

‘Artificial intelligence offers huge opportunities for Africa’

Johanna Dekker

Artificial intelligence and smart manufacturing in Africa, Panel F38, 9 February 2021

Africa has the fastest growth of value-added manufacturing in the world. New digital technologies, such as artificial intelligence (AI), add to this. But while currently AI hubs in Kenya, Nigeria, South Africa and Rwanda are connected, there are no connections with northern Africa. ‘We’re our own biggest enemies,’ commented Jacques Ludik, president of the Machine Intelligence Institute of Africa (MIIA), which aims to build a collaborative African AI ecosystem. Ludik reacted to Ton Dietz, professor of African Studies in Leiden, who asked about the connection between sub-Saharan and northern Africa. The panel agreed that AI offers an enormous window of opportunity to the African manufacturing sector, but that more connections throughout the continent are a prerequisite for this.

Despite claims of Africa de-industrialising, the panel argued that the opposite is the case. AI technologies, in particular, have simplified

processes and made manufacturing easier. The core use of AI is in predictive maintenance, asset performance and utility optimisation. It covers troubleshooting, monitoring, diagnostics, and predictions of processes in real time and helps to increase production while reducing risk and costs.

Wim Naudé from Cork University Business School mentioned the Ethiopian coffee supply chain as an example. Via the Internet of Things (IoT), the coffee is tracked and monitored and through blockchain and mobile finance linked with African fintech.

While these two speakers focused on the opportunities for entrepreneurs and SMEs, John Kamara of Nelson Mandela University pointed to the huge opportunities for AI-driven solutions at the low end of the value chain. Processes can be automated, especially in the bioscience industries, public health sector and financial services. ‘AI would create value faster for the common person on the street,’ Kamara stated. He called for the immediate education of 50,000 AI engineers.

Dorine van Norren spoke of the value that the African philosophy of Ubuntu could have for AI. Ubuntu means ‘I am because we are’, which is opposed to the western philosophical framework of cogito ergo sum, ‘I think therefore I am’. Ubuntu can be relevant when considering the ethics of AI in terms of responsibility. Peter-Paul Verbeek of the University of Twente helped UNESCO draft principles to guide the responsible and ethical use of AI. These principles include value-sensitive design, so Ubuntu – with its responsibility towards the community – is indeed reflected, he said.

Take-aways

- Africa has the fastest growth of value-added manufacturing in the world
- But the lack of connections between AI hubs hinders further expansion
- UNESCO’s AI principles reflect the Ubuntu philosophy