

## SPECIAL TRACK

### Examining the social and environmental relevance of sustainable digital business models: Impact on business practices and consumers

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In today's dynamic business landscape, the symbiotic relationship between innovation and sustainability has become more critical than ever.

New technologies have catalyzed the emergence of native **digital business models**, marking a paradigm shift in the landscape of commerce and industry (Bresciani *et al.*, 2021; Kraus *et al.*, 2021; Remane *et al.*, 2017). These innovative frameworks are intricately linked to the pathways of digital transition, wherein organizations navigate the dynamic realms of technological advancements to redefine their operational structures and strategic approaches (Kraus *et al.*, 2022; Sestino *et al.*, 2024). The **digital transition** is triggered by the integration of cutting-edge technologies such as Artificial intelligence (AI), Blockchain, Internet of Things (IoT), and – more recently – immersive realities, transforming traditional business models into digitally-driven counterparts (Davenport, 2018; Sestino *et al.*, 2020). Consequently, the synergistic interplay between technology and business gives rise to native digital business models that harness the transformative potential of digitalization (Iansiti & Lakhani, 2020). This **transformative process** not only enhances operational efficiency but also opens avenues for unprecedented value creation and competitive advantage (Andreassen *et al.*, 2018; Kraus *et al.*, 2021; 2022). As organizations embark on the journey of digital transition, delineating and adapting these native digital business models become imperative for sustained relevance and success in the contemporary business ecosystem (Bresciani *et al.*, 2021; Kraus *et al.*, 2021).

In this domain, among others, deep tech start-ups (DTSS) may play a crucial role as a significant and emerging entrepreneurial phenomenon deeply rooted in advanced research and engineering knowledge (Buratti & Vitellaro, 2024), frequently leveraging technology-driven strategies to disrupt traditional industries, establish novel markets, and deliver value through innovative approaches (e.g., as in Weber *et al.*, 2022). DTSS focus on disruptive and capital-intensive technologies with the potential to substantially impact society, individuals, and markets. They consistently express a clear purpose to address societal and environmental challenges profitably (Mayer, 2021), simultaneously enhancing the well-being of society, the natural world, and shareholders.

Therefore, embracing innovation ensures that old and new businesses stay relevant and competitive in an ever-evolving market, fostering growth and adaptability (Vaska *et al.*, 2021). Simultaneously, the case of DTSS demonstrates that prioritizing **sustainability** is not just a moral imperative but a strategic necessity, considering the escalating environmental and societal challenges our world faces (Broccardo *et al.*, 2023).

In this domain, **sustainable digital business models** represent a powerful approach. They embody an innovative approach where an organization harnesses digital technologies not only to create value but also to curtail adverse environmental, ethical, and social impacts (Comin *et al.*, 2020; Bocken *et al.*, 2014; Schaltegger & Burritt, 2018). This strategic approach involves seamlessly integrating socially responsible practices at the core of digital business operations, ensuring their resilience and longevity.

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Building upon seminal research by Bocken et colleagues (2014) and Schaltegger & Burritt (2018), a sustainable digital business model deeply incorporates environmental, social, and economic dimensions into the fundamental framework of business activities. The “core” of a sustainable business model lies in its commitment to creating value that extends beyond the interests of shareholders, encompassing the well-being of a broader spectrum of stakeholders, including the environment, society, and, significantly, individuals (Ukko *et al.*, 2019).

Importantly, in light of the overarching objective of companies to fulfil individuals’ and consumers’ needs, sustainable digital business models assume a pivotal role. Indeed, in the realm of creating, delivering, and sharing value, it’s crucial to uphold a robust focus on consumers and the market, and maintaining a strong orientation towards both ensures sustainable and meaningful value exchange (Danarrahmanto *et al.*, 2020; Rantala *et al.*, 2019; Rizzo *et al.*, 2023). Coherently, the prioritization of consumers in the design of sustainable digital business models accentuates the overarching notion of sustainability (Rizzo *et al.*, 2023), extending beyond environmental concerns to encompass social dimensions and the enhancement of collective well-being (Azmat *et al.*, 2021). Thus, these models must maintain a dedicated market orientation, particularly considering contemporary consumer behaviors and the inherent dynamism and changes in consumers’ preferences (Geissdoerfer *et al.*, 2018; Danarrahmanto *et al.*, 2020; Rizzo *et al.*, 2023).

In the current era where the digital “meet” business, and sustainability “intertwines” with success, we invite scholars’ practitioners and researchers to embark on a scholarly journey to explore the relevance of **sustainable digital business models** in today’s dynamic landscape. This call extends its arms to those curious contributions willing to unravel the intricate relationship between **environmental factors** (e.g., energy efficiency, low environmental impact, e-waste reduction, and so on), **social factors** (e.g., inclusivity, digital inclusion, ethical sourcing, and so on), and **economic factors** (e.g., as for circular economy models, job creations, cost efficiency, and so on), shaping our digital future.

Specifically, this research initiative aims to delve into the profound impact of sustainable digital business models on both businesses and consumers. We seek to uncover the synergies and trade-offs, understanding how sustainable practices in the digital realm influence business strategies, consumer behavior, and the overall socio-economic structure.

Thus, we invite researchers, scholars, and visionaries to explore the intersection of technology, business, and sustainability. Topics of interest include, but are not limited to:

- Investigate how sustainable digital practices can mitigate environmental footprints in the business ecosystem. Explore innovations, technologies, and strategies that pave the way for a greener digital landscape
- Investigate and recognize the “social-oriented” component of the sustainable digital business models, in the attempt to enrich final consumers’ needs and improve societal wellbeing
- Shedding light on the digital inclusivity, by examining the role of sustainable digital business models in fostering inclusivity. How do these models contribute to bridging the digital divide, ensuring equitable access and benefits for all segments of society?
- Explore emerging business models that seamlessly integrate sustainability into their core. Analyze case studies, success stories, and potential challenges faced by businesses striving for a harmonious blend of profit and planet.

- Investigate the influence and impact of purpose on the business model, relationship networks, and success trajectory of emerging deep tech startups.
- Investigate consumers' perceptions, preferences, and behaviors towards businesses adopting sustainable digital models. Uncover the motivators and barriers influencing consumer choices in the digital marketplace.
- Investigate and shed light on innovative approaches to creating sustainable digital ecosystems.
- Discuss and increase knowledge around the social and ethical considerations in developing and implementing digital business models.

**Keywords:** sustainable digital business model; business model; digitalization; start-ups; economic factor; social factor; environmental factor

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