, 2010). Thus, digital health innovation has increasingly embraced co-creation as a central approach for addressing grand challenges in healthcare (Iakovleva et al., 2021; Nickel et al., 2024). Co-creation represents a shift from more traditional top-down innovation processes to a more collaborative way where different stakeholders, including end users, are active participants in the creation of products and services (Bogers et al., 2010; Bogers et al., 2016; Ramaswamy & Ozcan, 2018; Schiavone et al., 2021). This participatory approach is particularly relevant in healthcare, where involving stakeholders such as patients, caregivers, and healthcare providers can lead to more effective and context-appropriate solutions (Baldwin & Von Hippel, 2011; Nickel et al., 2024; Von Hippel, 2007).

Co-creation has become a key approach for tackling major healthcare challenges in digital health innovation (Iakovleva et al., 2021; Nickel et al., 2024). By allowing various stakeholders, including users, to actively participate in the development of products and services, co-creation is therefore different from more conventional top-down innovation methods (Bogers et al., 2010; Ramaswamy & Ozcan, 2018; Schiavone et al., 2021). In this view, involving stakeholders like patients, caregivers, or healthcare practitioners can result in more effective and contextually appropriate solutions, making this participatory approach crucial in the healthcare context (Baldwin & Von Hippel, 2011; Nickel et al., 2024; Von Hippel, 2007).

More specifically, co-creation is frequently seen as a particular type of open innovation (OI) approach—an approach that emphasizes creation through interactions rather than merely concentrating on a set of collaborative activities and permits important knowledge to be widely shared in all directions across organizational boundaries (Cassiman et al., 2009; Chesbrough, 2006; Ramaswamy & Ozcan, 2018). By transforming the dynamics of the creative process and improving the alignment between solutions and user demands, this interaction-based approach positions users as co-creators rather than passive consumers (Piller & West, 2014; Vargo & Lusch, 2008). Thus, users have a unique understanding of their demands, as noted by Von Hippel (2007) and Baldwin & Von Hippel (2011), making their participation essential to the development of successful solutions. Co-creation, in this context, involves leveraging the insights of these stakeholders to develop solutions that are not only innovative but also practical and scalable within healthcare environments (Ramaswamy & Ozcan, 2018; Mahr et al., 2014)

The rise of digital health technologies has enabled more dynamic collaboration between organisations and users, making co-creation not only possible but also highly effective. Digital tools enable more rapid knowledge sharing and iterative feedback, essential components of user-driven innovation (Gassmann et al., 2010; Roszkowska-Menkes, 2017). In this context, co-creation involves stakeholders working closely with healthcare technology developers to shape solutions that meet real-world needs, ultimately enhancing the usability and impact of digital health innovations (Ramaswamy & Ozcan, 2018). Specifically, co-creation in digital health has its intrinsic features, such as it is more prone to continuous interaction loops, where input or user feedback informs the development process—from ideation to testing and implementation (Baldassarre et al., 2017; Gobble, 2016).

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2.3. Digital health platforms

In response to the grand challenges facing modern healthcare, digital health platforms have become critical tools for fostering the collaborative efforts required to create shared value across the healthcare ecosystem (Bardhan et al., 2020; Hermes et al., 2020). These platforms act as integrative technologies that bring together various actors—patients, healthcare providers, researchers, policymakers, and payers—into a unified system that enhances communication, data exchange, and care coordination (Gleiss et al., 2021). By facilitating cross-stakeholder collaboration, digital health platforms embody the principles of shared value, ensuring that diverse needs are met while improving patient outcomes and system-wide efficiency.

A significant advantage of digital health platforms is their ability to support the co-creation of value by enabling stakeholders to work together toward common goals. For instance, healthcare providers can leverage platforms to engage with patients more directly, offering personalised interventions based on patient-generated health data. This aligns with the value-based healthcare model, where the ultimate objective is to enhance patient outcomes while addressing societal challenges such as unequal access to care and the rising costs of treatment (Porter, 2008). In this context, digital platforms help address grand challenges by enabling healthcare systems to scale innovations that deliver meaningful results for patients and society as a whole.

In terms of creating shared value, digital health platforms contribute by addressing the healthcare inequalities and socioeconomic disparities that are often at the root of many grand challenges. By expanding access to healthcare services through telehealth and remote care, these platforms help bridge gaps between underserved populations and healthcare providers, promoting more equitable health outcomes. Furthermore, they enhance the efficiency of care delivery by enabling real-time monitoring, predictive analytics, and data sharing, which ultimately reduces the burden on healthcare systems while improving patient care (Fürstenau et al., 2021).

These platforms also play a critical role in facilitating collaborative innovation by allowing different stakeholders to contribute to the development of new healthcare solutions. This collaborative approach is essential in tackling grand challenges, where the complexity of problems such as chronic disease management, ageing populations, and global health crises require input from multiple sectors and expertise areas. By fostering a network of actors who share common goals and values, digital health platforms create a space for continuous innovation and shared learning, ensuring that solutions evolve to meet the changing needs of society (Gawer, 2021; Gregory et al., 2021).

Finally, digital health platforms not only enable the operationalization of VBHC principles but also contribute to tackling healthcare's grand challenges by creating shared value through collaboration, data-driven care, and a focus on patient outcomes. These platforms offer the potential for scalable, sustainable healthcare innovations that address the long-term needs of both patients and society, making them vital tools in the quest for a more equitable and effective healthcare system.

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3. Method

To enable comprehensive and contextualised observation, this study adopts an ethnographic approach that facilitates deep and sustained immersion within the organisational environment (Sanday, 1979; Van Maanen, 1979). Ethnographic methods are particularly effective in capturing naturally occurring organisational activity, producing rich, nuanced narratives that support the development of analytical generalisations (Zaitsava et al., 2022; Zilber & Zanoni, 2022). This approach provides a valuable framework for uncovering unexpected insights, as well as overlooked or hidden dimensions of organisational routines, practices, and decision-making processes.

3.1. Setting

The context of this study regards a fall prevention initiative in Greater Manchester, UK, where falls among older adults pose a significant public health challenge. Public Health England estimates that approximately 35% of individuals over 65 years of age experience at least one fall annually, with 43% of those experiencing multiple falls. Falls are a leading cause of injury-related morbidity among older adults, contributing to 40% of admissions into long-term care and resulting in a substantial burden on healthcare systems. The average cost of managing a serious fall is estimated at £7,500, amounting to an annual expenditure of £2.3 billion for the National Health Service (NHS) (NICE, 2015).

Greater Manchester, a metropolitan area with a high proportion of elderly residents, has been identified as an outlier in terms of fall incidence compared to national averages. Around 10,000 people aged 65 and older in Greater Manchester sustain injuries from falls each year, often leading to serious consequences such as hospital admission or long-term care placement (NIHR Applied Research Collaboration Greater Manchester). 2022 In response to this critical issue, the Greater Manchester Integrated Care Partnership (GMICP), in collaboration with Health Innovation Manchester (HInM) and local authorities, initiated the implementation of Safe Steps, a digital fall risk assessment tool (Neiva et al. 2023). This tool was introduced as part of a broader effort to adopt data-driven approaches to fall prevention and to promote early intervention across care settings in Greater Manchester.

Safe Steps is a digital platform developed to standardise and improve the fall risk assessment process, following the guidelines set out by the National Institute for Health and Care Excellence (NICE, 2013). It assesses 12 key risk factors associated with falls and creates personalised action plans for older adults, enabling timely and evidence-based interventions. The platform's deployment aligns with Greater Manchester's strategic priorities, including the Ageing Well programme (Greater Manchester Combined Authority Falls Prevention 2022), which emphasises fall prevention as a critical aspect of care for the ageing population.

The digital system was first introduced in the Bury locality, where 70% of care homes adopted the tool. Initial results from this implementation indicated a significant reduction in fall incidents, with serious falls decreasing by 38% and Northwest Ambulance Service callouts reduced by 57% (Health Innovation Manchester, 2024) The project resulted in an estimated cost saving of £500,000 for the NHS in Bury over 12 months, with further projections indicating a reduction in fall-related mortality and morbidity. The deployment of Safe Steps thus demonstrated both clinical and economic benefits, highlighting its potential for scalability across the Greater Manchester region.

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The digital nature of the Safe Steps platform addresses several limitations inherent in traditional paper-based assessment systems. Manual processes often result in fragmented data, making it difficult to capture real-time information on fall risks and outcomes (Neiva et al., 2023). Safe Steps provides an integrated, real-time platform for monitoring fall risk across care homes, enabling health professionals to make informed decisions and intervene promptly. The tool is designed for use within Primary Care Networks, giving general practitioners (GPs) and multidisciplinary teams access to up-to-date information on individual fall risks, which facilitates more effective care planning.

3.2. Data collection and analysis

Following the three-step ethnographic research framework (Street & Meister, 2004), this study also focused on the triangulation of multiple data sources (Yin, 2013) to capture the shared values driving the implementation of Safe Steps. In Step 1, we collected data through participatory observation (Bryman, 2012; Clark, 2009; Van de Ven & Poole, 1995; Zaitsava et al., 2022) of care home staff using the platform, semi-structured in-depth interviews with key stakeholders, and analysis of internal and external documents related to the project. This data provided a comprehensive view of how the tool was perceived and used by different actors, revealing how it aligned with broader societal values, such as patient safety, quality of care, and efficiency in healthcare delivery.

In Step 2, the researchers reflected on the data collected in Step 1 to identify how Safe Steps contributed to addressing the grand challenge of fall prevention by promoting collaborative action across stakeholders. The shared value of preventing falls was a unifying theme, driving the adoption and use of the tool across care homes. This phase also highlighted the importance of data-driven decision-making in healthcare, as the Safe Steps platform provided real-time insights into fall risk, enabling timely interventions that reduced falls and improved outcomes. Finally, in Step 3, the findings were conceptualised through reflexive thematic analysis to explore how digital health tools like Safe Steps can foster the emergence of shared value ecosystems in tackling public health challenges.

Specifically, this study employs a participatory observation approach (Bryman, 2012; Clark, 2009; Van de Ven & Poole, 1995) as the main method to examine the implementation of the Safe Steps digital falls prevention platform in Bury, Greater Manchester, within the broader context of tackling the grand challenge of falls among older adults. Participatory observation allows for the development of non-hierarchical relationships (Clark et al., 2009), the method was found to be essential for sensitive topics, such as the elderly population, care homes, and digital health (Van de Ven & Poole, 1995; Bryman, 2012).

The study was conducted over 18 months (2022–2024) when the researchers gained an in-depth, real-time understanding of how various stakeholders—including care home staff, healthcare professionals, and system managers—collaborated to deploy digital innovations aimed at addressing complex societal problems. More specifically, the researchers participated in all of the important events of Safe Steps, had 72 site visits to care homes of the Safe Steps case study, meetings (152 hours), online calls (130 hours), and strategic changes as one of the senior managers of the Safe Steps platform. The research process was iterative, with a second round of participatory observation, this was repeated with care home staff and GPs conducted to validate and expand on the initial findings. This iterative approach allowed the researchers to explore how the shared values underpinning Safe Steps evolved as the tool was integrated

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into care home practices. The overall process allowed obtaining the firm's natural and real-time reaction to the strategic decisions, changes, challenges, and an understanding of the grand challenges within the digital healthcare context.

The data collection was guided by two approaches to data collection. First, there was developed the ad-hoc observation forms following the general inductive approach to qualitative data analysis (Thomas, 2006) to fill in after meetings, calls, and other events occurred. As part of the research process, we used standardised forms to organise and assess the data collected through participatory observation. Building on the work of Morris (2015), we developed semi-structured in-depth interviews guides in accordance with the context of the study. To support transparency and coordination, we created a central repository to store core project materials including timelines, methods, responsibilities, budgets, legal documents, and communications, ensuring clarity, consistency, and accountability throughout.

Finally, data analysis was performed following the general inductive approach for qualitative data analysis (Thomas, 2006). Thus, the researcher interpreted datasets, such as participatory observations field notes, emails, interviews, and internal documents by continuously reading and deriving key topics and nuances.

4. Findings

The findings from the case study have shown that the implementation of Safe Steps and shared value creation unfolded through three distinct phases: (1) Establishing a Foundation of Shared Priorities, (2) Operationalising for Collective Action, and (3) Realising Impact through Value Synergy. Furthermore, each of the three phases captures the progression of organisational co-creation practices that supported shared value establishment, development, and realisation and led to substantial improvements in patient care, staff capabilities, and healthcare system efficiency, including monetary benefits. We further elaborate on these findings throughout and provide a synthetic representation of how these organisational co-creation practices foster shared value creation (see Table 1).

Table 1. Organisational Co-Creation Practices for Shared Value Creation and Realisation

PROJECT PHASE	CO-CREATION ORGANISATIONAL PRACTICE	DESCRIPTION
(1) ESTABLISHING A FOUNDATION OF SHARED PRIORITIES	Creating Alignment for Preventive Care	Collaborative effort among stakeholders to establish shared priorities cantered on preventive care and reducing falls among elderly residents.
	Building a Supportive Policy Framework	Integration of digital health solutions within broader regional and national healthcare policies to leverage support and ensure strategic alignment.
	Awareness Building and Stakeholder Engagement	Engagement in activities that create awareness about falls prevention and build consensus among stakeholders to ensure collective commitment.

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(2) OPERATIONALISING FOR COLLECTIVE ACTION	Co-Development and Stakeholder Engagement	Involving multiple stakeholders, such as care home staff, general practitioners (GPs), and health authorities, in the co-development of the digital tool to ensure practical usability.
	Training and Workforce Empowerment	Providing comprehensive training sessions to enhance the digital literacy and confidence of care home staff, empowering them to use technology effectively.
	Integrated Care Delivery	Enabling a seamless flow of health data across care teams, breaking down silos to improve coordination and ensure timely intervention for elderly care.
(3) REALISING IMPACT THROUGH VALUE SYNERGY	Collaborative Learning and Knowledge Sharing	Establishment of platforms like the Community of Practice to facilitate knowledge sharing, reflection, and refinement of healthcare practices.
	Empowering Care Staff	Leveraging digital tools to enable care home staff to provide personalised, data-driven care, thus enhancing both patient outcomes and staff satisfaction.

4.1. Establishing a foundation of shared priorities phase

The first phase of the Safe Steps implementation process involved creating a robust foundation through aligning stakeholders around shared goals and common priorities. Thus, "*Firstly, it was all about building a strong foundation by bringing stakeholders together around shared goals and common priorities. This alignment was essential for enabling collaborative innovation*" (Patient and Public Involvement and Engagement Lead, Safe Steps). This phase was critical in setting the context for collaborative innovation, especially in addressing the complex challenge of fall prevention among older adults, a challenge that has significant health, social, and economic implications.

Creating Alignment for Preventive Care. A key finding from this first phase of the project was the critical role of creating alignment among diverse stakeholders. Thus, the HInM, local authorities, and care home staff collaborated to establish shared priorities focused on improving patient safety through preventive care. As the Operations Director at Safe Steps stated: "*Once all partners were aligned, including the GPs, NHS commissioners, adult social care managers at Bury Council, and the care home staff, we accelerated the uptake of Safe Steps in Bury*". This collective alignment was driven by a shared understanding of the significant risks and costs associated with falls, widely recognised as a major public health issue. The commitment to a preventive, collaborative approach has had a measurable impact: "*To achieve a 57% reduction in ambulance callouts in Bury when the number is increasing across Greater Manchester is a phenomenal achievement. It is not only a testament to the transformative impact of proactive technology but to effective collaboration between healthcare providers and industry, ultimately resulting in better outcomes for care home residents*" (Clinical Lead for Transformation, Health Innovation Manchester).

Building a Supportive Policy Framework. Another critical practice of establishing shared priorities was ensuring that the Safe Steps platform was strategically linked to broader health initiatives, including the NHS Long Term Plan and the Enhanced Health in Care Homes

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(EHCH) framework. These initiatives provided a supportive policy environment that aligned with the project's goals of improving care for the elderly through proactive and data-driven interventions. By integrating Safe Steps within these established policy frameworks, stakeholders were able to leverage existing institutional support, thereby creating a stronger foundation for the platform implementation. This alignment ensured that the adoption of Safe Steps was not an isolated effort but part of a cohesive strategy to enhance elderly care in Greater Manchester. "*It meant we were not operating in isolation but contributing to a wider system of proactive, data-driven care for older people*" (Patient and Public Involvement and Engagement Lead, Safe Steps).

Awareness Building and Stakeholder Engagement. Awareness building was another key practice in this phase, aimed at raising awareness among stakeholders about the importance of fall prevention. Stakeholders, including healthcare providers and local authorities, actively participated in workshops, meetings, and discussions that highlighted the risks associated with falls and the benefits of adopting digital solutions like Safe Steps. "*It is through meaningful engagement that we begin to shift mindsets. When stakeholders truly understand the impact of falls and the potential of digital tools to prevent them, they become powerful advocates for change*" (Clinical Lead for Transformation, Health Innovation Manchester). This participatory engagement played an essential role in ensuring that all stakeholders were committed to the shared value of preventing falls and improving the quality of life for older adults. By fostering awareness and building a common understanding, stakeholders were more willing to collaborate, invest time, and allocate resources for the successful implementation of Safe Steps.

4.2. Operationalising for collective action phase

We found that the second phase focused on the practical implementation of Safe Steps, which was characterised by integrated, collaborative efforts aimed at translating shared priorities into effective health actions. This phase emphasised the importance of cross-organisational collaboration and stakeholder engagement to ensure a successful rollout of the digital platform. "*The strength of this platform was in its partnerships. By working across organisations, we turned shared goals into coordinated action, allowing Safe Steps to move from vision to impact on the ground*" (CEO, Safe Steps).

Co-Development and Stakeholder Engagement. We observed that the Safe Steps platform was deployed through a highly inclusive and participatory practice that involved multiple stakeholders, care home staff, GPs, local health authorities, and technology partners. The emphasis on co-development ensured that the platform was designed to meet the practical needs of its users. Specifically, the functionalities of Safe Steps, such as the RESTORE2 and RESTORE2 Mini tools for monitoring patient deterioration, were developed in response to feedback from care home staff and GPs. "*Safe Steps RESTORE2 feature was adopted as part of our escalation workflow*" (care home manager). This collaborative development approach ensured that the tool was user-friendly, easy to integrate into existing workflows, and addressed the real-world challenges faced in managing the health of elderly residents. We found that, as a result, Safe Steps was more readily adopted by care home staff, who were actively involved in shaping its features. "*The success of the Bury initiative was sustained as a collaborative approach through system partners being engaged and committed, driving change locally in digital transformation*" (Project Manager, Bury Integrated Delivery Collaborative).

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Training and Workforce Empowerment. A critical aspect of the integrated deployment was the focus on empowering care home staff through training and capacity building. Thus, the Safe Steps project team conducted comprehensive training sessions for care home staff to help them understand how to use the platform effectively. Interestingly, this training went beyond technical skills, emphasising the importance of data-driven decision-making and demonstrating how the use of real-time information could improve patient outcomes. We observed that the involvement of care home staff in training and feedback loops fostered a sense of ownership, which played a significant role in ensuring success. "*The training made a real difference to our team. It wasn't just about learning the system, it was about seeing how we could use it to improve the care we give every day*" (care home manager). The training not only enhanced the digital skills of care home staff but also increased their confidence in managing residents' health proactively, thus contributing to higher quality of care.

Integrated Care Delivery. The deployment of Safe Steps also facilitated a more integrated approach to care delivery, breaking down traditional silos between healthcare providers and care homes. Thus, the platform provided real-time data that was accessible to care home staff, GPs, and other healthcare professionals, enabling a coordinated response to changes in residents' health status. This practice of integration ensured that all relevant stakeholders had access to the same information, which allowed for timely and informed interventions. "*Safe Steps has been instrumental in bridging the gap between primary care and care homes. By giving everyone access to the same real-time data, we were able to respond faster, make better decisions, and deliver safer, more joined-up care*" (Clinical Lead for Transformation, Health Innovation Manchester). For example, the integration of Safe Steps into the broader Primary Care Network (PCN) framework was a key factor in fostering collaboration between different healthcare providers and ensuring that residents received the best possible care in their primary place of residence.

4.3. Realising impact through value synergy phase

The final phase focused on realising the impact of the Safe Steps project by creating value synergy through enhanced outcomes for patients, care staff, and the healthcare system. During this phase, the benefits of shared priorities and collaborative action converged, resulting in shared value, where both social and business values were created. CEO of Safe Steps stated "*This is where everything came together. By aligning our efforts from the start, we were able to create something greater than the sum of its parts, better care for residents, more confident staff, and a more efficient health system*".

Specifically, one of the most significant outcomes of the Safe Steps implementation was the reduction in falls among residents in care homes. According to data from the North West Ambulance Service, the incidence of serious falls decreased by 38% within a year of implementing Safe Steps. This reduction was accompanied by a 57% decrease in ambulance callouts from care homes. "*It changed how we work with care homes. It allowed us to identify issues early and intervene before things escalated, which meant fewer hospital admissions and better outcomes for residents*" (GP Partner, Sefton Park Medical Centre).

Moreover, the reduction in falls and emergency callouts not only improved patient outcomes but also led to significant system-level efficiency gains. The decreased demand for ambulance services, hospital admissions, and emergency care translated into substantial cost savings for the healthcare system. Analysts estimated that the Safe Steps project saved the NHS in Bury

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approximately £500,000 annually, reflecting the financial viability of the tool as a solution for fall prevention. The project's return on investment was calculated to be 30:1, demonstrating its potential as a sustainable and cost-effective innovation. "*If we were to model the reduction of falls in Bury across Greater Manchester, this amounts to a saving of £5.1 million in just 12 months. This could help tackle current NHS financial pressures as well as reduce the pressure on ambulance staff and improve the quality of life for people living in care homes*" (CEO, Safe Steps).

Collaborative Learning and Knowledge Sharing. We found that the role of collaborative learning as an organizational practice in realising shared value was crucial. More specifically, Safe Steps provided not only a digital platform but also a kind of "virtual" platform for stakeholders from different care homes to share experiences, learn from each other, and refine their practices. "*The strength of this work lay in its openness. Safe Steps brought people together, not just to use a tool, but to learn, adapt, and improve together. That collaborative spirit is what made it scalable*" (Clinical Lead for Transformation, Health Innovation Manchester). In this way, Safe Steps offered not just a "virtual" platform for knowledge sharing but more the community-based approach to learning. This helped ensure that the lessons learnt from the implementation in Bury were disseminated across Greater Manchester, contributing to the sustainability and scalability of the project.

Empowering Care Staff. Another practice that led to shared value realisation was providing staff with practical digital tools to assess fall risk and monitor patient health. Staff feedback highlighted the positive impact of the digital tools on their workflows, particularly in improving the efficiency of care rounds with GPs. We found that the participants overall emphasised how the platform facilitated better coordination and communication between healthcare professionals. This improvement in the work environment contributed to better care experiences for both staff and residents, reinforcing the overall shared value created through the project. "*Weekly ward rounds are now part of the NHS GP contract […] Safe Steps enables them to deliver on this responsibility in a timely manner. Safe Steps empowered staff by connecting them in real-time with GPs, this enabled our residents to get the right care at the right time*" (care home manager).

5. Discussion and conclusions

Digital health innovations represent a promising approach to addressing grand challenges such as ageing populations, health, and well-being, which are increasingly becoming critical societal issues (George et al., 2016; Franco et al., 2021). The present study aimed to explore how shared value is practically created through co-creation and collaborative efforts in healthcare, particularly when addressing the grand challenge of enhancing the health and well-being of the ageing population. We explored the case of the Safe Steps digital platform focused on preventing falls among older adults and discovered that shared value creation followed three distinct phases: (1) Establishing a Foundation of Shared Priorities, (2) Operationalising Collective Action, and (3) Realising Impact through Value Synergy. Moreover, the study identified eight organisational co-creation practices and their role in shared value establishment, development, and realisation.

Specifically, the study highlights that to be realised shared value needs to be established through shared priorities, then understanding of the shared value should be integrated into collective action, and only after it can be realised through social and business values synergy.

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More specifically, our study shows that, in the context of grand challenges, shared value is realised when social and business values converge to create unique shared value. Thus, in our case, the project achieved improved health outcomes for older adults by reducing falls, empowered care home staff through training and digital literacy, and also contributed to system-wide efficiency gains by reducing emergency care needs and associated costs. This synergy of value across different domains highlights the synergistic impact of aligning stakeholder priorities and fostering collaborative innovation.

The present study enlarges the current understanding of how grand challenges can be addressed through shared value co-creation. First, the study puts a break into the current conceptualization of how shared values are created. The existing view on the shared value highlights the intertwined nature of social and business values during innovation (e.g., Dembek et al., 2016; Wilson & Post, 2013). Thus, shared value is an outcome achieved by combining social and business benefits through collaboration (Porter & Kramer, 2011; Spieth et al., 2019; Rashkova et al., 2024). The present study provides a more nuanced dynamic perspective, suggesting when exactly the two different values—business and social—unite and the creation of shared values is initiated. Specifically, it is during the first two "preparatory" phases—Establishing a Foundation of Shared Priorities and Operationalising for Collective Action—that these values are developed separately. In this way, the related organisational practices focus on building capacity and readiness among stakeholders. Only after that, during the final phase—Realising Impact through Value Synergy—these values are realised as a unique, integrated, and shared outcome, reflecting the successful co-creation of value.

Second, the present study contributes to the existing research on collaboration in digital health innovation by showing how shared value is created through organisational co-creation practices. We add to the general understanding that more collaborative efforts combined with digital health innovations enable a more efficient approach to addressing grand challenges in healthcare and well-being (Iakovleva et al., 2021; Nickel et al., 2024). We further suggest that co-creation is crucial to enable the realisation of shared value in the context of grand challenges (e.g., Gond & Brès, 2020; Girschik et al., 2022), and propose a set of the organisational practices that guide this process. Specifically, the present study identified organisational co-creation practices intrinsic to grand challenges, such as alignment among stakeholders, stakeholder engagement to build awareness, training and empowering healthcare stakeholders to foster collaboration across healthcare settings, among others.

Third, this study advances the debate on shared value by illustrating that not only business and social aspects must be addressed to foster sustainable, long-term change (Dembek et al., 2016; George et al., 2016), but this should be done along with ethical alignment. Specifically, the current view on long-term change within health innovation suggests the importance of the *value-based approach* to healthcare with a focus on delivering patient-centric outcomes while addressing resource limitations and ensuring sustainable value for all stakeholders involved, including healthcare providers, payers, and society at large (Fürstenau et al., 2021; Porter, 2008). In this view, merely driving cost savings without ensuring improved patient outcomes can lead to misaligned incentives and unintended consequences for the healthcare system, as value-based care emphasizes that all stakeholders must benefit in the long term for true shared value to be realised (Porter, 2008). The present study highlights that adding shared ethical commitment feature serves as the foundation to transform collaborative initiatives from just

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transactional partnerships into impactful responses to the grand challenge of the well-being of the elderly population.

Concluding, this study explores how digital innovation, supported by shared value creation, can tackle grand challenges in the healthcare context. It emphasizes the need for new approaches that move beyond traditional, siloed methods and embrace organisational collaboration and co-creation, shared value creation, and the ethical dimension.

Keywords

grand challenge, shared value, co-creation, digital healthcare, digital platform, innovation

References

Baldassarre, B., Calabretta, G., Bocken, N. M. P., & Jaskiewicz, T. (2017). Bridging sustainable business model innovation and user-driven innovation: A process for sustainable value proposition design. *Journal of Cleaner Production*, 147, 175-186.

Baldwin, C., & Von Hippel, E. (2011). Modeling a paradigm shift: From producer innovation to user and open collaborative innovation. *Organization Science*, 22(6), 1399-1417.

Bardhan, I., Chen, H. and Karahanna, E. (2020), Connecting Systems, Data, and People: A Multidisciplinary Research Roadmap for Chronic Disease Management, *MIS Quarterly*, 44(1), 185–200.

Bogers, M., Afuah, A., & Bastian, B. (2010). Users as innovators: a review, critique, and future research directions. *Journal of Management*, 36(4), 857-875.

Bogers, M., Hadar, R., & Bilberg, A. (2016). Additive manufacturing for consumer-centric business models: Implications for supply chains in consumer goods manufacturing. *Technological Forecasting & Social Change*, 102, 225-239.

Breuer, H., & Lüdeke-Freund, F. (2017a). Values-based network and business model innovation. *International Journal of Innovation Management*, *21*(03), 1750028.

Breuer, H., & Lüdeke-Freund, F. (2017b). *Values-based innovation management: Innovating by what we care about*. Bloomsbury Publishing.

Bryman, A. (2012): Social Research Methods, 4th edition, Oxford university press, Oxford.

Cassiman, B., Di Guardo, M. C., & Valentini, G. (2009). Organising R&D projects to profit from innovation: Insights from co-opetition. *Long Range Planning*, 42(2), 216-233.

Chesbrough, H.W. (2006)**.** *Open Business Models: How to Thrive in the New Innovation Landscape*. Boston: Harvard Business School Press.

Clark, A., Holland, C., Katz, J., & Peace, S. (2009). Learning to see: lessons from a participatory observation research project in public spaces. *International Journal of Social Research Methodology*, *12*(4), 345-360.

Dembek, K., Singh, P. and Bhakoo, V. (2016) Literature review of shared value: A theoretical concept or a management buzzword?, *Journal of Business Ethics*, 137(2), pp. 231–267.

Ferraro, F., Etzion, D., & Gehman, J. (2015). *Tackling Grand Challenges Pragmatically: Robust Action Revisited. Organization Studies*, 36(3), 363–390.

Submitted 30/09/2024 – Accepted 05/08/2025

Franco E.G., Kuritzky M., Lukacs R., Zahidi S. **(2021).** *The Global Risks Report 2021: 16th Edition.* Geneva: World Economic Forum.

Fürstenau, D., Auschra, C., Klein, S., & Gersch, M. (2019). A process perspective on platform design and management: evidence from a digital platform in health care. *Electronic Markets*, *29*(4), 581-596.

Fürstenau, D., Klein, S., Vogel, A., & Auschra, C. (2021). Multi-sided platform and data-driven care research. *Electronic Markets*, 1-18.

Gassmann, O., Enkel, E., & Chesbrough, H. (2010). The future of open innovation. *R&D Management*, 40(3), 213-221.

Gawer, A. (2021). Digital platforms and ecosystems: remarks on the dominant organizational forms of the digital age. *Innovation*, 1-15.

George, G., Howard-Grenville, J., Joshi, A., & Tihanyi, L. (2016). *Understanding and Tackling Societal Grand Challenges through Management Research. Academy of Management Journal*, 59(6), 1880–1895.

Girschik, V., Svystunova, L., & Lysova, E. I. (2022). Transforming corporate social responsibilities: Toward an intellectual activist research agenda for micro-CSR research. *Human relations*, *75*(1), 3-32.

Gleiss, A., Kohlhagen, M., & Pousttchi, K. (2021). An apple a day–how the platform economy impacts value creation in the healthcare market. *Electronic Markets*, 1-28.

Gobble, M. M. (2016). Defining the Varieties of User Innovation. *Research-Technology Management*, 59(6), 47-51.

Gond, J. P., & Brès, L. (2020). Designing the tools of the trade: How corporate social responsibility consultants and their tool-based practices created market shifts. *Organization Studies*, *41*(5), 703-726.

Greater Manchester Combined Authority (2022) 'Falls Prevention'. Available at: https://www.greatermanchester-ca.gov.uk/what-we-do/ageing/ageing-well/falls-prevention/

Gregory, R. W., Henfridsson, O., Kaganer, E., & Kyriakou, H. (2021). The role of artificial intelligence and data network effects for creating user value. *Academy of Management Review*, *46*(3), 534-551.

Health Innovation Manchester (2024) "Care homes in Greater Manchester achieve 57% reduction in ambulance call outs with innovative digital health app", *Health Innovation Manchester*, 19 August. Available at: https://healthinnovationmanchester.com/news/care-homes-in-greater-manchester-achieve-57-reduction-in-ambulance-call-outs-with-innovative-digital-health-app/

Hermes, S., Riasanow, T., Clemons, E. K., Böhm, M., & Krcmar, H. (2020). The digital transformation of the healthcare industry: exploring the rise of emerging platform ecosystems and their influence on the role of patients. *Business Research*, *13*(3), 1033-1069.

Iakovleva, T., Oftedal, E., & Bessant, J. (2021). Changing role of users—innovating responsibly in Digital Health. *Sustainability*, *13*(4), 1616.

Ilmarinen, P. (2018). Creating shared value in the banking industry: A case study from Finland. *Finnish Business Review*, 10, 1-10.

Submitted 30/09/2024 – Accepted 05/08/2025

Laursen, K., & Salter, A. (2006). Open for innovation: the role of openness in explaining innovation performance among UK manufacturing firms. *Strategic management journal*, *27*(2), 131-150.

Lichtenthaler, U. (2021) Open innovation: Past research, current debates, and future directions, *Technovation*, 104, 102221.

Mahr, D., Lievens, A., & Blazevic, V. (2014). The value of customer co-created knowledge during the innovation process. *Journal of Product Innovation Management*, 31(3), 599-615.

Menghwar, P. S., & Daood, A. (2021). Creating shared value: A systematic review, synthesis and integrative perspective. *International Journal of Management Reviews*, *23*(4), 466-485.

Morris, A. (2015). *A Practical Introduction to In-depth Interviewing*. Sage Publications.

National Institute for Health and Care Excellence (2013). *Falls in older people: assessing risk and prevention.* Clinical guideline [CG161]. London: NICE. Available at: https://www.nice.org.uk/guidance/cg161

Neiva Ganga, R., Fitzsimmons, D., Smith, G., and Mustafa, A. (2023). Reducing care home falls: a real-world data validation of a multifactorial falls-intervention digital application, *BMC Digital Health*, 1(49).

Nickel, G. C., Wang, S., Kwong, J. C., & Kvedar, J. C. (2024). The case for inclusive co-creation in digital health innovation. *NPJ Digital Medicine*, *7*(1), 251.

NIHR Applied Research Collaboration Greater Manchester (ARC-GM). (2022). *Greater Manchester Falls Prevention: Delivering Integration and Reconditioning*.

Piller, F. and West, J. (2014) Firms, users, and innovation. In. Chesbrough et al. (eds.) *New Frontiers in Open Innovation*. Oxford University Press, USA, 344, 169-168.

Porter, M.E. (2008). *Value-Based Health Care Delivery. Annals of Surgery*, 248(4), 503–509.

Porter, M.E. and Kramer, M.R. (2011). *Creating Shared Value: How to Reinvent Capitalism and Unleash a Wave of Innovation and Growth. Harvard Business Review*, 89(1/2), 62–77.

Ramaswamy, V., & Ozcan, K. (2018). What is co-creation? An interactional creation framework and its implications for value creation. *Journal of Business Research*, 84, 196-205.

Rashkova, Y., Zaitsava, M., & Moi, L. (2024). Towards the Creation of Shared Value in an Inclusive Business: An Empirical Investigation. In *Diversity, Equity, and Inclusion (DEI) Management*. Emerald Publishing Limited, 229-247.

Roszkowska-Menkes, M. (2017). User Innovation: State of the Art and Perspectives for Future Research. *Journal of Entrepreneurship, Management and Innovation*, 13(2), 127-154.

Sanday, P. R. (1979). The ethnographic paradigm (s). *Administrative Science Quarterly*, *24*(4), 527-538.

Schiavone, F., Mancini, D., Leone, D., & Lavorato, D. (2021). Digital business models and ridesharing for value co-creation in healthcare: A multi-stakeholder ecosystem analysis. *Technological Forecasting and Social Change*, *166*, 120647.

Spieth, P., Schneider, S., Clauß, T. and Eichenberg, D. (2019) Value drivers of social businesses: A business model perspective, *Long Range Planning*, 52(3), pp. 427–444.

Street, C. T., & Meister, D. B. (2004). Small business growth and internal transparency: The role of information systems. *MIS Quarterly*, 473-506.

Submitted 30/09/2024 – Accepted 05/08/2025

Thomas, D. R. (2006). A general inductive approach for analyzing qualitative evaluation data, *American Journal of Evaluation*, 27(2), pp. 237–246.

Van de Ven, A. H., & Poole, M. S. (1995). Explaining development and change in organizations. *Academy of Management Review*, *20*(3), 510-540.

Van Maanen, J. (1979). The fact of fiction in organizational ethnography. *Administrative Science Quarterly*, *24*(4), 539-550.

Vargo, S. L., & Lusch, R. F. (2008). Service-dominant logic: continuing the evolution. *Journal of the Academy of Marketing Science*, 36(1), 1-10.

Von Hippel, E. (2007). Horizontal innovation networks—by and for users. *Industrial and corporate change*, 16(2), 293-315.

Wilson, F. and Post, J.E. (2013) Business models for people, planet (& profits): Exploring the phenomena of social business, a market-based approach to social value creation, *Small Business Economics*, 40(3), 715–737.

Yin, R.K. (2013), *Case Study Research: Design and Methods*. Sage Publications.

Zaitsava, M., Marku, E., & Di Guardo, M. C. (2022). Is data-driven decision-making driven only by data? When cognition meets data. *European Management Journal*, *40*(5), 656-670.

Zilber, T. B., & Zanoni, P. (2022). Templates of ethnographic writing in organization studies: Beyond the hegemony of the detective story. *Organizational Research Methods*, *25*(2), 371-404.

Submitted 30/09/2024 – Accepted 05/08/2025