

## **Evaluating the Realities of SDG 11 in Africa: Achieving Urban Sustainability by 2030— Fact or Fiction?**

Nara Monkam, Associate Professor, Head of Public Policy Hub, Chair in Municipal Finance, Department of Economics, Faculty of Economics and Management Sciences (EMS), University of Pretoria

Charite Leta, University of Pretoria

### **Abstract**

This commentary critically examines the progress and challenges in achieving Sustainable Development Goal 11 (SDG 11) in Africa, which aims to make cities and human settlements inclusive, safe, resilient, and sustainable by 2030. Despite rapid urbanisation and economic growth, Africa's urban areas face significant challenges, including outdated colonial-era planning systems, high youth unemployment, and inadequate infrastructure. The persistence of informal settlements, environmental degradation, and governance issues further complicate urban development efforts. The commentary explores innovative strategies to advance SDG 11 within the remaining time frame, focusing on digital twin technology. Digital twins hold transformative potential by simulating urban scenarios, optimising resource allocation, and improving municipal operations. These computerised models replicate real-world systems, using logic, machine learning, simulation, and real-time data to support informed decision-making. These technologies can significantly improve urban planning, public safety, and service delivery, creating more resilient and sustainable urban environments on the continent. Critical components for successfully implementing sustainable cities are outlined, emphasising the importance of strategic planning, talent development, robust data infrastructure, and active collaboration between the public and private sectors. The SODPA model—Strategy and Talent, Operation and Business, Data and Infrastructure, Platform and Technology, and Application and Scenario—provides a comprehensive framework for developing and managing digital twin cities. The commentary underscores the need for significant policy changes, increased investment in urban infrastructure, and innovative financing mechanisms to bridge the existing gaps. The conclusion calls for a concerted effort from all stakeholders to leverage technology and foster inclusive, resilient, and sustainable cities across Africa by 2030.