

South Africa re-energizes digital transformation

South Africa's government wants to accelerate digital technology adoption to support better public services while providing skills and jobs for its expanding youth population.

The nation's president, Cyril Ramaphosa, has a deputy director general to lead digital transformation from within the Presidency Office, Mr. Lawrence Matemba. He described his mission: "I have been asked by the President to transform services and make them digital. We want to use data better to support our policy decisions, and digital transformation is part of this."

Mr Matemba was among senior public sector leaders at a [University of Pretoria \(UP\) and AWS Institute executive](#) program at the [Future Africa Centre](#) to learn how other nations leverage cloud technology. "We have a great opportunity," Mr Matemba said. "We have already done an audit and we know how much we are spending on IT. It is half of the task to know this. The next stage is to build our road map." He added that leaders participating in the UP AWS Institute executive program would help deliver this.

UP's vice-chancellor and principal, [Professor Tawana Kupe](#), said South Africa is a country "brimming with young talent." Policy leaders and educators face advantages and challenges of being the only continent whose population is increasingly youthful – [60 percent of Africa's population will be under-24 by 2050](#). Professor Kupe explained that the university's Future Africa centre was set up in 2019 to create a hub for research to attract and retain this talent. In particular, the centre focuses on areas associated with the fourth industrial revolution, such as cybersecurity and robotics, because this will support economic growth and create jobs. Dr Wesley Rosslyn-Smith, senior

lecturer specialising in turnaround management and business rescue at UP, says closer relationships between academics and governments can help bring about change based on modern technology in this short [video](#). Cloud computing, he says, can help governments address their capacity challenge and help them focus on where they can really make a difference.

South Africa is constantly reviewing how digital technologies are rolled out in government. The public service spent approximately R62 billion on digital technologies between 2018 and 2021. According to the Auditor General's Annual Report 2021, approximately half of the 34 information technology projects did not yield the intended results, requiring a strengthening of project governance. The [Department of Public Service Administration \(DPSA\)](#) issued a policy in [February 2022 known as the Public Service Cloud Directive](#) to support the adoption of cloud technologies in its modernization journey. DPSA's chief director, Zaid Aboobaker, summarized South Africa's challenge for the UP AWS Institute program participants. One of the main challenges he identified is the digital capability in departments to support transformation. There are 160 government departments but just 0.3 percent of 1.13M full-time employees are part of the ICT units, of which half are focussed on supporting the desktop and network. System development, data, and cloud technology skills are scarce.

DPSA has published guidelines so that business owners can assess their needs and make a clear business case to support their required cloud adoption. These must include an assessment of the total cost of ownership, an assessment of risk, an analysis of the underlying

infrastructure, an assessment of the required skills, and the budget impact.

Liam Maxwell, director of transformation at AWS and a speaker on the program at UP, described how South Africa can accelerate transformation by using what has worked for other governments—from India and Singapore, to Estonia and Canada—reusing and adapting entire processes such as procurement to individual services. He described how Singapore’s government developed contact tracing during the COVID-19 pandemic before many others, and made their contact tracing solution open source so that others could use it when they developed their own systems. Find out more about how public services [start and accelerate digital transformation](#).

In South Africa, security is a significant concern for service leaders who want reassurance that data is safe in the cloud, [said Nomahlubi Ogoh](#), head of information technology for Sentech.

The cloud is the safest place for data, said Ahmed Abdel Hamid, senior security strategist in Europe, the Middle East, and Africa (EMEA) at AWS. He detailed how governments can [see independent, international, audit reports](#) to check that cloud service providers’ claims are correct. Hamid described [the shared responsibility model](#) that describes how AWS is responsible for the security of the cloud, and the customer is responsible for the security of what is in the cloud. Alex Meek-Holmes, government digital transformation advisor at AWS, said it is important to demystify digital sovereignty. He explained how the system of Regions and Availability Zones, together with the inability of AWS to see or move customer data, supports [governments in controlling and protecting citizen data](#).

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