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EDITORIAL

DIGITAL SERVITISATION: CURRENT EVIDENCE, CONSTRAINTS AND FUTURE RESEARCH DIRECTIONS

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The aim of this editorial[1] is to present an overview, and to promote, further discussion about digital servitisation (DS) from a firm's perspective. Here, we describe both the key features and the interplay between digitalisation and servitisation, which lead to the emergence of DS. We also propose a selection of the potentials and constraints of DS, their implications for practitioners, and forums for future research.

Digitalisation has accelerated the growth of both start-ups and large corporations that combine digital and non-digital assets to develop innovative products, services, and business models across various geographical areas and industrial sectors (Compagnucci et al., 2026b; El Hajjar & Compagnucci, 2025). Digitalisation encompasses the use of information or digital technologies, such as Internet of things (IoT), data analytics, cloud computing, and artificial intelligence (AI), to seize new business opportunities, to reinforce existing processes, and to improve user experiences. Unlike digitisation, which is the technical process of converting physical or analog information into a digital format, digitalisation comprises the organisation and integration of new sociotechnical structures, which were not possible before the advent of digital technologies, but are now used to transform business operations and create new revenue streams (Compagnucci et al., 2026b; Verhoef et al., 2021). More recently, the diffusion of Industry 4.0, and the consequences of the many health, environmental and geopolitical crises, have driven manufacturing firms to expand beyond their traditional core business to remain competitive, by exploring and exploiting the opportunities of servitisation (Jovanovic et al., 2022; Tian et al., 2022). Servitisation is the shift a firm makes from a product-centric business model to adopting a service-oriented strategy. This implies major changes in both the business model and the mission of firms (Raddats et al., 2019).

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The interplay between digitalisation and servitisation has increasingly attracted the attention of academics, practitioners, and policymakers. While digitalisation is the "enabler" that offers the data infrastructure, servitisation provides the commercial logic (Vendrell-Herrero et al., 2017). Although several firms do struggle to generate revenues from services (i.e. the Service Paradox), digitalisation can and does contribute to reducing service costs by enabling remote monitoring. Digitalisation also strengthens scalability, by replicating digital services with minimal marginal costs and it facilitates customisation, as data enables companies to adapt their services to individual user behaviours (Gebauer et al., 2005). This interplay between digitalisation and servitisation is now termed digital servitisation (DS) which acts as a force to re-engineer a firm's business model. Indeed, DS is «the development of new services and/or the improvement of existing ones through the use of digital technologies. These can be exploited to enable new (digital) business models, to find novel ways of (co)creating value, as well as to generate knowledge from data, improve the firm's operational and environmental performance, and gain a competitive advantage» (Paschou et al., 2020, p. 284).

Galvani et al. (2022) suggest that DS can influence three areas of innovation at the level of the firm: (1) product provision, (2) after-sales servicing, and (3) advanced services that take after-sales to the next level. From a general standpoint, DS offers several potential opportunities as it strengthens value creation and capture because digital technologies integrate seamlessly with fleet management, offering opportunities to enhance product lifecycle management, and to engage customers. Furthermore, DS enables the management team to improve decision making by providing both more complete and more reliable data. In particular, it facilitates customer interactions, data collection and storage, and big data analytics. DS also contributes to enhancing the financial performance of firms (Kohtamäki et al., 2020).

The literature also emphasises the key role of DS in innovating firms' business models (Beverungen et al., 2021), leading companies to create and adopt business models that prioritise customer needs, data, and outcome-based services. Indeed, DS redesigns a firm's value proposition by promoting the adoption of subscription models and pay-per-use systems (Paiola, 2019). Thus, DS reinforces customisation and flexibility in business models, leveraging on data analytics for predictive insights, improved customer engagement, and remote service delivery. Furthermore, DS facilitates circular business model innovation, where AI and digital capabilities help firms to improve resource efficiency and sustainability by automating circular practices (Sjödin et al., 2023).

Although DS offers strategic advantages to firms, this path of transformation may be hampered by a variety of constraints. First, to offer advanced services, manufacturing firms should shift from a focus on products and services, to a service-centric strategy. This requires specific managerial skills and increased managerial effort, and may need the upskilling, or reskilling, of a firm's workforce (Compagnucci et al., 2025). Indeed, digital capabilities involve training and software skills that are important for designing and implementing innovative product-service combinations (Calle et al., 2020). Second, to capture value from digitalisation, firms should also invest in the formation of servitisation capabilities. This means that both digitalisation and servitisation should be developed together (Kohtamäki et al., 2020). Third, the uncertainty associated with DS projects discourages companies from making important investments. However, a firm's digital readiness, which encompasses its existing knowledge of digital technologies, contributes to dealing with this issue by bridging the gap between traditional product-focused logic and innovative service-oriented, data-driven business models (Paiola et al., 2024). Fourth, DS poses the question of applying the concept of "value co-creation" at a practical level. It means that firms should redesign their organisation, resources, and mechanisms to learn more about their customers, suppliers and gain knowledge from external providers, thus enabling value co-creation (Compagnucci et al., 2025). This introduces the ecosystem perspective (Compagnucci et al., 2026a): a firm cannot advance towards DS independently, on its own, and

its stakeholders, within the ecosystem, should undertake a similar transformation. This emphasises the importance of relational strategies for implementing DS (Paiola et al., 2024).

When attention is focused on manufacturing industries and firms, DS is recognised as being one of the most important transformations reshaping industrial business models (Joshi et al., 2026). Manufacturing firms increasingly focus on building integrated ecosystems of services, data, assistance and customer relationships around products (Kowalkowski, et al. 2025). Firms tend to sell operational continuity, predictive maintenance, software updates, remote monitoring, and personalisation. Value is shifting from single product-based transactions to product lifecycles. Sensors, digital platforms and algorithms enable companies to collect real-time information, predict anomalies, optimise consumption, schedule interventions and thus to transform traditional goods into intelligent assets. This allows firms to anticipate both competitors' actions and customers' needs.

The yachting industry offers a clear example. A yacht does not generate value only at delivery; the service market begins after the launch of the yacht. Shipyards are evolving from yacht manufacturers into providers of integrated solutions: predictive maintenance, remote monitoring, technological upgrades, fleet management, crew training, charter management and continuous assistance. Digital platforms are a strategic enabler within this model. By adopting IoT and AI technologies, shipyards can constantly monitor vessels, anticipate possible failures, reduce downtime, and offer personalised subscription-based services. This creates long-term relationships with customers which are more stable and profitable than the single yacht-based transactions.

The same logic applies to several other domains such as, for example, industrial machinery. Producers of equipment can integrate sensors and AI systems in order to monitor machine performance, anticipate breakdowns, reduce downtime and to offer maintenance contracts based on performance or availability. Thus, as well as selling a machine, the manufacturer also offers production continuity and operational reliability. The fashion industry is another example. Digital tools and AI can enrich traditional products with personalised customer service, virtual styling, after-sales care, repair services, traceability, resale support and loyalty-based experiences. Here, DS strengthens brand identity, contributes to address environmental and social sustainability, and extends the relationship with the customer beyond the moment of purchase.

DS is not exclusive to large industrial groups (de Zabala, et al. 2025). Indeed, small and medium-sized enterprises (SMEs), especially those operating in highly specialised manufacturing sectors, can leverage on DS. DS makes it possible for SMEs to distinguish themselves from international competitors, to strengthen customer loyalty and to generate continuous revenue streams. In a competitive global economy, the real advantage will no longer lie only in "producing well", but in accompanying customers throughout the entire lifecycle of the product, integrating manufacturing, services, digital resources, and knowledge into a single value proposition (Seclen-Luna, 2025).

Despite its increasing influence and importance in industry, academic research on DS is still in its early stages. It is fragmented across various scientific fields and mainly relies on anecdotal evidence from single case studies rather than on either descriptive models for practitioners, or on research to support decision-making processes. Previous studies have focused on a small number of digital technologies for DS. But these technologies have often been examined individually rather than as just one part of integrated technology stacks. Furthermore, even though trust and privacy are often seen as barriers to the adoption of servitised business models, the importance and the potential role of cyber security has been largely ignored in the field of DS.

Current literature has also adopted a narrow industrial and geographical focus. Previous research has mainly investigated DS in the context of machinery and industrial equipment and business-to-consumer industries have received scarce attention. This gap should be addressed because DS may well evolve differently across sectors, depending on product characteristics,

customer relationships, data availability, service intensity and lifecycle management. Understanding these sector-specific trajectories would offer a promising avenue of research, especially in industries where digital services could reshape value creation, customer engagement and competitive positioning. Lastly, future studies should further explore DS in developing economies, where it could trigger important socioeconomic transformations and, also, assess the variety of digital entrepreneurial ecosystems already in existence (Compagnucci et al., 2026b; Paschou et al., 2020).

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