



# CONNECTED SUMMIT 2016

Conference Guide

Theme: Bridging the Service Gap

# Caucuses



# CAUCUS 1: Integrated Info-Infrastructure/ E-Government Services

## OBJECTIVES

- Facilitate efficient and effective Government services
- Support provision of reliable, secure and affordable connectivity across the country to all citizens
- Offer consistent, integrated, e-government citizen centric services

## OUTCOMES

- Enhanced public data integrity that facilitates efficient and effective delivery of Government services
- Improved transparency and accountability through securely accessible public data and information, thereby promoting positive international image of Kenya
- Improved Kenya's e-Government ranking in the world in line with the digital government philosophy (at least 15 points)
- Increased public value of e-Government services with 50% of adults accessing at least one e-service
- 8 out of 10 users being 'very satisfied' with the quality of Government of Kenya electronic services
- Enhanced digital presence and economic competitiveness using ICT, thereby improving the e-gov ranking and ease of doing business rank internationally by at least 15 places by 2017.
- Conducive legal and regulatory framework to address gaps

# Flagship Projects

## NATIONAL SPATIAL DATA INFRASTRUCTURE (NSDI) AS LAND DATA HUB

### Background

The project includes unique land identifiers and a national land management system. The direct benefits to citizens include a citizens' portal on land titles instead of the tedious and inefficient land search process. Related services on land will also be possible through Huduma services in tandem with E-Government service goals.

### Implementation Status

All land/property parcels mapped using GIS (NSDI). The Spatial Data centre building is 95% complete. National Digital mapping data produced. Titling Management System has been developed (survey, adjudication and registration of new titles) EDMS-Automation of Land Registration Transaction fully developed and being rolled out.

## ESTABLISHMENT OF DATA HUBS

### Company Registry:

The Registry has greatly improved in handling reservation of Company names, payments and searches.

- The reservation is now instant
- Payment is by Mpesa for registration of ensures names
- Registration now takes one day
- The service is also accessed at The Huduma Centers in Nairobi, Machakos
- A law has been enacted to allow for online submission (uploading) of relevant documents.

### Societies Registry

- Records are in the process of digitization
- Scanning of records in progress
- Offering registration of welfare Societies at the Huduma Centres in Nairobi and Machakos

# CAUCUS 1: Integrated Info-Infrastructure/ E-Government Services

## Marriages Registry:

- It has refurbished and a new registry and offices opened on ground floor, Sheria house
- Marriage Records are now being scanned and digitized.

## PERSONAL DATA HUBS

### Background

Enhancement of Internal Security through; Authoritative determination of real identity of individuals both citizens and non citizens in the country ,hence eliminate criminal activities arising from identity fraud and theft and Management and effective control of immigrants , aliens and refugees in the country Positive identification of eligible beneficiaries. Reduction of cases of fraud and forgery and Reducing the cost of risk involved.

### Implementation Status

#### IPRS

The National Population Register is already established, with about 19.3 Million records of Kenya citizens (18 years and above), Passport holders.(350,000), Registered Refugees records (223,723), and Registered Alien's records (111,768)

- Computerization of Civil Registration System CRS is complete and will soon provide information on Kenya citizens below 18 years.
- Procurement process for e-visa and e-border management systems in progress
- Procurement process for third generation ID card in progress

IPRS roll out to department of immigration is on going, and all passport-issuing centres are connected. IPRS database has been populated and organisations have been linked to it for verification.eg births and deaths when registering a birth or death you can verify authenticity, when someone is applying for passport, Kenya Revenue Authority during tax payments, etc. Safaricom, , Equity Bank, NHIF, Tangaza Mobile Pay, Metropol Credit Reference Bureau, Credit Reference Bureau Africa, have requested the Ministry to be granted access.

## E-passport

The East Africa Heads of states launched the regional e-Passport during the 17th EAC Heads of States Summit to be held on 2nd march 2016 in Arusha, Tanzania. The ePasssport shall be embedded with a contactless electronic chip.

The e-Passport upon implementation will have the following benefit:

- Secure identification of the traveler;
- Provide protection against identity theft;
- Eliminate passport data skimming;
- Provide regional identity of EAC member states citizens

## E-citizen

Services available in the e-citizen portal include:

- Business
- Marriages
- Driving
- Lands
- Immigration
- Civil Registration Services

## Huduma centres

### Background

Huduma Kenya is a programme by the Government of Kenya that aims to transform public service delivery by providing citizens access to public services and information from One Stop Shop citizen service centres called Huduma Centres and through integrated technology platforms. The project is being implemented by the state department of ICT, ICTA and state department of planning and devolution. Huduma centers are created with the aim of transforming public service delivery. The aim is to establish Huduma centers in all the 47 counties.

### Implementation Status

Huduma centers had been established in 31 counties. 45 services being offered at the centres serving about 30000 citizens a day and 12 billion shllings being collected through posta pay.

# CAUCUS 1: Integrated Info-Infrastructure/ E-Government Services

## ASSETS DATA HUBS

### Develop and Implement Transport Information Management System (TIMS)

#### Background


TIMS will confine PSV vehicles to their areas of jurisdiction as per their TLB licences. This will ensure that the driving habits and behaviour of drivers is streamlined. It will also enable sharing of inspection information between inspection units and the police. The project is being implemented by NTSA. The Objectives are :

- Eliminate fraud/corruption within the road transport sector
- Improve efficiency and effectiveness in resources utilization
- Provide single window single source of truth on road transport data
- Improve on compliance to traffic rules and enforcement
- Improve access and security to information
- Integration of all existing heterogeneous databases from the various Transport stakeholders into one Central Data Repository (CDS)
- Provide access to shared transport data both through the internet and Mobile technologies

#### Project Status

Delivery, Installation and Configuration of Servers at the NTSA Data Centre has been completed. Prototypes design, documentation and sign-offs for all the modules has also been completed, namely:

- Motor Vehicle Registration (MVR)
- Motor Vehicle Inspection (MVI)
- Driver Testing and Licensing (DTL)
- Citizens' Self Service Portal (CSP)
- Road Service License/ Public Service License (PSV/RSL)
- Enforcement
- Reporting and Business Intelligence (RBI)
- Development of Motor Vehicle Registration, Motor Vehicle Inspection, Driver Testing and Licensing, Citizen Self Service Portal and Enforcement Modules have been completed.
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- Integration of the following 3rd Party Systems has been completed. They include Simba System for Customs data, iTAX for PIN Identification information for both Individuals and Companies National Reference Bureau system for validation of Identification Numbers for both Kenyan and Foreign citizens, Bulk SMS service through Standard Media for validation of documents and notification of progress on their applications and E-Citizen to enable online payments
  - Capacity building and knowledge transfer to NTSA technical team is ongoing through various interactions and meetings between developers and NTSA.
  - Piloting of the MVR and MVI has been initiated with Car Dealers who sell new motor vehicles. Piloting is on-going, and so far NTSA has managed to register 134 vehicles in the new system. The types of vehicles have been summarised as follows: private vehicles (117), Commercial Vehicles (10) and PSV Vehicles (7)

Delivery, installation and configuration of equipment has been completed. Motor Vehicle Registration, Driver Testing and Licensing and Motor Vehicle Inspection Sign off modules have also proceeded to prototype development.

## **OPEN DATA HUBS**

### **Background**

The Kenya Open Data Portal makes Public Government datasets accessible for free to the public in easy reusable formats, supporting the Government's drive to proactively inform citizens and be accountable. The goal of opendata.go.ke is to make core government developmental, demographic, statistical and expenditure data available in a useful digital format for researchers, policymakers, ICT developers and the general public.

### **Implementation status:**

- Four years since the initial launch, there has been active supply of datasets from Government ICT Infrastructure to the public and beyond the portal the Open Data Initiative is supporting the digitalization of Government records and processes that will supply the portal in the future.
- For the first time budget data has been released through the Open Budget App (available at [budget.opendata.go.ke](http://budget.opendata.go.ke)). efforts are being doubled to automate data updates and adopt a developer ready data scheme that will be the default standard of release, enabling better API connectivity and relevance.



# CAUCUS 1: Integrated Info-Infrastructure/ E-Government Services

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- Kenya is the first developing country to have an open government data portal, the first in sub-Saharan Africa and second on the continent after Morocco. The initiative has been widely acclaimed globally as one of the most significant steps Kenya has made to improve governance and implement the new Constitution's provisions on access to information.
- As of May 2015, there were close to 500 datasets that had been uploaded to the site. The website has received nearly 300 requests for data to date, and tools and dashboards to monitor its effectiveness in responding to these requests is being developed. Data hosted on the portal has been downloaded over half a million times, and received well over 2.5 million views since our initial launch in 2011.

## **POLICY, LEGAL AND INSTITUTIONAL REFORMS**

### **Implementation status**

- The Information and Communications Regulation Guidelines (2010) were reviewed to cater for the changing needs of the sector.
- The National ICT Master Plan was launched in May, 2014 and an ICT Strategy to implement the master plan developed.
- the National Broadband Strategy was launched in July, 2013 and an implementation framework to connect 47 county government headquarters developed.
- Other key policy and legal reforms implemented are development and subsequent launch of the National Cyber Security; development of ICT standards; and enactment of the Kenya Information and Communications Act, 2013. The Access to Information and Data Protection Bill was also drafted and forwarded to Parliament for consideration and approval.

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## CAUCUS 2: Integrated ICT Infrastructure

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### OBJECTIVES

- Enhance data access and protection stewardship of public data and information
- Support provision of reliable, secure and affordable connectivity across the country to all citizens

### OUTCOMES

- Extension of ICT infrastructure to all National and County Governments offices
- Extension of quality and affordable broadband infrastructure to underserved areas
- Secure and shared ICT infrastructure to all national and County
- lower cost of doing business

## Flagship Projects

### PROVIDING AFFORDABLE AND QUALITY BROADBAND INFRASTRUCTURE TO UNDER-SERVED AREAS (NATIONAL AND COUNTY)

#### Private network roll-out by private network operators

##### Status

Orange Telkom, Safaricom and Airtel, the mobile and data operators have deployed infrastructure in most parts of the country. Further, data infrastructure operators, such as Jamii Telecom, Liquid Telecom, Access Kenya Group, Wananchi Group, Kenya Education Network (KENET), MTN and Internet Solutions are developing infrastructure.

#### NOFBI Extension

##### Background

The National Optic Fibre Backbone Infrastructure (NOFBI) is a government owned connectivity projects that aims at laying fibre cables in all major towns in Kenya. The project is now in phase two, with phase one having laid fibre across the country.

##### Implementation status

Design work for phase two is now complete and laying of the cable will be complete by December 2015. As at end of May, 2015 NOFB civil works were completed or ongoing in these towns; Embu, Meru, Maganya, Wote, Machakos, Kitui, Kisii, Nyamira, Homabay, Kutus, Kerugoya, Thika, Kisumu, Siaya, Eldoret, Iten, Kabarnet, Kapsabet, Voi, Wundanyi, Diani, Lunga Lunga, Chuka, Narok, Bomet, Kericho, Nyamira, and Nyeri. A total of 600km out of 1600 km of civil works had been done. The 6 billion project once fully implemented, will cover 2100 kilometers in all 47 Counties.

# CAUCUS 2: Integrated ICT Infrastructure

## **GCCN Extension**

### **Background**

The Government Common Core Network (GCCN), a Multi-Protocol Label Switching (MPLS) based network interconnects the various government ministries. It was rolled out and completed in 2009 by Telkom Kenya. GCCN serves as a shared and secure interoperable Government-wide ICT architecture with phase II of the project looking at redundancy issues and upgrade of power points. Through the Directorate of e-Government, Government Data Centre (GDC) have been built for processing and storage of Government applications and data. The Data Centre is connected to the Government Common Core Network (GCCN) that has networked Government Ministries, departments and agencies. The GDC implementation was started in late 2008 and was commissioned in February 2011 and is now hosting Government systems and services.

### **Implementation Status**

Development of requirement done. Power backup upgrade contract awarded and to be completed within 6 months.

## **Data Centre Expansion (IAAS, SAAS)**

**NOT STARTED**

## **Mombasa as a Regional Internet Exchange Point**

**NOT STARTED. Back tracked but still operational**

The Exchange Point is still operational and TESPOK is determined and will continue to run Mombasa Internet Exchange Point. (MSIXP) as it had began in 2009 and with the standards it has used to operate the Nairobi Kenya Internet Exchange Point POPs since 2002. With the ending of TESPOK and AMSIX contract due to challenges beyond their control, TESPOK has already approached various Kenyan ISPs as well as regional ISPs at the MSIXP to peer at the Mombasa Internet Exchange Point and continue realizing the benefits of the POP.

# CAUCUS 3: ICT Human Capital Development

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## OBJECTIVES

- Develop ICT skills and leadership capacity to transform public sector for efficient and effective service delivery and a sustainable national Development

## OUTCOMES

- Availability of sustainable local high end ICT skills to meet the needs of the industry
- Adequate workforce to transform and innovate business using ICT
- ICT literate population capable of exploiting ICT products and services for improved quality of life

# Microsoft 4Afrika Innovation 4Gov

Governments typically target robust levels of economic growth, delivering on their commitments of good governance, driving innovation in local economies, and creating jobs for their youthful populations. At the same time, most -if not all- governments in Africa, typically encounter many challenges in the delivery of services to citizens, to business, or in relation to intra-government operations.

We believe that the power of government demand can be an important catalyst in the process of innovation. Microsoft is reinventing existing synergies with governments, top entrepreneurs and startups by establishing and supporting new links between the demand for innovation by the government sector and the supply of innovation in the private sector space.

In recognition of the critical role played by governments in the economic and social spheres, and in partnership with key stakeholders in public sector and in the MS Partner ecosystem, Innovation 4Gov is the framework program designed to harness the power of Cloud and mobile technologies to transform the delivery of public services to citizens and businesses, as well as intra-government operations.

Microsoft 4Afrika Innovation 4Gov fosters the delivery of innovative public-sector services by offering co-funding and technical readiness to solutions built by Africa's private sector in response to government identified challenges and/or opportunities for improving the delivery of such services. We are also partnering with governments on internal capacity building for civil servants, to embrace innovation and to be change-agents in the public sector space. The program is embrative of public sector operation in the domains of healthcare, education, government administration etc. Innovation 4Gov strongly encourages intra and/or inter-regional partnerships.

Innovation 4Gov program will:

## **Identify and set scope**

Partner with stakeholders in government and in the Microsoft partner ecosystem to identify challenges in the delivery of government services (including intra-government).

## **Invite**

Issue periodic 'call for innovations' to invite Microsoft Partners (startups, ISVs, SI and developers) to address the identified challenges, and to capture the opportunity to grow and innovate around demand for innovation in the government space.

Fund and provide technical support

Based on meeting eligibility criteria and going through the selection process, successful entities will benefit from innovation funding and technical support to assist in developing and implementing innovative apps and/or solutions in the government space.

### **Skill**

Partner with governments to support internal ICT capacity building efforts targeting civil servants through Microsoft 4Afrika Academy.

### **Scale**

Provide the platform -4Afrika Repository for Line of Government (LoG) apps for innovative Microsoft Partners to share their success stories with the African government sector at large.

The ability for Africans to innovate is very promising. Smaller countries in Africa have shown great leadership in creating an enabling environment where innovation can thrive. However, there is still a challenge when it comes to technical and financial capability. By working with partners, we are able to source innovative solutions, evaluate and fund them and extend support to ensure that the demand for innovation is met with a solid and unentrapped supply of innovation.

For more information, visit [www.microsoft.com/africa/4afrika/4government/](http://www.microsoft.com/africa/4afrika/4government/)







## Flagship Projects

### **ESTABLISH 5 CENTRE OF EXCELLENCE IN EDUCATION AND TRAINING OF HIGH END ELECTRICAL ENGINEERING, COMPUTER SCIENCE AND INFORMATION SYSTEMS PROFESSIONALS**

#### **Background**

The Kenya ICT industry view of fresh ICT graduates is that of low quality, not only in technical content but also in terms of communication, analytical and critical thinking skills. Similarly, there is no approved structured ICT professional training program in Kenya thus forcing companies to import the high-end ICT professionals abroad.

#### **Implementation status**

No status report available

### **FINANCE A 1-2 YEAR INTENSIVE STRUCTURED TRAINING AND ATTACHMENT PROGRAM PRODUCING 500 GRADUATES PER YEAR**

#### **Background**

The lack of structured internship and graduate training programs by local industry has reduced the pool of well-trained graduates. In addition, very few industry firms provide structured on-the job training for new ICT graduates. The project will therefore identify students, train and provide attachment opportunities for them.

#### **Implementation status**

Under the Presidential Digital Talent Program (PDTP), 100 university graduates were recruited, trained and attached to various government Ministries to work on major flagship projects. Phase 2 of this project will commence later in 2015, where another 400 graduates will be recruited and given internship opportunities in various government offices.

# CAUCUS 3: ICT Human Capital Development

## ATTRACT TOP QUALITY GLOBAL UNIVERSITIES TO OFFER ICT PROGRAMS IN KONZA TECHNOLOGY CITY

### Background

There is no approved structured ICT professional training programme in Kenya. This means that professional development outcomes are not uniform and depend on the specific company. To address this, universities will be required to develop detailed plans addressing the current challenges. In addition, top quality global universities will be incentivised to set up and offer ICT programs at Konza Techno City.

### Implementation status

Not implemented. Pending KOTDA Bill

## DEVELOPMENT OF MOOCs-TYPE ICT CONTINUOUS EDUCATION COURSES FOR TRAINING OF TRAINERS AND THE PUBLIC

### Trainers of Trainers portal

### Background

In order to achieve this, school-based ICT training will be provided, first for secondary teachers, and later followed by primary school teachers. For this to succeed, an eLearning module for training teachers with technology will be introduced at the same time to ensure that the teachers stay current and develop other skills on a continuous basis.

### Implementation Status

Teachers ICT training: KICD has <http://elimika.ac.ke/about-elimika.html>

### Public Literacy program via eLearning

### Background

To increase the demand for e-Government services from National and County Governments by the public, it is imperative to create public ICT literacy programs. Through eLearning, the project aims to have ICT literate population capable of exploiting ICT products and services for improved quality of life.

### Implementation Status

NOT STARTED

## Caucus 4

# ICT as a Driver of Industry/ICT Innovation and Enterprise Information

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### OBJECTIVES

- Facilitate innovation and grow sustainable ICT enterprises in Kenya

### OUTCOMES

- Additional ICT companies established
- Additional 1.5% contribution to GDP by 2017/18 (indirect and very difficult to measure)
- A Science and Technology Park and ITES Centre in Konza Techno City and connected to other innovation hubs as part of scaling up ICT innovations

## Flagship Projects

### INTEGRATED SECURITY, INTELLIGENCE AND SURVEILLANCE SYSTEM, INCLUDING THE ICT INFRASTRUCTURE TO POLICE STATIONS

#### Background

Data provided by the ICT Master Plan reveal that Kenyan businesses spend 4% of sales just on crime insurance. The direct costs of insecurity in the country have had significant impact on asset losses, damage and personal injury. The security challenge can be addressed utilizing ICT tools to monitor, capture evidence and report crimes. This would positively contribute to business growth. This flagship project therefore will improve security by implementing an integrated security, intelligence and surveillance system. Built on the persons data hub, this project will enable the creation of multiple agency database and master data platform, data warehouse, crime analytics, and profiling. A key component of this system is providing the police with real time data on incidences and crime suspects providing them with the efficiency required to better manage crime.

To achieve this, broadband connectivity will be provided in police stations. Similarly, there will be seamless ICT infrastructure and info-structure within the communities to address the emerging mobile and cyber security issues. The key actors are the Ministry of Interior State, ICT Authority and Kenya Revenue Authority (KRA). The actors will develop and fast-track a Cyber Security Policy that will guide the strengthening of the existing cyber security statutes.


#### Implementation Status

Cameras have been installed in most of the main roads

### NATIONAL AGRICULTURE COMMODITY EXCHANGE

#### Background

The implementation of an agriculture commodity exchange as a flagship project will facilitate competitive and efficient trade in commodities by providing reliable, timely and accurate marketing information and intelligence. Through the use of ICT, the platform will provide transparent and competitive commodity prices, and enable farmers sell their produce directly to the customers without intermediaries and fetch better prices (Waema and Katua, 2014).



The project will also automate the tea auction in Mombasa as well as establish an electronic animal monitoring system that is able to track livestock ownership for security reasons. As a result, end to end data of farm animal produce will be available, thus opening up global market for Kenyan mean and increased trade opportunities. This will however not be possible without appropriate institutional and legal framework. As such, the key government actors on this project, namely Ministry of Agriculture and ICT Authority will fast-track the development and implementation of appropriate legal framework, including the Cyber Security Master Plan. This will boost economic development and provide trust and confidence to users of available services

### **Implementation status**

## **SCHOOL LAPTOP PROJECT**

### **Background**

The flagship project started in 2014 with a goal of providing teaching and learning tools for pupils in primary schools in Kenya in order to transform education and help to create a knowledge society. For the successful implementation of this project however, the following sub-projects will be included:

- review of school curriculum
- conversion of courseware into digital form
- ICT training for teachers
- broadband internet connectivity to the schools

The success of this project will be linked to the school project being implemented under the ICT Infrastructure pillar, which will develop an integrated education management system by automating academic and administrative processes at all levels, and creating hotspots in all schools. The key actors in this project are the Ministry of Education, Science & Technology, Kenya Education Network (KENET), and ICT Authority.

### **Implementation Status**

Teachers ICT training: KICD has <http://elimika.ac.ke/about-elimika.html>. Award for supply of the equipment has been finalized and samples done.pilot is underway. The approach, roadmap and governance structure for the National Digital Literacy program is now complete. The program, will be run through a multiplicity of government agencies whose main coordinator is the Ministry of ICT through the ICT Authority.



Other government organs that have defined roles are the Ministry of Education, Science and Technology, who is the project owner, Ministry of Industrialization & Enterprise Development, The National Treasury, the Ministry of Energy and Petroleum and the Office of the Attorney General.

We want to see the success of the project. That's why we are adopting a different strategy which focusses on the digital content for learners rather than the purchase of devices. We first have ensured that schools have adequate electrical power.

We are also ensuring that teachers are trained in ICT," said Dr Fred Matiang'i, the Cabinet Secretary, Ministry of ICT.

The CS added that, the content will be accessible anywhere irrespective of device or platform. To ensure the success of the programme, the leadership will ensure stakeholder involvement, robust communication and a smooth transition for all parties involved.

The strategy puts emphasis on ensuring sustainability in the long-term for the initiative to achieve its vision of creating a knowledge-based economy.

Implementation status:

### **PROGRESS ON DIGITAL LITERACY PROGRAMME TO DATE**

A framework that defines the ecosystem for effective delivery of education using ICTs has been developed. Four (4) pillars that are critical to the project delivery have been identified as below:

- Development of digital content.
- Power supply to schools
- Teachers are adequately trained and prepared on use of ICTs
- Content is accessible through multiple platforms (devices).

Currently working towards the implementation of the program in 150 schools country wide. The commencement of the Proof of Concept (POC) starts on 22nd February 2016. proof of concept phase seeks to allow the successful bidders to prove their capacity to implement the full project to all the 22,000 schools. This phase will last twelve (12) weeks and



will cover 150 schools distributed across the 47 counties.

The two successful bidders are the consortium of Moi University and JP Couto, Jomo Kenyatta University of Agriculture and Technology and Positivo BGH. Moi University will cover 26 counties, while Jomo Kenyatta University of Agriculture & Technology will cover 21 counties.

The 150 schools selected are certified to be e-ready by school head teachers in collaboration with County Education Officers. The e-readiness tool assessed the number of teachers trained, electricity connection and metering, device storage facilities, appropriate desks and availability of a secure classroom.


POC implementation phase is guided by a detailed project roadmap which includes testing of the following:

- Ability to deliver on schedule
- Adherence of specifications of devices
- Installation and testing of both the content and the devices
- Usability, functionality and support to schools to ensure that everything works optimally.

After completion of the POC they will then proceed to full implementation in 22,000 schools in Kenya in two phases. The first batch of 600,000 devices will be delivered to 11,000 schools starting in June 2016 which will mark the beginning of the first phase. The second batch will be delivered to the other 11,000 schools by June 2017. The setting up of the Local Assembly line and training of staff and other key players will start in the next few weeks.

On power connection to schools, the Ministry of Energy and Petroleum is in the final stages of connecting the remaining schools. Rural Electrification Authority (REA) has an aggressive plan to connect all the 22,175 public primary schools by December 2015. By the end of June 2015 REA will have connected 87% of public primary schools and the rest by December 2015.

On content we are already engaging stakeholders especially publishers, developers and content creators with the aim of orienting them on the criteria to be used for reviewing and approving digital content for schools. The Kenya Institute of Curriculum Development (KICD), is working towards liberalization of learning content and its availability on multiple



platforms. We see this as a huge opportunity for the estimated 13 billion content industry which will build applications and independent content in e-learning.

Going forward, the Ministry of Education, Science and Technology through the Kenya Institute of Curriculum development (KICD) will provide online training course for teacher training on ICT integration. This will be explosive and will ensure that teachers in both public and private school acquire critical ICT teaching skills anytime anywhere.

On Teacher training, we have identified teachers of the 150 POC schools as project champions. We have planned a training and briefing session with all the head teachers and the identified 2 teachers per school in the coming weeks. The project will specifically focus on community involvement and engagement, where we will be emphasizing on the need of the contractors to use local inputs in the program implementation.

On security of the devices and accessories, communities and a schools are expected to protect this valuable resource, and the Ministry of Interior and Coordination of National Government is being engaged to extend security to schools when need arises.


There is need to work with various stakeholders and a multi-agency partners . The agencies include the Ministry of Education, Science and Technology, Ministry of Industrialization and Enterprise Development, Ministry of Energy and Petroleum, National Treasury and the Office of the Attorney General.

## **SCALE UP COMMERCIALIZATION OF ICT INNOVATIONS**

### **Background**

Kenya's Vision is to be a knowledge based economy by 2030, by shifting the current industrial development path towards innovation and use of knowledge as the key source of economic growth. As such, there is an opportunity to build on current strengths and become a leader in ICT applications and services. By 2017, the project aims to establish several CoEs and Science & Technology parks with a focus on R&D in ICT applications and services. Such innovation hubs and clusters should be set outside of Nairobi with capacity to handle research funds and support commercialization of ICT innovations. Collaboration with private sector is key in order to develop ICT innovations that are relevant to the





market. As a result, leading experts and innovators will be acknowledged, recognized and rewarded. Programs that support commercialization of innovation will be encouraged as these are necessary in linking talent, technology, capital, and know-how in an effective framework to foster the growth of new businesses. The project will create a national framework for business incubators to support new start-ups, as well as the creation of a directory of incubators and their capacities.

### **Implementation status**

In February 2015, The ICT Authority convened a National ICT Innovation Forum that brought together top decision-makers in the innovation ecosystem that served as an exhibition forum for innovators and entrepreneurs. At this meeting, the Kenyan President, Uhuru Kenyatta, presided over the launch of Enterprise Kenya. In addition, Enterprise Kenya has been endorsed by Kenya Connect and the 4th Presidential roundtable held in April 2015 (McKinsey Enterprise Kenya Concept, 2015). Consequently, the government set aside Ksh. 1 billion to establish Enterprise Kenya with a call for matching funds from the private sector and partners.


## **NATIONAL PAYMENT GATEWAY**

### **Background**

According to the National ICT Master Plan, Kenya is poised to become the financial hub of Eastern Africa. In order to enhance this, a national payment gateway project will be implemented to facilitate secure online payments by supporting multiple financial institutions to carry out electronic transactions and simplify the processing of payments. To achieve this, the Government will facilitate the establishment of appropriate institutional and legal framework to safeguard infrastructure, information and applications. This includes the implementation of the Cyber Security Master Plan. This will boost economic development and provide trust and confidence to users of available services.

### **Implementation Status**

- Completion of Development of Exemptions & Remission module
- Implementation and enhancement of processes of the Radiation Board and Central Firearms Bureau organizations;
- Facilitation of international trade through implementation of an electronic system that serves as the single entry point for submission of Cross border documentation electronically to international trade interveners (government



agencies) and service providers (such as Banks and Insurance companies). The system aims at simplifying import, export, transit and transshipment procedures, making them faster and less costly for the benefit of Kenya's economy.

- Set up of the KENTRADE SMS gateway and its integration with various Business Systems including the Kenya TradeNet System and the Customer Relationship Management System. The SMS Gateway enables KENTRADE to interact with customers using SMS and USSD technology for Enhanced Customer Service.

## **NATIONAL ELECTRONIC SINGLE WINDOW SYSTEM**

### **Background**

The Kenya National Bureau of Statistics (KNBS, 2012) reports that transportation in Kenya accounts for 40% of costs of doing business. A major bottleneck in the trade, transport and logistics sector is low efficiencies at border points, which can be reduced by utilizing ICT tools for improved efficiencies and for tracking and monitoring in this sector. In order to realize development benefits in this sector, the National Electronic Single Window System will be implemented as a flagship project. The system will automate the submission of regulatory documents such as custom declarations, applications for import/export permits, certificates of origin, trading invoices, etc.

### **Implementation status**

Development partners, including USAID have for a number of years supported the development of such a system. The KRA payment gateway is an innovative mean by which taxpayers remit taxes through, among other channels, the mobile phone utilizing the USSD and SMS enabled technology. The technology includes secure real time integration with the banks' back- end systems, with reconciliation and reporting capabilities leveraging on the steady mobile phone penetration in the country which stands at 78%. The platform Reports Portal allows users to generate reports for transfer of revenue collected in specific time ranges from the KRA Paybill account to the Collection account at the designated Bank.



## **DEVELOP THE ICT STANDARDS**

### **Project status**

The Government Enterprise Architecture has been developed and approved. Standards in the following 6 thematic areas have been developed and have gone through two stakeholder workshops for validation. We are yet to have the private sector contribution.

- Infrastructure
- Information Security
- Application Systems
- Information management
- ICT HRM
- IT Governance

They have been forwarded to KEBS for review and publishing.

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# PROJECT: SECURITY GOVERNANCE & E-GOVERNANCE

## OBJECTIVES

- To ensure the security of Government ICT infrastructure, systems and data.
- Ensure that Government ICT projects are cost-effective, integrated and aligned With national objectives

## OUTCOMES

- Effective coordination of info security activities across Government
- Improved confidentiality, integrity, availability and accountability of Government services
- Increased completion rate of Government ICT projects
- Improved efficiency of public service delivery
- Improved Kenya's e-Government ranking in the world
- Increased transparent access to critical Government services by citizens

## Flagship Projects

### CYBER SECURITY

#### Project status

Policy on cyber security being drafted

### PUBLIC KEY INFRASTRUCTURE (PKI) IMPLEMENTATION

#### Project status

Procurement of the firm to implement the PKI underway

# PROJECT: SECURITY GOVERNANCE & E-GOVERNANCE

FLAGSHIP PROJECTS	SUB-PROJECTS	ACTORS	STATUS
<b>INTEGRATED ICT INFRASTRUCTURE</b>			
1. Providing affordable and quality broadband infrastructure to underserved areas.(national and county)	Private network roll-out by private network operators	MOICT/ ICTA/CAK	Roll out has started
	NOFBI extension		Design complete and laying of the cable will be complete by December 2015. To date 600km out of 1600 km of civil works has been done
	GCCN extension (PHASE II)		Development of requirement done. Power backup upgrade contract awarded and to be completed within 6 months.
	CCP		Phase I is completed (28 counties) Phase II is on and will cover 19 counties will complete by june 2015
	Mombasa as a regional internet exchange point		Not Yet
School community network	School laptop project	MoE/	It is on hold
	Integrated education management system (automates academic & administrative processes at all levels)	ICTA	The integrated architecture and configuration has been done and unique identifier developed. TSC is currently using it
	Creation of a schools network and its connection to the Internet through the KENET infrastructure	ES&T State Dept, KENET, ICTA	KENET has done for higher learning and colleges
	Provision of education data, information and statistics through an educational portal		

3.Health community network	Integration of all health management systems into an integrated national health management system	MoH/	NOT YET
	Creation of health networks and its connection to internet	ICTA	Countrywide all have internet
	Provision of public health information and services to citizens and businesses		This is done and information is available on the website through the : ehealth kenya facilities, District health information software (DHIS2), HRH resources.
<b>INTEGRATED INFO INFRASTRUCTURE AND E-GOVERNMENT SERVICES</b>			
Personal Data Hubs	National Unique Persons Identifier (NUPI)		
	Implementation of an integrated national persons registry system and integration with existing persons systems (e.g. IPRS)	Interior State Dept	Not Yet done
	Development of persons-related systems (Integrated security, intelligence and surveillance system Integrated security, intelligence and surveillance system	AG	Concept note and Preparation of bidding documents-completed. Sourcing of funding ongoing (financial year 2014- 2015)
	Establishment of Huduma centres		Contract awarded Implementation in progress
	Integrated security, intelligence and surveillance system, including the ICT infrastructure to police stations		13 done and next 34
Establishment of Data Hubs	Establishment of unique identifier (e.g. CUPI)	AG	The internal processes are automated, all records have been digitized and citizens are able to search and reserve company names through mobile, e-citizen portal and huduma centres. They are also able to pay through MPESA.
	Development of Companies registry management system		
	Investor registry System		Not Yet

Assets Data Hubs	Asset unique identifier	Interior State Department	Not Yet done
	Develop and implement Assets management system (e.g. vehicles, buildings, etc.)		
	National physical addressing system	Treasury/ ICTA/KRA/ NTSA/ transport state dept	
	Develop and implement Transport information management system (TIMS)	NTSA	Motor Vehicle Registration & Driver Testing and licensing requirement gathering complete Servers Delivered to NTSA, Power on Self-Test Conducted and all the components tested. Sign off done. dec 2014.The following Modules; Motor Vehicle Registration, Driver Testing and Licensing and Motor Vehicle Inspection Sign off was done 02/02/2015 and have proceeded to prototype development. This is after the requirements gathering, questionnaire administration and presentation of the design of the three modules was conducted at the NTSA offices to the ICT Officers and the module users was done and their inputs incorporated. Signed acceptance certificate on the three modules was done in order to proceed with the prototypes. Mobile devices Sample equipment delivered, tested and demonstrated at the NTSA Headquarters. The enhanced mobile devices have been by NTSA. Procurement of equipment ongoing, awaiting delivery.



National spatial data infrastructure (NSDI) as part of land data hub	Land unique identifier LUPI)		All land have been given LRN all the systems have been linked to E-citizen portal
	Develop and implement National land management systems		Titling Management system has been developed(survey,adjudication and registration of new titles) EDMS-Automation of Land Registration Transuction fully developed and being rolled out.
	All land/property parcels Mapped using GIS(NSDI)		The Spatial Data centre building 95% complete National Digital mapping data produced

### ICT HUMAN CAPITAL AND WORKFORCE

Establish 5 CoEs in education and training of high end Electrical Eng., Computer Sc. and Information Systems professionals	Fund of CoEs in ICT education and training	ES&T State Dept, KOTDA	Not Yet
	Enactment of KOTDA bill		KOTDA Bill done
	Attract top quality global universities to offer ICT programs in Konza Techno-city		In progress Carnegie Mellon university we have collaboration for certification
Finance a 1-2 year intensive structured training and attachment program producing 500 graduates per year	Identifying the students and providing training and attachment program for them	Uni/	100 university graduates have been taken in for presidential digital talent internship.400 will be taken in phase 2 through collaboration between ICTA and huawei &SAP partnership has given 63 interns

Development of MOOCs-type ICT continuous education courses for training of trainers and the public	Trainers of trainers portal	ICTA	Not Yet
	Public Literacy program via e-learning		
<b>ICT AS A DRIVER OF INDUSTRY</b>			
National payment gateway (legal framework and the system)	N/A		DONE
National electronic single window system	N/A		DONE
National agriculture commodity exchange (Agricultural portal, Electronic tea Auction, Electronic animal monitoring system)	Agricultural portal Electronic tea Auction Electronic animal monitoring system		

## DEVELOPING ICT FOR ICT BUSINESSES

Scale up ICT innovations	A Science and Technology Park and ITES Centre in Konza Techno City	ICTA	
	S&T Parks in selected counties (ICT Hubs)		
	Program to support commercialization of ICT innovations		Presidential directive for MCDAs to leverage on locally developed systems
	Market Kenya as an international ICT hub (To enhance investments in the ITES sector)		Developing a certification mechanism for software developers is ongoing
Enabling legal and regulatory framework	Enactment of an e- Government legislation	MOICT/AG	NOT YET
	Enactment of a data protection legislation and setting up of a regulatory framework for data protection		Bill has been drafted
	Enactment of a freedom of information legislation		Done
	Strengthening cyber security legislation		Drafting stage



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