THE REPUBLIC OF UGANDA

"Implementation in crisis": How can the National Transmission Backbone Infrastructure be realized?

Background

The National Data Transmission Backbone Infrastructure and e-Government Infrastructure Project (NBI/EGI) is implemented by the National Information Technology Authority-Uganda (NITA-U). It is aimed at connecting Ministries and Government Departments onto the e-Government Network. This is done to create an efficient government through simplifying procedures, bringing transparency, accountability and making timely information available to citizens.

The objectives of the project are to: establish a National Backbone Infrastructure (NBI) with high bandwidth data connection in major towns of Uganda; connect all Government Ministries, Departments and Agencies (MDAs) in a single wide area network; establish a government data centre, and establish district information centres.

The expected outputs at completion of the project are: All government ministries connected; e-government implemented; an optic fiber backbone transmission cable set up across the country (2,294km); district information centres established to improve communication, improved service delivery by government ministries, and reduced cost of communications. However, implementation of this project has delayed due to numerous challenges.

This policy brief discusses the persistent work stoppages and proposes options for achieving the project.

Key Issues

- Implementation of the NBI/EGI was characterised with poorly planned procurement.

This was due to lack of technical capacity at the Ministry of ICT at the time of signing the contract. This led to poor requirements specifications for the type of cable

- Lack of supervision of the contractor for the first two phases, and

- Lack of sensitization on usage of e-government services

Introduction

The NBI/EGI project is funded by a concession loan from the EXIM Bank of China with counterpart funding from Government of Uganda. In 2006, a contract was signed between the Ministry of ICT and M/s Huawei Technologies Company Limited of the Peoples' Republic of China at a contract sum of US$ 106,590,305.

The project was divided into three phases and implementation was staggered in 27 months. The project commenced in July 2007 and was expected to be completed in June 2011. However, the completion date has been revised several times to the current July 2015 (Public Investment Plan 2014/15).

What has been achieved so far?

Phase I and II of the National Backbone Infrastructure/e-Government Infrastructure (NBI/EGI) project were substantially completed in FY 2012/13. These phases entailed laying of 1,536.39km of fibre optic cables and setting up of the NBI primary data centre and Metropolitan Area Network (MAN).

The MAN network consists of the connectivity of 27 ministries and some departments through the laying of optical fiber cable onto the e-government network.

Racks containing NBI Servers at the Primary Data Centre

Twenty two district headquarters across the country were connected and are benefiting directly from the project (Kampala, Wakiso, Luweero, Nakasongola, Masindi, Gulu, Lira, Dokolo, Soroti, Kumi, Bukedea, Mbale, Tororo, Busia, Bugiri, Iganga, Jinja, Mukono, Kyenjojo, Kabarole, Kasese, Bushenyi, and Mbarara). The Government of Uganda was saving about US$ 1.9 million annually in bandwidth costs after over 40 agencies switched from private operators to the NBI in 2014.

A total of US$91.2 million was paid for Phase I and Phase II (US$ 30.1 million and US$61.1 million respectively). However, implementation of the first two phases experienced several hurdles while phase III (US$ 15.4 million) is still pending (four years behind schedule against original project completion date).

A completed transmission site in Kasese

Delays in implementation

Delays have been largely due to emerging complaints on low capacity of optic fiber cables installed (cable type G-652 instead of type G-655 which supports high speed data and future growth for data and video transmission), below specification on depth of cable trenches (less than the agreed 1.2 meters deep), and overpricing of the project as compared to similar projects in neighboring countries.

These complaints led to several audits, investigations, legal proceedings, parliamentary ICT Committee recommendation stopping implementation, and executive policy directives halting the project between 2009 and 2014.

Findings from the Auditor General's forensic audit, Internal Audit and Budget Monitoring reports indicated that the key impediments to project implementation were:- poorly planned procurement, lack of supervision of the contractor for the first two phases, lack of technical capacity at the Ministry of ICT by the time of signing the contract, poor requirements specifications for the type of cable and lack of sensitization on usage of e-government services before and after completion of phase I.

The reports recommended that remedial action is taken by the contractor before implementing the third phase.

By June 2014, most of the remedial works had been substantially completed and financing modalities for phase III agreed.

Phase III entails installation of 756 kms of optic fiber cable to the towns of Masaka-Kyotera, Mutukula, Lyantonde, Mbarara, Ntungamo, Kabale and Katuna and linking Kyenjojo district to Masindi through Hoima.

Conclusion

The controversies and long delay in achieving this project have led to missed opportunities especially provision of high speed bandwidth for IT enabled services for both government and the private users at lower costs. In addition there has been missed income from lease of extra capacity, and lack of redundancy from

connectivity to a second undersea cable through Tanzania.

What should be done?

Access to high speed data remains a priority to the country. The NBI/EGI is expected to improve collaboration within government through provision of IT enabled services such as unified messaging systems, voice over internet, e-education, tele-medicine, and support to digital migration process. This is to be done by providing auxiliary infrastructure for the transmission and delivery of digital television signals, and facilitation of business transactions nationally and internationally through electronic commerce.

1. The NITA-U should therefore fast track the implementation of the NBI/EGI phase III to avoid further delays.

2. The subsequent phases of the project should be adequately supervised and optic fiber cable capacity issues addressed in line with recent technology advancement and capabilities

3. The NITA-U should plan and implement last mile connectivity to districts which are not directly served by the NBI in the initial phases using WiMAX.

4. The agency should consider leasing fiber from private operators in areas not covered in the first three phases such as West Nile and the greater

northern part of the country for equitable provision of e-government services.

5. The NITA-U should embark on a sensitization campaign of users on the available services under the e-government infrastructure.

References

- MFPED: Budget Monitoring Reports; FY2010/11 -FY2014/15

- MoICT: Ministerial Policy statements 2011-14

- NITA-U: Quarterly Progress Reports

- National Planning Authority (2013); Uganda Vision 2040

- Office of Auditor General: Forensic Audit Report of the NBI/EGI 2013

Inside the NBI transmission site in Tororo

Budget Monitoring and Accountability Unit

Ministry of Finance, Planning and Economic Development

P.O Box 8147, Kampala

www.finance.go.ug