Republic of Rwanda
Ministry of Youth and ICT

ICT Sector Profile - 2015

e-Government:
"Enabling Excellence in Service Delivery"

December 2015

RDB | RWANDA DEVELOPMENT BOARD

NISR NATIONAL INSTITUTE OF STATISTICS OF RWANDA

rura RWANDA UTILITIES REGULATORY AUTHORITY
Inspiring development


irembo

Jean Philbert NSENGIMANA
Minister of Youth and ICT

Foreword

During the year 2015, the ICT sector continued to be a major driver for Rwanda's economic growth. The sector recorded an average growth of 16% ahead of the rest of the economy which grew at 6.9%. The theme of this edition of the ICT sector profile is "E-Government, Towards Excellence in Service Delivery"; in recognition of ICT's potential to transform how government services to citizen and business are being improved and the efficiency and effectiveness that the Government is gaining by using ICT. In 2015, efforts to digitize public service delivery were accelerated through Irembo by Rwanda Online Platform Limited. Irembo is envisioned to become the Government's One Stop Shop for all services to citizen and business. The objective is to achieve fully cashless and digital government with at least 95% of all transactions happing electronically by 2017. To date, 30 services are on the platform while more than 100 are already digitized under the respective institutions platforms.

The Smart Rwanda Master Plan (SRMP), the 4th iteration of the 5 year ICT plan since 2000 was approved by the cabinet in November 2015. The previous plans were known as NICI (National Information and Communication Infrastructure) Plans. The plan comes to accelerate the progress towards Vision 2020' goal of a middle income, knowledge-based economy. SRMP key focus is on Business and Innovation, Digital Transformation and Research and Development. Digital transformation efforts will prioritize Governance along with Education, Healthcare, Agriculture, Finance, Trade and Industry as well as Women and Youth empowerment.

The push to connect the country to broadband also continued with 4G LTE rollout reaching 15 districts beyond Kigali. Today, the network has reached 26 of the 30 districts of Rwanda. A Free WiFi in public transport initiative was launched with 485 buses. As of December 2015, 33.5% of the Rwanda total population had access to Internet and 77.8% had mobile phones with mobile money subscribers reaching 7,663,199. Another milestone of 2015 was the launch of local manufacturing of laptops by Positivo BGH, in line with Rwanda's push for made in Rwanda for the world. In 2015, the ICT sector contribution to GDP was 3% according to the National Institute of Statistics of Rwanda (NISR). The ICT sector remains also one of the main targets for foreign direct investment (FDI).

Looking ahead, 2016 will be marked by the launch of Smart Africa Secretariat Headquarters in Kigali as well as the hosting of the World Economic Forum in Rwanda with a focus on the 4th Industrial Revolution, powered by ICT. By the end of the year, it expected that 4G LTE will have reached all the districts with a population coverage of over 60%. Kigali Innovation City development will be launched and we will move to implement full digital interoperability of the entire financial sector, bringing together banks, microfinance and telecom and accelerating the move towards a cashless economy.

Rosemary Mbabazi

Permanent Secretary
Ministry of Youth and ICT

Josephine Nyiranzeyimana

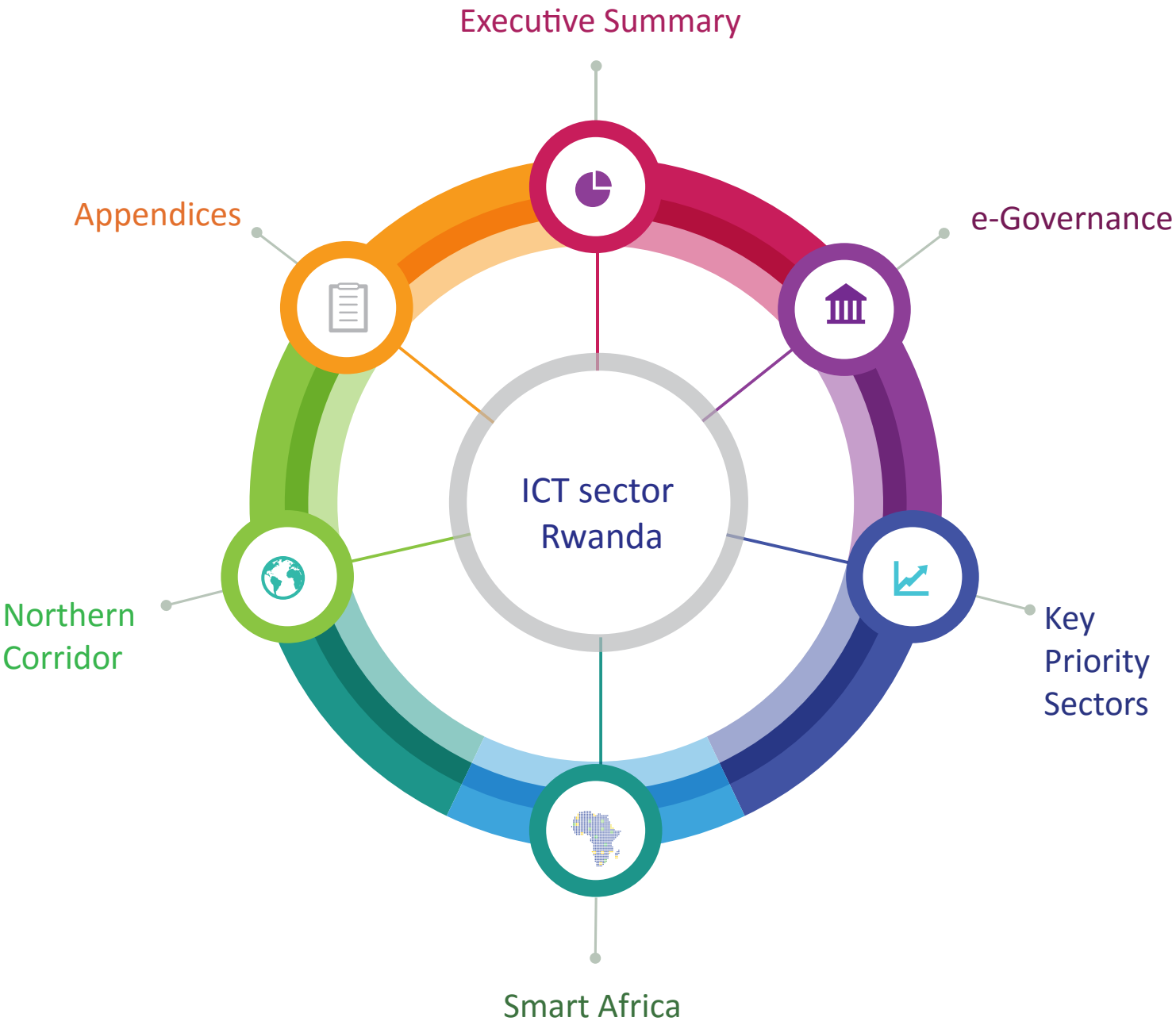
A.g Director General
Ministry of Youth and ICT

Acknowledgement

This work is a collaborative effort of the Ministry of Youth and ICT (MYICT) together with: Rwanda Utilities and Regulatory Authority (RURA), Rwanda Development Board IT department (RDB-IT), and the National Institute of Statistics of Rwanda (NISR).

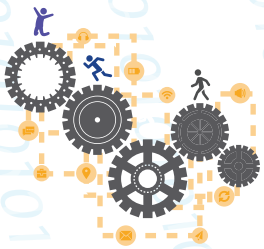
We also recognize the support and cooperation of the Ministry of Local Government (MINALOC), the Ministry of Health (MINISANTE, the Ministry of Education (MINEDUC), the Ministry of Finance and Economic Planning (MINECOFIN), the Ministry of Justice (MINIJUST), the National Bank of Rwanda (BNR), the Rwanda Revenue Authority (RRA), the Rwanda Education Board (REB), the National Identification Authority (NIDA) Higher Education Council (HEC) and the Registrar General Office of the Rwanda Development Board (RDB).

What's Inside



I. Executive Summary

For four years now, the Ministry of Youth and ICT provides an annual overview of statistical information covering the ICT sector performance and progress against its ICT for Development (ICT4D) strategy.



This year, the ICT Sector Profile emphasizes the prominence ICT enabled E-government, under the Smart Rwanda 2020 Master plan, GoR has set ambitious target to achieve 24/7 self-service Government, driving cashless and paperless economy with 95% of Government services transacted online by 2017. As results in the last two years in partnership with Rwanda Online Platform Ltd (ROPL), Irembo that is single platform through which businesses and citizens will access integrated government services via the Internet and mobile devices have been developed and operationalized. Currently there are 18 e-services automated on Irembo platform since its launch in June 2014 with 30 e-services by central Government and 100 e-services local Government. Besides, there are other 36 existing e-services that were already automated by different institutions and which ROPL is currently working jointly with respective institutions to integrate them to Irembo platform.

Under the process of establishing and promoting cashless economy, the Central Bank of Rwanda has continued to promote reliability and robustness of the e-payment infrastructure. Standardized, interoperable, and integrated payment systems to improve operational efficiency of the entire e-payment ecosystem have been strengthened.

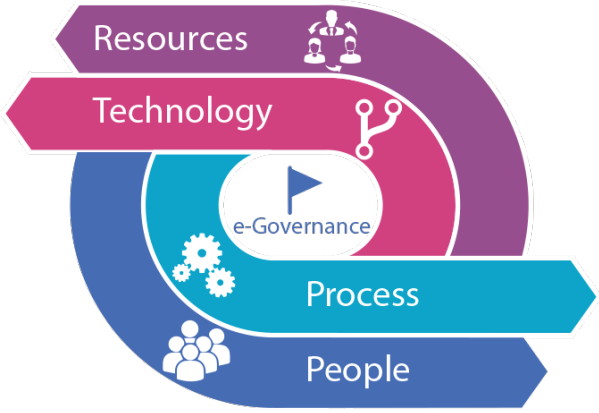
In 2015, ICT sector has continued to increasingly fuel the Rwandan GDP growth as it has been among the largest contributor to GDP growth (3%) and it is still persistent to be a primary target for foreign direct investment (FDI) into the country. Though it has reduced compared to previous year whereby FDI in ICT sector was estimated at US $ 66,354,860, in 2015 it attracted US 55,600,000. The importance of the Telecom Sector in terms of revenue generation to the government, the broader ICT sector is also experiencing growth and gaining prominence. ICT has also enables and advances the delivery of Government services, including education, health care, and security. Its significant contribution to economic growth could also be directly observed through investment and job creation in the development, production, and sales of ICT goods and services and indirectly through creation and distribution of technologies that enable health, trade and finances, agriculture, retail, and a host of other industries.

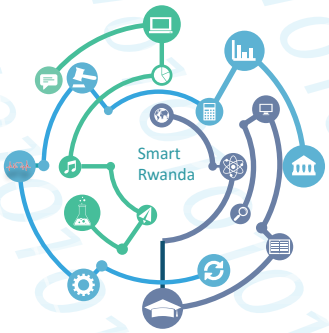
The Rwanda's Telecomunication industry is continuing to see rapid growth in connections, subscribers and data traffic, and is playing a pivotal role in unlocking socio-economic progress across the Country. By December 2015, the number of active phone mobile-cellular phone subscribers has increased to 77.8%, from 70% in December 2014, hence a total addition of 1,012,600 new subscribers in a period for nearly a year. Consequently different sectors especially Financial Institutions and Utilities are increasingly digitizing and mobilizing their products and services, reducing costs and providing compelling new experiences for consumers. The One Network Area which was introduced in October 2014 with the aim of harmonize tariffs on mobile voice calls, SMS and data transmission within the EAC. Today, roaming charges between Rwanda, Kenya and Uganda have been removed and all mobile calls between the three countries are local. This has led to a minimum 400 per cent increase in the volume of calls; a direct benefit to EAC citizens and African businesses operating across EAC borders.
Subsequent to the ongoing development of seven ICT Sector Strategies The ongoing national roll out plan of 4G LTE Technology, Rwanda will usher in a completely new data era that will open up new opportunities to create businesses, spur innovation and improve people's lives.

The Health Sector has continued its tremendous, Rwanda Health Management information System (R-HMIS) in each of the country's over 500 health facilities in the past two years. Since the roll out of the initial system, many modules have been added and these include, death audit reporting for all maternal, Neonatal, and child deaths, Community Health Information System, eTB-a patient level system for tracking MDR (multi-drug resistant) TB patients as well as the HIV reporting and Disease surveillance system which is currently being transitioned. The percentage of health centers connected to internet remained at 93.8%, however, increase in number of clinical emergencies supported through RapidSMS is 25%, whyle number of patients at community level tracked using RapidSMS reached 186719 by December 2015 up from 173,131 in 2014, which make an increase of 8%.

e-Governance

II. ICT in Governance





The current national development policy and strategies including Vision 2020, ESPRS II, 7 year Government Program and Smart Rwanda 2020 Master Plan (SRMP) in particular, all provides to harness transforming Rwanda into knowledge based society through digital Government transformation. The SRMP is focused to Government digital transformation agenda targeting a 24/7 self-service Government, driving cashless and paperless economy with 95% of Government services transacted online by 2017. In driving the digital transformation agenda, the Government has entered into a PPP agreement with Rwandaonline platform LTD in 2014 to digitize all Government service. Separately, there are over 150 other existing services which shall be integrated onto the Irembo platform.

The Government has established one single portal to digitize and offer all Government services starting with a start of commonly demanded citizens. Since the project inception in April 2014, more than 30 services are now offered on the central portal “Irembo” with a target to automate the first 100 services by the end of 2017.

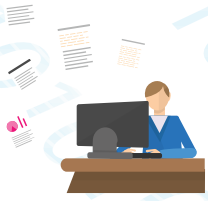
It is imperative to note that the selected first batch of 100 e-services to be automated on Irembo including the existing e-service already digitized by other sectors over the past years, collectively forms about 80% of the general services commonly demanded by citizens. Over 150 existing e-services which include for instance, *the popular E-Soko for Agriculture, Business Registration System at RDB, Smart FMS for public finance management, Electronic Single Window, Credit reference beaurral, Student Registration System for Universities, E-voting services* among others, will be integrated onto the Irembo platform to provide the general public with a seamless experience of accessibility.

The platform usage metric indicates that the platform receive over 90k every month, with over 142k transactions processed since the platform launch. The design approach to access e-Government services will be through self-service via mobile by default (USSD), local Government sector and cell offices for local communities and service access points run by private sector. Currently, the mobile-based USSD services account for 46% of total transactions, while web-based access count for 31% and the remaining 23 % are those processed by franchise agents.

The growth of mobile financial inclusion has greatly facilitated the usage of the platform since the the platform is fully integrated with existing payment systems like mobile money, Tigo Cash, Airtel money, VISA card, Mobicash and commercial banks and applicants can fully pay online.

Online Services Currently Available on Irembo

INSITUTION	SERVICES
Immigration and Emigration Services	▪ Single Entry Visa ▪ Transit Visa ▪ East Africa Tourist Visa ▪ Conference Visa-Single Entry ▪ E-payment of on arrival visa
Local Government Services	▪ Billboards, banners and signposts ▪ Birth certificate ▪ Birth record certificate ▪ Certificate of being single ▪ Death certificate ▪ Death record certificate ▪ Death registration ▪ Marriage certificate ▪ Marriage record certificate
National Identification Agency	▪ Application for National ID ▪ Replacement of National ID
National Police	▪ Criminal Record Clearance Certificate (Offered by NPP) ▪ Registration for Driving Test (Provisional) ▪ Registration for Driving Test (Definitive) ▪ Registration for Driving Test (Supplementary) ▪ Driving License Category Upgrade ▪ Renewal of Driving License ▪ Application for Definitive Driving License ▪ Application for Provisional Driving License ▪ Duplicate of Provisional Driving License ▪ Duplicate of Definitive Driving License ▪ Renewal of Provisional Driving License
Rwanda Natural Resources Authority	▪ Transfer of Land Title (Voluntary Sale) ▪ Land Sub-Division



Sample Services of Existing E-Government Services

Government Command Center: It provides a dashboard which monitors all key performance indicators.

Robust electronic citizen Database: NIDA manages a robust citizen electronic registry holding unique number and biometric data of all citizens, and offering now over 18 authentication services to other institutions hence expanding the horizon efficient delivery.

Business Registration System: A robust system that allows foreign investors and nationals to register their business online within 2 hours. A system that is also allows registration of assets/property online.

Smart FMS: A G2G system that allows manage flow expenditure of public finances connecting the finance Ministry and all Government agencies.

E-Tax Single Window System: A system integrated with Commercial Banks in order to facilitate the payment of duties and taxes dues.

Credit Reference Bureau: Provides accurate information on borrowers' debt profiles and repayment history, an activity that is currently done by lending institutions.

Umucyo System (E-Procurement): An end-end public procurement system that shall curb corruption by reducing physical contacts between bidders and government officials.

E-Recruitment System : An online recruitment tool that used by both Government and public institutions to recruit employees, evaluate identities and help employees to petition in case of any dissatisfaction

Emigration Services: Automated Passenger Clearance Infrastructure used on border posts and Airport to clear passengers swiftly.

Integrated Case Management System: A system that manages all judicial cases by allowing people to submit cases online, track status of their files, allows judicial institutions to collaborate remotely.

Mobile-Based Solutions by Younger Innovators: Younger ICT engineer graduates have leveraged ICT to create innovative solutions. These range from mobile applications and web-based applications like Airclerk , Mergims, Safe Motos among many others.


Key
Priority
Sectors
Rwf

III. Finance/Business Sector

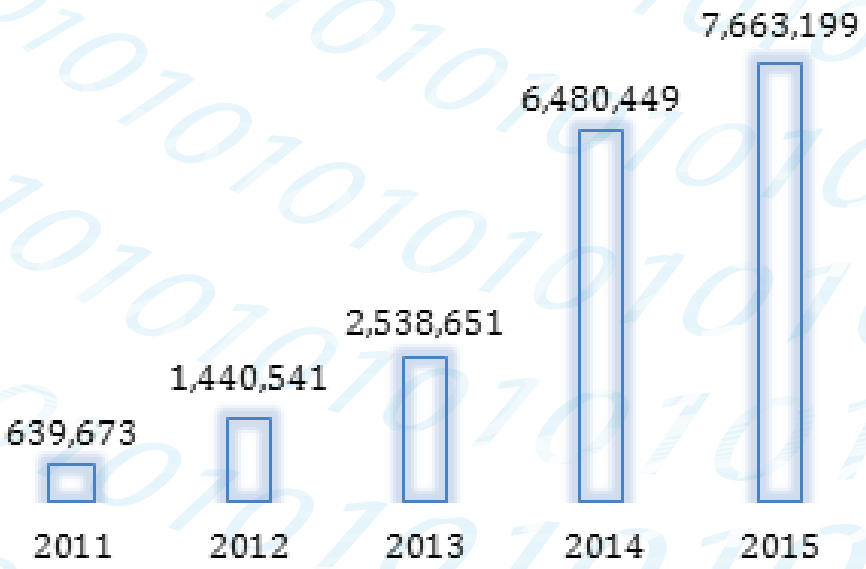
Promotion of Cashless Economy

ICT continues to boost the growth in the Finance Sector and contributes to improving the digital inclusion in Rwanda. This is seen through the improved use of ICT for financial services delivery, the unceasingly increased number of mobile payment subscription and electronic transactions, electronic billing machines deployment, online tax payments etc. The benefits include effective and efficient processes, cashless payments, and more business opportunities.

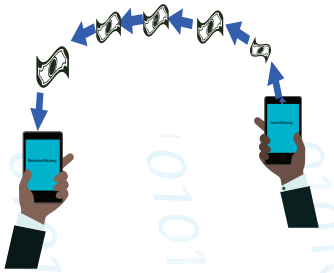
Mobile Payments - Number of subscriber

In 2015, Mobile Money subscribers across all mobile network operators have reached 7,663,199 from 6,480,449 recorded in December 2014. That is 18% of the number of subscribers; the previous year the increase was 15%. .

Mobile payment users

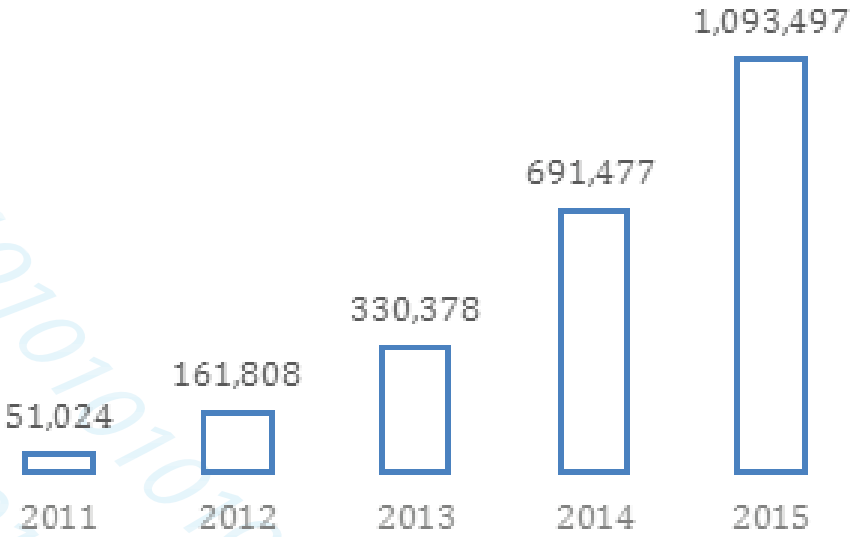


Mobile Payments - Value of transactions (In Million RwF)



In December 2015 the number of mobile money transactions reached Frw 1,093 billion from up from Frw 691.5 billion amount transacted in the previous year.

Value of transactions in Million (Rwf)



Observing the current trend, mobile money services are playing a crucial role in transforming the business processes. The citizens' life style is being improved through more and more innovation in the financial services industry. An example is a Rwandan innovation called "Mergims", a payment platform that allows transactions of basic products and services at international level. All these has greatly changed the citizens' lifestyle and consumers' behavior in terms of money transferring, money deposits, and making payments whereby people prefer to use mainly mobile money payment and other instruments such as debit and credit cards in lieu of cash.

Transaction through mobile money is main cashless channel used in Rwanda. In 2015 the number of mobile money agent reached 40,467 from 3,85 of 2014, which is 1211.7% increase. The number of mobile money transaction rose by 659.8%, 168,612,455 Frw were transacted 2015 whereas it was 22,191,674 Frw in 2014.

Modernized payment systems are improved, regulated and facilitated through the Rwanda Integrated Payments Processing System (RIPPS). This development is expected has increased formal access to financial service between 2012 and 2015 more than what was achieved between 2008 and 2012(BNR, monetary, policy and financial satiability statement report 2015, 54p)

ATM Transactions

The number of ATMs increased by 7%, from 354 in 2014 to 380 in 2015, while the number debit cards increased from 638869 to 650924 which gives an increase of 2% from 2014 to 2015 and credit cards by 37%, an increase from 2540 in 2014 to 3485 in 2015. The figure bellow shows that the volume of ATM Transaction increased with small percentage of 0.2% by December 2015, while it was reduced by 6.8 % last year. The reduction was due to different partnership between Telecos and Banks to enable both their clients to cash out from their accounts through their mobile phones and vice versa while they also facilitated bill payments.

Volume of ATM transactions

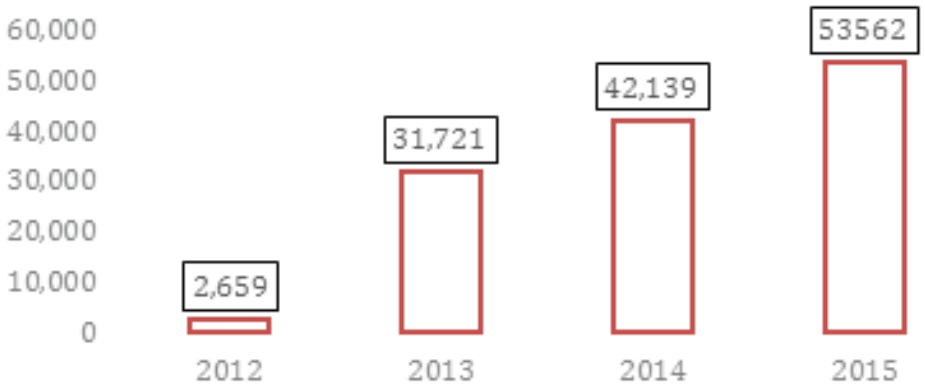
In addition to Visa, new international payment cards (MasterCard, China Union Pay, Dinners Club and Japanese Credit Bureau) have also joined the Rwanda market.

ICT in Tax and Revenue Payment

The introduction of E-filling and E-payment has continued to reduce compliance costs for both tax administration and taxpayers. Enterprises are now utilizing their mobile phones to declare tax returns and pay their dues via any of the mobile money platforms regardless of the mobile network provider. The Taxpayers using online tax filling increased by 27% from 42139 in 2014 to 53562 in 2015. This reduced the time required to comply with VAT.

The use of Electronic Billing Machines has improved highly improved the revenues collection and management, reducing time and cost of massive document auditing, minimizing errors risks and frauds.

Number of subscribers in online tax fillin



Financial inclusion in Rwanda

According to the FinScope 2016, there has been a significant shift in formal inclusion as a result of recent financial sector development interventions. This shift was mainly due to the mobile money uptake and continued increase in the uptake of Umurenge SACCOs. The percentage of adults, who are formally served, although not banked, increased from 19% in 2012 to 42% in 2016. When considering multiplicity ownership of mobile money accounts, FinScope estimates that there are around 2.7 million (46%) mobile money accounts. About 12% (0.7 million) of adults have more than one mobile money account. Around 2.3 million adults in Rwanda use mobile money (m-money). Around 34% of adults are registered for mobile money accounts and further 10% use someone else's mobile money account.

In December 2015, it counted around 1.5 million adults banked, that is 26% of total adult individuals in Rwanda. The proportion of adults that are banked ranges from 69% in Nyarugenge district to 11% in Ngororero district. Banked population growth has slightly increased by 0.4 million since 2012. Debit cards drive the growth or bank usage, loan from the bank and high uptake of mobile banking. In terms of banking product usage, 52% of bank clients used at least one banking product during the month prior to FinScope 2016 (increasing from 43% in 2012).

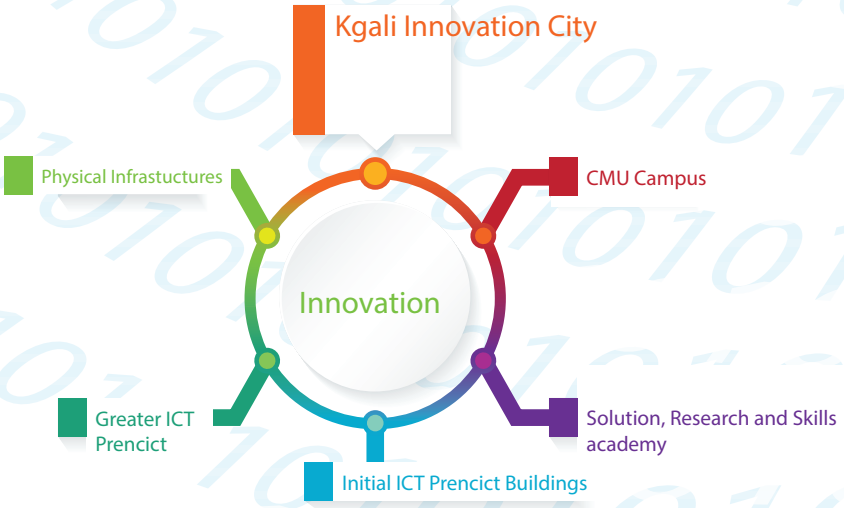
investment opportunities in ICT

ICT sector has continued to be the top attractions of local and foreign investors and it has contributed 3% to the country's gross domestic product. The total Investment operational (local and foreign in ICT) reached 75,953,913 (USD) in 2015. The sector also increased its impact on sectors such as finance. Mobile payments were mainly used for cash-in, cash-out and transfer services, representing significant percentages of all values transacted. This development was termed as one of the key facilitators of a cashless economy. Highlights are Key Potential Sectors for investment in Rwanda:

Key potential sectors for investment

- World class Technology Park
- Business process outsourcing
- ICT education and training centers
- Electronic device manufacturing plant
- E-waste management
- Venture capital
- Internet data centers and Application Development

The main expected future investments will come from the operationalization of Kigali Innovation City Project located around Masoro, which will be home to ICT-related firms, as well as the establishment of the ICT innovation fund.

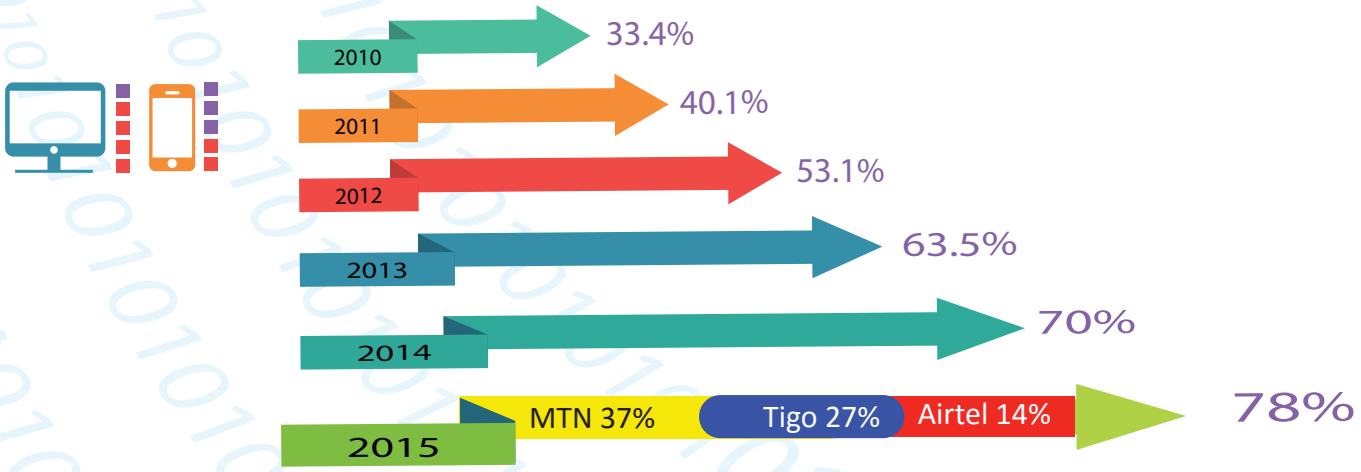


IV. Telecominication Sector

Mobile Phone and Internet Penetration

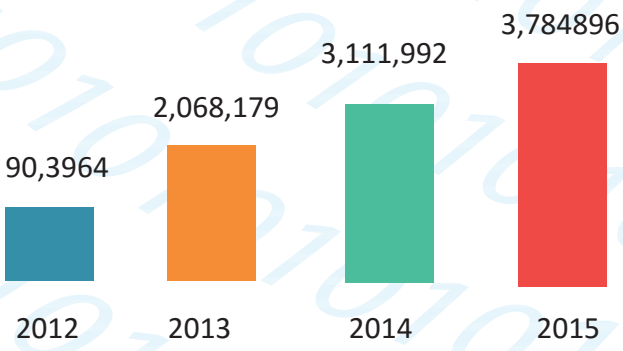
Technology evolution and competition among technology vendors, telecom operators, and service providers over the years has contributed to a continuous decrease of price cost for voice, data, as well as devices including feature phones and smartphones. This has contributed to increasing the mobile phone penetration rate and the Internet penetration rate.

Mobile Phone Penetration Rate



Rwanda had 8,759,619 mobile subscribers, hence a total addition of 1,012,600 new subscribers in a period of 12 months.

Internet Penetration



On the Data segment, the number of Internet subscriptions reached 3,784,896, up from 3,111,992 subscriptions in December 2014. This represents an Internet penetration rate of approximately 33.5% by December 2015. As result, 35.6 % of the Rwandan population is using Internet through their different devices.

Rwanda is the highest ranked LDC in this year's ADI. In the report's 'Affordability Index', the top five developing countries with the most affordable Internet.

Broadband access and 4G LTE deployment

The rollout of 4G LTE, a catalyst to attaining national developments goals through the improvement of ICT-based services has reached to 21 cities across the country. This is part of the broadband policy implementation, which also calls for free Internet deployment in buses, and public places. To start with, so far 487 buses were equipped with free 4G LTE WiFi in Kigali.

Internet Affordability

A4AI ALLIANCE FOR AFFORDABLE INTERNET

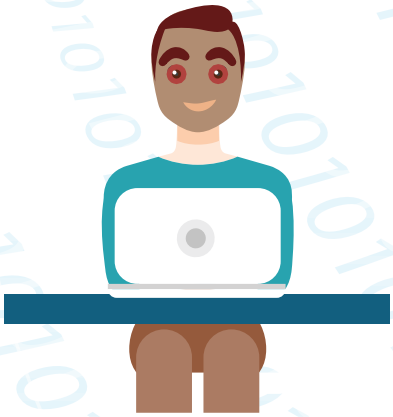
In 2014, the Alliance for Affordable Internet (A4AI) has ranked Rwanda as the African country with the most affordable Internet at 10th position. According to 2015-16 Affordability Report, Rwanda was ranked first in Least Developed Countries (LCDs) with the Affordability Drivers Index (ADI) n Africa with composite score of 53.13 and 11th position worldwide. In 2014 Rwanda was on 10th position worldwide with 51.6 overall composite score. Countries like Uganda and Gambia follow Rwanda with respective score of 49.40, 45.82 and positions worldwide 16th and 20th.

This achievement is a result of ambitious policies and plans, considering ICT priorities, specifically broadband at the heart of National social economic development agenda.

V. ICT in Education

In 2015, the education sector has developed ICT integration in Education Sector Masters Plan with the vision to harness the innovative and cost-effective power of world-class educational technology tools. The main target is to use ICTs in order to improve the quality of education, increasing access, and allowing diversity of learning methods.

OLPC Program



The integration of technology in education in Rwanda started at primary school level with the implementation of the 'One Laptop per Child' (OLPC) program. In education Sector, One Laptop per Child (OLPC) program has played a key role to the enhancement of education through introduction of technology in primary schools. It also allows primary school students early access to computer skills and computer science understanding while expanding their knowledge on specific subjects like Science, Mathematics, languages and Social Sciences through online research or content hosted on servers. By December 2015, more than 245785 laptops have been distributed in 756 primary schools through OLPC project.

ICT devices in Education

Further to the agreement signed between the Government of Rwanda and Positivo BGH to locally assemble laptops, computers, tablets, and other electronic gadgets, in July 2015, Positivo BGH started its production in Rwanda. In addition to this the Government of Rwanda through the Ministry of Youth and ICT under its initiative to accelerate the penetration and usage of smart devices in Rwanda, and in collaboration with its partners has launched the Viziyo Program. Through this program students and teachers in both public and private institutions are facilitated to own laptops under a loan scheme.

Laptops Made in Rwanda

In 2014, GoR partnered with Positivo BGH to assemble smart devices in Rwanda .

Since the starts of the factory on 15th June 2015, over 95,580 devices had been produced. Initial distribution has targeted the education sector and by December 2015, 87,012 laptops had already been distributed.

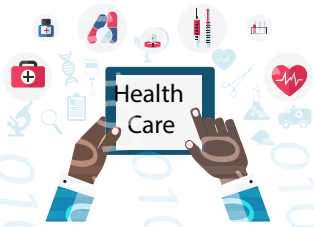
ICT enrolment in TVET

With the Government strategy to encourage young people to join TVET schools, the number of students' enrolment in ICT related programs increases every year. In December 2015, the students enrolled in ICT where 15,979 from 12,631 in 2014 and that's 27% increase.

Teacher Training in ICT

Literacy in ICT is the important area not only for people who are in education system but also for teachers to build their capacity. 16,214 teachers were trained in 2015 in basic ICT literacy Basic. This helps the Use of Laptops in Teaching. For the laptops to be well useful to schools capacity building of head of schools, teachers has been the crucial priority for the OLPC program and a continuous assistance to teachers is needed.

VI. ICT in Health



ICT has brought numerous benefits in the health sector ranging from creation of a network of specialists; improving access by health care practitioners to specialists; to improving the quality of diagnostics and treatment. As a supplement to traditional patterns of health care delivery, Telemedicine and e-Diagnosis has improved the way medical professionals share medical expertise.

The percentage of health centers connected to Internet increased to 93.8%, and this has allowed the health centers to access health information systems and medical records systems and provide better and timely reporting. Collaborative programs of practice-based initiatives have streamlined intake, improved communication, reduced gaps in referrals and services and reduced duplicate information collection among health care service providers.

Using RapidSMS, the increase in number of clinical emergencies supported went from to 25% in 2014 to 1820% in 2015. The number of patients at community level followed using RapidSMS in 2014 was 173,131 in 2014 and has reached 186,719 by December 2015. Also through strong partnership with the private sector, the number of registered clinics and dispensaries reporting using Health Management Information System (HMIS) has increased from 275 in 2014 to 301 in 2015.

VII. ICT in Agriculture

The agriculture sector has completed the development of National ICT 4Ag. Strategy (2016-2020), specifically, it underscores the need for strong national ICT4Ag strategy that is to:

Increase efficiency and coordination
base on good practices on the use of ICTs for agricultural and rural development
Guide investments in the ICT solutions for supporting agricultural and rural development
Create strategic alliances on the use of ICTs among different sectors
Open up silos between different sectors involved
And place key actors of the agricultural sector and smallholder farmers at the center of the strategy

The sector is striving to significantly increase access to information and communications technology and affordable access to the Internet in partnership with other stakeholders.

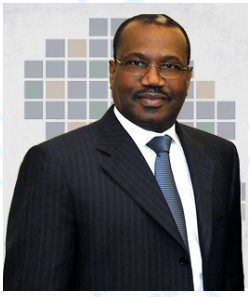
ESoko the real time electronic system that provides market price information for agriculture commodities has registered 11,820 SMS transactions in December 2015. From 721 in 2014, in December 2015 916 cooperatives and agro dealers are using the Fertilizer Voucher Management System, which allows distribution of fertilizers to farmers through cooperatives and other agro dealers.


smart
africa
CONNECT. INNOVATE. TRANSFORM

VIII. Smart Africa

From19th to 21st October 2015, Rwanda hosted the second edition of Transform Africa Summit under the theme of “Accelerating Digital Innovation” over 2,500 participants were present. Throughout the three days, participants shared experiences and renew their commitment towards accelerating and sustaining Africa’s on-going digital innovation.

Assumed office on January 7th 2016 in Kigali. The mandate of the Smart Africa Secretariat is to implement the Smart Africa adopted during the inaugural Transform Africa summit in 2013. The aim of this manifesto is to put ICT at the center of national socio-economic development agenda, improve access to ICTs especially broadband, improve accountability, efficiency and openness through ICT to put the private sector first, and leverage ICT to promote sustainable development. The Smart Africa manifesto focuses on ICT industry development, SMART cities, youth innovation and job creation, digital economy, and green economy to digital literacy.



Dr Hamadoun Touré

At the margin of the Transform Arica, the Board meeting of the Smart Africa Alliance chaired by His Excellence Paul Kagame the president of Rwanda appointed Dr Hamadoun Touré as the Executive Director of the Smart Africa Secretariat.

Didier NKURIKIYIMFURA

Didier was appointed as Head of Technology and Innovation at the Smart Africa Secretariat. Didier took over this position in March 2016, bringing with him over 13-year rich ICT policy, strategy and implementation experience.


KENYA


RWANDA


SOUTH SUDAN


UGANDA

Northern Corridor Integration Projects - NCIP

IX. Northern Corridor Integration Projects

One Area Network

The Northern Corridor countries agreed to adopt “One Network Area” applies to telephone calls originating and terminating within the region and mandates members to adopt the following: Exemption of regional calls from surcharges applied by member states on international incoming calls. No additional charges to subscribers on account of roaming within the region.

The One-Network-Area is being implemented as a result of resolutions made during the 5th Heads of State Summit for the Northern Corridor Integration Projects held in Nairobi, Kenya in May 2014. Today, roaming charges between Rwanda, Kenya and Uganda have been removed and all mobile calls between the three countries are local. This has led to a minimum 400 per cent increase in the volume of calls; a direct benefit to EAC citizens and African businesses operating across EAC borders.

Appendices

Appendices

ICT in Finance and Business

key indicators	2011	2012	2013	2014	2015
Investments					
FDI in ICT (USD)		44,483,333	308,665,230	66,354,860	55,600,000
Investment under implementation (USD)		44,000,333	274,665,230	6,354,860	55,600,000
Investment operational (USD)		2,483,000	34,000,000	60,000,000	0
Local Investment (USD)		1,083,000	3,811,484	30,314,000	20353913
Investment under implementation (USD)		1,083,000	3,811,484	-	20,000,000
Investment operational (USD)		0	0	30,314,000	353,913
Investment Companies					
Cumulative number of ICT investment companies registered		35	50	58	62
Payments - Smart FMIS					
Number of subscribers	893	1,292	1,960	1,956	2,357
Number of payments voucher processed	131,461	137,560	126,768	129,651	182045
Mobile Payments					
Number of subscribers	639,673	1,440,541	2,538,651	6,480,449	7,663,199
Volume of transactions	4,323,490	22,191,674	57,147,777	104,800,000	168,612,455
Value of transactions (In Million RwF)	51,024	161,808	330,378	691,477	1,093,497
Payment Systems - Instruments					
Number of Automated Teller Machines (ATMs)	167	292	333	354	380
Number of Points of Sale (POS) terminals	227	566	946	1,152	1,718
Number of debit cards	115,200	389,269	487,498	638,869	650,924
Number of credit cards	516	418	845	2,540	3,485
ATM transactions					
Volume of ATM transactions	1,976,376	5,753,163	7,774,053	7,488,707	7,505,815
Value of ATM transactions (In million RwF)	122,536	180,567	260,585	310,009	354,049
Pos transactions					

key indicators	2011	2012	2013	2014	2015
Volume of POS transactions	38,440	63,757	111,570	185,441	373,029
Value of POS transactions (In million RwF)	6,438	9,034	14,718	19,223	26,625
Tax - e-filing					
Number of subscribers	-	2,659	31,721	42,139	53,562
Volume of transactions	-	17,482	212,381	339,863	607,309
e-Payment payment					
Number of subscribers	-	69	250	637	37,949
Volume of transactions	-	329	2,461	7,954	89,633
Electronic Single Window					
Number of subscribers	-	126	245	2,048	3,058
Volume of transactions	-	90,435	138,747	314,240	320,360
No Creance	-				
Number of subscribers	-	9,364	8,798	9,179	13,146
Volume of transactions		13,461	12,731	2,633	9,727
Mobile declaration					
Number of subscribers	N/Av	N/Av	N/Av	15,521	39,639
Volume of transactions	N/Av	N/Av	N/Av	60,457	116,243
Non Fiscal Revenue System					
Number of subscribers	N/Av	N/Av	N/Av	N/A	888,807
Volume of transactions	N/Av	N/Av	N/Av	551,559	769,674
business registration					
Online business registration system					
Total number of companies registered	-	11,288	13,396	14,798	21,718
Total number of companies successfully registered online annually	-	4,169	1,150	11,922	6,087
Percentage of companies successfully registered online	-	36.93%	8.60%	80.60%	28%

ICT in Education

key indicators	2012	2013	2014	2015
Primary education				
Computer to teacher ratio	1:17	1:08	1:08	1:06
Computer to pupils ratio	1:40	1:15	1:15	1:16
Percentage of schools with computer infrastructure	39%	49%	56.10 %	58.80 %
Total number of OLPC laptops distributed	152,768	203,763	204,321	245,785
Total number of schools covered by the OLPC program	292	407	409	765
Percentage of schools connected to the Internet	6%	6%	8%	10.25 %
Percentage of schools with a networked computer lab	1%	1%	2%	3.90%
Secondary education				
Computer to teachers ratio	1:06	1:07	1:06	1:11
Computer to students ratio	1:40	1:44	1:32	1:28
Percentage of schools connected to the Internet	18%	14%	16,9%	16.10 %
Percentage of schools with a networked computer lab	25%	31%	31%	43%
Tertiary education				
Computer to admin. staff ratio	1:02	1:01	1:02	1:02
Computer to acad. staff ratio	1:04	1:02	1:03	1:03
Computer to student ratio	1:19	1:10	1:07	1:05
Percentage of High Learning institutions connected to Internet	100%	100%	100%	100%
Percentage of High Learning institutions with a network computer lab	100%	100%	100%	100%
ICT skills development				
Total number of TVET students enrolled in ICT-related programs	7,959	12,532	12,631	15,979
Male	4,001	6,641	7,171	9,566
Female	3,955	5,891	5,814	6,413
Open Distance and e-learning (ODel)				
Total number of institutions offering ODel	1	1	1	1
Total number of ODel students	3166	4,372	5,357	3251
Male	2,036	2,607	3,251	2066
Female	1,130	1,767	2,108	1,185
ICT Literacy				
Number of teachers trained in basic ICT literacy	9,377	9,377	10,246	16,214
Male	5,336	5,336	6,001	9,567
Female	4,041	4,041	4,245	6647

ICT in Health

Key indicators	2013	2014	2015
Infrastructure			
Hospitals			
Total number of public and private nonprofit hospitals	48	48	48
% of public and private nonprofit Hospitals with telemedicine infrastructures	21%	21%	21%
Percentage of institutions connected to Internet	100%	100%	100%
health Centers			
Total number of Health Centers	468	477	494
Total number of Health Centers connected to Internet	451	457	475
Percentage of Health Facilities Connected to internet	93.80%	95.80%	96.2%
Application and system: Electronic Medical Record (EMR)			
Number of Hospitals using less paper in medical records	3	6	10
% of Hospitals using less paper in medical records	6%	10%	21%
Health Management Information System			
Number of Health facilities reporting into HMIS	797	802	1,161
HMIS data managers assisted through HMIS e-support messaging	1,473	1,067	463
Rapid SMS			
Number of Patients at community level tracked using RapidSMS	158,510	173,131	186,719
Number of clinical emergencies supported through RapidSMS	176	220	4,185
Telemedicine			
Number of Hospitals using Telemedicine	13	13	13
%Hospitals using Telemedicine	27%	27%	27%
Calls for medical assistance			
Number of emergency calls for ambulance (SAMU)	25,010	11,564	38,423
Number of call received for clarification on health issues	9,878	5,870	720
EDPRS2/HSSP indicators			
Number of registered private clinics and dispensaries reporting routinely using HMIS	221	275	301

ICT in Governance

key indicators	2012	2013	2014	2015
Provinces				
Percentage of provinces connected to the Internet	100%	100%	100%	100%
Districts				
Percentage of districts connected to the Internet	100%	100%	100%	100%
Total number of Business development Centers and Public access points	95	95	95	816
sectors				
Percentage of institutions connected to the Internet (modems included)	33.40%	100%	100%	100%
Infrastructures and Applications				
Video conference				
Total number of budget agencies connected	16	56	60	60
National ID				
Cumulative Number of ID cards produced	5,687,210	6,199,533	6,492,248	6,783,088
Cumulative Number of driving licenses produced	141,777	190,068	206,467	273,931
Cumulative Number of refugee cards produced	15,216	15,542	21,970	29,607
Cumulative Number of institutions connected to NIDA database using online authentication	7	11	12	20
Document tracking and workflow management system				
Cumulative Number of budget agencies connected	7	55	68	116
Number of subscribers	748	4,069	4,854	
Volume of transactions (since of the start of the system in 2012)	5,070	131,894	366,183	460,771
Percentage of government institution using IPPIS	94%	97%	98%	100%

ICT in Agriculture

key indicators	2012	2013	2014	2015
Applications / e-Soko				
Number of SMS-based transactions	9,893	11,815	11,320	11,820
Number of Web-based transactions	3,652	4,640	4,939	5,439
Number of cooperatives and agro dealers using system	-	-	721	916
Number of fertilizer importers using system	-	-	5	7
Number of seed companies using system	-	-	3	4
AMIS – Agric. Management Info System				
Number of Users/ visits	-	-	11,028	16,214
Number of pages visited	-	-	83,736	118,214
Agricultural extension week				
(Noza ubuhinzi n' ubworozi platform)				
Number of Users/ visits	-	-	-	7,918
Number of pages visited	-	-	-	27,771
Hotline				
Number of Phone calls	-	-	6,292	9,490

Telecommunication

Key indicators	2010	2011	2012	2013	2014	2015
Fixed-telephone subscriptions (per100 inhabitants)	0.4	0.4	0.4	0.43	0.45[c]	N/Av
Mobile-cellular telephone subscriptions (per 100 inhabitants)	33.4	40.6	53.1	63.5	70	77.8
% of households with internet access	3.2%	5.0%	7.0%	N/Av	9%	N/Av
Percentage of individuals using internet		7.0%	8.0%	26.2%	35.6%	N/AV
Internet subscribers			903,964	2,068,179	3,111,992	3,784,896
Fixed broadband subscription (per 100 Inhabitants)	0.0	0.0	0.03	0.03	0.02	0.02
Active mobile broadband subscription (per 100 inhabitants)	1.3	6.4	7.97	19.5	12.2	28.5
Broadband subscriptions per a hundred inhabitants						28.7

ICT Sector Profile 2015

Website: www.myict.gov.rw
Twitter: @RwandaYouthICT
Facebook: Ministry of Youth & ICT
Instagram: myictrwanda
Youtube: Myict Rwanda
Phone: +250-786791388
Email: infor@myict.gov.rw

Office: KN 3rd Road, Sopetrade