# Nakuru County Government ICT Roadmap 2015-2020

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Statement on Confidentiality and Distribution of this Document

This report has been prepared for and only for County Government of Nakuru and the ICT Authority in accordance with the terms of our engagement letter dated 4th February 2015 and inception report dated 13th March 2015 and for no other purpose.

Infosys Engineering Limited (the Consultant) does not accept or assume any liability or duty of care for any other purpose or to any other person to whom this report is shown or into whose hand it may come save where expressly agreed by our prior consent in writing.
COUNTY ICT ROADMAP ACCEPTANCE SIGNOFF

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Signature  
Date  

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Project Manager,  
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Date
ACKNOWLEDGEMENT
The County Government of Nakuru ICT Roadmap 2015-2020 has been developed through the involvement of the county stakeholders. We commend the national government through the ICT Authority and World Bank for the financial support that made this a reality.

We extend our appreciation to the Governor HE Kinuthia Mbugua through the CEC for ICT and e-Government, ICT and e-Government Chief Officer, the ICT team and County Head Quarters team who supported the process with a lot of zeal. The teams were very clear on how they expected to improve service delivery to the citizens. Special appreciation go to the ICT Chief Officer for reaching out to the county stakeholders, coordinating the Technical committee, Planning committee and the stakeholder’s validation workshops.

We believe that the roadmap will change the ICT landscape in the county and look forward to a further engagement with the county teams to support the implementation of the ICT Roadmap.

Thank you very much.
PREFACE

ICT and e-Governance is a cross-cutting service which all government agencies and departments depend on for the supply of ICT equipment, ICT infrastructure development, software solution development and general ICT support. Through ICT and e-Governance, the government services will be made available to the citizens in a convenient, efficient, and transparent manner. The roadmap will guide Nakuru County towards achieving its ICT and e-Governance vision. Research on the actual ICT status of Nakuru County was carried out and gaps identified. The strategies to address the identified gaps are categorized as: Infrastructure and Connectivity, Human Capital and Workforce Development, Public Service Delivery and Policy Environment and Legal Framework.

The roadmap is developed in line with the national ICT Master Plan.
## LIST OF ABBREVIATIONS AND ACRONYMS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>BPO</td>
<td>Business Process Outsourcing</td>
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<tr>
<td>CA</td>
<td>County Assembly</td>
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<td>CCTV</td>
<td>Closed Circuit Television</td>
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<td>CDF</td>
<td>Constituency Development Fund</td>
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<td>CEC</td>
<td>County Executive Committee</td>
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<td>CDMA</td>
<td>Code Division Multiple Access</td>
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<td>CIDP</td>
<td>County Integrated Development Plan</td>
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<td>CO</td>
<td>Chief Officer</td>
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<td>CPSB</td>
<td>County Public Service Board</td>
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<td>CRA</td>
<td>Commission for Revenue Allocation</td>
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<td>CRM</td>
<td>Citizen Relationship Management</td>
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<td>DG</td>
<td>Deputy Governor</td>
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<td>DHIS</td>
<td>District Health Information System</td>
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<td>EAC</td>
<td>East Africa Community</td>
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<td>ECD</td>
<td>Early Childhood Development</td>
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<td>ECDE</td>
<td>Early Childhood Development and Education</td>
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<td>ERP</td>
<td>Enterprise Resource Planning</td>
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<tr>
<td>GIS</td>
<td>Geographical Information System</td>
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<td>GCCN</td>
<td>Government Common Core network</td>
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<td>GPS</td>
<td>Global Positioning System</td>
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<td>GSM</td>
<td>Global System for Mobile</td>
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<td>HE</td>
<td>His Excellency</td>
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<td>HMIS</td>
<td>Health Management Information System</td>
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<td>ICT</td>
<td>Information and Communications Technology</td>
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<td>ICTA</td>
<td>Information and Communication Technology Authority</td>
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<td>ITES</td>
<td>Internet Enabled Services</td>
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<td>KTC</td>
<td>Konza Technology City</td>
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<td>IFMIS</td>
<td>Integrated Financial Management Information System</td>
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<td>IPPD</td>
<td>Integrated Personnel and Payroll Database</td>
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<td>IPRs</td>
<td>Intellectual Property Rights</td>
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<td>KES</td>
<td>Kenya Shilling</td>
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<td>KPLC</td>
<td>Kenya Power and Lighting Company</td>
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<td>LAN</td>
<td>Local Area Network</td>
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<td>LAIFOMS</td>
<td>Local Authorities Integrated Financial and Operations Management System</td>
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<td>MCA</td>
<td>Member of County Assembly</td>
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<td>MTP</td>
<td>Mid-Term Plan</td>
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<td>nRI</td>
<td>network Readiness Index</td>
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<td>NOFBI</td>
<td>National Optical Fibre Backbone Infrastructure</td>
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<td>PABX</td>
<td>Private Automated Branch Exchange</td>
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<td>SLA</td>
<td>Service Level Agreement</td>
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<td>SP</td>
<td>Strategic Plan</td>
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<td>TA</td>
<td>Transition Authority</td>
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<tr>
<td>TTC</td>
<td>Teachers Training College</td>
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<td>TVET</td>
<td>Technical and Vocational Educational Training</td>
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<tr>
<td>UNESCO</td>
<td>United Nations Educational, Scientific &amp; Cultural Organisation</td>
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<tr>
<td>USD</td>
<td>United States Dollars</td>
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<tr>
<td>VoIP</td>
<td>Voice Over Internet Protocol</td>
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<td>WAN</td>
<td>Wide Area Network</td>
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<td>WB</td>
<td>World Bank</td>
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<td>WDF</td>
<td>Ward Development Fund</td>
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<td>WSIS</td>
<td>World Summit on the Information Society</td>
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EXECUTIVE SUMMARY

This roadmap intends to deliver on four objectives namely:

This roadmap is benchmarked on the global, regional and national ICT trends, demands, expectations, standards and best practices. It analyses the status of ICT in the county and analyses the gaps using the maturity level analysis. Finally, four thematic roadmaps and three cross cutting themes are discussed.

The National ICT Master Plan aims at making ‘Kenya an ICT hub and a globally competitive digital economy’. The master plan identifies the county governments as one of the key stakeholders and partners in the implementation process. The Nakuru ICT roadmap aligns itself to the national ICT Master-plan. It seeks to position the County in delivering efficient ICT enabled services.

Nakuru County ICT Roadmap 2015-2020

The Roadmap is covered in the following thematic areas that have defined the current ICT status, ICT gaps identification, proposed roadmaps and strategies to address the identified ICT gaps; Infrastructure and Connectivity; Human Capital and Workforce Development; Public Service Delivery and Policy Environment and Legal Framework.

The roadmap plan underpins the National ICT Master Plan’s ICT sector-transformational agenda. Two notable achievements in the county are the effective utilisation of the Bilawaya free wifi in the selected zones and the zizi system of revenue collection. However, the ICT assessment highlights the following ICT gaps that have formed the basis of the roadmap:

1. Infrastructure and Connectivity; Limited ICT infrastructure and poor connectivity
2. Human Capital and Workforce Development; Lack of a comprehensive training programme for the county staff (training needs assessment, training and user support) and low ICT skills
3. Public Service Delivery; Lack of integrated information management system and a limited ICT enabled public service delivery systems;
4. Policy Environment and Legal Framework; Lack of ICT governance policies and procedures

In addition to the above, the county lacks a Shared Services plan, a change management plan and there is limited citizen involvement and participation. An assessment of the ICT maturity level in the County Government of Nakuru is currently rating significantly below average with a score of about 274.2 on the weighted maturity ratio and a category maturity of 1.1.

There is huge potential and opportunity for growth in all the areas considered. The ICT needs of the county are unmet with the current ICT infrastructure and service delivery mechanisms. The findings confirm the need of a significant County ICT Roadmap and a high investment to accelerate the delivery of the identified ICT infrastructure, information systems, processes and required skills to support the ICT Vision. Key gap- closure projects have been identified to reach the desired ICT maturity level. These projects shall fall under the following ICT Roadmaps;
The Vision of the ICT roadmap is to ‘Automate service delivery to the citizen’. The ICT Vision is aligned to the County vision that aims ‘to be a highly secure, Productive and Prosperous County. To achieve the desired state, the Nakuru County Government shall require an investment of Kshs. 1,568,459,300 (USD 17,048,471).

At the heart of implementation are the shared services and change management plans as strategic approaches. The County Government shall coordinate the implementation through a project implementation structure. The County Government shall embrace a private public partnership model in financing the roadmap.
INTRODUCTION & BACKGROUND
The second Medium Term Plans (MTP) (2013-2017) of the Vision 2030 considers ICT as one of the foundations for economic growth, ‘strengthening the foundations of a knowledge-based economy’. The plan highlights ICT as a critical tool in the Kenya’s vision for a knowledge-based economy. The development of these ICTs involves the following:
1. Upgrading the national ICT infrastructure
2. Improving public service delivery
3. Developing the ICT industry
4. Upgrading ICT capacity

The County Government of Nakuru, through this five-year ICT Roadmap, seeks to leverage on the advantages of ICT investment as an essential driver that will bring forth improved economic development. The plan will focus the county’s ICT investment under the following areas:
1. ICT Infrastructure and Connectivity
2. Public Service Delivery Systems
3. Human Resource and Capacity Building
4. Policy Environment and Legal Frameworks

1. Background of the County
This section presents the location and position of the County Government of Nakuru, its administrative and political units as well as the arms of the County Government

2. General Information
Nakuru County lies within the Great Rift Valley and borders eight other counties namely; Kericho and Bomet to the west, Baringo and Laikipia to the north, Nyandarua to the east, Narok to the south-west and Kajiado and Kiambu to the south. The county covers an area of 7,495.1 Km² and is located between Longitude 35° 28’ and 35° 36’ East and Latitude 0° 13 and 1° 10’ South. The county headquarter is Nakuru town.

The county is divided into nine administrative Sub-Counties namely; Naivasha, Gilgil, Nakuru, Rongai, Nakuru North, Subukia, Njoro, Molo, and Kuresoi. Njoro and Kuresoi were hived off from Molo Sub-County, Gilgil from Naivasha, Rongai from Nakuru Town, and Subukia from Nakuru North.

The county is divided into 11 constituencies namely: Naivasha, Gilgil, Nakuru town West, Nakuru Town East, Rongai, Bahati, Subukia, Njoro, Molo, and Kuresoi North and Kuresoi South. In total Nakuru County has 55 electoral county wards.

3. Demographics
The County Integrated Development Plan indicates that the population of Nakuru county as per 2009 census stood at 1,603,325 (males-804,582; females – 798,743). This population was projected to increase to 1,925,296 in 2015 with 966,154 males and 959,142 females. This population is projected to increase further to 2,046,395 by 2017.

4. County Executive
The County Executive consists of various departments (sometimes referred to as Ministries).
The County Executive Committee Members and Chief Officers (who are the accounting officers) head the departments. The directors and their respective directorates perform the technical aspects of the departments. The Governor with the approval of the County Assembly appoints the County Executive committee members and chief officers.

The County Government is fully established and has 10 Executive departments. Nakuru Sub County hosts the head quarter that has offices spread across the town. The county headquarters as well as most of the County Government office spaces have taken over the former Municipal council and former National Government offices. The other lower administrative offices of the County Government including sub-counties, wards and villages are in their geographical areas.

The Executive functions are further devolved to the nine (9) sub-counties (headed by Sub-County Administrators), then the fifty five (55) wards (Ward Administrators) and down to the villages.

5. County Assembly

The Speaker elected by the Members of the County Assembly heads the County Assembly of Nakuru. An elected member of the County Assembly (MCA) represents each Ward in the Assembly. The Assembly is composed of fifty five (55) elected members and nineteen (19) nominated members making seventy-four members. The County Assembly executes its legislative, oversight and representation roles through established eleven (11) sectoral committees. The clerk (chief accounting officer) coordinates the day to day functions of the assembly.

The Assembly has developed a five-year strategic plan whose Vision is to attain a cohesive, socio-economically and politically developed county based on the rule of law, constitutionalism and participative democracy. The guiding core values include the following; equity and equality, good governance, public participation, accountability and transparency, integrity, partisanship, professionalism and innovativeness.

6. ICT in the County Government of Nakuru

The ICT and E-government is one of the 10 departments established to deliver services to the citizens of the county government of Nakuru. A CEC Member heads the department. He is supported by the Acting Chief Officer. At the time of developing this roadmap, the Chief Officer and Director positions were still vacant. In addition, the department was yet to recruit other key members of the team.

The mandate of the ICT department is as follows;
1. Provide the structure for acquisition, management and use of Information Technology through the ICT framework.
2. Set up ICT policies and standards for proper dissemination of services, direct or indirect to the public or within the department.

To implement the ICT department’s mandate, the team is guided by the CIDP and draft strategic plan. The CIDP recognizes the need for ICT support in the county. However, the implementation plan is not comprehensive enough to give the ICT support required across all the other departments. According to the CIDP, the ICT sector is recognized as one of the key development projects clustered together with Energy and Infrastructure. This sector is considered as an enabler for sustained development of the economy and in particular...
to the six key sectors of the Kenya Vision 2030 strategy. The county government of Nakuru recognizes the importance of ICT and plans to improve ICT infrastructure and develop management systems to bridge the digital divide and improve service delivery to its citizens.

Growth in this sub-sector has seen a significant rise in mobile phone services offered by Safaricom, Airtel, Orange Kenya and Yu. Estimates from the 2009 Population and Housing Census indicate that approximately 75 per cent of households in the county own a mobile phone. Mobile network coverage in the county is at 91 per cent. However, landline connectivity and post office presence is low at 1.3 per cent and 12 per cent respectively. It is worthy to note that a number of government departments have adopted e-government leading to installation of requisite ICT equipment in offices. The county government plans to adopt an integrated electronic system for all its services including revenue collection. It is envisaged that all Sub-Counties will have a fully equipped Sub-County Information and Documentation Centre (DIDC) as nerve centres for information.

Cyber cafes have enhanced access to Internet for the literate population especially in urban areas. Money transfer has been made easier with the introduction of Posta Pay, Airtel Money, Orange Money, Yu Cash and M-PESA services. The county has a strategic telecommunication equipment factory situated in Gilgil Township.

As a collaborative initiative with the National Government, the county offers free Wi-Fi to the citizens through “Bilawaya” project. This free internet is available in the central business district of Nakuru town.

Scope
The Nakuru County ICT Roadmap 2015/2016-2019/2020 is a clear, concise and coordinated approach to delivering quality ICT services to the people of Nakuru County. The following four principles guided the development of the ICT Roadmap

- ICT as an enabler for service delivery
- Desire to deliver better public service at lower costs
- Sharing of resources
- Desire to offer high quality services

The roadmap is also fully conscious of the desire of the County leadership to offer high quality services. The focus of the roadmap is to increase the efficiencies of service delivery across all departments and the devolved units. Based on the information gathered from the above sources, the current status and what needs to be done in 5 years has been established. In the approach and design of this roadmap, attention is paid on five elements that are conceptually defined as brought out in the table below.

ICT Achievements, Challenges and Lessons Learnt
Nakuru County has notable ICT achievements that include NOFBI terminating at the County headquarters, with plans to extend to the departments and Sub County and the roll out of zizi platform in revenue collection.

However, the County still faces a number of challenges. The ICT department is under-established and unable to serve the needs of the County Government compared to how dispersed the sub counties are located. Furthermore, most of the departments are
scattered within the county Head Quarters posing a further challenge in communication and establishment of a LAN; and the ICT departments budgets are limited both at the executive and county assembly.

The ICT department has over the years learnt some key lessons. These include; Goodwill from the departments to improve service delivery systems/mechanisms. The County should involve the private sector to support the implementation of the ICT Roadmap. The business community has good will in involving the county government in implementing the road map; and the good working relationship between the ICT technical teams in both the county executive and assembly will improve service delivery in the county.
2. THE ICT CONTEXT AND SITUATIONAL ANALYSIS

This chapter presents the contextual analysis of ICT implementation in Nakuru County. It largely borrows from the global practices, standards and critical lessons. The analysis further delves into the status of ICT in Nakuru County, the stakeholder analysis and the gap analysis. Most importantly, the maturity model that borrows heavily from the Gartner model is used to establish the ICT maturity levels of Nakuru County.

2.1.1. Overview of the Global, Regional and National ICT Trends

The world’s advances in ICT over the last 20 years have been phenomenal. The uses of ICT have been so pervasive that we cannot imagine a world without mobile phones and computers. The Worldwide –Web, high-speed broadband internet and universal increase in the use of mobile devices to communicate and collect information have resulted in remarkable transition. ICTs have gained increased importance especially with the advent of globalization and increased information-intensive economic activities (World Bank 2006).

As a result, both the private and public sector acknowledge ICT’s pivotal role in national development because the use of ICTs enhances public sector effectiveness, efficiency and transparency. It also creates substantial profits for the firms. There are rapid advances in ICTs but the degree of advancement but the distribution is uneven. Nakuru County acknowledges the importance of ICT to enhance service delivery and accountability to the citizens. There is a general move towards enabling citizens of Nakuru County “access the global village” through the move to automate revenue collection, water services and health services in general.

In infrastructure and connectivity, the emergence of global interconnectivity has levelled the participation of all countries in the global economy. Along with the global economy has emerged the global cultural exchange and new global political order.

Globalisation through the ICT revolution has profoundly changed the rules of the game. Efficiency more than never is now an indicator of competitiveness. Nations, corporations and people that find the means to become more efficient will advance and prosper. Countries that provide better governance, with more transparent and efficient bureaucracies and that are able to provide a legal and regulatory framework that allows free and fair competition, will see greater investment flows, create more jobs and ultimately provide a better quality of life for their populace.

2.1.2. Alignment to National ICT Trends

The National ICT Master Plan that aligns to Vision 2030 is one of the most transformative documents produced by the Government to spearhead and revolutionize the country. It provides major foundations that are critical to undertake in order to lay a basis of Kenya transitioning to a Knowledge-based society and positioning the country as a regional ICT hub. These foundations are:

1. 1. The development of quality ICT infrastructure
2. 2. The development an integrated and secure information infrastructure and
3. 3. Developing critical mass of high-end ICT human capital.

The above foundations, form part of the key thematic areas in this ICT Roadmap (i) ICT Human Capital and workforce development (ii) integrated ICT Infrastructure and (iii)
Internet access is a key driver for the ICT revolution, the National ICT Master Plan (2014), the national broadband strategy (2014) has put emphasis on infrastructure, and connectivity by year 2017 hence demands for more coordinated and coalesced efforts by the national and county governments to realise the vision. Inter- county joint investment ventures for instance will facilitate heavy infrastructure investment through sharing. The underlying assumptions are that the essential reliable power, compliant infrastructure buildings and human capacity are provided. From the stakeholder meetings held in the county, the importance of shared services and infrastructure was underscored. However, there is need to establish a structure on how this can be done effectively and with minimal resistance from the county administrations.

The National Optic Fibre Backbone Infrastructure (NOFBI) connects major towns. In order to extend fibre capacity to all parts of the country, the Government is reviewing NOFBI with a view of extending and building additional links. To complement NOFBI, the ICT state Department is discussing with stakeholders a framework to develop a wireless broadband network.

This has provided the Nakuru County an opportunity to ride on these national initiatives for fast, efficient and stable Internet connectivity with minimal expenditure. NOFBI terminates at the county Head Quarters and the ICT team hopes to have this extended to the sub-counties.

The County Government of Nakuru has a mandate to align the broadband initiatives with the national framework. The national strategy identifies the following key areas as indicated in the table below;

2.2. ICT Foundations
This sub section highlights a summary of the ICT foundations that are critical to the implementation of the road map in the county.

The Nakuru County ICT Roadmap aligns to the policies and strategies proposed in the National ICT Master Plan, the Broadband Strategy Paper and the Infrastructure sharing Paper as the key papers to spearhead Kenya’s ICT sector. The following are the thematic areas that are guiding the ICT roadmap’s current assessment and proposed implementation.
2.2.1. ICT Human Capital and Workforce Development

While the Government and the private sector have been investing heavily in the ICT infrastructure, there has comparatively been little investment in the human resources required to design, develop and operate this infrastructure and the associated e-applications. With the increasing sophistication of ICT and its applications, high-end skill sets are increasingly required and availability presents a challenge to growth and to achieving the vision 2030.

Successful implementation of products and services is dependent on a highly skilled and motivated workforce. The ICT staff should be equipped with focused technical skills as well as appropriate managerial and leadership skills. The County Government of Nakuru will continue to enhance its workforce capacity through assessment of current and future needs, identifying capacity gaps and developing relevant and effective capacity building programmes. Undertaking ICT training needs assessment, development of a skills inventory database and a sustainable career progression for staff motivation and retention shall realise this ambition.

It is critical that County improves the level of literacy in the whole county by engaging in Public Private Partnership with higher learning institutions. There is need to build capacity as follows Governor and the Executive team, Chief officers, Staff of the County, Sub-county Administrators, Ward administrators, teachers among others. These will provide the Administrators with the necessary skill to propagate to others. It is also critical to enable the schools with internet facilities for immediate use after undertaking training.
Globally, ICT has been shown to have impacts on economic and social development, and one of the indicators that have gained global recognition is the network Readiness Index (nRI), that includes skills as a critical pillar for nations to exploit ICT for development. According to the Global Information Report (2013), the skills pillar gauges the ability of a society to make effective use of ICT.

The elements mentioned under capacity building are limited in providing the necessary skills and competences required to spur optimal utilization, service delivery and innovation of ICT enabled services in counties. The Nakuru county government should design and develop holistic capacity building programs that not only build on national framework but also respond to local prevailing ICT needs. The capacity building should focus on but not limited to:

1. Digital literacy amongst the County government Staff,
2. Public participation and outreach programs
3. ICT technical experts in the county government
4. Model ICT resource centre at all levels; headquarters, sub-county, ward and villages.
5. End user training of county departments’ staff and Citizens
6. Basic ICT infrastructure trouble shooting and maintenance for county staff
7. Change management; for county staff to appreciate and utilize ICT

10. Integrated ICT Infrastructure
This foundation seeks to provide the integrated infrastructure backbone required to enable cost effective delivery of ICT products and services to Kenyans, business community and other stakeholders.

There are four sub-marine cables that offer connectivity in world; TEAMS, EASSY, SEACOM and LION. Inland, the National Optical Fiber Backbone Infrastructure has reached over 23 counties. Nakuru is one of these counties. The NOFBI phase II program is underway. Provision of the last mile connectivity remains a challenge and the government is addressing this to transform the country into a knowledge-based economy. The private sector through the available private operators, have built metropolitan fibre networks in the cities. These operators are rolling out the second and third generation network in these cities.

The master plan envisages that Nakuru County will have attained a robust ICT infrastructure to facilitate the development of an ICT-enabled economy by 2017. This will promote integration and sharing of ICT infrastructure. The ICT team was encouraged to tap into the Universal Access Funds (UAFs) to address the connectivity challenges in the undeserved rural areas.

2.2.2. Integrated Information Infrastructure
This foundation concerns itself with the creation, continuous accessibility and archiving of public information. Currently data is not well organized and is very difficult to access electronically. The master plan proposes that Kenya develops and implements public data hubs based on secure infrastructure for efficient and effective citizen centric services. The national government is currently deploying Huduma Centres across the country to facilitate one –stop-shops that bring services closer to the citizens. Nakuru County has started plans to establish similar centres to improve access to information and services to the citizens.
2.2.3. National Government Enterprise Architecture
The National Government of Kenya recognises that Strategic management of Information, Information Systems and Information & Communication Technology is key and needs to be done in a more coordinated manner. The Ministry of ICT and ICT Authority constitute the collective governing body of Information & Communication Technology (ICT). These institutions are charged with the responsibility to govern Government-Wide ICT plans and programmes in pursuance of the outcomes, principles of the ICT pillars as depicted in Figure 2 below.

Figure 22 ICT House of Values

ICTA has developed the Kenyan Government Wide Enterprise Architecture (GEA) Framework as a minimum standard to use across all government departments and agencies. The GEA Framework is intended to supersede any prevailing Enterprise Architecture and ICT planning frameworks and methods in use in government. County Governments are no exception to this policy requirement. Hence the need for Nakuru County Government to conform and abide by the GEA framework as prescribed by the government policy.

In this ICT Road map, the County government shall use this guide to tailor or establish its Enterprise Architecture capability to meet the minimum requirements as contemplated in the GEA Framework. In the development of the Nakuru County ICT strategy road map, the foregoing (GEA) framework shall guide the County Government Enterprise Architecture accordingly.

2.4. Pillars in line with National Master Plan
The Government developed a Government Common Core network (GCCN), that serves as a shared and secure interoperable Government-wide ICT architecture. The system will
not only integrate work processes and information flows, but also improve inter-ministerial sharing of databases and exchange of information. This is to ensure that there is maximum
access to information held by public authorities to all Kenyans and that public information is readily available through consolidated portals in an affordable and secure way.

2.4.1. Commonality in Counties
The government having commonality is important in ensuring that there is interoperability between the national government and the county governments making service delivery more efficient. Three main aspects of commonalities are notable, infrastructure, common standards and common capability.

Alongside the commonalities highlighted above, the following service delivery mechanisms are critical: (i) e-Government Services (ii) ICT as a Driver of the Industry and (iii) Developing ICT Business.

2.4.2. National ICT Flagship Projects
The National Government has initiated a number of ICT Flagship projects that have a direct impact on all Counties. Counties are expected to tap in to these projects and align their ICT Strategies to the National Government strategies.

2.5. ICT Status in the County
The section presents the county status of the Infrastructure Connectivity and Interoperability, Public Service Delivery Systems, Human Resources and End-Users Capacities and the Legal and Policy Environment. The status is for both the County Assembly and County Executive with specifics being highlighted appropriately.

The current ICT status in Nakuru County is presented below.

2.5.1. Infrastructure and Connectivity
1. The status of infrastructure and connectivity in Nakuru County is outlined below
2. NOFBI available at the County Headquarters – former PCs office;
3. The County headquarters offices are networked but not interconnected to departments and sub counties; The County Assembly departments are fully networked
4. WAN Connectivity planned FY2015-2016;
5. Both Headquarter and sub county to be fully connected by 2016-2017
6. PABX exists and is VoIP enabled;
7. The county is well connected to mobile service providers;
8. SLAs available for softwares only but none for equipment;
9. Interactive Web portal www.nakuru.go.ke; but under-utilized; County assembly website – www.assembly.nakuru.go.ke
10. Free Wi-Fi (Bilawaya) in certain areas in Nakuru town CBD. The hot spots need to be increased to cover more areas
11. Location of offices pose a challenge in networking and office automation- [eg Bondeni, Public works;]
12. Official email use not enforced. Most staff use personal email;
13. The Server room requires organisation;
2.5.2 Public Service Delivery and Interoperability

The current ICT status on public service delivery is outlined below in three areas of software and applications, communication and citizen involvement and participation.

Software and Applications: The current ICT status in the county on software applications is summarised below:

1. Currently migrating from LAIFOMS which used to collect revenue to web based revenue collection system “zizi”.
2. IPPD is used to manage payroll.
3. E-Extension is utilised in the agricultural sector;
4. Several systems/applications in the health services department; (eg MEDIBOSS in Naivasha; HRIS by World Bank; Futures Kenya system).
5. IFMIS system is operational at the head office;
6. No system in place for planning and monitoring ICT interventions.
7. The current financial management systems (IFMIS, IPPD, zizi) are not integrated;
8. Most County operations still manual.

Communication: The status is that social media usage (Twitter and Face book) accounts for most of the social media.

2.5.3. Human Capital and Workforce Development

The current status of human capital and workforce development in Nakuru is as follows:

1. The ICT staff support other departments and sub-counties;
2. ICT Impact is generally high in the county;
3. There is inadequate computers for use for official work;
4. Some staff members are resistant to technological change.

2.5.4. Policy Environment and Legal Framework

The current state of policy environment and legal framework in Nakuru is as follows:

1. There is general support for ICT initiatives in the county;
2. The county CIDP has details on the county structure and directorates;
3. The draft ICT strategy in use in the ICT department;
4. There is no ICT policy in place. There are no policies on ICT investments;
5. The current budget of ICT department is 0.9% which is below the recommended 5% as per National ICT masterplan (Current budget- 2014/15: 84.5million against a total budget of 9.8bn).

2.5.5. Shared Services

Below is the summary of the current ICT status on shared services:

1. IFMIS is a shared service across all the departments;
2. There is no plan on sharing services plan in the county.
3. ICT infrastructure development in the county is neither shared amongst the three arms of government nor the departments.
4. Except IFMIS, the county does not share any other ICT services across other counties.
5. No shared services plan exists.
6. County databases are not shared across departments.
7. The unified communication system is not shared across the three arms of government.
2.5.6. Change Management
Below is a summary of the current ICT status on change management
1. The devolved government structures are in place. These include the county executive, the county assembly and the public service board.
2. Neither a clear change management strategy nor plan exists to implement the change management process.
3. No communication strategy exists to support expected change management.

2.5.7. Citizen Involvement and Participation
Below is the summary of the current ICT status on citizen involvement and participation
1. The County updates citizens through the Website.
2. The County does not have a dedicated information portal for providing information or accessing services to the public;
3. There is inadequate information to the public on the services offered by executive
4. Although the above mentioned initiatives exists, no formal citizen involvement and participation plan exists.

2.6.1. Nakuru County ICT Gap Analysis
This section analyses the existing gaps that limit Nakuru County from optimising and deploying ICT in service delivery. It uses the maturity level analysis to establish gaps in the existing ICT environment and the desired ICT optimisation in Nakuru County.

2.6.1 Nakuru County ICT Maturity Level Analysis
The first step in ICT development is to assess the status in understanding the areas for development to raise the maturity level of the ICT environment. ICT Standard’s maturity analysis is performed as a self-assessment where each ICT function gets a score Consistent with CMMI scale (Capability Maturity Model Integration). This way, the organization will have visibility about the maturity of ICT and how people inside and outside of the organization view it. Organizations cannot implement ICT developments as a single project. They must implement it as a coordinated program that evolves over time. A maturity model will enable organisations to identify their maturity levels and determine action plans for reaching the next level.
**County ICT Maturity Findings**

The findings of the maturity level are as indicated in the summarised table and figure below;

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Category Maturity</th>
<th>Weighted Maturity Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infrastructure and Connectivity</td>
<td>0.8</td>
<td>79.4</td>
</tr>
<tr>
<td>Public Service Delivery</td>
<td>1.0</td>
<td>75.0</td>
</tr>
<tr>
<td>Human Resource &amp; Capacity Building</td>
<td>1.3</td>
<td>66.7</td>
</tr>
<tr>
<td>Policy, Environment and Legal</td>
<td>1.3</td>
<td>66.7</td>
</tr>
<tr>
<td></td>
<td>1.1</td>
<td>Overall Maturity Ratio 287.75 Significantly below average</td>
</tr>
</tbody>
</table>

Based on the above maturity analysis, the County is currently rating well below average with a score of about 274.2 on the weighted maturity ratio and a category maturity of 1.1. The category maturity on all the four aspects under consideration is between 0.5 and 1.0. The needs of the county are unmet with the current ICT infrastructure, service delivery mechanisms, Human resource and the legal and policy framework that has been put in place.
2.6.2. Nakuru County ICT Gap Analysis

The maturity level analysis brings to fore ICT Gaps as per the four thematic areas. The table below represents a summary of the ICT Gap analysis and some of the proposed closure projects. Table 2.2 summarises the ICT gaps in Nakuru County

<table>
<thead>
<tr>
<th>Table 2.2 ICT Gap Analysis Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1 Infrastructure and Connectivity</strong></td>
</tr>
<tr>
<td>1. Lack WANs Links in some departments and the sub counties;</td>
</tr>
<tr>
<td>2. Server room is inadequately equipped;</td>
</tr>
<tr>
<td>3. Lack of backup and Database Management facilities (Data Centre);</td>
</tr>
<tr>
<td>4. Low office automation.</td>
</tr>
<tr>
<td>5. Poor internet connectivity in the sub counties;</td>
</tr>
<tr>
<td>6. No shared resources and processes across Departments and the lower Units;</td>
</tr>
<tr>
<td>7. There is no policy on official emails;</td>
</tr>
<tr>
<td>8. County websites are not fully utilised</td>
</tr>
<tr>
<td><strong>2. Public Service Delivery Systems</strong></td>
</tr>
<tr>
<td>1. Most County Government operations are still manual;</td>
</tr>
<tr>
<td>2. Inadequate ICT enabled citizen participation mechanisms; and</td>
</tr>
<tr>
<td>3. Lack spatial information system</td>
</tr>
<tr>
<td>4. Ineffective user training for IFMIS;</td>
</tr>
<tr>
<td>5. Inadequate computer applications;</td>
</tr>
<tr>
<td>6. Lack of an integrated financial management</td>
</tr>
<tr>
<td>7. IFMIS modules not fully operationalised;</td>
</tr>
<tr>
<td><strong>3 Human Capital and Workforce Development</strong></td>
</tr>
<tr>
<td>1. Inadequate ICT skills among the MCAs</td>
</tr>
<tr>
<td>2. ICT department organisation structure not fully established;</td>
</tr>
<tr>
<td>3. Low computer literacy levels;</td>
</tr>
<tr>
<td>4. Inadequate preparation of staff to change;</td>
</tr>
<tr>
<td>5. Inadequate structured capacity building programmes</td>
</tr>
<tr>
<td><strong>4 Policy Environment and Legal Framework</strong></td>
</tr>
<tr>
<td>1. Lack of a documented ICT policy:- No policy of the ICT investment plans</td>
</tr>
<tr>
<td>2. Inadequate funds for ICT in the county (ICT department budget of 84.5million against a total budget of 9.8bn), 0.9% in 2014/15;</td>
</tr>
<tr>
<td>3. CIDP is still in draft form</td>
</tr>
</tbody>
</table>

2.6.2. Current Nakuru County ICT Budget (2014/2015)

The current budgeting level in the County was analysed based on Gartner IT key metric data report (2012) which provides a market benchmark for key ICT metrics including spend level as compared to revenue. The percentage of ICT Budget Vs Overall County Budget is 0.86%. The National ICT Master Plan recommends expenditure of 5% on ICT of the overall revenue. A study by Gartner in 2012 also noted ICT spending as a percentage of total revenue for organisations close to the County ranged from 3% to 5%.

3 THE ICT STRATEGY ROAD MAP

This chapter defines the Vision, mission and guiding principles of the ICT Roadmap informed by the stakeholders. The County government through the ICT Roadmap will therefore
facilitate significant improvement of public services through better use of ICT for efficient, cost effective, and innovative ways. The ICT Roadmap focuses on improving services through a shared ICT infrastructure, increased ICT Capability and improved ICT Governance.

3.1. Strategic Principles
Current delivery systems improvements and expectations from the 10 departments is the foundation of the ICT road map. The following section lays some of the fundamental principles for the ICT roadmap.

**Vision**
The vision of the County ICT is to

“Automate service delivery to the citizens”

This vision is aligned to the County’s vision that aims

“To be a highly secure, Productive and Prosperous County”

**Mission**
The mission of the County ICT is

‘To streamline ICT infrastructure, provision of robust, innovative and reliable technological solutions.’

**Values**
1. Customer-focused
2. Professionalism
3. Integrity
4. Equity and Equality
5. Transparency and Accountability
6. Team work
7. Creativity and innovativeness

3.2. Road Maps
The following are the proposed road maps for the county

3.2.1. Road Map 1: Infrastructure and Connectivity
The following are the overall objectives and specific objectives under infrastructure and connectivity.

**Overall objective 1: To develop the County ICT infrastructure(s)**

**Specific objectives**
1. Conduct ICT infrastructure needs assessment for all county office locations by December 2015;
2. Equip staff with appropriate computers and other requisite ICT equipment by June 2017;
3. Provide and maintain adequate internet bandwidth to meet the County’s needs by June 2016.

**Overall objective 2: To enhance ICT connectivity in the County**

**Specific Objectives:**
1. Build and maintain LANs/WANs infrastructure in all County departments, County Assembly, sub-county offices and wards by June 2018;
2. Build and maintain the County’s Data Centre/Server room (Active Directory Services, Mail Services, File Services, Applications Services, Backup, Replication and Recovery
3.2.2. Road Map 2: Public Service Delivery
The County shall implement three interventions (specific objectives) that seek to achieve the following objective: To improve the Public service delivery systems

Specific Objectives
1. Facilitate the county to implement knowledge-based databases and applications by June 2018;
2. Design systems and processes for Services delivery by June 2019;
3. Establish communication and Online access to County information by staff and citizens by June 2019;

3.2.3. Road Map 3: Human Capital and Work force Development
The County shall implement four interventions (specific objectives) that seek to achieve the following objective; Build the County Human Resources/people ICT capacities

Specific Objectives
1. Equip county staff with the ICT tools that they need to efficiently and cost-effectively carry out their work by June 2018;
2. Train, organise and manage ICT human capacity for Service Delivery by June 2018;
3. Strengthen the ICT services through Budgetary and organisational Mechanisms by June 2016;
4. Establish an ICT Resource Centres to facilitate access to ICT facilities to all staff and the citizens by June 2019

3.2.4. Road Map 4: Policy Environment and Legal Framework
The County shall implement two interventions (specific objectives) that seek to achieve the following objective: To develop and adopt ICT Policies, regulations and standards

Specific Objectives
1. Introduce/adapt the required legal frameworks needed to support usage of the ICT and ensure compatibility, interoperability and secure sharing of information by June 2016;
2. Develop and implement the County’s ICT Policies to guide in proper usage and application of ICT equipment, systems and services by June 2016;

3.3. Citizen Involvement & Participation
Objective: Increase citizen involvement and participation in county matters

Under citizen involvement and participation, the county will implement the following interventions:
1. Develop a comprehensive ICT policy on citizen involvement and participation by December 2015
2. Identify and review existing mechanisms for citizen involvement and participation in the county by December 2015
3. Carry out a stakeholder analysis on citizen involvement and participation analysis June
4. Develop suitable mechanisms for citizen involvement and participation (Web portal, Social media, e-Newsletters, Emails, Discussion forums, Print, Television, Radio, SMS and Automated calls) by June 2019

3.4. Change Management
Change management is critical to the successful implementation of the Nakuru County ICT Roadmap.

Objective: To develop a comprehensive change management plan
The County Government shall implement the following interventions:
1. Identify a change management team by December 2015
2. Develop a schedule of activities for the proposed change by June 2016
3. Develop the change management plan by June 2016
4. Review of the change management process by June 2017

3.5. Shared Services
Across the national government and county governments, there is a need to improve service delivery to citizens, increase efficiencies and reduce costs. Shared service is one key mechanism to achieve this.

Objective: Develop a shared ICT services plan for the County
The specifics objectives are:
1. Identify services and or systems to be shared within and outside the County.
2. Develop a platform with a clear framework to share the services within the county, across the county and nationally.

3.6. Key Strategies guiding implementation of the Roadmaps
The following is a summary of the key strategies guiding implementation of road maps

<table>
<thead>
<tr>
<th>Roadmap/other</th>
<th>Key strategies Guiding Implementation</th>
</tr>
</thead>
</table>
| Roadmap 1: Infrastructure, Connectivity and Interoperability | 1. Lobby the County government to increase ICT budgets from the current 1% to 5% in the subsequent financial years  
2. Diversify fundraising campaigns beyond the allocated county budgets  
3. Use Private Public Partnerships arrangements to realise ICT investments  
4. Lobby the County leadership to provide investment incentives for investors in ICT infrastructure |
| Road Map 2: Public Service Delivery Systems | 1. Build robust delivery systems based on stakeholder analysis  
2. Work with National Government and other counties to standardise processes  
3. Build systems based on current and future trends in standards and frameworks |
**Road Map 3: Human Capital and Workforce Development**

1. Build the capacity of county technical staff in ICT skills and competencies
2. The Executive and County Assembly work closely to establish a Human Resource development policy and implementation manuals
3. Institutionalise ICT training in the county training institutions

**Roadmap 4: Policy Environment and Legal Framework**

1. Lobby the Executive and County Assembly to develop ICT policies and reinforcement plans
2. Outsource experts to support the development of policies
3. Secure an Information Security System
4. Plan for annual and mid-term reviews

**CRITICAL SUCCESS FACTORS**

This chapter defines the governance, implementation plan, ongoing projects, priorities and quick win, critical success factors and risk factors of the ICT Roadmap informed by the stakeholders contacted and literature review both before and during the planning process.

4.1. Governance, Management and Organisation

The Nakuru County ICT Roadmap requires a standardised, flexible and efficient ICT infrastructure to enable delivery of these objectives in an effective, secure and sustainable manner. Above all, it seeks to reduce inefficiency, replication of systems and duplication of effort. Currently, technology investment planning is department-specific, often near-term focused, and is biased significantly towards the purchase of technology infrastructure capital assets.

The ICT and e-Government Department is currently implementing ICT projects. Other departments have also implemented ICT projects either with County or donor agency funds. The governance, management and delivery of the goals and objectives of the Nakuru County ICT Roadmap shall be through a proposed structure constituting of the Planning and Technical Committees. Its objective is to bring about increased accountability, transparency, reduce duplication, and greater emphasis on performance to bring about the desired efficiencies and effectiveness and therefore an increased return on ICT investment.

The ICT directorate will own the ICT strategy. The directorate is responsible to deliver all the ICT related projects.

4.1.1. Shared Services Plan

Nakuru County ICT service aims to provide services to other Countries and organisations and may consume Shared Services from other Counties providing it is the appropriate solution for the County. Therefore, the funding and resourcing of the services are shared and the providing department becomes the internal provider. Some of the key services identified include: data centre, communication infrastructure, application/systems across departments, national systems among others.

The basis for shared services in Nakuru County is achieving efficiency and cost savings by the use of local or available resources through reduced duplication and maximisation of local expertise. An action plan based the shared services plan will be developed for all
delivery mechanisms within Nakuru County, other Counties and the National Government in collaboration with ICTA because some of the services are national

4.1.2. Change Management Plan
The ICT Authority recommends the establishment of a Governance Committee, Technical Committee and a Secretariat as critical for the successful implementation of the developed ICT Roadmap for the Nakuru County.

There is need to align the Nakuru County governance structure with the ICT Roadmap which will mean reviewing the ICT Department Structure in relation to all executive department. This will ensure viable ICT Projects implementation structure that can deliver the ICT Roadmap. Since ICT is currently a only a directorate in one of the ten departments, it is essential that the Nakuru County establishes a Project Management Office that will work with the ICT Roadmap proposed Committees including the Technical and Planning Committees. Secondly, it is important for the Nakuru County to define a technical structure that will ensure successful Roadmap implementation. This will be handled through management of anticipated structural changes and management of the projects related to the roadmap. A Change Agent and a technical agent with relevant expertise will be required. Such partners must have the relevant expertise and experience to play the following roles:

- The Change Management Agent will guide the County through the execution of the transformation roadmap and will complement the County internal resources in order to provide a high quality resource base to manage the project.
- The ICT Projects Implementation Partner will focus on: overseeing technical aspects of the projects/programme implementation; Training and Capacity building to Nakuru County staff on effective use of the ICT systems and Initial Support and maintenance of the Roadmap projects/programmes.

4.1.3. Citizen Involvement and Participation Plan
Citizen participation is critical in the county. In addition, the citizens expect the county to establish different mechanisms suitable for all the citizens with different literacy levels. Citizen involvement and participation is a democratic decision process that provides individuals with an opportunity to influence public decisions. ICTs can enhance citizen engagement and advocacy and to increase county government transparency and accountability.

4.2. Other Critical Success Factors
The following are the critical success factors that need to be considered during the execution of the implementation plan:

1. Clarity: The ICT scope and governance within the county i.e. ICT HR Management Structure, Top management and Staff
2. People – Staff and Citizens: - Change management across Staff and citizens, Attitude change; Systems/technology change and Structural change
3. Resources and Financing: - Development of Private and Public Partnerships (PPP)
4. Technology development i.e. Information as a resource ICT Infrastructure - NOFBI, Mobile network coverage, Data Centre, Systems and Applications; bridging the digital Divide between Rural and urban areas
5. Policy, Legal and Regulatory Framework:- Development of a Comprehensive County policy, legal and regulatory framework
6. Risk management:- Addressing effects of anticipated Risks
7. Project Management Office or Unit that results in effective transformation of the ICT sector in the county

4.3. Risk Management
In any ICT strategy, it is important that potential risks are identified and mitigating actions planned for appropriately.

4.4. Communication Strategy
Communication is critical to the successful strategy implementation. Therefore this ICT Roadmap requires an effective communication plan that involves all the stakeholders. Below is the Communication Matrix that will help deliver successful implementation:

4.5. Monitoring and Evaluation (M&E)
An effective and commensurate monitoring and evaluation system is necessary to ensure timely, focused, objective and evidence-based information on the performance of the County ICT road map implementation. Continuous observation, monitoring, measurement, feedback and corrective action will inform the anchorage of the County M&E system.

The M & E structure will be continuously strengthened and linked to the specific activities. The ICT department CEC and the County Assembly ICT Director will be responsible for the M & E process. In consultation with the Heads of departments (Directors and Chief Officers) The ICT department CEC will prepare reporting formats for the ICT road map, incorporating Key Performance Indicators (KPIs) that are selected from the implementation matrix. He/she will collate, verify, analyse and compile the monthly, quarterly and annual M&E reports on ICT road map developments from the various departments for onward transmission to the County Senior Management (Governor and CEC level monthly/quarterly meetings).

The evaluation system will provide for annual assessments of the results arising from the implementation of the road map objectives. A mid-term review of the Plan will be undertaken with the help of an external consultant at the end of year two and at the end of the Plan period. The purpose of the mid-term review will be to improve overall plan implementation while the terminal evaluation will facilitate the improvement of the next County ICT road map through lessons learned during the implementation of the current Plan.
5. PROJECT IDENTIFICATION AND PRIORITISATION

The ICT Directorate Roadmap will consolidate ongoing county ICT projects and in some cases expanding their scope to meet the County Government’s transformational goals. New initiatives will be added as concepts and benefits are proven, and will typically require business cases as well subjected to portfolio/Programme management

On-going projects in the County are:

1. Revenue collection management system: zizi is 50% implementation status
2. LAN in all the sub-counties
3. Installation of internet in all the sub-counties
4. Extension of IP telephony
5. Purchase of IT equipment

The ICT Roadmap will consolidate ongoing county ICT projects and in some cases expand their scope to meet the County Government’s transformational goals.

5.1 Priority services and Quick Wins

The following are some of the priority services and quick wins for the county:

1. Improve the LAN/WAN in the county (infrastructure and connectivity) – both executive and County Assembly.
2. Provide the applications/systems as requested by the departments to improve efficiency (especially mapping of resources-land registry, asset management, Health Management System to improve the operations- revenue collections etc)
3. Capacity building for the staff and end-users
4. Unified communication extended to all departments
5. Provide sufficient computing Devices for Departments;

Table 5.1 Project Identification and Prioritisation

<table>
<thead>
<tr>
<th>Road Map 1: Infrastructure, Connectivity and Interoperability</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computing Devices</td>
<td>This includes the ICT devices requires by the staff; desktops, laptops, printers among others</td>
</tr>
<tr>
<td>LAN, WAN and Internet</td>
<td>Expand the limited ICT infrastructure to allow for improved ICT connectivity</td>
</tr>
<tr>
<td>Data Center Construction</td>
<td>Data Storage</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Road Map 2: Public Service Delivery Systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geo- Spatial Information System (GIS)</td>
</tr>
<tr>
<td>Enterprise Resource Planning System</td>
</tr>
<tr>
<td>Unified Communications</td>
</tr>
<tr>
<td>Road Map 3: Human Capital and Workforce Development</td>
</tr>
<tr>
<td>---------------------------------------------------</td>
</tr>
<tr>
<td>County ICT Training – ICT and Users</td>
</tr>
<tr>
<td>Carry out Training Needs Assessments for government staff and for citizenry to adapt to new systems, develop a plan and conduct the required trainings</td>
</tr>
<tr>
<td>Establish and equip ICT training facilities in Polytechnics, Vocational training Institutions and ICT Digital Villages</td>
</tr>
<tr>
<td>Access to ICT facilities and training in the county institutions</td>
</tr>
<tr>
<td>County ICT Governance – PMO and Secretariat</td>
</tr>
<tr>
<td>This includes the governance structures that need to be reviewed or established to ensure the success of the ICT roadmap. Align the ICT structure with the ICT Roadmap, review policies, establish the technical and planning committees and also a PMO guide the implementation process. Recruit a change management agent.</td>
</tr>
<tr>
<td>County Staffing - Structures</td>
</tr>
<tr>
<td>Acquisition of the relevant competencies and structures to allow for a seamless implementation even after the ICT roadmap</td>
</tr>
<tr>
<td>Change management</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Road Map 4: Policy Environment and Legal Framework</th>
</tr>
</thead>
<tbody>
<tr>
<td>Review and update the CIDP</td>
</tr>
<tr>
<td>The current CIDP is not conclusive and requires an update</td>
</tr>
<tr>
<td>Development of a comprehensive ICT Policy – Covering Security (Cyber), Document workflow, Procurement, SLAs, e-Waste management</td>
</tr>
<tr>
<td>This involves the establishment of ICT policies, regulations and standards</td>
</tr>
<tr>
<td>Disaster Recover and Business Continuity (DRC)</td>
</tr>
<tr>
<td>Develop and operationalize a disaster recovery plan for business continuity</td>
</tr>
<tr>
<td>Establish a Shared Services Policy</td>
</tr>
</tbody>
</table>
5.2. Financial Projections

Development of suitable incentives and tax breaks to private sector both within and outside the ICT sector to fund the Master Plan projects. Counties have a great opportunity to partner with the private sector players and provide incentives such as waiver of way leaves charges for the private sector to accelerate investments especially in connectivity.
**Clustered by Thematic Areas**

The table below summarises the investments into the roadmap

**Table 52 Summary of Investments in Roadmaps**

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Road Map 1: Infrastructure, Connectivity and Interoperability</td>
<td>472,658,500</td>
<td>5,137,592</td>
<td>52,194,960</td>
<td>47,043,540</td>
<td>366,220,000</td>
<td>7,200,000</td>
<td>-</td>
</tr>
<tr>
<td>Road Map 2: Public Service Delivery and Interoperability</td>
<td>687,240,000</td>
<td>7,470,000</td>
<td>106,950,000</td>
<td>94,645,000</td>
<td>152,720,000</td>
<td>283,475,000</td>
<td>49,450,000</td>
</tr>
<tr>
<td>Road Map 3: Human Capital and Workforce development</td>
<td>381,060,800</td>
<td>4,141,965</td>
<td>55,600,000</td>
<td>72,120,000</td>
<td>86,544,000</td>
<td>88,398,400</td>
<td>78,398,400</td>
</tr>
<tr>
<td>Road Map 4: Policy Environment and Legal Frameworks</td>
<td>27,500,000</td>
<td>298,913</td>
<td>18,500,000</td>
<td>-</td>
<td>4,000,000</td>
<td>3,000,000</td>
<td>2,000,000</td>
</tr>
<tr>
<td>TOTAL</td>
<td>1,568,459,300</td>
<td>17,048,471</td>
<td>233,244,960</td>
<td>213,808,540</td>
<td>609,484,000</td>
<td>382,073,400</td>
<td>129,848,400</td>
</tr>
</tbody>
</table>
5.3 Road Map Financing

Achieving the vision of the National ICT Master Plan for Nakuru County will require the mobilisation of significant financial and human capital. Funding of the identified projects will come from the National and County Governments, development partners and other public or private institutions through Private/Public Partnerships (PPPs) and collaborations. It is therefore important to develop a resource mobilisation plan that will see the implementation of the Nakuru County ICT Roadmap.

1. The National ICT Master Plan identifies the following for mobilisation of resources that are also applicable for the County Governments:

2. The Government shall fund the foundational pillars through a re-focused expenditure-planning model. This shall be facilitated through the Government budget and allocations such as:

3. Increase Government spending on ICT from 0.3% to 5% of National and County Government budgets from 2015/2016, as recommended in the National Broadband Strategy. It is important that the County Governments also make investments commitments in the Finance Budget Policy Paper to increase funding to the ICT Projects.

4. Use of Universal Access Fund (0.5% of turnover of ICT operators and service providers) from 2015/2016 to fund broadband roll-out in under-served areas, as recommended in the National Broadband Strategy.

5. Use of the Equalisation Fund to fund ICT projects in marginalised counties from 2014/2015

6. Use the National Research Fund (2% GDP) or other Government Supported Venture Capital Fund to finance and commercialise ICT innovations.

7. Provision of risk guarantees for micro and small businesses through a statutory prescribed agency

8. Consolidate all Ministries’ ICT budgets by 2015/2016 for ICT projects only. This should be same at the County level.