

Op-ed

Tipping The Scales Of Africa's Manufacturing Industry Through Data

By Sabine Dall'Omo, CEO for Siemens Southern and Eastern Africa

The value of data coupled with connected infrastructure and industrial ecosystems offers Africa a remarkable opportunity to create smart factories of the future. Data will be at the heart of reinvigorating Africa's industrial prowess, creating new industries and an entirely new set of jobs that previously did not exist.

Historically, Africa's growth has been defined by its abundance in natural and mineral resources but digitalization will change this. It will tip the scales of Africa's economic outlook more towards exports emanating from the manufacturing sector, with the textile vertical being the prime example. Developing factories of the future will boost Africa's GDP and catapult its international competitiveness by merging both the physical and virtual worlds. The future will now be defined by how Africa harnesses its manufacturing potential and how it moves the industrial revolution forward.

The continent's unique identity and extraordinary sense of creativity could be what puts us on the global map. The Afro-inspired design revolution taking shape is an opportunity to take our ingenuity to the world, and with skills development the continent will see a new industry emerge. The combination of smart hardware and intelligent software could help position Johannesburg, Nairobi or Lagos as the next design capital of the world.

The Siemens FABRIC showcase, launched at the end of August, is a testament to the talent Africa holds. Told through the universal language of fashion, FABRIC was a powerful project that demonstrated how data combined with technology could transform African cities. Three iconic African fashion designers (John Kaveke, Zizi Cardow and Palesa Mokubung) created one-of-kind outfits weaving in data extracted from these three African cities to tell a unique story about each of them. These are the kind of edgy collections that have gained the attention and admiration of the international fashion community, taking all three designers to renowned fashion shows across the world. But despite recognition on the global catwalk, the economic output from the apparel industry in Africa has not been grand in the last few years. However through digitalization, Africa's dynamic fashion sense could become a global hit.

Urbanization

As urbanization rapidly increases, so too does the demand in products and services. In the last few years, manufacturers have had to shorten throughput times to keep up with the increasing trend of individualised mass production and at the same time reduce their energy and raw material consumption. Now is the time for manufacturers to relook at rising production costs and determine how to safeguard their competitiveness

As connectivity changes the world and how we communicate, the manufacturing industry will also need to adapt. Transforming into factories of the future will be a smart step because intelligent machines will effectively respond to changing market and customer needs, and enable manufacturers to pick up on inefficiencies quickly. The industrial internet of things (IIOT) will be the foundation of production, ensuring machine to machine communication and automation while real-time data boosts productivity and revenue. Digitalization will transform workforces and contribute to the entire value chain while ensuring safe, reliable operations.

According to a [Frost & Sullivan White Paper](#) by the Manufacturing Leadership Council, the manufacturing industry will look completely different in the next 10 to 15 years as industries become high-tech engines of mass customization.

“Highly automated and information-intensive, the factory of tomorrow will look like an integrated hardware and software system...fuelled by vast quantities of information from every corner of the enterprise and beyond, moderated by analytical systems that can identify and extract insights and opportunities from that information, and comprise of intelligent machines that learn, act, and work alongside highly skilled human beings.”

Through research and insights, Siemens acknowledges the vast potential and possibilities for Africa’s future through manufacturing and has already been hard at work creating technologies for smart factories. It has created flexible, modular, economic automation and drive solutions to help industries transform easily. Its single-source solution maximises production and minimises downtime and has the capability to cover all facets of a textile plant from the production of chemical fibres and yarn to spinning, fabric manufacturing and finishing. It’s cost-effectiveness in configuration and commissioning makes it a manufacturer’s dream. Industrialisation will additionally bridge the gap between blue and white collar workers creating an upskilled workforce termed ‘grey-collar’ workers. This dynamic and developed staff contingent will be able to execute their duties with ease in the digital economy, alongside machines.

This transformation will push the continent onto another level that amplifies GDP, while creating a smarter Africa for all. The role of data architecture in this metamorphosis cannot be magnified enough, and with the exponential value of industrialization, Africa’s development could be fast tracked to tip the scales of its economic potential. The only element left will be active collaboration between government, regulators, business and society.