

P20 - Delving into the nexus of digitalisation and circular economy in businesses: overlapping and implications

8. SUSTAINABILITY TRANSITIONS

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Track summary: In an era defined by rampant digital transformation, which reshapes people's lives and redefines businesses and industries, the world is facing a series of grand challenges triggered by the industrial legacy of the past two centuries. In response to resource depletion and environmental corruption, among others, the Circular Economy (CE) paradigm has emerged as a beacon of hope for addressing environmental and sustainable challenges and has modified businesses and societies as well. In this realm, the role of Digital Technologies (DTs) is key and integral to the circular transition. On the one hand, DTs such as the IoT, additive manufacturing, big data analytics, and artificial intelligence enable businesses' translation towards CE principles, resulting in circular products, processes, and practices. DTs offer solutions for resource optimization, transparency, stakeholder engagement, and circular-driven innovation. On the other hand, the adoption of practices afferent to the CE inherently triggers DTs adoption by businesses. Employing CE strategies may lead businesses to overcome barriers to digitalization, like management commitment, openness to change, poor infrastructure, employee skills, stakeholder collaborative posture, and market uncertainties, among others.

A question arises: how do digitalisation and circular economy converge in businesses? In this resource-constrained business environment, this track aims to stimulate the debate about these discussed phenomena in terms of their links, overlaps, synergies, and implications. As a result, the track chairs seek to discuss how these two phenomena can contribute to forming a virtuous circle within companies to leverage digital transformation and circular paradigms to address sustainability challenges.