



REPUBLIC OF KENYA

**SECTOR PLAN
FOR
BUSINESS PROCESS
OUTSOURCING AND IT-ENABLED
SERVICES (BPO/ITES)**

The Principal Secretary
State Department for Broadcasting and Telecommunications
Ministry of Information, Communications and Technology
Teleposta Towers, P.O. Box 30025-00100 Nairobi, Kenya.
Tel: +254204920000
e-mail: info@information.go.ke
Website: www.ict.go.ke



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STATEMENT BY THE CABINET SECRETARY, THE NATIONAL TREASURY AND PLANNING

Kenya's long term development blue-print, Kenya Vision 2030, is in its third implementation phase under the Third Medium Term Plan (MTP III) 2018-2022. A total of 28 MTP III Sector Plans have concurrently been prepared through 25 MTP Working Groups and three (3) Thematic Working Groups. The Plans provides in detail policies, programmes and projects to be implemented in each sector for the period 2018-2022. The Plans also incorporate policies, programmes and projects necessary for the effective implementation of the "Big Four" initiatives namely: industrialization, manufacturing and agro-processing; affordable housing; food and nutrition security; and universal health care. Ongoing flagship projects and other priority programmes and projects carried forward from the previous Medium Term Plans will also be implemented. The Sector Plans have also mainstreamed key priorities outlined in the Manifesto of the Jubilee Government.

The MTP III and the Sector Plans have been prepared through a participatory and inclusive process involving representatives from the government, development partners, private sector, Civil Society, NGOs, organizations representing vulnerable groups, faith-based organizations and professional associations, among others and in line with the constitutional requirements.

The Sector Plans detail specific programmes and projects for implementation during the plan period, 2018-2022. The programmes and projects outlined in these plans will be implemented in close consultation and collaboration with county governments and in line with the Fourth Schedule of the Constitution. The Public Private Partnerships (PPPs) framework will be the vehicle through which the private sector will contribute to the implementation of programmes and projects highlighted in the plans.

The County Integrated Development Plans, County Spatial Plans and Ministries, Departments and Agencies (MDAs) Strategic Plans (2018-2022) will be aligned to the MTP III and the National Spatial Plan. Implementation of these plans will also be linked to the Results-Based Management Framework through Performance Contracts and Staff Performance Appraisal System.

A robust monitoring and evaluation framework will be put in place. In this regard, National Integrated Monitoring and Evaluation System (NIMES), County Integrated Monitoring and Evaluation

System (CIMES) and the electronic Project Monitoring Information System (e-ProMIS) will be fully integrated with other governmental financial systems. This will ensure effective tracking of implementation of programmes and projects and also boost Public Investment Management.

In conclusion, I would like to appreciate the respective Cabinet Secretaries, Chief Administrative Secretaries, Principal Secretaries, staff in the MDAs and all those involved in the preparation of the Sector Plans for their valuable inputs. In addition, I commend staff from State Department for Planning led by Principal Secretary, Planning for the effective coordination of the MTP III preparation process.

A handwritten signature in black ink, appearing to read 'H. Rotich', with a large, stylized flourish below it.

HENRY ROTICH, E.G.H.,
Cabinet Secretary,
The National Treasury and Planning.

FOREWORD

The Kenya Vision 2030 recognizes Information and Communications Technology (ICT) as a key enabler to socio-economic growth and development. The sector has the ability to accelerate productivity by reducing both the cost and efforts required in production processes. As reported in the 16th Global Information Technology Report (GITR) 2016, Kenya performed well during the Second Medium Term Plan (MTP II) period. The report whose theme was “*Innovating in the Digital Economy*”, ranked Kenya at 5th position in Africa with a Networked Readiness Index of 3.8 rising from an index value of 3.5 in 2013. Mauritius was leading with a Networked Readiness Index of 4.4.

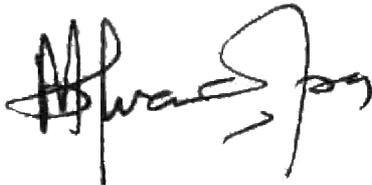
In addition, the sector registered an average annual growth rate of 10% making it one of the most attractive sectors in the economy. It received investments worth KShs 164 Billion, which resulted in 52% growth in its contribution to Gross Domestic Product (GDP) from KShs. 204 Billion in 2012 to KShs 311 Billion in 2016. This growth had positive effects in employment, general income levels and the standard of living in the country.

During the third MTP period, the BPO/ITES Sector proposes to advance Kenya into the Fourth Industrial Revolution that brings together digital, biological and physical technologies. The sector plans to develop and implement appropriate policies, legal and regulatory frameworks that improves business environment for employment and wealth creation. To increase ICTs usage and investments, sector programmes that enhance national ICT infrastructure, e-government, cyber security, data protection, human capacity, employment opportunities, e-commerce and local digital content have been identified for implementation.

The Government will leverage on information technologies as a key enabler to support the achievement of the Big Four Agenda in affordable housing, food security, universal health-care and manufacturing. The Government will also embrace and pioneer the adoption of emerging technologies such as blockchain, artificial intelligence, machine learning and the internet of things. ICTs will be used to improve planning, construction, management and operations of smart cities. Smart and intelligent systems will be

deployed for safety and security of lives, properties and data in the country. Local industries will be encouraged to use ICTs and embrace the gig economy to transform their businesses for improved efficiency and innovations for higher productivity and growth. The development of local content and a vibrant e-commerce ecosystem will be promoted for online marketing and selling of Kenyan manufactured goods and services.

Finally, the sector will work with all stakeholders to develop partnerships that will ensure strong collaborations in all matters affecting it. More investments will be encouraged in the BPO/ITEs field through support to local startups and development of incentives packages. In addition, the Konza Technopolis project will be fast tracked to ensure that basic infrastructure is put in place to open way for private investments. Implementation of these programmes is expected to double the sector's contribution to GDP by the end of the MTP III Period.

A handwritten signature in black ink, appearing to read 'Joe Mucheru', written in a cursive style.

MR. JOE MUCHERU, E.G.H.,
Cabinet Secretary,
Ministry of Information, Communications and Technology.

PREFACE

The Government acknowledges the great potential that the BPO/ITES sector has on economic growth and development. The increasing demand and supply of services being offered online by both public and private sector demonstrate the opportunities that need to be harnessed for both local and international investments. Kenya has developed as a regional BPO/ITES hub where operators leverage on regional proximity, high quality workforce and high speed broadband connectivity. This has created jobs and a steady inflow of foreign exchange for the country.

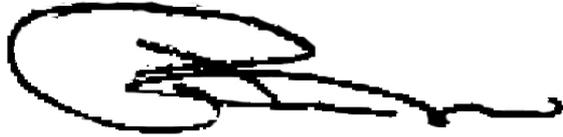
During the third MTP period, the Sector Plan will focus on how to utilize information and technology to deliver better services in a constantly changing environment. It will also draw its priorities from the achievements, emerging issues and challenges and lessons learned from the second MTP. Moreover, the Plan will take cognizance of the institutional frameworks and the general ICT policy to guide the implementation and achievement of Kenya Vision 2030 goals.

The BPO/ITES Sector Plan has prioritized the implementation of Konza Technopolis and the Digital Learning Programme as the flagship projects. Other projects include the establishment of a regional ICT hub; Development of Local Digital Content; Data centre; Ajira Digital Programme; Centres of Excellence in ICT and Mass Media skills and Policy; legal and institutional frameworks among others. It is anticipated that implementation of these programmes will bear the potential to transform the lives of Kenyans as intended in Vision 2030.

The success of the Plan will rely more on how sector stakeholders will work together to meet the needs of citizens, business and government. As the lead ministry, the plan will be implemented through performance contract targets, annual work plans and individual work plans. In addition, a monitoring and evaluation framework has been developed and will be used for tracking the implementation of the project and programmes.

Finally, I would like to acknowledge the work of Sector Working Group including all Government Ministries, Departments and Agencies, County Governments, Community Based Organizations,

Non-governmental Organizations and the Private sector who worked tirelessly towards the development of this Sector Plan.

A handwritten signature in black ink, consisting of a large, stylized initial 'F' followed by a series of loops and a long horizontal stroke ending in a small hook.

FATUMA HIRSI MOHAMED (MRS), C.B.S.,
*Principal Secretary,
State Department for Broadcasting and Telecommunications,
Ministry of Information, Communications and Technology.*

LIST OF ABBREVIATIONS

ADBM	Analogue Digital Broadcasting Migration
ADM	Analogue Digital Migration
BPO	Business Process Outsourcing
CAK	Communications Authority of Kenya
DI	Department of Information
DPC	Department of Public Communications
EOIs	Expressions of Interests
GDP	Gross Domestic Product
GOK	Government of Kenya
IBM	International Business Machines
ICT	Information and Communication Technology
ICTA	Information Communication Technology Authority
ITES	Information Technology Enabled Services
ITU	International Telecommunication Union
KBC	Kenya Broadcasting Corporation
KENET	Kenya Education Network Trust
KIMC	Kenya Institute of Mass Communication
KNA	Kenya News Agency
KoTDA	Konza Technopolis Development Authority
MCK	Media Council of Kenya
MOICT	Ministry of Information, Communication and Technology
MOU	Memorandum of Understanding
MTP	Medium Term Plan
NAS	National Addressing System
PCK	Postal Corporation of Kenya
PPP	Public Private Partnerships
RIPA	Royal Institute of Public Administration
SAGAs	Semi-Autonomous Government Agencies
UPU	Universal Postal Union

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EXECUTIVE SUMMARY

The Third Business Processing Outsourcing and Information Technology Enabled Services (BPO/ITES) Medium Term Plan (MTP) highlights key programmes and projects that will be implemented during 2018/19-2022/23 plan period. The choice and identification of programmes were informed through a consultative process involving public and private sector stakeholders. A review of the achievements in the implementation of the programmes under the Second MTP running from 2013-2017 also informed the process.

During the MTP II period, the sector focussed on promotion of two flagship projects including establishment of a smart city, namely Konza Technopolis and implementation of the Digital Literacy Programme for primary schools. Other priority programmes comprised of capacity building in ICT and mass media skills, development of local digital content and innovation, the Ajira Digital programme, modernization of mass media infrastructure and facilities and policy, legal and regulatory frameworks. The sector achieved the following:

Establishment of Konza Technopolis:- The sector initiated the development of horizontal infrastructure where works on roads, energy, water and sewerage and provision of trunk fiber is on-going. Funds have been secured through Engineering, Procurement and Construction with Financing (EPC-F) model for Phase 1 infrastructure. The Government also signed an MOU for the development of Kenya Advanced Institute of Technology (KAIST), an anchor institution.

Digital Literacy Programme (DLP):- Under this programme, 150 Teachers were trained as National ICT champions; 63,484 as trainers of trainers on basic ICT training; 11,894 on ICT certification and training; and 11,248 on DLP devices handling. Digital content for Grade 1, 2 and 3 has been developed and installed in all devices that are being deployed in schools. A total of 19,666 public primary schools had been installed and supplied with 989,586 learner digital devices and 39,332 teacher digital devices. 2 Local assembly lines were established at JKUAT and Moi University with each capable of producing 1,200 devices a day.

Promotion of Business Process Outsourcing (BPO) and ITES:-

The sector provided subsidized broadband to BPO/ITES companies to reduce the cost of internet, partnered in the establishment of IBM Research Lab, development of a Centre of Excellence at the University of Nairobi; and Digital Villages (Pasha Centers) country wide.

Capacity Development: the sector upgraded infrastructure and modernization of training equipment at the Kenya Institute of Mass Communication to make it a center of excellence in the region as well as implementation of the Presidential Digital Talent programme (PDTP) in partnership with the private sector where young professionals are being trained in ICT and leadership skills.

Rolling out of the Ajira Digital programme:- This included the launch of an information portal – www.ajiradigital.go.ke, training and sensitization of over 10,000 youth on basic introductory skills for online work, launch of 5 studios under the Studio Mashinani initiative and development of 11 Constituency Innovation Hubs (CIH) which are expected to assist in up scaling innovations into full commercialization.

Management of public information and development of local content:- This was undertaken through broadcasting; publications of 3 annual Kenya Yearbooks; launching of MyGov (a weekly government newspaper); and development of the e-public Communication Policy among others.

During the implementation of the MTP II, the sub-sector encountered some challenges and emerging issues that affected full achievement of its objectives. These included: weak policy and legal frameworks to institutionalize ICT state agencies to facilitate collaboration and governance within the BPO/ITES subsector; infrastructure vandalism affecting performance of the subsector; emerging security challenges; inadequate funding coupled with delayed disbursement leading to slow implementation of priority projects; and urban rural digital divide limiting public awareness on the economic opportunities being created by ICT.

During the MTP III period the sub-sector will endeavor to complete the implementation of the on-going programmes and projects as well as initiate new ones to enhance its contribution to the welfare of Kenyans. The programmes and projects include: development

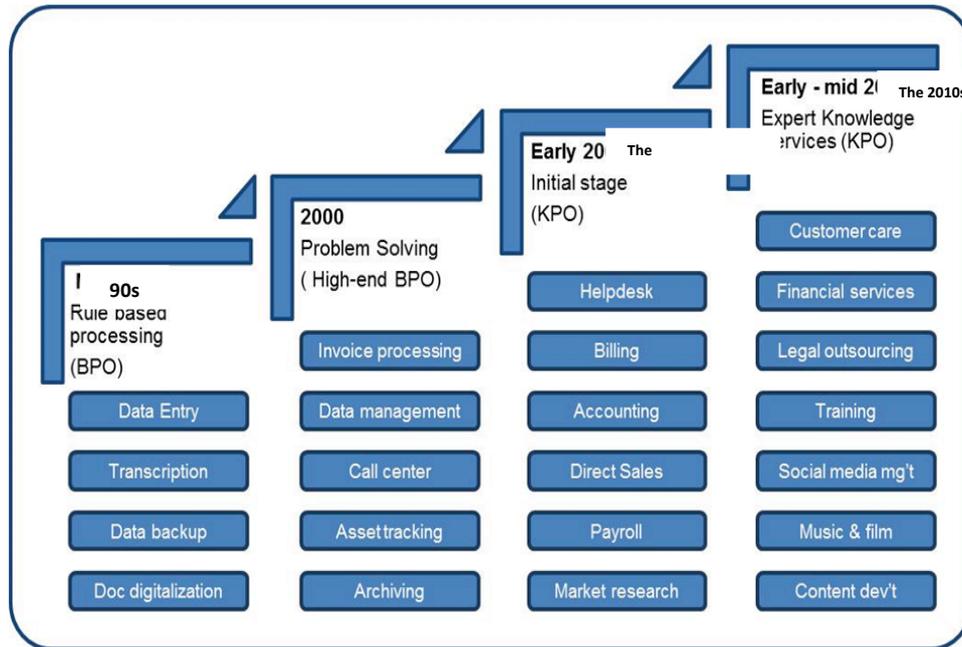
of Konza Technopolis; Digital Literacy Programme (DLP); National Data Centre; Ajira Digital Program and the rollout of Studio Mashinani and Constituency innovation Hubs; Open Innovation Lab; Centres of Excellence in ICT Research and Development and Mass Media Skills; establishment of an e-commerce Hub; development of local digital Content; Public Information Management; Enterprise Kenya and the development of the ICT Ecosystem (Huduma Whitebox); and Policy, Legal and Regulatory Frameworks

1.0 INTRODUCTION

The vision of the Business Process Outsourcing (BPO) and It-Enabled Services (ITES) sector is “*To be a top off-shoring destination in Africa*”. Business Process Outsourcing (BPO) refers to the contracting of non-primary activities to a third party provider and is part of a cost saving measure for any organization. The growth in the global business outsourcing industry has opened a window for Kenya to exploit a new growth area of BPO and IT Enabled Services (ITES). In Kenya, the BPO industry began in earnest in the 1990s. Since then, Nairobi has become East Africa’s Technology Hub, attracting foreign investments in the sector. The sector provides a significant contribution to the creation, networking, and funding of a burgeoning tech cluster around Nairobi. Local operators have leveraged their proximity to regional clients and the high quality of the workforce (particularly regarding language skills), and high-speed fiber optic connections. This has created jobs and a steady inflow of foreign exchange for the country.

Globally, BPO operators have become increasingly sophisticated. Early assignments in the sector focused on low-skill functions, such as data entry, with a natural evolution towards more sophisticated BPO. The early 2000s saw the introduction of Knowledge Process Outsourcing (KPO), in areas such as research. Within the last eight years, the sector has established a track record in sophisticated KPO, such as customer profiling, social media management, and graphic design as shown in Figure 1.

Figure 1: Evolution in the Sector



Despite the huge potential that Kenya stands to gain from the global BPO industry, the country share of BPO is still minimal and focuses more on low-skill functions, such as data entry and transcriptions. There is therefore need to give incentives to this sector in order to realize the spur growth.

During the third MTP period, the sector will train and provide mentorship to youth on online digital work and digitally enabled job opportunities and equip them with skills and access to available information and opportunities in the investment, trade and manufacturing sectors. It will also gather, package and disseminate news and information on the development, implementation and review of related policies affecting the Four Pillars of change (Big Four), that is, Manufacturing, Affordable Housing, Food Security and Universal Healthcare related issues through government centres and digital villages. Specifically, the Sector will directly contribute to the 4 pillars of change as follows:

i. Universal Health Care

Ensuring connectivity across all healthcare facilities, telemedicine and roll out of e-hubs countrywide, digitization and the standardization of the healthcare system to implement an electronic medical record for every citizen, Implementation of a Life Sciences Band at Konza Technopolis that will house investments and developments in Universal Health Care through development of world-class Health Care Facilities, Laboratories and Research Centres, development of a Biotechnology and Pharmaceutical Plant and a Science Technology Park in the technopolis city in partnership with the Ministry of Education.

ii. Food and Nutrition

Registration and mapping of all farmers to drive efficiency and access to government subsidy programs, use of big data to inform farming practices countrywide, digitization and automation of the agriculture value chain to increase benefit to farmers and value generation in both the upstream and downstream supply chains, modern Commercial Agriculture activities to be undertaken within the Konza Technopolis buffer zone to address the city's and the nation's Food and Nutrition needs through Modernization of Agricultural practices, promotion of irrigation, provision of water etc to support non-rain-fed agriculture. The city will also host Agricultural Research Centres drawn from the government, academia, the private sector and international investors.

iii. Affordable Housing

Countrywide GIS Mapping and roll out digital land information and processing, universal network coverage and development of digital economic activities (e-commerce) to curb rural-urban migration, development of a residential band at Konza Technopolis that will host various housing projects for the Konza Technopolis population. The proposed housing projects will cater for the high-end market and the bottom of the pyramid populations through provision of Affordable Housing Units. The city's Phase 1 will accommodate 30,000 inhabitants upon completion in 2022, while the entire city will be home to a population of 200,000 by 2030.

iv. Industrialization, Manufacturing and Agro-processing

Availability of market information (investments, jobs/skills marketplace), promotion and facilitation of digital device manufacturing (SMT lines), development of local assembly plants, Konza Technopolis has allocated 108 acres to Industrialization, Light Manufacturing and Agro-processing within Phase 1. This sector will be supported by the vibrant ICT infrastructure in the city and leverage on the city's innovation ecosystem. The city's Phase 1 will upon completion in 2022 generate 17,000 jobs and contribute additional \$ 1 Billion to the country's GDP

2.0 SITUATIONAL ANALYSIS

The Kenya Vision 2030 identified BPO/ITES as a priority sector under the Economic Pillar that is envisaged to create over 200,000 jobs and contribute over 10 per cent to GDP. To achieve this goal, the government has been implementing various initiatives. These include improving universal access to ICTs; promotion of the BPO/ITES; capacity building; development of digital content; roll out of e-government services; and development of the ICT industry and innovation. These initiatives are geared towards creating a favorable environment for the growth of the ICT market.

During the review period (2013-2017), the following achievements were made:

2.1 Foundation Initiatives for local digital content and applications development

This project supported the establishment of the following:-

- i. **Bandwidth:** The government provided partial bandwidth to subsidize BPO/ITES companies in order to reduce internet costs prior to the arrival of the submarine cables to Mombasa.
- ii. **Centre of Excellence (COE):** The Government established a Centre of Excellence at the University of Nairobi in partnership with Kenya Methodist University, Royal Institute of Public Administration (RIPA) International and International Business Machines (IBM). The Centre is intended to improve Kenyan youth's employability and empower them with requisite skills. A curriculum was developed and a series of trainings were conducted for trainers. In addition, a sustainable business model and a governance structure were developed for deployment.
- iii. **Software Certification Programme:** The Government partnered with Carnegie Mellon University (CMU) to develop a tool for software development certification, which would complement other certification programmes established by various vendors for their specific products (such as Microsoft, Cisco, Unix).

- iv. **ICT Incubation:** The Government supported an ICT business incubator at Nailab to enable innovators grow their activities in this space. Nailab supports ICT start-ups and entrepreneurs who have entrepreneurial idea. They are provided with space, computers, bandwidth and access to a marketing toolkit, taught how to apply for patents, legal support and are mentored. The incubators are expected to follow a six month plan for development; creating a prototype of the idea; marketing; and finally commercialization of the product or service. So far, 56 startup companies have been incubated including SokoText, KejaHunt, GigWapi, GoKibali, CladLight and SwapKitabu.
- v. **Established Digital Villages (Pasha Centers):** These are intended to be e-centers where citizens are able to access information and communication related services. They were intended to bring affordable technology and services to remote locations in the country. During the period, pilot Pasha Centers were established and Managers were trained and provided with sustainability model.

2.2 Establishment of Konza Technopolis

Konza Technopolis is a flagship project of the Kenya Vision 2030. The Government plans to position Kenya as a global technology and innovation hub, with a mission to develop Konza Technopolis as a sustainable, smart city and an innovation ecosystem, contributing to Kenya's knowledge-based economy. Konza aims to attract Research, Education and Commercial partners in ITES; Life Sciences; and Engineering. Innovation and entrepreneurship leads to an increase in patenting and an increase in the quality and quantity of relevant skilled workers available to work in these critical industries. The City will attract investors and build programs aimed at commercializing the products of research.

The Government has signed an investment agreement with the government of China to develop a National Data Centre. The government has also signed Memorandum of Understanding (MoU) with the Republic of South Korea for the establishment of a higher institution of Learning (Kenya Advanced Institute of Science

and Technology - KAIST) to provide advanced Science and Technology training in Kenya.

Development of horizontal infrastructure for the Technopolis is on-going with construction of water supply, installation of electricity to the site and on-going construction of two (2) sub stations to guarantee adequate and stable power. The government is constructing the Konza Complex to house the Konza Technopolis Development Authority (KoTDA). KoTDA is also processing 66 applications for space by private investors. Qualifying applicants are expected to commence construction immediately the leases are awarded. The applicants include R&D, Education and various commercial institutions in the areas of ITES, Life sciences and Engineering. Moreover, there are applicants ready to set up Hotels, residential facilities, a stadium and shopping center.

In 2015, the Government enacted the Special Economic Zones Act 2015 which will provide incentive for the BPO/ITES that will be applicable to Konza and identified areas. The Konza Bill has also been forwarded to the National Assembly for deliberations and is expected to be enacted during the third MTP period.

2.3 Digital Literacy Programme

The Digital Learning Programme (DLP) is targeted at learners in all public primary schools and is aimed at integrating the use of digital technologies in learning. Under this programme, the following has been achieved:-

- i. **Teacher training:** Training has been conducted for 150 National ICT champions; 63,484 trainer of trainers on basic ICT training; 11,894 on ICT certification; and 11,248 on DLP devices handling.
- ii. **Device Installation:** As at June 2017, digital learning devices have been installed in a total of 19,666 public primary schools. The devices deployed include 1 projector (Learning Digital Device) per school commensurate with class 1 enrolment; and 1 digital content server / router. Special schools have been equipped with 2 Teacher Digital Device, 1 projector and wireless router. A total of 989,586 learner digital devices (LDD) and 39,332 teacher digital devices (TDD) were installed.

- iii. **Digital Content:** Class 1, 2 & 3; and TUSOME digital content developed and installed on the devices. Development of the Kenya Education Cloud.
- iv. **Local Assembly:** For sustainability, skills transfer and growth of the local ICT ecosystem, two local assembly lines were set up at JKUAT and Moi University. Each has a capacity to produce 1,200 devices per day.
- v. **Power Connection to schools:** Over 22,675 schools were electrified through grid or solar systems.

2.4 Mass Media Skills

To build capacity in this sector, the government trained over 2,000 mass media personnel at the Kenya Institute of Mass Communication thereby boosting the national talent pool on mass media skills.

2.5 Presidential Digital Talent Programme

The government in partnership with the private sector trained and graduated the first batch of 100 young professional's in ICT skills and leadership under the Presidential Digital Talent Programme. The second batch of 400 trainees was expected to complete their training by December 2017.

2.6 Ajira Digital Programme

To promote employment opportunities among youths, the Government is implementing the Ajira Digital Programme aimed at introducing over 1 millions youth to digital work opportunities and provide the tools, training and mentorship needed to work and earn a decent wage (above minimum wage) from digital platforms. The initiative has four components namely:-

- i. **Access to dignified work:** growing the international and local demand, and Government utilizing freelancers to grow the local ecosystem.
 - a. During the period under review, the program rolled out *#PataAjira* campaign initiatives that promoted the onboarding of digital agents, able to earn commissions for selling various components of identified goods and services. One such initiative was with the Postal Corporation of Kenya (PCK) that

enabled youth to sell Mpost accounts and get instant commissions. Over 800 youth benefitted from this campaigns.

- ii. **Training and Mentorshop:** Empowering our citizenry to be prepared for the dynamic, always changing future of work.
 - a. By July 2017, Over 10,000 youths were trained and sensitized on basic introductory skills for online work and provided mentorship and guidance on how to access to online jobs.
- iii. **Access to Infrastructure:** Roll out of Constituency Innovation Hubs (CIH), Studio Mashinani, Y254 TV Channel
 - a. **Constituency Innovation Hubs (CIH):** During the period under review, the national government signed a contract for the implementation of the CIH project in partnership with the Constituency Development Fund Committees. The project involves the establishment of 1,160 innovation hubs across all the constituencies in the country. It is expected that the hubs will provide space for the youth to access online jobs. Eleven (11) CIH were established by July 2017.
 - b. **Studio Mashinani Initiative:** The government also developed and operationalized 5 audio studio facilities based in Mombasa, Kisumu, Machakos and Nairobi to empower the creative sector to develop and commercialize their talents and innovations at subsidized rates. The studios are being used to develop local digital content through music and video recording. A dedicated youth channel, Y254 was then conceptualized and implemented by the Kenya Broadcasting Corporation (KBC) to assist in the commercialization of the artists that are discovered at Studio Mashinani.
- iv. **Awareness:** A sustainable communication campaign to drive awareness, trust and confidence in online and digitally enabled job opportunities.
 - a. By July 2017; the Ajira Digital Portal (www.ajiradigital.go.ke) had been launched and over

60,000 youth had registered on the platform, various sensitization sessions had been delivered, reaching over 3,500 youth.

2.7 Information and News Services

As part of the effort to have informed citizenry, the Government implemented various initiatives that led to the following achievements during the review period (2012 to 2016): -

- i. The number of licensed TV stations rose from 14 to 63.
- ii. The number of Radio stations rose from 461 to 687.
- iii. Internet service providers grew from 7,154 to 8,448.
- iv. 3 editions of Kenya Yearbook publications were launched.
- v. A weekly government newspaper “MyGov” was launched in 2016.
- vi. New Broadcasting Regulations were issued in 2015 requiring broadcasters to allocate 60% of airtime to locally produced content.
- vii. The Public Sector Communications Policy, 2015, was developed to standardize government communications structures, processes and procedures.

3.0 EMERGING TRENDS, CHALLENGES AND LESSONS LEARNT

3.1 Emerging Trends

- i. **Gig Economy:** Organizations are increasingly shifting to contracting temporary, independent workers to accomplish specific tasks. This rise in short-term jobs leads to reduction in the 'traditional full-time' employment. In this digital age and onset of the fourth industrial revolution, the workforce is increasingly mobile and work can be done from anywhere, by anyone and at any time. The result of this is that, employers can select from a larger pool of workers, demanding quality and lower costs.
- ii. **Crowdsourcing:** This is an innovative trend that refers to the process of obtaining services from a group of persons, instead of depending on specific suppliers and fixed contracts. This is made possible through online communications and social networking. Through effective management, crowdsourcing delivers results faster, cheaper and possibly with better quality.
- iii. **Big data analytics:** The quantity of data related to a business process is extensive. Enterprises require large volumes of data to be analyzed, extracted and converted to meaningful information. The content adds high value in business process performance analysis and process improvements. Furthermore, this consolidated information would be utilized in organizations' decision-making processes. Through big data management, enterprises could better process transparency, visibility and control. It would lead to improved and streamlined operations, complemented by tangible business impact. It is imperative to develop the necessary facilities and skills for big data analytics.
- iv. **Human Computation:** With the rise of machine learning and artificial intelligence, computers are able to do many things that were previously performed by humans; they understand language, speech, handwriting and gestures; but these capabilities are limited. Businesses and Governments are increasingly in need of information processing capabilities

that computers alone cannot provide, thus human capabilities such as creativity, intuition, symbolic and logical reasoning, abstraction, pattern recognition and other forms of cognitive processing are performed by humans in the processing cycle. Such tasks are being referred to as Human Intelligence Tasks.

- v. **Cloud Computing Technology:** This technology is being increasingly used for data storage but the security of data and retrieval of the same is an issue of major concern.

3.2 Challenges

Whereas the sector registered minimal successes during the second MTP, it also experienced some challenges that affected full achievement of its objectives. Some of the challenges include:-

- i. **Technological and Technical Challenges:** Most BPO companies across the world, Kenya included, face technological and technical challenges. Such challenges that are considered as high-end BPO activities cover technical areas such as engineering, software development, knowledge management and retention. According to various studies done, BPO companies also face the challenge of high cost of BPO technology and bandwidth especially during startups.
- ii. **Human Resource Challenges:** Majority of BPO companies face human resource challenges. Most of the prospective companies have perception that working in a BPO company does not require much skill. Some feel that any person with interpersonal communication skills and a basic education are employable after some training. In this regard, it is difficult to get professionals working in BPO industry. This is a major challenge to BPO companies across the world including Kenya. Tied to this challenge is the high attrition of number of people working in BPO due to number of youths that want regular jobs.
- iii. **Policy and Regulation:** One of the major challenges facing BPO in Kenya is lack of specific BPO policy. Kenya is yet to develop a specific BPO sector policy as pledged in the medium term plan as envisioned by the Kenya Vision 2030.

The policy should among other things demonstrate a strong commitment by government to promote outsourcing, address ICT BPO Standards, put in place a desirable incentive scheme for the BPO and align it with the Kenya Vision 2030. Other policy challenges include lack of a BPO strategy and a weak monitoring and evaluation framework for the BPO industry.

- iv. **ICT Skills Gap:** Both National and County Governments are offering more and more services via various online media and moving more toward shared services and greater leveraging of ICT to enhance service delivery. The success of these initiatives depends on competent and highly skilled workforce to assure sustainable and seamless services to citizens and for the implementation of the e-Government initiatives. A major challenge of creating an enabling environment is the lack of ICT skills in the Public sector workforce. The demand to provide online services to citizens has not been paralleled with up scaling of the requisite skills to the end users who offer services to meet this change. Additionally, there are low levels of ICT literacy especially in rural areas.
- v. **Cyber Security:** There are emerging challenges and complexities due to ICT systems which continues to present new security risks. The possibility of security breaches and data compromise from various categories of officers due to unawareness creation could have a serious impact/loss on Governments revenue, disruption on services, and may even create liabilities for lawsuits.
- vi. **Data Integrity and Intellectual Property:** BPO companies handle a lot of sensitive and specific information given to them by various clients. Data security and privacy are important concern for western clients especially when dealing with local BPO companies. The challenge is that most developing countries are yet to develop and embrace intellectual property protection and enforcement mechanism.

3.3 Lessons Learnt

Some of the lessons learnt include:

- i. Harnessing online job opportunities will provide immense opportunities especially for the youth;
- ii. Developing supporting infrastructure, skills and access to devices will enhance uptake of BPO and online jobs;
- iii. Comprehensive policy, legal and regulatory frameworks can facilitate collaboration of government agencies in terms of data applications and data sharing as well as proper management and governance of the sector;
- iv. Provision of adequate requisite infrastructure and affordable and uninterrupted power supply will contribute to lessening the existing digital divide between the rural and urban areas which limits public awareness of the advantages and opportunities of BPO/ITES;
- v. BPO/ITES can leverage on e-Government initiatives to create more jobs and this in turn will spur further growth for the sector while the public will benefit from improved service delivery
- vi. Cyber security is needed to address emerging challenges and complexities which continue to present new security risks in the BPO/ITES industry;

4.0 PROGRAMMES AND PROJECTS

The focus of the sector is to implement priority programmes and projects which will generate broad based inclusive economic growth, as well as employment creation, reduction of poverty and inequality, and which are in line with the global Sustainable Development Goals (SDGs) and the goals of African Union Agenda 2063. The BPO Programmes and projects aims at contributing to 10% economic growth and generation of over 200,000 direct jobs.

4.1 Flagship Projects and Programmes

Growth in BPO/ITES industry has opened a new window for Kenya to initiate greater expansion of opportunities in the sector. The sector is especially critical for Kenya in the medium term because it has the potential to create job opportunities in large numbers while contributing strongly to the overall GDP growth as it has in the past. To achieve this, the Government endeavours to implement several projects and programmes, details of which follow below.

4.1.1 Establishment of Konza Technopolis

Konza Technopolis will be a technology hub, with an integrated urban information and communication technology (ICT) network that supports delivery of connected urban services and allows management of smart city services such as innovation, research, academia, business, security, traffic among others on a larger scale. This will be delivered through the city's integrated urban information and communication technology (ICT) network. Projects to be undertaken include:

i. Development of Phase 1 Infrastructure

The project entails construction of the following:-

- a) **Phase 1A Streetscape:** This project entails upgrade of 12.9 Km murrum/ gravel roads to tarmacked roads with sub-surface utilities.
- b) **Design and construction of Phase 1B:** The project entails Design and Construction of the remaining 27.1 Km of roads for Phase 1 of Konza Technopolis with subsurface utilities.

- c) **Construction of Phase 1 Wastewater Reclamation Facility:** The project covers design and construction of Wastewater Reclamation Facility (Sewer treatment plant) for **Phase 1A** with capacity of **6,000 m³** per day to cater for the needs of the city's population.
- d) **Provision of Phase 1 Electrical Network:** The project involves construction of Utility Ducts (Utilidor) for underground distribution of utilities e.g. power lines, fiber etc. within Phase 1.
- e) **Phase 1 Solid Waste Management System:** The project involves construction of solid waste pneumatic system and solid waste plant to cater for the city's daily solid waste.
- f) **The Konza Technopolis Welcome Center:** The project involves construction of the city's main entrance facility, with security checkpoints, parking etc. to facilitate entry into the city.

ii. National Data Centre and Konza Technopolis Smart City Facilities

The project entails construction of a National Data Centre and Smart City Facilities at Konza Technopolis. Project scope includes construction of a National Data Centre facility and construction of the enabling Smart City Facilities and ICT Infrastructure to enable:

- a) Cloud National Data Centre at Konza Technopolis
- b) Smart Connection Network for Konza Technopolis
- c) Citizen and SME Service as Virtual Desktop Infrastructure
- d) Public Safety City Solution for Konza Technopolis

iii. Konza Technopolis Investor attraction

Project entails sponsorship, participation and hosting of various events and initiatives geared towards marketing Konza Technopolis as a global ICT and Innovation destination. The Investor Outreach programme's key goal is to attract and retain residents, investors and investments into the city.

4.1.2 Digital Literacy Programme (DLP) Phase II

The project will enhance the quality of digital teaching and learning in public primary schools. It entails:

- i. Having a model in all schools.
- ii. Distribution of devices to remaining schools not covered in Phase I.
- iii. Design and construct a computer lab that will accommodate 50 students in every public school.
- iv. Implementation of a cloud infrastructure for digital content.
- v. Establishment of connectivity Infrastructure to all public schools; and
- vi. Capacity building and training of teachers.

4.2 Other Programmes and Projects

4.2.1 Presidential Digital Talent Programme

The Government in partnership with the private sector will provide one-year internship to 400 fresh ICT graduates annually to enhance their skills and enable them acquire gainful employment. During the third MTP period, the government will continue to scale up the development of critical pool of local high-end skills to meet the needs of the entire economy. The Government will increase the current number of interns from 400 to 2,000 under the Presidential Digital Talent Programme: ICT Graduate (PDTP) Internship.

4.2.2 National ICT Human Capital and Workforce Development

The national ICT human capital and workforce development programme aims to develop and upgrade ICT skills for ICT professionals, Public sector workforce, youth and citizens in order to transform the industry and the public sector for efficient and effective service delivery and sustainable national development. During the period under review the following will be done:-

- i. An ICT Academy shall be established to conduct ICT capacity building for the Public servants on ICT, governance, security and productivity courses on digital

awareness, digital literacy, digital competence and digital expertise;

- ii. Establish an accreditation body for ICT professions and accreditation of ICT firms;
- iii. Develop an ICT National Qualification Framework for ICT professionals;
- iv. Development of a database to capture ICT professionals in the country and;
- v. Increase digital literacy by 50% through training of over 5million adult citizens' (senior citizens, women, and youth) on ICT literacy skills to enable citizens interact with government, access government services and increase utilization of technology.

4.2.3 Ajira Digital Programme

The Government will continue with the implementation of the Ajira Digital initiative. The project aims to empower and expose the youth to online work and digitally-enabled job opportunities through training, provision of infrastructure and connecting youths to online and digital work opportunities through the partner ecosystem.. The project components will be implemented as follows:-

- i **Access to dignified work:** growing the international and local demand, and Government utilizing freelancers to grow the local ecosystem.
 - a. During the period under review, the program rolled out *#PataAjira* campaign initiatives that promoted the onboarding of digital agents, able to earn commissions for selling various components of identified goods and services. One such initiative was with the Postal Corporation of Kenya (PCK) that enabled youth to sell Mpost accounts and get instant commissions. Over 800 youth benefitted from this campaigns.
- ii **Training and Mentorshop:** Empowering our citizenry to be prepared for the dynamic, always changing future of work.

This will involve training and providing mentorship on online digital work to over 100,000 youths annually.

- iii **Access to Infrastructure:** Continue the roll out of Ajira Digital Centers country wide; this includes Constituency Innovation Hubs (CIH), Ajira Digital Mobile Centers, Ajira Digital Training Centers, Studio Mashinani, Y254 TV Channel
 - a. **Constituency/County/Community ICT Innovation Hubs (CIH):** The project will entail the establishment of constituency/county/community innovation Hubs to all Constituencies and Counties in Kenya to provide space for youths to access digital work opportunities. It will include provision of high speed connectivity, Computing devices and Office furniture.
 - b. **Studio Mashinani Initiative:** The project entails establishment of one studio in each of the remaining 44 Counties, as they have already been established in 3 counties. The studios will be used to empower youths to develop and commercialize their talents and innovations at subsidized rates.
- iv **Awareness:** Rollout of a sustainable communication campaign to drive awareness, trust and confidence in online and digitally enabled job opportunities.

4.2.4 Public Information Management

The programme involves licensing of Radio and TV stations, Newspapers and internet service providers; production of annual Kenya Yearbook publications; production of weekly government newspaper; mainstreaming of public communications in different languages through a contact centre; gathering, packaging and dissemination of news and information; modernization of KNA; training of journalists; media complaints arbitration; media monitoring; and development and review of related policies.

4.2.5 Local Digital Content Development

Development of Local digital content is critical to enable Kenyans to express, store and access their own stories. The Government will promote the development of local digital content through formulation and review of necessary policy frameworks,

transformation of KNA into digital content agency and development of data centres for data storage and retrieval.

4.2.6 ICT and Mass media skills development

This project involves upgrading and modernizing training facilities and equipment at the Kenya Institute of Mass communication to ensure that learnt skills are responsive to the transitions in technology and media industry needs. The project also entails constructing a facility that would be used to conduct pool mass media training, incubate local content creation, commercialize talents in new mass media and serve as a referral centre of excellence in mass media training and product innovations.

4.2.7 Establishment E- Commerce Hub

The project involves conducting a feasibility study and developing a road map; setting up of a warehouse, sorting and dispatching centres; procurement and installation of operating applications software; training of key stakeholders; and branding of branches of Postal Corporation of Kenya as distribution outlets.

4.2.8 ICT Innovation and Enterprise Kenya

The project will facilitate BPO/ITES companies' access to capital (including by running an equity fund) and promote start-ups in general. Enterprise Kenya will foster innovation across the BPO/ITES sector and support the internationalization of Kenyan BPO/ITES SMEs, including through the activation of economic diplomacy linkages, enhancement of the growth, productivity and global competitiveness of SME's by facilitating technology innovation and sustainable BPO/ITES enterprises in Kenya.

4.2.9 Regional ICT Ecosystem initiative

As a member state of the East African Community (EAC) and a signatory to the East African Common Market Protocol, the Government is committed to implement policies and programmes to promote regional integration. The Government will remain proactive in exploring new areas of collaboration within EAC member states and other Africa regions on ICT policy and regulatory issues and related matters that serve to advance the objectives of the EAC Common Market and African union Protocols for the benefit of the citizens of the East African region

and Africa at large. Specifically but not exclusively, this project will entail:-

- i Secure cross border broadband connectivity to enhance cross border trade in goods and services;
- ii Promote high speed broadband connectivity between the Capital and major cities of the East African Community, COMESA and Africa to facilitate electronic transactions between the African Union Member States; and
- iii Implementation of SMART Africa project to ensure a single digital market.

4.2.10 Government Call Centre

The project proposes to develop multilingual contact centres in all counties where Kenyans and visitors can obtain information on Government services and programmes, national issues of concern and also give feedback on their concerns. The callers can indicate their preferred language of discourse which can be any official Kenyan language, as well as a growing catalogue of Kenyan community languages. The main objective is to build patriotism and national pride in Kenyans and to unify the country and restore productivity after a contentious general election. In addition the project intends to build positive feelings towards the government by addressing the issues of:

- i Perceived lack of equitable access to public services;
- ii Perception of inequalities along ethnic lines;
- iii Poverty and lack of jobs

4.2.11 Media Park

The purpose of the project is to build the foundation for Kenyan dominance in the African media industry and to create employment for youths with creative and technical skills in the media industry. The project aims at establishing a media Park in Nairobi by utilizing land owned by KBC to provide the skills, competences and physical facilities for media development in three areas:

- i Entertainment (privately-funded, full-length video productions for the global entertainment market);

- ii Edutainment (publicly-funded, multilingual video productions which target to educate Kenyans on national values and development issues);
- iii Mini-media (professional, short-length media intended for use on the Internet for advertising, entertainment and education.)

The Media Park shall support all elements of the multimedia production process in an efficient, effective and economical way. Private sector contractors shall be procured to manage the different elements, with a corporate social responsibility component built into all elements to ensure that youth are continuously being trained and absorbed into the industry.

The eight basic elements which shall be supported in the media city are:

- i Script writers workshop (supporting the writing and development of quality creative scripts);
- ii Investment, production and direction (supporting the funding and professional development of media products);
- iii Editorial and technical services (supporting the technical quality assurance process and intellectual property protection of multimedia production as well as maintaining a library of multimedia products);
- iv Costume and set development and management (supporting the design and production of costumes and sets for multimedia production);
- v Filming (supporting the still and moving photography of subjects and productions);
- vi Indoor and outdoor set management and hire (a large chunk of the 79 acres shall be used to develop indoor and outdoor sets for filming);
- vii Hospitality and tourism (providing catering and hospitality services for the workers in media city as well as tourists who visit media city);
- viii Creatives Guild (providing a register, rating system and recruitment service for actors, musicians and other creative

workers who are necessary for the production of multimedia products).

4.2.12 Digital Villages

The purpose of the project is to build a sustainable market for the Kenyan media industry by ensuring that Kenyans have ready access to media products and services as well as to deliver edutainment to Kenyans at the grassroots level. The project will enable Kenyan households and institutions to cost-effectively access digital satellite television so that they can gain access to public information, public edutainment and private entertainment content.

The project, partially funded by the Government of China, shall initially set up 800 communities (where at least 10 households and 2 institutions per community shall be provided with digital satellite television.) The project will go on to support the transmission of free edutainment channels as well as supporting the extension of the project to additional communities.

5.0 POLICIES, LEGAL, INSTITUTIONAL AND REGULATORY FRAMEWORKS

5.1 Policy, Legal and Regulatory Frameworks

Review, formulation and implementation of appropriate policies, legal and regulatory frameworks will be undertaken to promote growth and development in the BPO sector. During the Third MTP period, the sector will:

- i. Review ICT Regulations to address local content and participation of local investors and local public learning institutions for knowledge and capacity transfer;
- ii. Fast track enactment of ICTA Bill, KoTDA Bill and e-government Act and Regulations;
- iii. Review Kenya Information Communications Act;
- iv. Develop and implement Digitization Strategy, Roadmap and Standards;
- v. Develop ICT innovators and content creators institutional framework to support growth and export of BPO/ITES services; and
- vi. Develop Government Records Digitization Policy.

5.2 Institutional Reforms

Reforms will be carried out to revitalize State Corporations under the ministry of ICT to make them vibrant in supporting BPO/ITES services of the government. In this regard, the following institutions will be restructured: Konza Technopolis Development Authority (KoTDA); Information Communication Technology Authority (ICTA); Kenya News Agency (KNA), Kenya Broadcasting Corporation (KBC); Postal Corporation of Kenya (PCK); and Government Advertising Agency (GAA).

6.0 Implementation Matrix

Projects/ Programmes	Objectives/ Program	Expected outcomes/ Outputs	Indicator	Implementing Agency	Time frame	Sources of Funds	Indicative Budget (KShs . Million)					
							Total	2018/1 9	2019/2 0	2020/2 1	2021/2 2	2022/2 3
Establishment of Konza Techno-polis	To develop a sustainable city and an innovation ecosystem contributing to Kenya's Knowledge- based economy	Konza Complex built	No. of complex built	KoTDA/MoICT	5	GoK, Private partners Donor	3920	500	1,667	1,200	553	0
		Master Delivery Partner Deliverables	% of works completed	KoTDA/MoICT	3	GoK	3,800	300	1,490	1,340	670	0
		Access Roads/streetscape /waste water facilities constructed	No. of km of roads tarmacked	KoTDA/MoICT	5	GoK, Private partners Donor	4,500	148	1480	1480	1244	148
		Engineer Procure, Construct and Finance of Infrastructure Projects (EPC-F) completed	Amount invested	KoTDA/MoICT	4	GoK, Private partners Donor	43,120	6,820	16,500	13,200	6,600	0
		Konza Data Centre established	A fully operational Data Centre	KoTDA/MoICT	3	Develop ment partners/ GoK	18,480	0	9,240	9,240	0	0
		Investors attracted	No. of investors investing in the city.	KoTDA/MoICT	5	GoK	1,200	0	300	400	500	0
		Distribution of devices to remaining schools not covered in phase I Design and construct a computer lab in every school that will accommodate 50 students	No. of schools with digital device No. of digital learning devices with digital content distributed	MoiCT, Treasury, Ministry of Energy MOE	5	GOK/ Private sector	93,800	13,400	13,400	26,800	26,800	13,400
Digital Literacy Program	Development of a cloud infrastructure for digital content Establishment of connectivity Infrastructure to Schools; and											

Projects/ Programmes	Objectives/ Program	Expected outcomes/ Outputs	Indicator	Implementing Agency	Time frame	Sources of Funds	Indicative Budget (KShs . Million)					
							Total	2018/1 9	2019/2 0	2020/2 1	2021/2 2	2022/2 3
Presidential Digital Talent	Provide apprenticeship to ICT fresh university graduates	Training of teachers. Fresh ICT graduates recruited	Number of ICT fresh graduates recruited	MOE	5	GoK	2,875	377	707	707	707	707
National ICT Human Capital And Workforce Development	Develop ICT skills to transform the industry and the public sector for efficient and effective service delivery.	ICT academy established; ICT professional accreditation body established; ICT framework developed; -Public digital literacy improved	No. of talents identified and harnessed; No. of civil servants trained; % increase in public digital literacy	MoICT,	5	GOK, Development Partners, Private sector	19,860	0	2,930	8,610	4,020	4,300
Establishment of ICT Research & Development Centre	To establish a fully-equipped facility for R&D on (ICTs) technologies	A functioning ICT Research Centre established	ICT Research Centre	Multi-media University	5	GOK/ Partners	400	0	150	100	100	50
Ajira Digital Program	To promote online work and digitally-enabled jobs for the youth by providing the tools, training and mentorship needed to earn above minimum wage from digital platforms	online jobs and digitally-enabled jobs created youths trained and accessing online and digitally-enabled jobs studio mashinani established Constituency/County/Community Innovation Hubs established	No. of online jobs created; No. of youths trained and accessing online jobs and digitally-enabled jobs No. of studio mashinani established No. of Constituency/County/Community Innovation Hubs	MoICT	5	GoK	10,700	2,134	2,134	2,145	2,157	2,130

Projects/ Programmes	Objectives/ Program	Expected outcomes/ Outputs	Indicator	Implementing Agency	Time frame	Indicative Budget (KShs . Million)					
						Total	2018/19	2019/20	2020/21	2021/22	2022/23
Public Information Management	To enhance timely accessibility of Information	A functioning public information management system.	established Number of Kenya Yearbook publications produced; No. of MYGOV Newspaper issues published; % of KNA modernized; News items gathered and disseminated; % of Media disputes resolved; No. of KNA news items gathered, packaged, disseminated; No. of public information policies developed;	Department of Information, Department of Public Communications, Kenya Yearbook, Media Council of Kenya, CA	5	5,910	1050	1020	1140	1270	1430
Local digital content development	Provide storage of data	Construction of data/recovery center completed Government Data Center /Disaster Recovery; Digitization of government records	A fully operational data center; % of government records digitized	MoICT		4306	306	1,000	1,000	1,000	1,000
ICT and Mass media skills development (KIMC)	To enhance ICT and mass media skills	Tuition Centre and state of the Art Technical studios established Library established	No. of studios and libraries established	MoICT, KIMC	5	1,155	221	437	221	176	100
ICT Research & Development Centre	To establish a fully-equipped facility for research and development	High Performance Computing lab established; Incubation laboratories operationalized; Post graduate research and	% completion rate Incubation laboratories operationalized;	Multimedia University	2018-2022	500	100	150	100	100	50

Projects/ Programmes	Objectives/ Program	Expected outcomes/ Outputs	Indicator	Implementing Agency	Time frame	Sources of Funds	Indicative Budget (KShs . Million)						
							Total	2018/1 9	2019/2 0	2020/2 1	2021/2 2	2022/2 3	
	in the Information and Communication Technologies (ICTs) to stimulate innovation and economic growth	training centre established; and Industry training centre established											
Establishment E- Commerce Hub	To promote E- Commerce	Posta infrastructure Modernized; Warehousing established ; Human capacity developed Fleet capacity enhanced; and E-commerce hub established	% of Posta infrastructure Modernized; Number of Warehousing established; Number of Human personnel trained on e- commerce % of Fleet acquired; and % of E-commerce hub established operational	MoICT, UPU, PCK, KRA, CA	2018- 2022	GoK	1600	1100	1150	1000	400		
ICT Innovation and Enterprise Kenya (Huduma Whitebox.go.k e)	To facilitate BPO/ITES companies' access to capital	Capital provided to BPO SME's	-Amount disbursed - No. of BPO/ITES SME's funded	MoICT, ICTA, COG, Private sector	5	GOK/Private sector	0	2000	2000	1000	1000		
Regional Integration of the BPO/ITES Ecosystem	To have a single digital market for efficient cross-border trade	Border connectivity, Harmonized electronic/digital payment systems, harmonizing internet and communication tariffs	Electronic/digital payment system; Report on harmonization of tariffs and border connectivity	MOICT	5	GOK	0	500	500	750	750		
Digital government transformation program	To promote ICT applications in MDAs	ICT applications	No.	MDAS	5	GoK	0	13,000	15,500	15,500	14,000		

Projects/ Programmes	Objectives/ Program	Expected outcomes/ Outputs	Indicator	Implementing Agency	Time frame	Sources of Funds	Indicative Budget (KShs . Million)					
							Total	2018/1 9	2019/2 0	2020/2 1	2021/2 2	2022/2 3
Government call center	To enhance service delivery of government services to the public	Operational government call center	One Call center	MoICT	2019/20 TO 2021/22	GOK	2,150	0	-	650	500	1000
Media Park	To create employment for youth with creative and technical skills in the media industry.	Establish a media centre; Train youth on media skills	Functional Media Park; No of youths trained	MoICT; DP	2018- 2022	GOK/DP	23,800	5,000	5,200	5,800	4,800	3,000
Digital Villages	To promote access to public information	Access to digital satellite television;	No of new communities accessing digital televised information	MoICT; DP	2018- 2022	GoK DP	1220	20	200	800	200	0
Policy, Legal and institutional Frameworks	To formulate, review and implement ICT policies, legal, and regulatory frameworks.	Policy, legal and regulatory frameworks developed and reviewed; Institutions restructured	No. of Policy, legal and regulatory frameworks reviewed; No. of Institutions restructured	MICT and Stakeholders	5	GOK	18,960	1,550	3,430	4,700	5,750	3,530
GRAND TOTAL							332,406	33,526	77,705	98,783	75,397	46,995

MONITORING AND EVALUATION MATRIX

Programme	Objectives	Output	Indicator	Baseline value (2016)		Yearly Target					
				2018/19	2019/20	2020/21	2021/22	2022/23			
Outcome 1: Increased Employment opportunities in BPO/ITES Industries											
Establishment of Konza Technopolis	To develop a smart sustainable city and an innovation ecosystem contributing to Kenya's Knowledge-based economy	Konza Complex established	% of completion	20	60	80	100				
		Consultancies (MDP2) undertaken	% of deliverables completed	30	60	75	90			100	
		12.9 km Access Roads and Phase 1 Wastewater Reclamation Facility Designs	% of design completed	60	80	90	100			-	
		12.9 km Access Roads to tarmac standards and Phase 1 Wastewater Reclamation Facility constructed	% of completion	100	100	-	-				
		Engineer, Procure, Construct and Finance of Infrastructure projects (EPC-F)	% of infrastructure Developed	20	25	50	75			100	
		National Data Centre and Konza Technopolis Smart City Facilities Constructed	% constructed	Procurement of EPCF Contractor	15	45	75			100	
Konza Investor Outreach Programme	No. of anchor tenants investors attracted	-	-	50	100			-			
Outcome 2 Enhanced quality of teaching and learning in schools and institutions of higher learning											
Digital Literacy Programme (DLP)	To enhance the quality of teaching and learning in public primary schools	Output 2.1 Distribution of devices to remaining schools not covered in phase I	Number of learning devices distributed to schools	1.2 M	250,000	150,000					
		Output 2.2 Design and construct a computer lab in every school that will accommodate 50 students	Number of Computer schools established	-	-	5000	10,000			10,000	
		Output 2.3 Development of a cloud infrastructure for digital content	Percentage of digital content developed								
		Output 2.4 Establishment of connectivity Infrastructure to Schools; and	Number of schools with connectivity infrastructure								
		Output 2.5	Number of teachers								

Programme	Objectives	Output	Indicator	Baseline value (2016)					Yearly Target				
				2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23			
Outcome 3:													
Youth empowerment for job opportunities													
Presidential Digital Talent	Provide apprenticeship to ICT fresh university graduates	Output 3.1 Fresh ICT graduates recruited under the Presidential Digital Talent	Number of ICT fresh graduates recruited	400	400	400	400	400	400	400	400	400	
Outcome 4:													
Enhanced data security													
Cloud based data Centre	To enhance security of data	Output 4.1 Government private Cloud- Data centre	Number of agencies hosting in the systems cloud data centre	-	-	10	15	20					
Outcome 5													
Increased employment opportunities													
Ajira Digital Programme	To promote online work and digitally-enabled jobs for the youth by providing the tools, training and mentorship needed to earn above minimum wage from digital platforms	Output 5.1 Training youths on Online jobs Output 5.2 Access of online and digitally-enabled jobs Output 5.3 Constituency/County/Community Innovation Hubs established Output 5.4 Studios Mashinani established Output 5.5 Regional e-commerce hub Established	Number of Youths trained Number of Youths connected to online employment Number of Constituency innovation hubs established Number of Studios Established Percentage of Completion	10,000 100,000 11 5 0	20,000 500,000 500 5 10	30,000 500,000 1,160 10 40	40,000 500,000 - 10 60	50,000 1,000,000 - 10 80	100,000 1,000,000 - 7 100				
Outcome 6													
Increased Access to local digital content													
Local digital content development	Create Content and Provide storage of data	Output 6.1 Transformation of KNA to Digital Content Agency Output 6.2 Construction of data/recovery centre completed	% of KNA operational data centre Number of operational data centre	10 0	20 1	40 -	60 -	80 -	100 -				
Outcome 7													

Programme	Objectives	Output	Indicator	Yearly Target					
				Baseline value (2016)	2018/19	2019/20	2020/21	2021/22	2022/23
Increased ICT Human Capacity development									
ICT and Mass media skills development (KIMC)	To enhance ICT and mass media skills	Output 7.1 Centre of excellence in mass media training and product innovations established.	Percentage of completion	50	10	30	50	70	100
		Output 7.2 KIMC campuses Established	Number of KIMC campuses	0	0	1	1	1	1
		Output 7.3 Establishment of ICT Research & Development Centre	Percentage of completion	0	10	20	40	60	100
Outcome 8 Informed Citizenry									
Public Information Management	Provide Information on Government Programmes	Output 8.1 KNA Stories produced and disseminated /features	No. of Copies produced and disseminated	14400	15500	16000	16500	17000	17500
		Output 8.2 TV news features gathered and disseminated	No. of television news features	3500	3642	3500	4000	4200	4500
		Output 8.3 MyGov weekly Newspaper	No of Publications	52	52	52	104	156	156
		Output 8.4 Public Advertisement standardized and placed in the media	% of Advertisement standardized placed in media	100	100	100	100	100	100
		Output 8.5 Kenya Yearbook Publication	No. of Editions produced	1	1	1	1	1	1
		Output 8.6 Cabinet profiles publications	No. of Cabinets Profile published	1	1	1	1	1	-
		Output 8.7 Sector Specific Yearbook Publications	No. of Sector Specific Yearbook published	1	1	1	1	1	1
		Output 8.8 Media disputes resolved	% of disputes resolved	50	700	100	100	100	100
Outcome 9									
Increased ICT Innovation and Enterprise Kenya									
ICT Innovation and Enterprise Kenya	To facilitate BPO/ITES companies' access to capital		Number of ICT innovators and BPO companies facilitated	-	-	3	3	3	5
		Output 9.1 BPO/ITES companies' access to capital							

Programme	Objectives	Output	Indicator	Yearly Target					
				Baseline value (2016)	2018/19	2019/20	2020/21	2021/22	2022/23
Outcome 10: Harmonized Regional ICT connectivity									
Regional ICT Ecosystem Initiatives	To have a single digital market for efficient cross-border trade	Output 10.1 Border connectivity	Percentage of connectivity	20	40	60	80	100	-
		Output 10.2 Harmonized electronic/digital payment system	Percentage of harmonized electronic/digital payment system	20	40	60	80	100	-
		Output 10.3 Harmonized internet and mobile communication tariffs	Percentage of Harmonized internet and mobile communication tariffs	20	40	60	80	100	-
Outcome 11: Knowledge based economy									
Government call centre	To Enhance public delivery services and access to information	Output 11.1 Government call centre established	Number of Counties with Functional Call Centre	0	0	10	20	30	47
		Output 11.2 Media Park established	Percentage of Completion	0	0	20	40	60	100
		Output 11.3 Digital Villages established	Number of digital villages established	0	0	800	1200	1500	2000
Outcome 12: Improved Governance									
Policy, Legal and Regulatory Frameworks: Institutions reformed	To review Policy, Legal and Regulatory Frameworks: To restructure Institutions for enhanced service delivery	Output 12.1 Policy, Legal and Regulatory Frameworks developed/ reviewed	Number of policies reviewed and developed	5	5	5	5	6	7
		Output: 12.2 Institutions reformed	No. of Institutional reforms	2	2	3	3	3	3