

MOVING FOUR-WARD

ACCELERATING AFRICA'S JOURNEY TOWARDS
THE FOURTH INDUSTRIAL REVOLUTIONS

WORDS EUGENE YIGA

AFTER CONSTANTLY BEING LEFT BEHIND THE REST OF THE WORLD, AFRICA HAS A CHANCE TO CATCH UP IN THE FOURTH INDUSTRIAL REVOLUTION (4IR).

Professor Tshilidzi Marwala, Vice-Chancellor of the University of Johannesburg and Deputy Chair of the Presidential 4IR Commission, shares how.

What's happening in the African tech space right now?

It's historically true that Africa hasn't been an active agent in past revolutions. But the last few years have seen an emergence on the continent of the real presence of the fourth industrial revolution (4IR) and the need for consolidated, rapid action in order for us not to be bystanders in

this process. The 4IR is already changing how we live, work, and communicate and is reshaping government, education, healthcare, and commerce. Not only do we have more access to information than ever before, but we also see a confluence of cyber, physical, and biological technologies, which no longer exist in labs but impact us every day.

How has COVID-19 affected all this?

The pandemic has precipitated an economic downturn in many of our countries. These can be deemed to be a tragedy of mega proportions. But

there is truth in the saying that through the clouds one can sometimes see a clear day. Our current pandemic has enabled us to continue to work productively in new and exciting ways. And while reports on the future of work from multiple sources have predicted that the world of work will change, the pandemic appears to have injected lightning speed in the transformation of workplaces. My argument is that the pandemic can be seen as a strategic lever that has accelerated change. We need

PROFESSOR
TSHILIDZI MARWALA
**Vice-Chancellor of
the University of Johannesburg
and Deputy Chair of the
Presidential 4IR Commission**

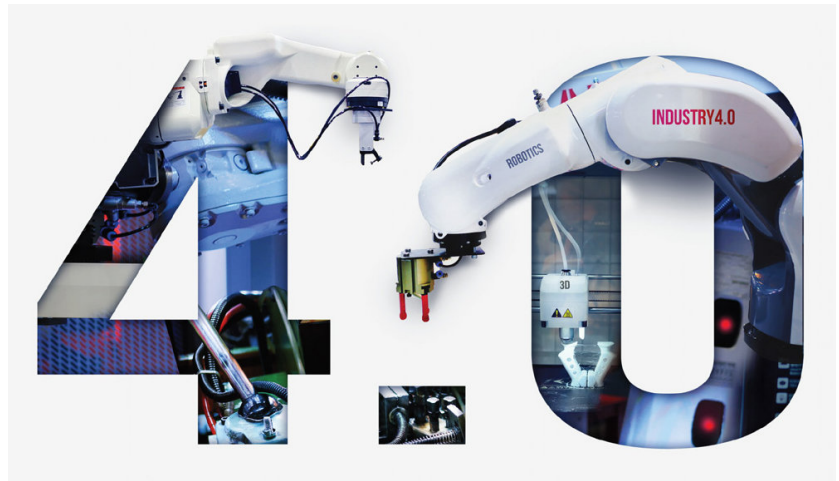
to keep up the momentum.

How do we embrace new technology?

We must develop a comprehensive and globally shared view of how technology is affecting our lives and reshaping our economic, social, cultural, and human environments. There has never been a time of greater promise or greater peril. A decade ago, the advent of machines smarter than human beings still seemed like a farfetched concept. But as Mariette DiChristina [dean of the College of Communication at Boston University and former Editor-in-Chief of Scientific American] has said: "Technologies that are emerging today will soon be shaping the world tomorrow and well into the future, with impacts to economies and to society at large. Now that we are well into the 4IR, it is critical that we discuss and ensure that humanity is secured by these new innovations, so that we can continue to prosper."

What are the risks of our dependence on new technology?

As Aldous Huxley once put it, "Technological progress has merely provided us with more efficient means for going backward." Huxley, noted for his 1932 novel *Brave New World*, sketched an uncanny picture of the future, located in a world populated by genetically modified inhabitants, and intelligence based social hierarchy. Huxley ramps up the terror as



he prophesies scientific advancements in sleep learning, psychological manipulation, and classical conditioning that alter the way human beings think and act. He feared that embracing scientific advancements would reduce human beings to passivity and egotism. What he probably hadn't anticipated is that human beings would adapt and remain active participants in those advancements.

How optimistic are you about Africa's prospects?

It must be acknowledged that Africa is lagging. But in terms of demographic distribution, the future belongs to Africa, with 60% of the continent's 1.25 billion people below the age of 25. Yet we're still

A history of revolutions

- 1** The First Industrial Revolution was the transition to new manufacturing processes in the period from the mid-18th century to the mid-19th century.
- 2** The Second Industrial Revolution [Technological Revolution] was a phase of rapid standardisation from the late 19th century into the early 20th century.
- 3** The Third Industrial Revolution [Digital Revolution] was the shift from mechanical and analogue electronic technology to digital electronics, which began in the latter half of the 20th century.
- 4** The Fourth Industrial Revolution is the ongoing automation of traditional manufacturing and industrial practices using modern smart technology.

behind the likes of South Korea, China, and the United States. And we face vast unemployment and inequality, which of course our strategies have to speak to. The crux of the issue is that we have to develop blueprints and systems from within the continent that speak to our unique circumstances. The continent has the potential to be a leader and contributor to the developments of the 4IR. We are tasked to ensure that Africa provides at least some answers to these challenges. It is vital that we continue to collaborate on ideas and solutions. Now is the time for us to take decisive steps to lead the charge rather than playing a game of catch-up. **T**

