Broadband for an inclusive digital society

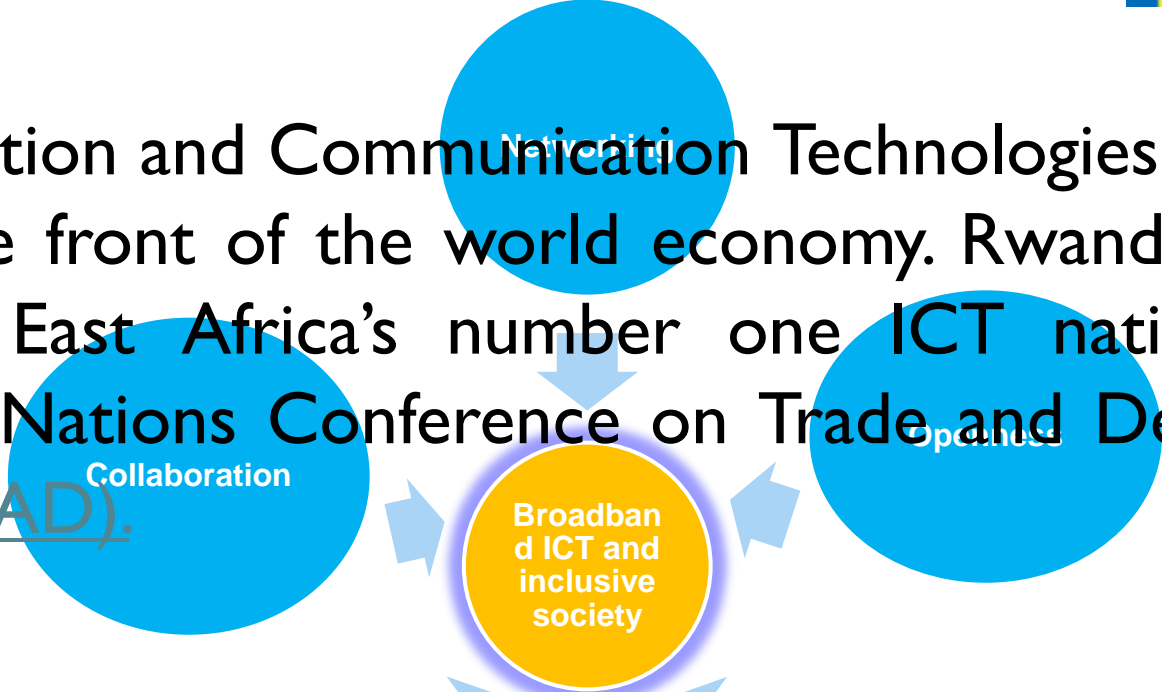*A presentation to CSTD 2012-2013 Inter-Sessional Panel*
Lima, Peru (UNCTAD)

CONTENT

1. INTRODUCTION

Information and Communication Technologies are now at the fore front of the world economy. Rwanda has been named East Africa's number one ICT nation by the United Nations Conference on Trade and Development (UNCTAD).

This presentation outlines ICT-led progress but also explains the cost of a digital divide being inward or outward. It provides some tips on how to bridge the gaps and conclude with recommendations.

Collaboration

Openness

Broadband ICT and inclusive society
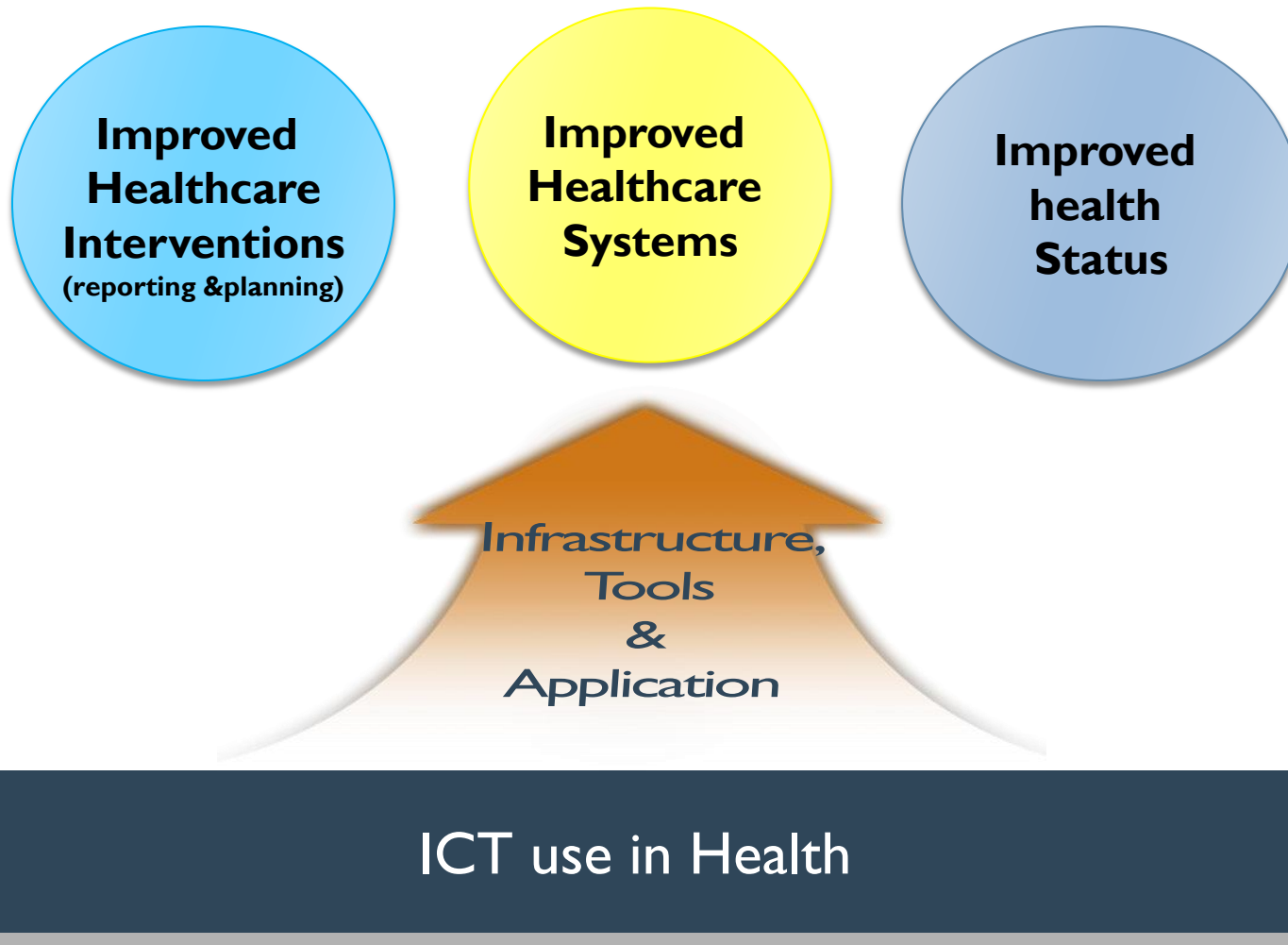
Accessibility

Sharing

Rwanda's Vision is to transform the country into a knowledge based middle income economy by 2020.

To achieve this vision, improvements in the country's business environment, competitiveness reforms as well as ICT deployment were put forward.

2.1. ICT Broadband and Health

E-health solutions in Rwanda such as Tracknet, Onehealth, DHIS and HMIS, mobile and E-Health, DSST, E-procurement, M-CBHW, etc) have led to incredible increase in both quality and access to healthcare.

These tools improved both interventions, monitor and reporting therefore impacting policy formation and operational planning. Rwanda is now one of the few countries in Africa that use efficiently ICT and stands a chance of reaching the MDG targets according WHO.

Improved Healthcare Interventions (reporting &planning)

Improved Healthcare Systems

Improved health Status

Infrastructure, Tools & Application

ICT use in Health

Other initiatives include :

▸ **Community based IS** which provides Mobile phones to support CBHW to support maternal health & report on mortality ;

▸ **Facility based ICT systems** (HMS, Telemedecine, etc.) and improve hospitals efficiency;

▸ **Tracknet & Trackplus**: Databases collecting national data on various diseases;

▸ **NHA**: Which captures all expenditures in the health sector and **E-procurement** which alerts decision makers on the cellphones when there is a stock out anywhere.
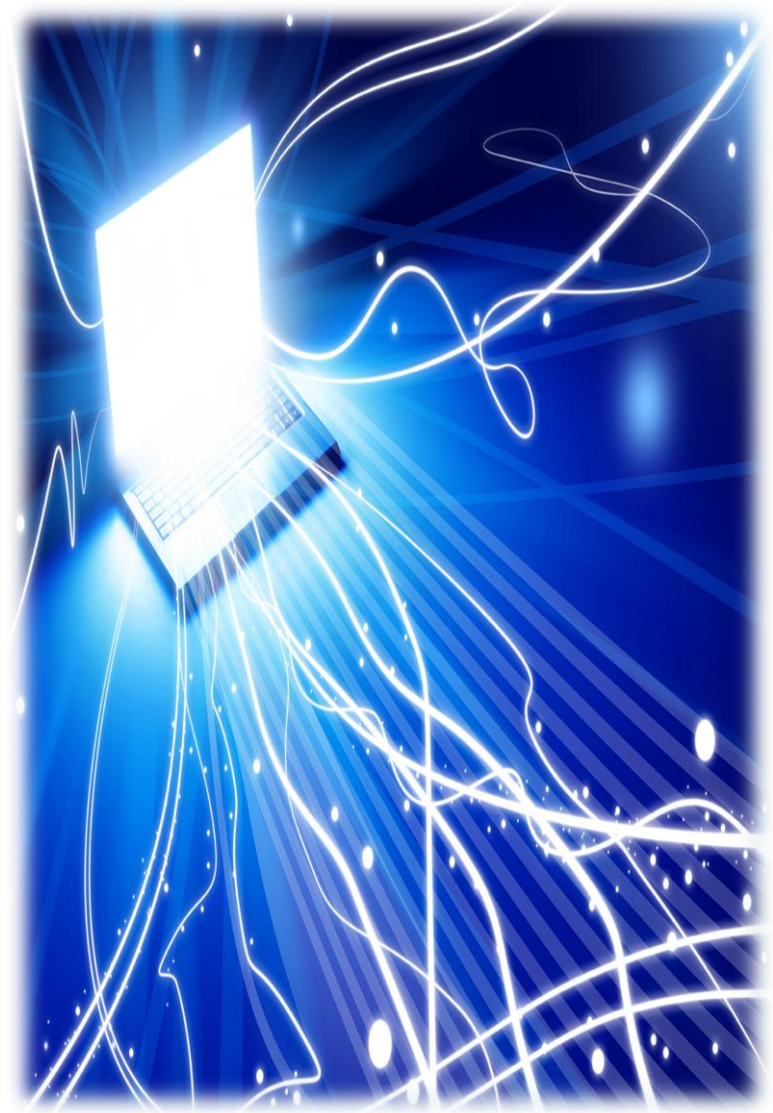
▸ There are a number of roles played by ICT in development of Rwanda as a knowledge based economy:

▸ ICT is a source of knowledge in schools, enabling access to cheap, fast and updated education; OLPC

▸ ICT is a great medium of transacting businesses: Through electronic payment systems, (ATMs, IPPS, IFMS and m-Banking).

▸ ICT is a fast and efficient mode of Information dissemination

▸ ICT integrated Rwanda into the global economy.

▸ ICT is a tool used for agriculture development (e-soko, weather)

▸ A number of E-solutions increase government efficiency; stimulate good governance and promote accountability and transparency. A good example could be that of E-procurement. the traditional process involve steps associated with a number of inefficiencies and corruption risks. The deployment of such ICT solution is associated with benefits including: removal of corruption opportunities; Increase of the ability of services to citizens (G2C) while also lowering the costs; removes a fair amount of opportunities to manipulate the process; reduction in purchasing cycle time or order time and inventory savings.

▸ Another important tool is social media, where people access decision makers at the finger of their tips and participate in policy formation an important part of democracy. E.g. twitter, Ministers' Mondays, etc.
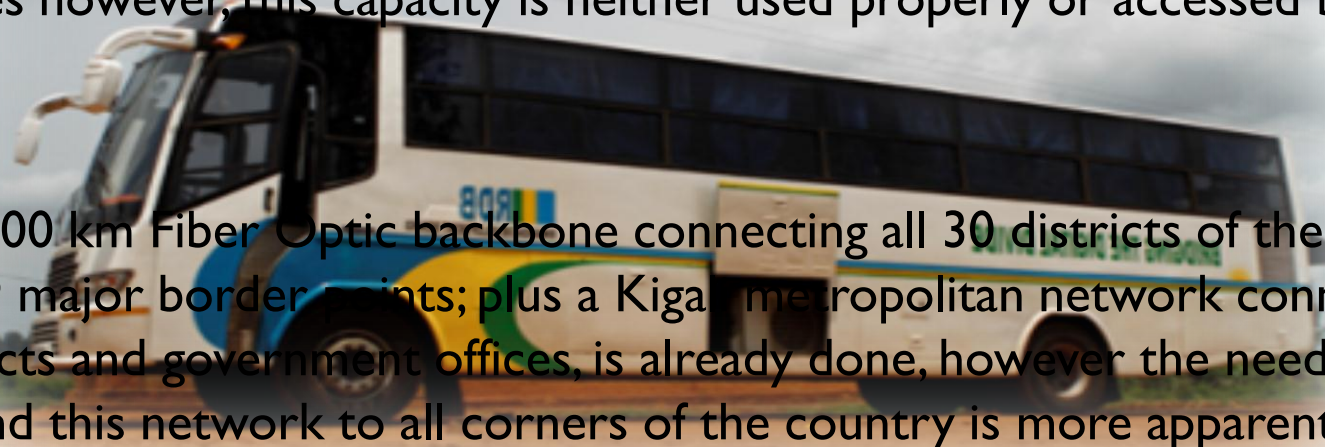
3.1. Availability

Ensuring access by all citizens has been a mainstay of Rwanda's ICT policy, although there is still a substantial rural-urban gap, with the majority of mobile phones, landlines and internet access concentrated in Rwanda's capital Kigali.

The National Backbone is an IP/MPLS network, with a 10Gbps capacity and 1Gbps (upgradable) for each district. Currently, Rwanda has acquired international capacity equivalent to 2.5 GB connecting to the international routes however, this capacity is neither used properly or accessed by all.

A 2,500 km Fiber Optic backbone connecting all 30 districts of the country and 9 major border points; plus a Kigali metropolitan network connecting 3 districts and government offices, is already done, however the need to extend this network to all corners of the country is more apparent. By and large, the current networks: National backbone, Kigali metropolitan network and the Wibro are located only within Kigali.

The greatest challenges that most developing countries are facing regarding bridging the digital gap is the affordability. Most of countries are market-led economies and correcting the market failures in ICT has been a problem to Rwanda as well. Most ICT tools especially equipment, are expensive for common people.

Affordability	Rwanda	China
Fixed-telephone sub-basket ($ a month)	13.2	4.7
Mobile-cellular sub-basket ($ a month)	13.9	6.0
Fixed-broadband sub-basket ($ a month)	86.9	17.8

Source: The Little Data Book on Information and Communication Technology 2012(World Bank)

One billion dollar was committed in 2006 to build nation wide tele-centers with Internet and telephone access points, allowing for increased connectivity in rural areas.

Though efforts are made to reduce the gap. Few Rwandans can afford ICT services, both to the cost at the upper layer of the market (average of 125$/MBPS) and of course at end-users level. Rwanda is ranked 128 in the World.

3.3. Quality of access and use of broadband

In order to increase the quality of access, the establishment of a Virtual Landing Station is underway; a Carrier Neutral "Meet Me" Facility and Private Network Access Point (PNAP). This is a neutral exchange point that will house the termination point for international cables and allow operators and ISPs to interconnect.

The VLP will ensure that all players in the market have equal nondiscriminatory access to wholesale international connectivity. But this access should be transmitted to end users including in rural areas. E.g. RURA fines to telecoms.

The next step in implementing the broadband policy for Rwanda is to expand access and reach to each of the 416 administrative sectors in Rwanda as well as government institutions, schools, hospitals, churches, commercial institutions and residential areas with the same quality connection.

4. BRIDGING THE DIGITAL DIVIDE

The Broadband Commission has set four clear, new targets for making broadband policy universal and for boosting affordability and broadband uptake. Targets 1 and 2 cover the policy options while targets 3 & 4 cover the operational level.

4.1. At policy level

Target 1: *Making broadband policy universal.* Promoting universal access to computer in schools and out of schools is planned in NICI III (2010-2015), correcting market failures/distortions measures have been adopted.

Target 2: *Making broadband affordable.* Public private dialogue is on-going and innovative financing schemes under studies to expand ICT and make them.
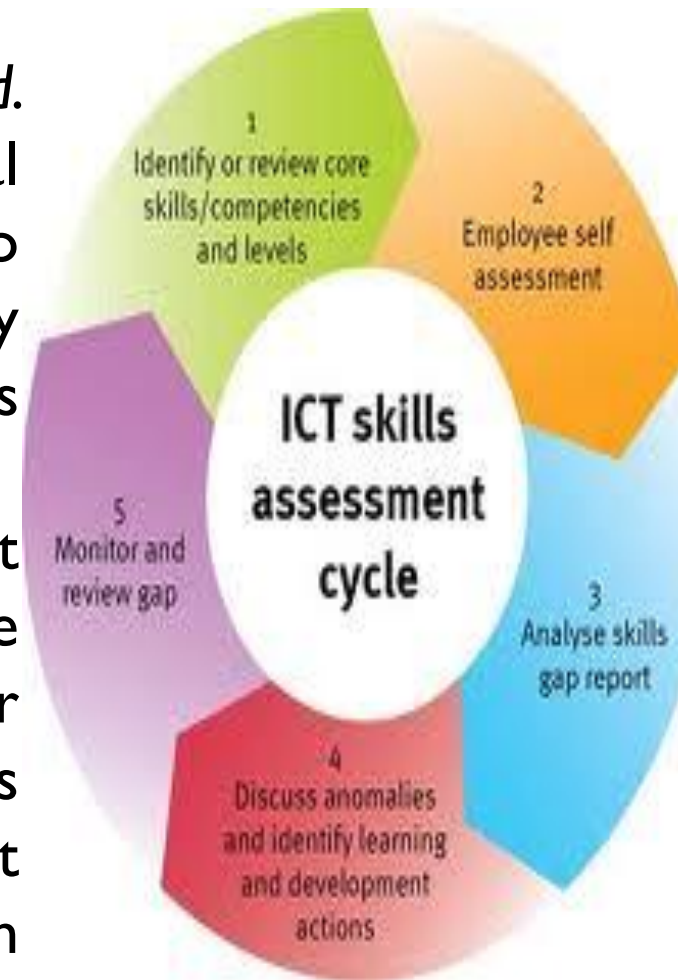
4.2. At operational level

Target 3: *Connecting homes to broadband.* Rwanda is studying how to use electrical towers to deploy wireless technology to rural areas since optical fiber option is very expensive. In addition, several PPP models are being developed and used.

Target 4: *Getting people online.* Internet penetration is being improved, online services by government and private sector has increased the use of internet. Rwanda is now ranked number 1 in Africa in internet speed, and post a double digit increase each time.

1 Identify or review core skills/competencies and levels

2 Employee self assessment

ICT skills assessment cycle

3 Analyse skills gap report

4 Discuss anomalies and identify learning and development actions

5 Monitor and review gap

ICT Broadband is a major tool for an inclusive growth and reduction of inequalities among society. It does improve the access and quality to healthcare even in remote areas, it is an incredible medium providing updated, cheap and fast knowledge/ information at all levels of the society therefore improving government efficiency and transparency.

Despite recognized values and benefits of broadband ICT, countries and individuals suffer from its availability, affordability and; quality and use of broadband. The access to broadband is very expensive to developing countries and especially landlocked ones, its not only expensive to countries but also to poor people who hardly benefits from the even little existing infrastructures and tools.

There is therefore, a need to bridge the gaps both a international levels but also at countries levels. For this to happen, actions must me taken both at policy level and implementation level to leverage on existing pool of tools, technology and infrastructure.

Infrastructure
Social, cultural and economic status
Human resources
Policy Implications for digital inclusive growth
Equity
Educational experts
Usage
Service
Impact

Thank you