

Govt pushes innovations,

State of ICT

BY APOLLO MUBIRU

The Ministry of Information and Communication Technology (ICT) has prioritised infrastructure development, innovation, development of ICT parks and Business Process Outsourcing (BPO).

The ministry's mission is to increase access and usage of ICT infrastructure and services throughout the country, ensure effective communication of government policies and programmes as well as promotion of a national ideology for socioeconomic transformation.

As a result, it has registered a 76% reduction in the cost of Internet bandwidth to \$70 per Mbps from \$300 per Mbps.

Since the 2013/14 financial year, under the strategy for rationalisation of IT services across Government ministries, departments and agencies (MDAs), NITA-U is currently providing bulk Internet bandwidth to Government through the National Data Transmission Backbone Infrastructure (NBI).

The provision of bulk Internet bandwidth through the National Data Transmission Backbone

Infrastructure (NBI) has seen the reduction of the cost from \$190 Mbps per month to \$70 per Mbps.

NITA-U currently offers one of the lowest prices for Internet. The body intends to reduce this cost further, which will in turn lower the bandwidth prices across the country.

ICT minister Frank Tumwebaze said the Government's investment in infrastructure development such as optic fibre and satellite is meant to make Internet a public good.

A public good is a commodity or service that is provided without profit to all members of a society, either by the government or by a private individual or organisation.

"If we cannot have accessible and affordable Internet, we cannot talk about the digital inclusion. We want to use the Internet to

reduce the cost of doing business, create new jobs, opportunities and to solve our problems for development," Tumwebaze recently told an Internet Summit in Kampala.

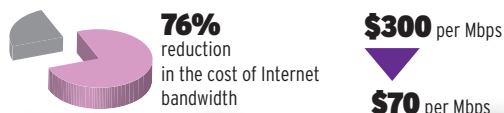
Future of broadband

He noted that telecoms had focused on voice calls little did they know that data would take over.

Fibre-optic Internet is the future of broadband. It uses fiber-optic technology to reach the fastest speeds available today. Optical fibre is used by many telecommunications companies to transmit telephone signals, Internet communication and cable television signals.

"Optic fibre is one of the common important tools in the Internet infrastructure and I thank telecommunication companies that are leading on this. The government is coming in to complement the establishment of

Information and Communication Technology (ICT) ministry mission:
To increase access and usage of ICT infrastructure and services throughout the country



A FIBRE OPTIC CABLE spanning **2,346km**, connecting **39** districts has been laid.

● The ICT sector employs more than **1.3 million** Ugandans.

GRAPHICS BY BRIAN SSEKAMMATE

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The number of innovation hubs that received grants under the National ICT Initiatives Support Programme in 2017/18

AT THE NATIONAL DATA CENTRE

The National Data Centre is fully equipped with state-of-the-art technology and the functionalities:

- Multiple layers of hardened physical security.
- Closed-circuit television (CCTV) surveillance
- Instant SMS Alerts to predefined personnel
- Biometric access and code protected entry
- Access to data centre only by designated and authorised staff
- Fireproof door
- Direct AC power 220 - 240V (Umeme)
- Two generators one with 200KVA backup and other 250KVA back up with two-day fuel
- Three UPS systems
- Fully redundant precision-controlled air conditioned environment
- Monitoring of virtualised

infrastructure to host production site for applications and databases

- Provision of required infrastructure to host production site such as CPU, RAM and storage
- Provision of required platform to host production as well as sites

- Dedicated virtual servers with required specifications
- Dedicated virtualised storage system for customer data
- Platform for customer requirements



A couple surfing the Internet

76% The reduction in the cost of Internet bandwidth to \$70 per Mbps from \$300 per Mbps

22 Upgrade of 22 base stations in rural areas from 2G to 3G providing connectivity to over 1,000,000 Ugandans

5000 Jobs created through the BPO companies and centres

affordable Internet

this," the minister noted.

In May 2017, Google and three other companies signed an agreement with government to invest in CSquared. CSquared is a broadband infrastructure company focused on building wholesale metro fibre-optic Internet networks and enabling Internet access in Africa.

Tumwebaze said like a revolution was started on safe water access to everybody, the same should be done for the Internet.

"These days we want to supply Internet to all people but when I was growing up, it was all about supplying water. This is the same when it comes to the Internet, it should be accessible to all people in Uganda and Africa," he said.

The National Data Centre and Disaster recovery site has been upgraded to a Tier 3 classification. It currently hosts 46 government applications.

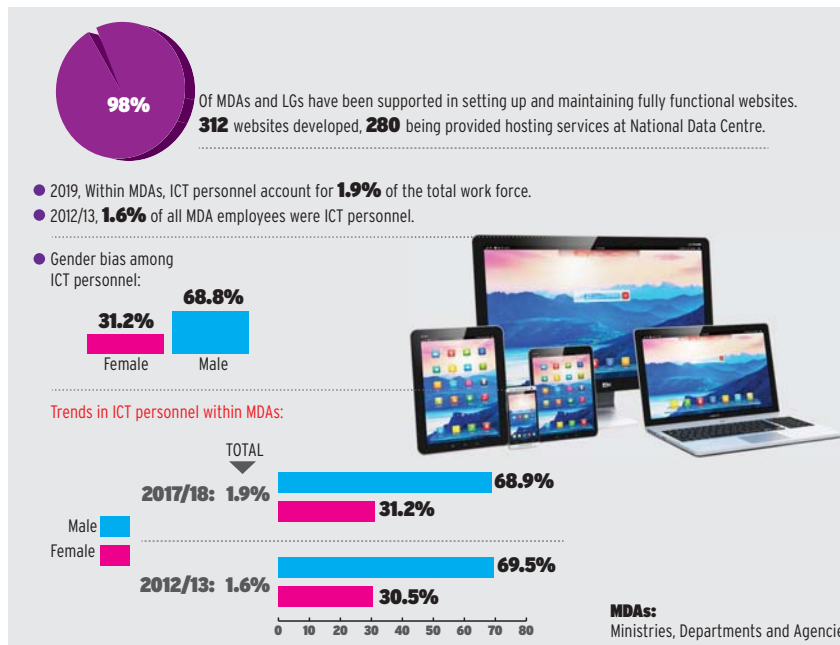
This has greatly reduced the Government cost towards establishing separate data centres in the different ministries, departments and agencies.

Fibre optic cables

The ministry has laid a fibre optic cable spanning 2,346km connecting 39 districts. Government and NITA-U in 2012 launched the laying of the fibre optic cable network that links Uganda to the submarine cable on the East African coast and provide faster and cheaper Internet access.

Fibre optic cable can be used as a medium for telecommunication and computer networking because it is flexible.

It is especially advantageous for long-distance communications, because light propagates through the fibre with little attenuation compared to electrical cables. This allows long distances to be spanned with few repeaters.



Connection to NBI

A total of 420 ministries, departments and agencies (MDAs) and Local Government (LGs) sites have been connected to the National Backbone Infrastructure (NBI).

Over 98% of MDAs and LGs have been supported in setting up and maintaining fully functional websites. A total of 312 websites have been developed and 280 are being provided hosting services at the National Data Centre.

Within MDAs, ICT personnel account for only 1.9% of the total workforce. This is a slight improvement compared to 2012/13, when 1.6% of all MDA

ABOUT MINISTRY OF ICT

Ministry of ICT & National Guidance is composed of National Information Technology Authority- Uganda, Uganda Communications Commission, Uganda Post Limited, Uganda Institute of Information and Communications Technology, Uganda Broadcasting Corporation, Uganda Media Centre and the Media Council.

employees were ICT personnel. Given the Government's ambition to mainstream ICT in its operations and to leverage ICT to improve the efficiency and effectiveness of service delivery through use of e-government services, the proportion of ICT personnel is still very low.

Other issues like the gender bias among ICT personnel (31.2% female vs. 68.8% male), as well as increased specialisation in key areas like IT security and user experience design, need to be urgently addressed through targeted efforts and programmes. A total of 1,000 new MDA/LG



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ICT minister Frank Tumwebaze

sites will be connected to NBI by end of next FY 2019/20.

A new NDP III pipeline project IT shared Platform (GovNet) which will extend connectivity to over 5,000 Government administrative units across the country will commence implementation in FY 2020/21.

Under the last mile project, NITA-U will extend connectivity to 20 Uganda People's Defence Forces sites in the FY2019/20.

Rural stations

Upgrade of 22 base stations in rural areas from 2G to 3G providing connectivity to over 1,000,000 Ugandans. Over 1,047 School ICT labs will be equipped.

Selected Post Offices of Kitgum, Kasese, Mubende and Moroto and public libraries have been converted into ICT access centres for eGovt Services.

Uganda Communications Commission (UCC) through its Rural Communications Development Fund (RCDF) said the one-stop community centres provide information for citizens on public services.

The facilities are equipped with desktop computers connected to Internet in a well-partitioned arrangement. The public information centres have capacity to serve 60 people a day.

The services, which are entirely free, aim to respond to any citizen query and to encourage them to uptake online government services including URA returns, e-payments, e-health and e-education, among others.

The Uganda Institute of ICT Master Plan developed and refurbished institute infrastructure. It also established and equipped digital labs.

Key achievements

The approval of the National Broadband Policy 2018, Enactment of the Data Protection & Privacy Act 2019 and Development of the Digital Uganda Vision.



Prime Minister Ruhakana Rugunda, Minister of ICT & National Guidance, Hon Frank Tumwebaze; State Minister Finance in-charge of Investments, Evelynne Anite and NITA-U ED James Saaka, pose for a picture with the various winners at the inaugural eGovernment Excellence Awards

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98% Of MDAs and LGs have been supported in setting up and maintaining websites

160 The number of people public information centres serves per day

5000 Jobs created through the BPO companies and centres

GRAPHICS BY BRIAN SSEKAMMATE

31% Female ICT personnel in ministries, departments and agencies