

Connecting Africa through 5G broadband technologies

The Council for Scientific and Industrial Research (CSIR) is currently developing a 5G testbed, to prepare for the advent of 5G technologies and to ensure that Africa is able to adapt to the demands of the Fourth Industrial Revolution.

The testbed is expected to be launched later this year at the CSIR and can be adopted by various stakeholders such as higher education entities, development agencies, funding agencies, state owned enterprises, and government departments.

The testbed aims to support research on key technology building blocks for 5G and support development and experimentation on use cases relevant to the African continent, in partnership with Independent Communications Authority of South Africa, the private sector and higher education institutions.

This was revealed last week at the 40th Forum meeting in Durban, organised by the Wireless World Research Forum (WWRF), in partnership with the CSIR to discuss the role of 5G technologies to enable digital inclusion and industrialisation in Africa.

At the top of the agenda was 5G connectivity in Africa and how it's expected to transform the information and communication technology sector globally, whilst simultaneously contributing to the industry 4.0.

Speaking at the forum, CSIR's researcher, Sabelo Dlamini said the testbed would provide leadership and direction to the development of next generation networks.

"Knowledge and skills development is at the core of the CSIR's investment in the 5G testbed. This testbed will assist South Africa and the rest of the continent to develop the necessary skills and to adopt the new 5G technologies. We want to provide practical and tested use cases for the next industrial revolution in the country," he said.

The forum also aimed to prepare and enable policy makers and business of the upcoming 5G technologies and their impact in society. As the roll-out of 5G technologies and what needs to be done to establish an all-inclusive digitalisation of underserved areas for 5G infrastructure for both rural and urban citizens.

The Minister of Telecommunications and Postal Services, Siyabonga Cwele, urged government and industry to find creative ways to assist developing countries to remain competitive saying "that these countries should not be left behind".

"The principle of inclusivity is fundamental in ensuring that global humanity embraces the benefits of power of evolving technologies keeping the eyes on bridging the emerging digital divide. In most developing countries the majority of the workforce is low skilled. It is therefore very important to consider the potential impact of these new technologies that will provide platforms to build smart factories with plant automation, artificial intelligence and use of augmented reality to control stationary equipment such as welding, painting and assembly using robotic," said Minister Cwele.

The Minister said the 5G technologies are expected to provide significantly enhanced mobile broadband, including in areas where it has traditionally struggled, such as the boundary between cells, in high traffic areas such as shopping centres, and on trains.

"All these will require high speed, low latency, secure connectivity that is ubiquitous and highly reliable. This will offer a greatly improved mobile experience to citizens, and provide the platform for new services and applications in markets such as virtual reality and augmented reality," he said.