

# Africa could position itself as a frontrunner in 4IR

KIGALI, Rwanda - Advances in science, technology and innovation, particularly in gene technology, big data, artificial intelligence and robotics, offer unprecedented opportunities to speed up Africa's development and transformation process.



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Advances in modern technologies are occurring at an accelerating pace, ranging from the fields of robotics, nanotechnology and biotechnology to materials science and artificial intelligence.

Globally, these technologies are bringing about transformation in all dimensions of life, and this provides an opportunity for Africa to harness these technologies to advance its socio-economic development agenda and position itself as a frontrunner in the 4th Industrial Revolution (4IR).

Three reports were launched by Clare Akamanzi, CEO of Rwanda Development Board and the African Union (AU) High Level Panel on Emerging Technologies (APET), at the Africa Innovation Summit II held in Kigali, Rwanda. The reports focus on malaria control and elimination, increasing Africa's agricultural productivity and enhancing Africa's energy security.

Recognising the role of science, technology and innovation, the APET was established by the AU to provide advice on emerging technologies and has since identified three emerging technologies that have the potential to benefit Africa:

- Gene Drives for Malaria Control and Elimination in Africa.
- Drones on the Horizon: Transforming Africa's Agriculture.
- Micro-grids: Empowering Communities and Enabling Transformation in Africa. In addition, APET has called for functional regulatory systems at national and regional levels

Speaking during the official launch of the three reports, Akamanzi commended the High Level Panel for the achievement of this milestone. He further reiterated his government's commitment and urged other Member States to harness emerging technologies for accelerated socio-economic transformation of the continent.

Chair of the High Level Panel, Prof Gassama Dia emphasised the need to strengthen regulatory systems in order to ensure timely access and effectiveness of these technologies. She also stated that there are perceived risks associated with these technologies and further research is encouraged with full participation of African scientists, policy makers, with active engagement of the target communities.

### **Innovation acceleration**

"Advances in science, technology and innovation, particularly in gene technology, big data, artificial intelligence and robotics, offer unprecedented opportunities to speed up Africa's development and transformation process. High-tech, reliable technologies at affordable cost, exist to address many problems in agriculture, energy production and health," Prof Dia said.

Earlier during the summit, the chief executive officer of the New Partnership for Africa's Development (NEPAD) Agency, Dr Ibrahim Assane Mayaki, noted that African scientists are actively involved in innovations and have necessary competences to apply the three technologies to address Africa's challenges and opportunities for transformation.

"... in order to effectively advance science, technology and innovation, Africa needs to adopt a co-evolutionary approach in which technology development should go hand in hand with regulation. The function of regulation is to promote innovation," Dr Mayaki argued.



### **African innovation must be nurtured**

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The three reports will serve as valuable resource in unpacking emerging technologies and building a culture of science, technology and innovation in Africa. The APET has made its recommendations on the three emerging technologies taking into account the capacity strengthening needs, regulatory and ethical considerations, and requirements for domestic and international investment.

APET further argues that Africa cannot afford to play the "waiting-game" in putting together regulatory requirements for technologies that are on the horizon but should be actively involved and come up with harmonised policies, guidelines and standard operating procedures taking advantage of its regional integration agenda.

The APET calls upon research and development institutions and entrepreneurs to examine these recommendations, and further calls upon African governments, regional organisations and partners to support them in taking this work to the next level.