



Unleashing power of AI and digitization for leap-frogging growth of African economies

04th September 2025 at 1230h – 1400h

Background

Africa stands at a critical juncture, facing a dual challenge: a massive energy infrastructure gap that leaves 600 million people without electricity and significant barriers to attracting the investment needed to close it. This is compounded by a "data-poverty paradox," where the lack of digital and energy infrastructure prevents the generation of data required to build the AI models that could optimize its rollout. This cycle of data scarcity and perceived investment risk creates fragmented markets and hampers the continent's ability to harness its immense clean energy potential, thus hindering economic growth and sustainable development.

AI and digitization are catalytic forces that can break this impasse by fundamentally reshaping the continent's energy landscape. AI acts as both a technical optimizer and a financial enabler. On the technical side, it drives radical efficiency; for example, digital grid management at the Abuja Electricity Distribution Company in Nigeria cut energy losses from 44% to 26% in just three months. In Kenya, companies like M-KOPA use AI-powered analytics to assess customer credit and create optimal repayment schedules for solar home system (SHS) loans, making clean energy accessible to previously unelectrified populations. Similarly, in Tanzania, Zola Electric's Infinity platform uses AI to integrate solar, storage, and grid power into a seamless energy service by forecasting demand, managing source-switching, and optimizing costs. Uniquely targeting not just households but also small enterprises, Zola now serves over 2 million people, demonstrating how AI can scale distributed renewable energy while boosting productivity and incomes.

Beyond optimizing individual projects, AI enables a complete reimagining of Africa's energy backbone. The future is not a monolithic grid but a hybrid, intelligent system where centralized grids, solar mini-grids, and stand-alone systems are seamlessly integrated. In this new model, the grid transforms from a sole provider into a manager of a complex, decentralized network, using AI to provide the predictive analytics needed to balance the system and ensure stability in real-time. This allows African nations to leapfrog legacy infrastructure and build a resilient, decarbonized, and digitally native energy system. This model builds on a proven precedent for digital leapfrogging in Africa; for instance, mobile cellular subscriptions in sub-Saharan Africa soared from 44% in 2010 to 89% in 2023.

Realizing this digital leapfrog requires a concerted strategic shift from all stakeholders, including policymakers, development finance institutions, investors, and international partners. To discuss these critical strategies and forge a collaborative path forward, the ISA is organizing a dedicated session. This discussion aims to further explore how African nations can harness AI and digitization for leapfrogging growth, charting a course to accelerate the development of resilient and clean energy economies across the continent. It will also discuss the demonstrations of AI in the power sector.

Schedule

Time (in IST)	Provisional Agenda
1230h to 1235h	Opening Remarks by ISA
1235h to 1355h	<p>Discussion with eminent discussants:</p> <ul style="list-style-type: none"> • Sujith Nair, CEO & co-founder, FIDE • Hari Natrajan, Consultant, SELCO Foundation • Ajay Kumar Sinha, General Manager, Solar Energy Corporation of India • Mousa Sondoqah. Head of AI, Becquerel Institute <p>Moderated by Mr. Ashish Khanna, DG ISA</p>
1355h to 1400h	Closing Remarks by ISA