

AI, Leadership, and Global Sustainability Goals: How Leaders Leverage AI to Accelerate Organizational Contributions to the SDGs

Susan Akinwalere¹ Kirk Chang²

Abstract

This study aims to examine how AI-enabled leadership and organizational readiness jointly shape the strategic use of artificial intelligence (AI) to advance sustainability and green innovation, particularly in support of the United Nations Sustainable Development Goals (SDGs). It addresses two key gaps: the lack of integrative frameworks linking strategic leadership, AI ethics, and SDG-oriented innovation, and limited empirical understanding of how leadership dynamics and organizational readiness influence the integration of AI-driven sustainability metrics into performance systems and outcomes. Guided by two research questions, the study asks (1) How do organizational leaders across sectors align AI applications with sustainability goals and green innovation agendas, and what leadership capabilities and practices enable ethical, data-driven cultures that support responsible AI use? (2) In what ways do leadership dynamics and organizational readiness for digital transformation shape the integration of AI-enabled sustainability metrics into performance management systems and influence sustainability outcomes? The research is grounded in an integrated framework combining strategic leadership theory, AI ethics, and SDG-centered innovation models. Methodologically, the study adopts a qualitative multi-case design, analyzing 4-6 organizations across sectors such as energy, manufacturing, finance, and services that have embedded AI into sustainability strategies. The approach includes conceptual development and the design of constructs, alongside in-depth analysis of archived and published documents to identify patterns across cases. The findings are expected to show that AI-enabled sustainability leadership is a distinct capability combining technological literacy, ethical orientation, and systems thinking. Organizational readiness, including digital infrastructure, data governance, and a sustainability-oriented culture, is anticipated to strengthen the translation of leadership intent into measurable sustainability and outcomes, through the integration of AI-powered metrics into performance systems. The study contributes to the field by developing an integrative framework and offering practical insights for leaders and policymakers seeking to align AI adoption with sustainability and SDG objectives.

Keywords: AI-enabled leadership, organizational readiness, sustainability and green innovation, Sustainable Development Goals (SDGs)

Doi:

¹ University of East London, United Kingdom. ORCID: 0000-0002-0204-4475

² University of East London, United Kingdom. ORCID: 0000-0002-5689-7780