

## COUNTY CONNECTIVITY PROJECT (CCP) FOR THE INFORMATION & COMMUNICATION AUTHORITY OF KENYA (ICTA)



### ICTA - KENYA

The Information and Communication Authority of Kenya ICTA – formerly E-govt under the Office of the President -is a State Corporation under the Ministry of Information Communication and Technology. The corporation was established in August 2013.

The Authority is tasked with rationalising and streamlining the management of all Government of Kenya ICT functions. Its broad mandate entails enforcing ICT standards in Government and enhancing the supervision of its electronic communication.

The new Constitution passed in Kenya put to law devolution of the Central Kenyan Government into 47 Counties. There was need to link these counties with the Central Administration to provide all citizens with equal access to high-quality public services in line with the

### Solution Description

The solution as designed by Soulco is meant to implement a network that is scalable (easy to add an additional site or service), resilient (sending data over an alternative path dynamically), private (ensures mission-critical traffic is segregated from other enterprise and public Internet traffic), and flexible (allows for tailored solutions that best fits each site's specific bandwidth and redundancy requirements, and communication needs). All these are aimed at delivering critical services such as Voice, Video, Data and Service Applications, to the government ministries, agencies and departments (MDAs), across the country, fast and securely. The solution is based on an MP-BGP and MPLS-VPN Solution for traffic segregation and security at the Network Core and County Edge delivered via Enterasys routing and switching devices, SDH Transmission for physical connectivity between Network Core and the counties via the country's national fiber optic network (NOFBI), Last-mile connectivity using IP-based Wireless Outdoor Routing Protocol radio systems and fiber optic cables to connect the different MDAs to the network. Voice service is delivered via Siemens HiPath Communication System and Video Service via Clear sea application.



### Voice:

*VoIP inter-county connectivity*

*VoIP integration between CCP and Government core Network.*

*Account Management for Telephone sets via HiPath Access Manager*

*HiPath 4000 network monitoring via HiPath Manager*

*Hardware used for Solution:*

*Siemens HiPath 4000 & IP Telephone Sets*

### Wireless Outdoor Routing System

*Last Mile connectivity to MDAs via air interface.*

*The wireless network is Monitored and managed using proxim vision NMS.*

*Hardware used for Solution:*

*Proxim base station and subscriber units*

### SDH Transmission

*Provides physical connectivity from the counties to Nairobi Core via the NOFBI*

*Hardware used for Solution:*

*RAD FCD*

*RAD E-Gate*

*Our design for this includes;*

### Data

*Nairobi Network: Provides connectivity to the government core network and to the network management and monitoring servers*

*CCP Core Network: Responsible for inter-county connectivity via OSPF,MP-BGP and MPLS VPN. Provides for traffic segregation, resilience and security.*

*CCP Access Network: Responsible for last mile connectivity to the MDAs.*

*Network Monitoring and Management via Netsight.*

*Hardware used for Solution:*

*Enterasys Core Routers - SSA 180*

*Enterasys Layer 3 Switches - C5*

*Enterasys Edge Switches - B5*

### Video:

*Real time video conferencing between the county bosses.*

*The Video Conferencing network controlled via LifesizeClearSea Server.*

*Hardware used for Solution:*

*Desktop Computers, Video Camera, microphones and ClearSea application installed in computers.*

### Network Monitoring and Management:

*Centralized Real time monitoring and management of all CCP devices from the network operating center in Nairobi.*

*All Network Management Servers are installed in the cloud environment (VMware Server)*



*Soulco Sales Director and Member of the Board, Jan De Keuster, was involved in the project from the beginning.*

*"We had a strong team in place with a 'never-give-up' mentality. We combined a robust technical solution with local and Belgian support. Our proposal included maintenance for three years, ensuring continuity of service based on a three level maintenance program. Soulco experts are currently providing high-tech third-level maintenance.*

*We have put a 'train the-trainer' program in place to assure capacity building. Our customers' staff have been trained, guaranteeing that all counties – including Nairobi – have their own technical support capability to manage the infrastructure locally."*



*The project is addressing the constitutional duty of the public authorities to provide equal municipal services throughout the country, which satisfies the Office of the President, explains Dr. Katherine Getao, ICT Secretary of the e-Government Directorate.*

*The centralized monitoring and support provided over the IP network allows us to properly manage all the new equipment installed." The IP platform is promoting transparency, ensuring greater public responsibility among staff while lowering administrative costs."*

*The scope of the project has changed and it is now developing a private cloud-based enterprise system that will allow the national government to offer a wide range of services to its citizens.*

*The CCP has successfully connected 29 counties as at November 2014. The project has entered another Phase which adds County Governors Offices to the network, full completion is expected in 2015 as high-level maintenance of existing network is ongoing.*

*"We have challenged each other along the journey to achieve our goals, and this has led to a friendship between us; one which will inspire new opportunities in the future."*

*Dr. Katherine Getao, ICT Secretary of the e-Government Directorate, Office of the President, Republic of Kenya*

*Regardless of where in the country Kenyans live, they have the right to receive the same quality of services. The government through the CCP is delivering these services as closely as possible to where citizens live.*

*It is also supporting a more efficient and reliable public service for citizens, driving economic growth. "With the IP network, the maintenance issues of our old telephony network belong to the past," says Thomas O. Odhiambo, Senior Assistant Director of the e-Government Directorate at the Office of the President.*

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