



Republic of Zambia
Office of the President
Electronic Government Division

SMART ZAMBIA ELECTRONIC GOVERNMENT MASTER PLAN 2018 – 2030

FOREWORD

The Government of the Republic of Zambia launched the SMART Zambia Agenda in September 2015. The goal of the SMART Zambia Agenda is to achieve social and economic transformation by adopting a paradigm shift from traditional approaches of service delivery. The paradigm shift entails leveraging Information and Communication Technologies (ICT) to modernize and simplify the Governance and Service Delivery Systems in the Public Service, create a conducive environment for business investment, and enhance the welfare of our people. This agenda has necessitated the development of the SMART Zambia Electronic Government Master Plan (2018-2030).

The goal of the Master Plan is to achieve *“transformation of our country into an information and knowledge-based society and economy supported by consistent development of, and pervasive access to ICTs by all citizens by 2030”*.

The e-Government Master Plan is a blueprint for harmonisation, integration and mainstreaming of ICTs in the Public Service. This will be achieved through:

- i. A strengthened legal, regulatory and policy framework on electronic Government and electronic commerce;
- ii. A coordinated investment in Infrastructure for ICTs in the Public Service and across the nation; and
- iii. Integrated digitized service delivery system.

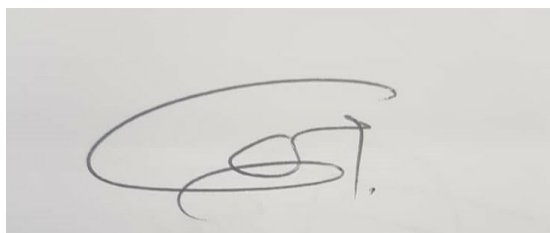
The alignment of the e-Government Master Plan to the National Vision 2030 and the Seventh National Development Plan and its successor National Development Plans also provides an opportunity for optimization of resources as well as acceleration of the development and deployment of infrastructure and services.

The Master Plan will facilitate a coordinated approach to implementation of ICT projects in the Public Service as opposed to the stand-alone silo investment approach that has over time proved to be costly and in some cases a duplication of effort. Government has made significant investment in ensuring that the requisite ICT infrastructure is in place. The infrastructure deployed so far includes the national datacenters and broadband networks. Further, Government has deployed a Government-Wide Area Network (GWAN) and shared services to improve internal collaboration and efficiency in its operations.

In addition, electronic and online platforms have been deployed for selected public services to simplify and quicken service delivery. These applications include the Electronic Cabinet (e- Cabinet); Zambia Integrated Agriculture Management Information System (ZIAMIS); Electronic Payslip System; Treasury Single Account; Consolidated Immigration System; Electronic Government Procurement System, Tax Online Administration, Patents and Company's Registration, among others.

These efforts will reduce the cost of doing business and increase efficiencies in service delivery making it possible for citizens to access services from the comfort of their homes and location and ultimately contribute to the country's Gross Domestic Product (GDP).

I, therefore, urge all stakeholders to embrace and support the Plan to accelerate social and economic transformation of Zambia into a more prosperous and inclusive information society.

A handwritten signature in black ink on a light grey background. The signature is stylized and appears to be 'S. Miti'.

Simon K. Miti (Dr.)
Secretary to the Cabinet
CABINET OFFICE

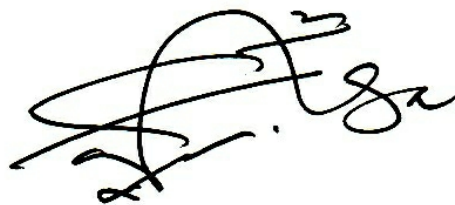
ACKNOWLEDGEMENT

I wish to take this opportunity to pay special tribute to His Excellency Mr. Edgar Chagwa Lungu, President of the Republic of Zambia for the vision to endorse the Government's resolve to transition the country into a Digital Economy and subsequently launching the SMART Zambia Agenda.

I am grateful to the Citizens, Private Sector, Collaborating Partners and Government agencies for their keen interest and contributions to the formulation of this Master Plan through the various e-Government consultative forums conducted by Government.

Special thanks go to the Staff at the Electronic Government Division under Cabinet Office and Heads of ICTs in Government for spearheading the consultative process and development of the e-Government Master Plan.

I look forward to stakeholder support in the implementation of this Master Plan.

A handwritten signature in black ink, appearing to read 'Martine G. Mtonga', with a large, stylized flourish above the name.

Martine G. Mtonga (Dr.)

National Coordinator
SMART Zambia Institute

Table of Contents

FOREWORD	ii
ACKNOWLEDGEMENT	iv
LIST OF FIGURES AND TABLES	vii
WORKING DEFINITIONS	viii
ABBREVIATIONS AND ACRONYMS	ix
EXECUTIVE SUMMARY	xi
PLAN IMPLEMENTATION.....	xiii
CHAPTER 1.....	1
1 INTRODUCTION	1
1.1 SMART Zambia Concept	2
1.2 Outline of the plan	2
1.3 Methodology.....	3
1.4 Background.....	3
CHAPTER 2.....	6
2 SITUATIONAL ANALYSIS.....	6
2.1 Political and Policy Development.....	6
2.2 Economic Analysis	7
2.3 Social Analysis	10
2.4 Technological Analysis.....	11
2.5 Environment Analysis.....	15
2.6 Legal Analysis	16
2.7 SWOT Analysis.....	19
CHAPTER 3.....	21
3 RATIONALE	21
CHAPTER 4.....	23
4 THE PLAN	23
4.1 Vision Statement	23
4.2 Guiding Principles.....	23
4.3 Strategic Areas of the SMART Zambia e-Government Master Plan.....	24
CHAPTER 5.....	29
5 IMPLEMENTATION AND COORDINATION	29
5.1 Implementation Plans	29
5.2 Master Plan Implementation Approach.....	29
5.3 Roles and responsibilities of various institutions in the management of the plan.....	31

CHAPTER 6.....	34
6 MONITORING AND EVALUATION	34
6.1 Monitoring	34
6.2 Evaluation.....	35
CHAPTER 7.....	37
7 RESOURCES MOBILISATION	37
7.1 Financing of e-Government and Budget	37
ANNEX 1 – PROGRAMMES	39

LIST OF FIGURES AND TABLES

Figure 1:	Summary of Electronic Government Masterplan.....	xi
Figure 2:	ICT and e-Government Timelines in Zambia.....	1
Figure 3:	Quarterly GDP growth rates, 2016 Q2 – 2017 Q2.....	9
Figure 4:	Copper Output (Mt), Q1 2016 – Q3 2017.....	9
Figure 5:	Broadband status in Zambia.....	12
Figure 6:	National Optical Fibre Backbone Coverage.....	13
Figure 7:	Broadband Status and Gap Analysis.....	14
Figure 8:	M&E Measurement Framework.....	34
Table 1:	SWOT Analysis.....	19
Table 2:	e-Government Roadmap.....	30
Table 3:	The Key Performance Indicators for the Master Plan.....	36

WORKING DEFINITIONS

Access Technology	Technological methods for gaining access to a computer system, Service or
Big Data	Extremely large data sets that may be analysed computationally to reveal patterns, trends, and associations.
COBIT	A good-practice framework created by international professional association ISACA for information technology (IT) management and IT governance.
Universal Access Programme	Programme to provide ICT infrastructure and services to unserved and underserved communities.

ABBREVIATIONS AND ACRONYMS

2G	Second Generation (<i>of cellular technology</i>)
3G	Third Generation (<i>of cellular technology</i>)
4G	Fourth Generation (of cellular technology)
CSO	Central Statistical Office
7NDP	Seventh National Development Plan
CAGs	Cluster Advisory Groups
CCSD	Centralised Computer Services Department
CEEGICT	Centre of Excellence for e-Government and Information Communication Technology
CEEC	Citizen economic Empowerment Commission
COBIT	Control Objectives for Information and Related Technologies
E-Government	Electronic Government
E-NAPSA	Electronic National Pensions Scheme Authority
E-ZAMTIS	Electronic Zambia Transport Information System
EASSy	Eastern Africa Submarine Cable System
FTTX	Fibre to the X
FOREX	Foreign Exchange
GDP	Gross Domestic Product
GIS	Geographical Information System
GWAN	Government Wide Area network
ICT	Information and Communication Technology
IFMIS	Integrated Financial Management Information System
IDC	Industrial Development Corporation
INRIS	Integrated National Registration Information System
IoT	Internet of Things
IT	Information Technology
LTE	Long Term Evolution
MAN	Metropolitan Area Network
M&E	Monitoring and Evaluation

NICTS	National Information and Communication Technology Strategy
PPP	Public Private Partnership
PRINCE2	Projects In Controlled Environment Revision 2
SADC	Southern Africa Development Community
SAT3	South Atlantic Telecommunications Cable 3
SDG	Sustainable Development Goals
SOE	State-Owned Enterprise
SZEGMP	SMART Zambia Electronic Government Masterplan
TEAMS	The East African Marine System
UN	United Nations
USD	United States Dollar
xGPON	10-Gigabit-capable passive optical network
ZAMTEL	Zambia Telecommunications Company Limited
ZESCO	Zambia Electricity Supply Corporation Limited
ZICTA	Zambia Information and Communication Technology Authority
ZILMIS	Zambia Integrated Lands Management Information System

EXECUTIVE SUMMARY

The SMART Zambia e-Government Master Plan aims at providing a clear road map to the acceleration of our effort toward delivering quality and responsive services to citizens, Non-citizens, businesses as well as improving collaboration within government institutions. The Plan will ultimately facilitate greater coordination within the public sector and transform the way government performs its business.

In formulating this Master Plan, a situation analysis was undertaken to assess the current state of e- Government implementation in Zambia. Through this assessment, a range of significant issues which impeded the development of e-Government were identified. The assessment of Information and Communication Technologies in the Public Sector was complemented by consultations with a number of Government Ministries, Departments and Agencies to gain a clearer understanding of the concerns, practical challenges and requirements for the improvement of public service delivery. As part of the analysis, the needs of clients and interests and concerns of stakeholders were also identified.

Based on the above analyses, the Government of the Republic of Zambia has set out a strategic framework for the period (2018 – 2030) comprising of the following:

Vision:

“A Zambia transformed into an information and knowledge-based society and economy supported by consistent development of, and pervasive access to ICTs by all citizens by 2030”.

The key outcomes and objectives of the SMART Zambia e-Government Master Plan are as follows:

a) Outcome 1: Improved Country Competitiveness

The objectives to this key outcome are:

- i. To improve the country’s ranking on major global indices;
- ii. To support the country’s economic diversification programme using ICT’s;

- iii. To establish an enabling environment for the development and growth of ICT specific industries and value-added industrial chains; and
- iv. To enhance capacities and human capital development

b) Outcome 2: Improved ICT Infrastructure

The objectives to this key outcome are:

- i. To establish efficient, highly reliable, manageable distributed cloud data centres, using converged infrastructure; and
- ii. Secure national information and infrastructure.

c) Outcome 3: Strengthened Legal, Regulatory and Policy Framework of Information and Communication Technology

The objectives to this key outcome are:

- i. To enhance the legal and policy framework in order to support e-Government.
- ii. To enhance regulatory mechanisms for effective provision of e-services.

d) Outcome 4: Better public services for improved quality of life

The objectives to this key outcome are:

- a. To enhance public service delivery through the provision of advanced e-services.
- b. To improve quality of life for Zambians.

The Plan will be implemented in three key Phases:

a) Foundation Phase

The foundation phase which is from **2018 to 2021** will be based on implementation of Policy, Legal, Regulatory, Institutional and Standards that are responsive to the SMART Zambia Vision. The stage will also facilitate the establishment of SMART Institutions and upscale the development of human capital skills and competencies. The phase also lays a firm foundation for key ICT infrastructure and information systems as well as initial integration of priority systems and online services.

b) Integration Phase

The integration phase commences from **2022 to 2026** and shall leverage on the foundation stage by increasing the ICT connectivity infrastructure and enhance the integration of systems and services on to the cloud computing environment and the single window government transactional web portal.

c) Connected Government Phase

The final phase spans from 2027 to 2030 for intensive integration of online services and value-added services. This will bring the ICT initiatives in Zambia to a new level and achieve nationwide E-Government service coverage.

PLAN IMPLEMENTATION

Further, to ensure successful implementation and achievement of the desired impact, the plan will apply the 7th National Development Plan Monitoring and Evaluation framework:-

Implementation of the plan will be closely monitored through budget execution reports and tracking of output indicators on a monthly and quarterly basis, while annual progress will be assessed through agreed key performance indicators.

The plan implementation and its impacts will be evaluated at mid-term and at end-term. Evaluation will involve an analysis of both process and impact, to generate evidence to inform the development, strategic focus and implementation of future development plans.

Achieving the goal of the SMART Zambia e-Government Master Plan will require the mobilization of significant financial and human resources. Funding of the flagship projects in this Master Plan will be in line with the Budget, Medium Term Expenditure Framework (MTEF) and the Government Economic Stabilization Programme.

Financing requirements for the Master Plan Projects will be from a combination of financing sources, which will include; domestic revenue, Public Private Partnerships, development partners and multilateral sources. Concessional loans will also be considered for economical e-Government activities whose operations will provide the needed government revenue.

The SMART Zambia e-Government Master Plan is based on the Vision 2030 and responds to the challenges encountered in its goal to achieve the national vision of Zambia becoming a middle-income country with a sustainable knowledge-based economy. Below is *fig 1* - summary of the Plan;

FIG 1 – Summary of SMART Zambia Electronic Government Masterplan 2018 -2030

Vision 2030	Transformation of our country into an information and knowledge based society and economy supported by consistent development of, and pervasive access to ICTs by all citizens by 2030			
Key Outcomes	Improved ICT infrastructure for service delivery	Improved country competitiveness	Strengthened legal and regulatory service	Better public service for improved quality of life
Key Programmes & Projects	<ul style="list-style-type: none"> ❖ National Backbone ❖ Universal Access ❖ National Data Centre ❖ District Metro Fibre Networks 	<ul style="list-style-type: none"> ❖ e-Tourism System ❖ e-Agriculture ❖ Integrated GIS ❖ Economic Analysis & Forecasting system ❖ Natural Resources Monitoring System ❖ Cloud Services 	<ul style="list-style-type: none"> ❖ ICT Legal Review ❖ Smart Institutions ❖ Data Sharing Policy ❖ Standards, laws & regulations 	<ul style="list-style-type: none"> ❖ e-Education ❖ ICT Device Assembly ❖ Photo voltaic power generation ❖ Smart City ❖ E-Health
Key Enablers	Robust Legal & Institutional Frame works			
	Change Management & Capacity Building			
	Interoperability ,Shared Services and standardization for cloud computing and big data			
	Innovation infrastructure			

Chapter 1

1 INTRODUCTION

The SMART Zambia e-Government Master Plan outlines the priorities of Government for implementation of e-Government in a coordinated and harmonised manner. These priorities are aimed at facilitating the attainment of the National Vision 2030 through the successive national development plans. The plan builds on past experiences and plans whilst incorporating aspirations to create an e-Government system that is future ready. Government has recognised that technology is evolving fast and becoming more efficient, hence the need to establish systems that will respond to emerging technologies and challenges.

Implementation of the e-Government Master Plan will improve and transform the way government delivers its services to the citizens, and business organisations as well as services between departments and agencies. The new model of government business governance using Information and Communication Technology (ICT) will deliver citizen-focused, transparent, efficient and inclusive services.

More importantly, the Master Plan will facilitate optimal realisation of value of investment in ICT infrastructure and solutions across the Ministries, Provinces, and Spending Agencies (MPSAs) through an integrated multi-sectoral approach. This will eliminate the duplication of ICT infrastructure projects by the government agencies. In this regard, the plan recommends an institutional coordination framework and strategies to strengthen regulatory and standardized framework to ensure sound and responsive technologies are implemented.

The SMART Zambia e-Government Master Plan, therefore, serves as the principal working document to meet the present and future needs of government services through short and long-term strategies.

1.1 SMART Zambia Concept

The African Union Agenda 2063 highlights the Pan African vision to attain “*an integrated, prosperous and peaceful Africa, driven by its own citizens and representing a dynamic force in the international arena*”. In this respect, by 2063, Africa aspires to have the necessary infrastructure in place to support its accelerated integration and growth, technological transformation, trade and development. This will include high-speed railway networks, roads, shipping lines, sea and air transport, as well as well-developed ICT and the digital economy.

In line with its aspiration, the African Union launched the SMART Africa initiative to transform Africa into a single digital market. Thus, African countries were challenged to put ICT at the center of national socio-economic development agenda.

Accordingly, in 2015, His Excellency, Mr. Edgar Chagwa Lungu, the President of the Republic of Zambia, launched the SMART Zambia transformation agenda in which he urged citizens to embrace a transformative culture by:

- a) Embracing innovation and entrepreneurship;
- b) Embracing technology to simplify and quicken provision of services;
- c) Re-aligning institutions, where necessary, to make them more responsive to the needs of the nation;
- d) Promoting cost effective operations in government to eliminate waste and abuse of public resources;
- e) Transitioning towards a green economy;
- f) Creating SMART institutions and SMART budgeting that promote a whole-of-government approach to public service delivery; and
- g) Promoting punctuality and efficiency to enhance productivity.

1.2 Outline of the plan

This document is organised into the following chapters:

- Chapter I** Overview of the SMART Zambia e-Government Master Plan.
- Chapter II** Situational analysis; past performance, opportunities and challenges of Zambia’s ICT development; the current status of the ICT sector; it also describes the macro environment framework in which the Plan will be executed. Chapter III describes what it will take to move towards the Vision 2030 leveraging on ICTs, the goal and the strategic objectives of the SZEMP.
- Chapter III** Strategic outcome areas of the Plan, which are improved country competitiveness; improved ICT Infrastructure for service delivery and Strengthened legal, regulatory and institutional framework of ICT.
- Chapter IV** Implementation and coordination as well as the monitoring and evaluation framework of the Plan.
- Chapter V** Resources mobilisation and Financing of the Plan.
- Chapter VI** Annex
- Priority Projects List
 - Tables and Diagrams
 - Summary Budget

1.3 Methodology

The development of this Master Plan adopted an analytical and participatory approach. It involved critical analysis of the current strategic position of Zambia and conceptualising of its required future position. Reference was made to national and international strategic documents, *inter alia* Vision 2030, 7th National Development Plan, National ICT Policy 2006. Benchmarking exercises were undertaken of countries that have successfully implemented e-Government programmes such as the People’s Republic of China, Republic of Korea, Estonia, South Africa and Mauritius. These sources provided useful insights for development of the Plan.

1.4 Background

The Government of the Republic of Zambia established the Centralized Computer Services Department (CCSD) in 1968 to provide data processing services to public institutions. The focus of the CCSD was computerisation, maintaining Government accounts and ensuring payments of remuneration to public service workers. These institutional arrangements remained steady until the 1990s. In the late 90s, CCSD had not evolved in tandem with the significant changes in technology

and telecommunications sector reforms. The department remained centralized and unable to effectively coordinate and implement the application of Information Technology (IT) in Government Ministries, Provinces and Spending Agencies (MPSAs). This was due to its institutional arrangement and inadequate organisational structure which resulted in most MPSA's establishing standalone IT units to meet their needs.

Following the reforms that were implemented in the ICT sector in the early 1990s, the Government established the Ministry of Communications and Transport to provide guidance in policy formulation on telecommunications, information technology, and information security and drive electronic services development. The Government further enacted the Telecommunications Act of 1994 and made significant telecommunication sector reforms which saw the dissolution of the Post and Telecommunications Company Limited (PTC) and subsequently established three institutions namely Zambia Telecommunications Company Limited (ZAMTEL) and Zambia Postal Services Corporation (ZAMPOST) Communications Authority of Zambia (CAZ) that was later transformed into Zambia Information and Communication Technology Authority (ZICTA).

Globally, governments were shifting their telecommunications policies to attract private investment in the increasingly dynamic and innovative sector. This culminated into more than 70 World Trade Organization (WTO) Member States signing an Agreement on Basic Telecommunications in 1998 to further liberalize the telecommunications sector. After this policy intervention, Zambia saw increased investment in the sector and by 2001 the number of mobile phones had exceeded Zamtel's fixed lines.

In 2003, World leaders met in Tunisia at the World Summit on Information Society (WSIS) and outlined the principles on an Information Society based on the UN Human Rights Charter and Inclusiveness. At the second phase meeting of WSIS held in Geneva the same year, eleven (11) action lines were drawn for nations to promote the provision of ICT enabled services that included e-Government.

Against this background, Cabinet approved the National ICT Policy in 2006 to create an innovative, market responsive, highly competitive, coordinated and well-regulated ICT industry. The policy is anchored on thirteen (13) pillars, one of which is e-Government. The policy provided for institutional arrangements which included the establishment of the Department of Communication, ICT regulator and the Centre of Excellence for e-Government and ICT (CEEGICT). To provide the necessary

legislation for the policy, Parliament passed the Information and Communication Technologies Act No. 15 as well as the Electronic Communications Transact Act No. 21 in 2009.

In September 2015 during his address to Parliament, His Excellency Mr. Edgar Chagwa Lungu, President of the Republic of Zambia, launched the SMART Zambia transformation agenda. Consequently, the ‘SMART Zambia Institute’ was established to facilitate implementation of e- Government as well as coordinate and support ICT in the Public Service on 30th October 2015. The picture below illustrates the timelines in the development of ICT’s and eGovernment in Zambia.

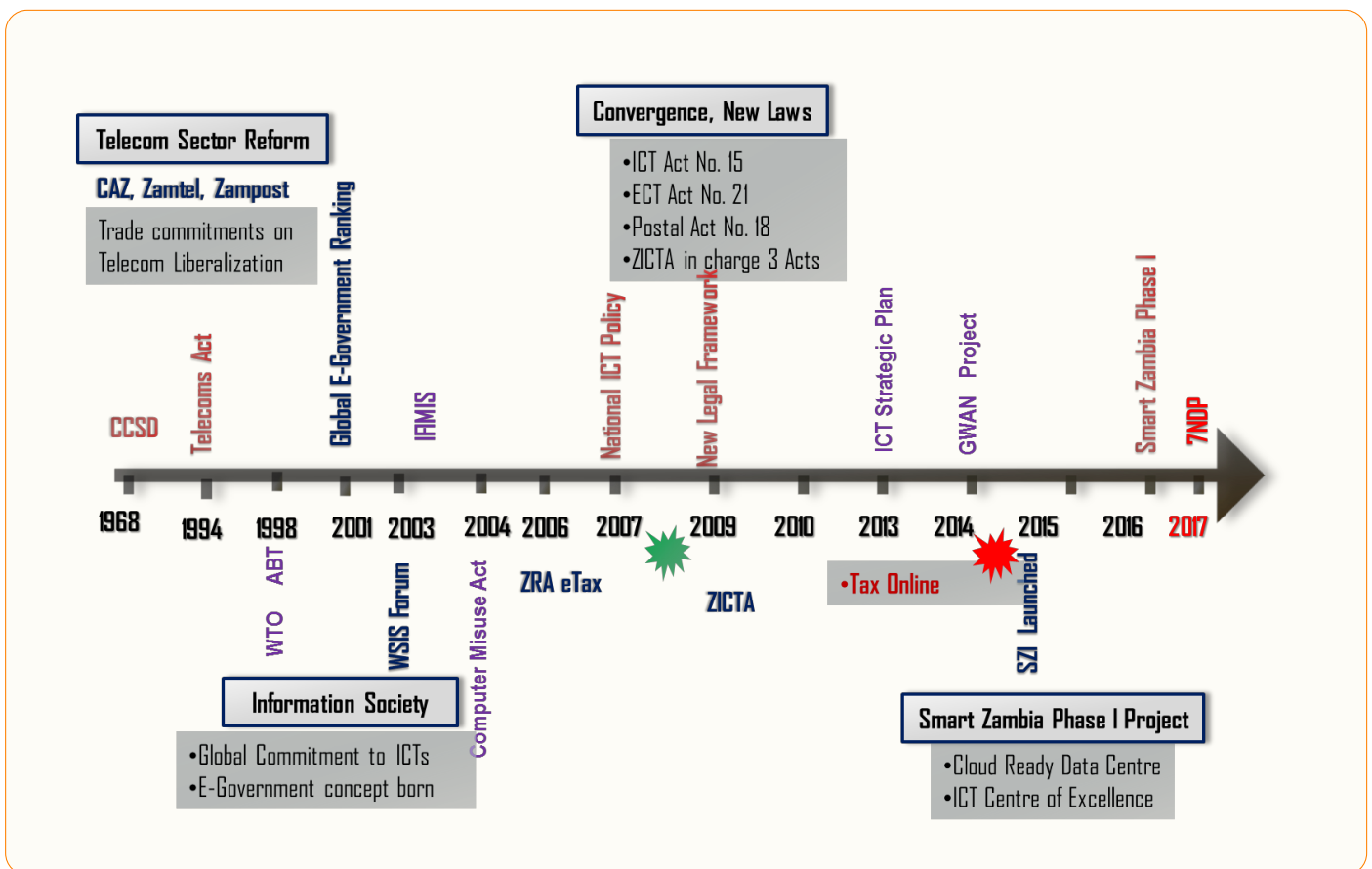


Figure 2: ICT and e-Government Timelines in Zambia

Chapter 2

2 SITUATIONAL ANALYSIS

This chapter addresses the political, economic, social, technological, environmental and the legal factors of the country. In addition, the analysis went further to consider the strengths, weaknesses, opportunities and threats which give an overview of major indicators and how these affect the smooth implementation of the SMART Zambia Master Plan.

2.1 Political and Policy Development

Since its independence in 1964, Zambia has undergone phases of both multi-party state and one-party rule. Since the early 1990s, the country has been enjoying multi-party democracy with peaceful transition of leadership. Administratively, Zambia is a landlocked country bordering eight countries namely: Zimbabwe, Tanzania, Malawi, Namibia, Democratic Republic of the Congo (DRC), Angola, Botswana, and Mozambique. The country seats on a land mass covering approximately 753,000 square Kilometers with a population estimated at about 15.4 million (Central Statistical Office report, 2015). Zambia resides at the heart of the Southern African Development Community (SADC) hence its strategic land-linked connectedness for the facilitation of regional and global trade. Nevertheless, its central location implies that instabilities in neighboring countries can have an adverse effect on its economic, technological and social development hence the need to strategically balance its relationships with all its neighbors.

Furthermore, government adopted the National ICT Policy in 2006 to provide a conducive environment for public and private sector participation in the ICT sector. Implementation of the ICT policy is critical to support the operationalisation of the National Decentralization Policy which is now a requirement under the Constitution of Zambia (Amendment) ACT No:2 of 2016.

The Government has consistently demonstrated high level political will and commitment towards the development of the ICT sector through key policy documents which include the National Development Plans and establishment of relevant institutional mechanisms.

Currently the country is known to be an oasis of peace in the region. Naturally, as a landlocked nation, its geographical location poses challenges of higher logistical costs for its imports and exports.

The implications of the political analysis are:

- a) **Integrated systems** to facilitate inter-regional trading and reduce cost of doing business between Zambia and the countries in the region.
- b) **Stable, secure financial systems** for facilitating national and regional payment systems; this should also catalyze a dramatic increase of the population with access to financial services.
- c) **Provides opportunities** & access to citizens to **participate in the governance** and contribute to the decision-making process through channels like e-Participation, e- Parliamentary, e-voting etc. These platforms should allow for collecting, sharing and disseminating information and national decisions with citizens.
- d) The need for **Information Systems** linking the local and central government and to secure efficient collaboration and sharing information between government agencies.
- e) The Government of the Republic of Zambia through the Industrial Development Corporation (IDC) indicated the need for all State-Owned Enterprises (SoEs) to commercialise. This will help in unlocking the value for SoEs like Fibercom and Zamtel.

2.2 Economic Analysis

2.2.1 Developments in the global economy

The Global economic performance in 2016 closed with a lower growth rate of 3.1 percent compared to 3.2 percent in 2015. Growth in advanced economies declined to 1.6 percent in 2016 from 2.1 percent in 2015 largely due to weaker economic activities in the United States of America and Europe. Growth in emerging markets and developing economies remained constant with the 2015 level of 4.1 percent. The Chinese economy grew by 6.7 percent compared to 6.9 percent in 2015. Overall, low commodity prices on the international market, weak external demand, severe weather conditions and geopolitical factors played a role in the slower global trade and growth.

As of 2016, the growth for 2017 was projected to grow by 3.5 percent compared to 3.1 in 2016. Growth was anticipated to be driven by both the advanced and emerging and developing economies. In advanced economies, growth was projected at 2.0 percent for 2017 compared to 1.7 percent for 2016. Generally,

2017 was expected to reflect increased economic activities across most countries due to an increase in domestic demand and improved market confidence. Growth in the United States of America was projected at 2.1 percent compared to 1.6 percent in 2016. In Europe, growth was projected at 1.9 percent compared to 1.8 percent in 2016. China recorded an increased growth rate of 6.9 percent compared to 6.7 in 2016.

Emerging markets and developing economies are projected to grow by 4.6 percent in 2017, compared to 4.1 percent in 2016. This in large part reflects gradually improving conditions in large commodity exporters that experienced recessions in 2015 and 2016.



2.2.2 Developments in the Domestic Economy

In 2016, the economy grew by about 3.4 percent compared to a growth of 2.9 percent recorded in 2015. The higher growth was largely as a result of improved performance in agriculture, mining, tourism and transport. The energy sector recorded negative growth.

As at end second quarter of 2017, preliminary data indicate that the economy grew by 3.2% which was higher than 3.0% recorded in the first quarter of 2017 (See Figure 2).

The marginal increase was partly as a result of improved output in the mining, construction and manufacturing sectors supported by continued stability in the supply of electricity. Growth in the third quarter is expected to continue aided by positive performance in mining, construction and manufacturing sectors.

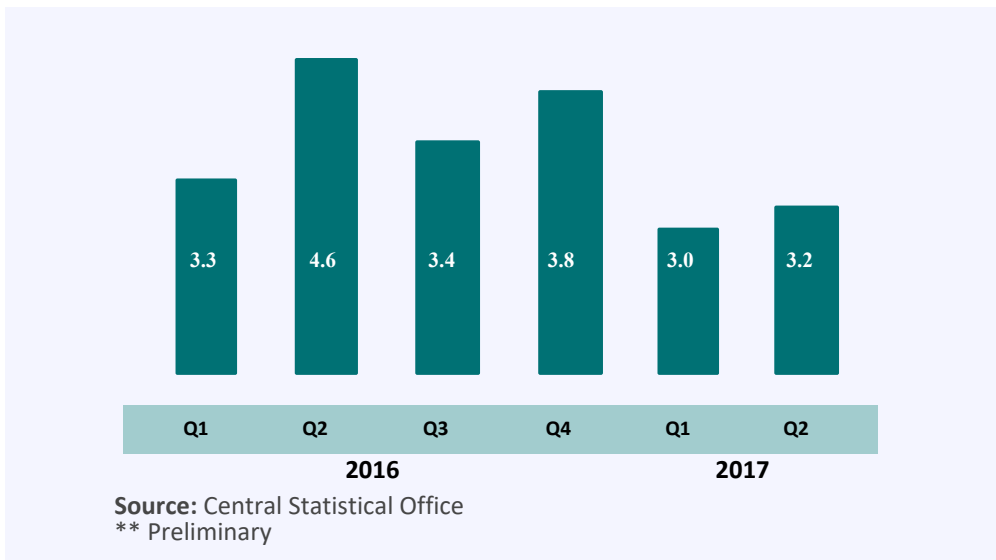


Figure 3: Quarterly GDP growth rates, 2016 Q2 – 2017 Q2

The increased growth in the global economy and higher commodity prices in 2017 had a positive effect on the performance of the domestic economy. The higher global growth led to an increase in the demand for copper which resulted in increased production and foreign exchange earnings.

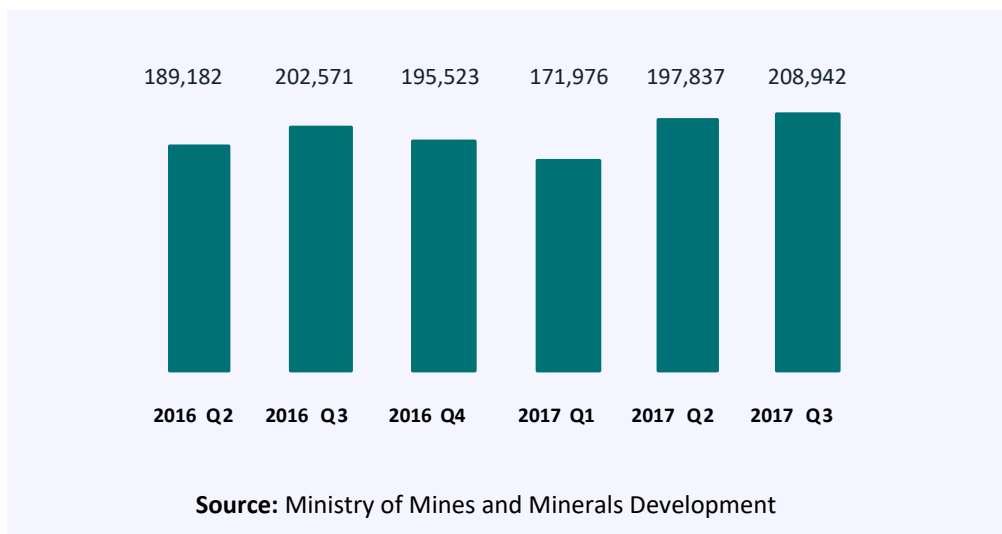


Figure 4: Copper Output (Mt), Q1 2016 – Q3 2017

Annual Inflation in November 2017 reduced to 6.3% from 6.4% in October. This was mainly on account of the reduction in the fuel prices compared to November 2016. The Kwacha depreciated in November 2017 trading at an average of K10.04 against the US\$ from K9.74 recorded in October 2017. The Kwacha’s depreciation was largely attributed to inadequate foreign exchange inflows to absorb high demand in the market. Observations from the economic analysis are:

- a) Lack of ICT knowledge and expertise necessary to support innovation for domestic market and build an export market;
- b) Financial infrastructure needs enhancement to improve accessibility to financial services;
- c) There is need to continuously develop export product portfolio at a national level and provide new growth driver by managing and promoting export product along with diversification;
- d) The country is currently in initial stage of providing basic economic information but lacking an integrated online commerce support platform;
- e) There is need to promote and facilitate increased private sector participation: support new business development by establishing innovation centers and incubation hubs and supporting technology financing through angel investment and funding.
- f) There is need to continue diversifying the economy to include agriculture and tourism for industrialization; and
- g) Need to Integrate smart solutions which will play a big role in time and cost savings.

2.3 Social Analysis

Zambia's population increased from about 10 million in 2000 to about 15 million people in 2014. Although the population has increased rapidly, it has a very high dependency ratio of 0.93 dependents for every working person, with the 45% of its population below the age of 15 years. According to the 2015 Living Conditions Monitoring Survey (LCMS) results, the prevalence of poverty in Zambia is about 54% of the total population. Of the total population living below the poverty line, 76.6% are in rural areas while 23.4% are in urban areas. The income inequalities are high and reflect the country's inability to distribute its economic resources fairly across the population. To address this situation, government is implementing

several social protection schemes which are targeted towards the poor and vulnerable population.

In addition, the labour force is largely dominated by the informal sector at 86% of the total labour force (2014 Labour Force Survey). The majority of workers are self-employed either in subsistence agriculture or small scale.

In the health sector, priority has been given towards expanding and modernising health infrastructure from about 50 health facilities that were available at independence to over 2,922 by 2016. Despite this effort, the medical personnel to population ratio remains below the recommended World Health Organization (WHO) standard.

In the education sector, while progress has been made in the construction of primary and secondary schools, 85% of schools (8450 schools) have no access to ICT devices (2015 ZICTA report).

The implications of the social environmental analysis are:

- a) Equitable distribution of the country's wealth smartly;
- b) E-services that cascade across all social sectors regardless of their location in the country;
- c) Affordable user-friendly digital access equipment for all citizens; and
- d) Creation of new innovative ICT-enabled industries.

2.4 Technological Analysis

At global level, there are more than 7 billion mobile phone subscriptions of which more than 4 billion have access to the internet. The ICT technological landscape is fast-evolving, as devices and services proliferate, broadband connectivity becomes increasingly pervasive, and the hyper-connected world of the 'Internet of Everything' starts to become a reality (ITU, 2015). As prices of smartphones plummet, representing decreasing cost of computing and storage, more and more people are having access to the internet.

At national level, the GSM (2G) technology was introduced in 1998. The number of mobile phones exceeded fixed telephone land lines by 2001. In 2017, the number of mobile phones were more than 12 million while fixed lines were just over 100 hundred thousand.

The 3G technology was first deployed in 2011 and represents 70% of the current mobile networks. The 3G technology introduced high-speed mobile internet which stood at approximately 35% penetration in 2015 (ZICTA, 2015).

Fixed broadband is almost non-existent. However, there are indications that latest technologies such as FTTx and xGPON would also be deployed (see figure 5 below).

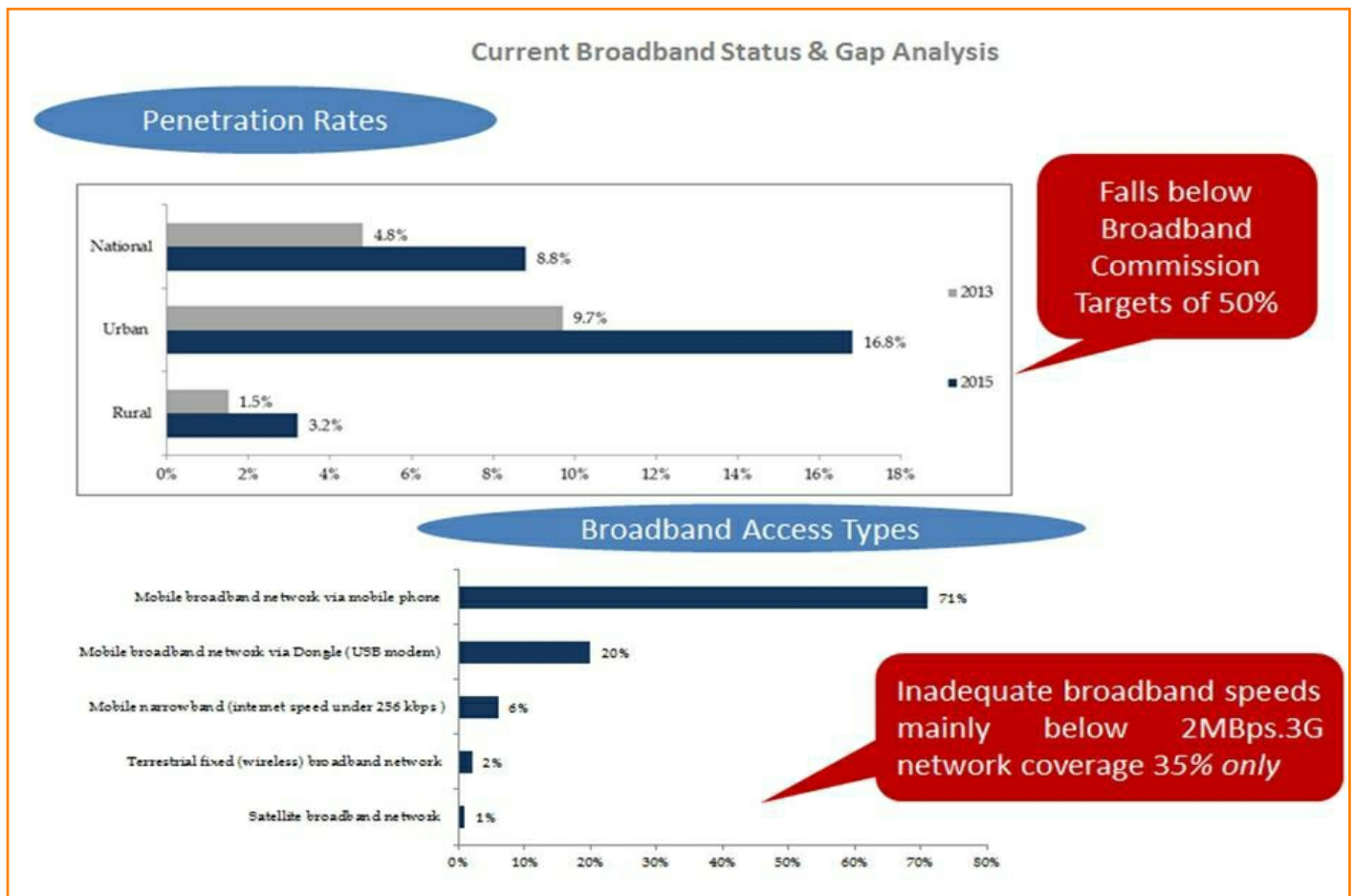


Figure 5: Broadband status in Zambia

In terms of ICT infrastructure development in the public sector, this has evolved from the use of centralized Mainframe computers at CCSD to a Cloud Data Centre and Government Wide Area Network (GWAN) utilizing broadband technology. The GWAN connects more than 101 MPSAs and carries 19 e-services including flagship services such as e-Cabinet, e-Visa, Tax online, e-NAPSA,

IFMIS, ZILMIS, e-ZAMTIS, SmartCare, e-GProcurement among others. In addition, nine (9) other provincial centers have been connected to the GWAN.

There has been massive investment in the transmission infrastructure and in recent years, Fibre optic technology has replaced point-to-point wireless technologies. The public sector, through ZESCO and Zamtel, has invested in the development of more than 12,700km of optical fibre backbone countrywide. In addition, the private sector continues to invest in the expansion of optical fibre transmission network countrywide. As investment continues in the optical fibre backbone network, new focus has arisen to develop Metropolitan Area Networks (MANs) and Fibre to the Curb/Home (FTTx). Figure 6 shows Zambia’s optical fibre backbone coverage.

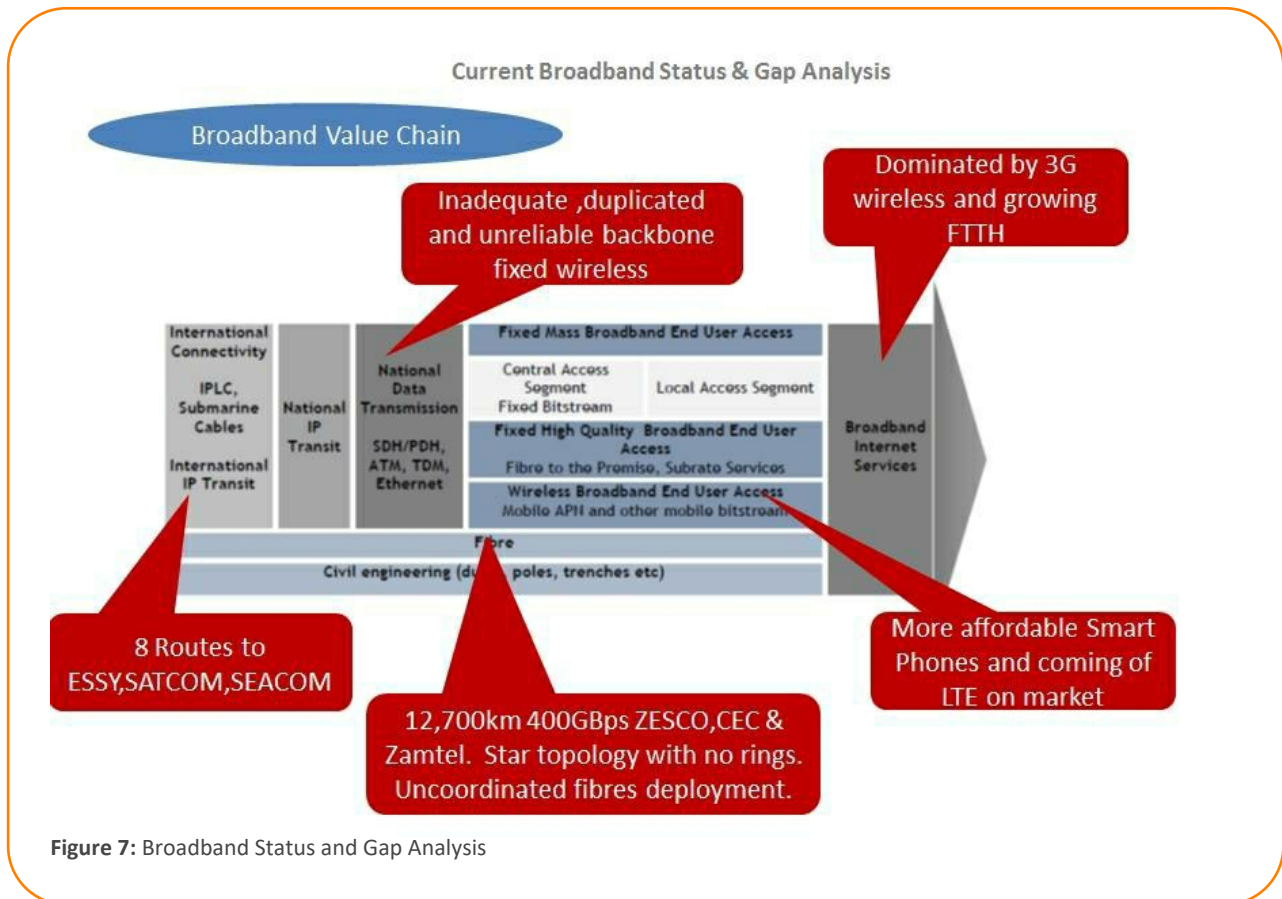


Figure 6: National Optical Fibre Backbone Coverage

In 2017, Zambia completed the digital migration project after adopting new digital television broadcasting standard that not only frees up more spectrum for newer and faster technologies to

cover the whole country but also offers Zambians an opportunity to enjoy richer and affordable services.

The deployed fibre optic backbone has opened opportunities to connect to undersea cables such as SAT3, EASSy and TEAMS. There is, however, no coordinated and regulated effort for regional and national connectivity.



Wireless broadband is beckoning on Zambia as more operators are upgrading their technologies from 3G to 4G(LTE) technologies. This is driven by the increasing usage of social media such as WhatsApp, Facebook and YouTube which has put pressure on service providers to upgrade their networks to 4G as data traffic is increasing rapidly whereas voice traffic remains constant.

The 5G technologies worldwide are expected to be rolled out beginning 2019 to accommodate the increased bandwidth requirements from new and data intensive technologies such as Cloud Computing, Internet of Things (IoT) and Big Data analytics.

The number of fixed internet subscriptions in Zambia stood at 33,000 subscribers representing 0.21 subscribers per 100 inhabitants by the first quarter of 2015. The recorded number of mobile internet users was 4,315,056 users representing a penetration of 28 percentage points as at first quarter of 2015.

Observations from the Technology analysis are:

- a) Delivery of Government services using eGovernment requires investment in ICT infrastructure and online services;
- b) Disruptive new ICT technologies means the legal, regulatory and policy framework needs constant upgrading;
- c) Increased ICT connectivity and faster technological changes could lead to more cyber- attacks and bullying;
- d) More investment is needed to build and upgrade as well as maintain a stable, secure and reliable ICT infrastructure;
- e) There is need to maintain the complex ICT infrastructure and systems;
- f) There is need to build ICT skills among Zambians;
- g) There is need to enhance the national electricity grid to enable continuous provision of services; and
- h) To optimize the investment in ICT infrastructure, there is need to establish an institutional mechanism to manage and coordinate.

2.5 Environment Analysis

Governments around the world have acknowledged the existence of global warming and climate change, and this has led to various treaties such as the Kyoto Protocol, Rio 2020, the Sendai Framework for Disaster Risk Reduction (2015-2030) and more recently the progressive Paris Agreement. Zambia is expected to implement a raft of environmental measures after recent signing of the Paris Agreement.

At the Paris climate conference (COP21) in December 2015, 195 countries adopted the first- ever universal and legally binding global climate deal. The Paris Agreement is a bridge between today's policies and climate-neutrality before the end of the century.

Further international commitments to protect the environment are enshrined in the 2030 Sustainable Development Goals (SDGs). At national level, the Zambia Environmental Management and Protection Act, 2010 established a regulatory authority to regulate environmental issues including e-waste arising from rapid technological obsolescence in the ICT sector.

The ITU 2015 'Telecommunication Trends' report reveals a fast-evolving ICT sector which is increasingly consuming more energy and producing electronic waste that could negatively impact the environment.

Observations from the environmental analysis are:

- a) In order to meet the Co2 emissions from the transport sector, government needs to provide services online through the e-Government Programme;
- b) There is need to adopt energy efficient ICTs through formulating/adoption and enforcement of green standards;
- c) Adopting emerging cloud computing technology could also help environmental sustainability requirement; and
- d) Enhancement of the legal and policy framework on e-Waste to protect the environment as well as foster job creation through creation of new industrial value chain for recycling.

2.6 Legal Analysis

The country has endeavored to enact various pieces of legislation over the years to manage and regulate ICT for better service delivery. Nevertheless, the SMART Zambia agenda entails revising and enacting new laws to effectively manage and regulate the sector so as to efficiently deliver Government services to the citizens. The current existing laws that govern various aspects of ICTs are: -

2.6.1 National ICT Policy, 2006

This Policy has strong emphasis on the creation of an innovative, market responsive, highly competitive, coordinated and well-regulated ICT industry. The Policy is anchored on thirteen focus areas namely; Human Resources Development, Agriculture, Tourism, Telecommunication infrastructure, Environment and Natural Resources, Education, Health, e-Commerce, e-Government, Youth and Women, Security in information society, Access, media, content and culture and Information and Communication Technology services.

2.6.2 National ICT Strategic Plan (NISP), 2015-2020

The NISP 2015-2020 aimed at operationalising the ICT Policy of 2006 and ensure integration of ICTs into all sectors of the economy. The Strategy provides a hierarchy of responsibilities, properly focused; time bound ICT development and a roadmap presenting a series of stages towards achieving the vision and SMART targets.

2.6.3 National Development Plan

The ICT Sector has been recognised as a growth sector in the fifth National Development Plan, (2006-2010) and Sixth National Development Plan (including its subsequent revision 2011-2015 and 2013-2016). The sector was classified as an economic sector able to facilitate and contribute to the growth of the economy. The Revised Sixth National development plan focuses on ICT Infrastructure, electronic services and Human Resources Skills development.

2.6.4 Information and Communication Technology Act No. 15 of 2009

The Act provides for the economic and technical regulation of information and communication technology; facilitates access to ICTs; "protects the rights and interests of service providers and consumers"; and regulates and manages radio spectrum. The ICT Act also renamed the CAZ to the Zambia ICT Authority (ZICTA).

2.6.5 Electronic Communications and Transaction Act No. 21 of 2009

The ECT Act, 2009 provides for the development of a safe, secure and effective environment for the consumer, business sector and the Government to conduct and use electronic communications; promotes legal certainty and confidence, and encourages investment and innovation in the electronic communications industry; facilitates the creation of secure

communication systems and networks; and allows the legal interception of electronic communications and admissibility of intercepted communications.

2.6.6 Universal Access and Service Fund Regulation No .38, 2012

In order to promote the widespread availability and usage of electronic communication services throughout Zambia, and to bridge the digital divide between urban, peri-urban and rural areas, Parliament in 2009 passed the Information and Communications Technology (ICT) Act No 15 of 2009. The ICT act established a Universal Access and Service Fund to address the provision of electronic communications services in un-served or under-served areas and communities. The Ministry of Transport and Communication in June 2012 issued statutory Instrument No. 38 of 2012 to guide the operation of the fund.

2.6.7 Access Regulation, 2013

Additionally, a Statutory Instrument on Interconnection, Co-location and Access was issued to provide a legal and regulatory framework for interconnecting and sharing of ICT infrastructure amongst the operators to support growth of the sector, avoid duplication of infrastructure, ensure equitable access and delivery of efficient and affordable services to the customers.

The implications of the legal environmental analysis are:

- a) New governance structure that helps to achieve easy service delivery to citizens;
- b) Better management of e-Government;
- c) Better control of cyber-crimes and e-justice system;
- d) Better operating business environment for ICT entrepreneurial talent nurturing and growth;
- e) Better regulations to protect start-ups; and
- f) New laws to waiver taxes.

2.7 SWOT Analysis

The section presents an analysis of the strengths, weaknesses, opportunities and threats in relation to the implementation of e-Government. Identified issues informed the strategies contained within this master plan.

Table 1: SWOT Analysis

STRENGTH	WEAKNESS
<ul style="list-style-type: none"> ● Political will 	<ul style="list-style-type: none"> ● Lack of Integration and data sharing mechanisms
<ul style="list-style-type: none"> ● Existence of a National ICT Policy, an ICT Act. and ECT Act. 	<ul style="list-style-type: none"> ● Uncoordinated ICT projects among public institutions
<ul style="list-style-type: none"> ● Growing investment in ICT Infrastructure 	<ul style="list-style-type: none"> ● Weak institutional arrangements and legal frameworks
<ul style="list-style-type: none"> ● Existence of ICT departments in Government 	<ul style="list-style-type: none"> ● Inadequate ICT skills
<ul style="list-style-type: none"> ● Existing ICT platforms for service delivery 	<ul style="list-style-type: none"> ● Poor talent management
	<ul style="list-style-type: none"> ● Inadequate funding for ICT's
	<ul style="list-style-type: none"> ● Inadequate ICT infrastructure in Government
	<ul style="list-style-type: none"> ● Lack of standards and procedures

<p>OPPORTUNITIES</p>	<p>THREATS</p>
<ul style="list-style-type: none"> ● Growth in ICT trend globally 	<ul style="list-style-type: none"> ● Cyber security threats
<ul style="list-style-type: none"> ● Growing global trend of Digital Transformation of Governments 	<ul style="list-style-type: none"> ● Poor grid power coverage and stability
<ul style="list-style-type: none"> ● Prioritization of ICT's in the 7th National Development Plan 	<ul style="list-style-type: none"> ● Slow pace of decentralization
<ul style="list-style-type: none"> ● Central geographical location of Zambia in the region 	<ul style="list-style-type: none"> ● Slow review of the legal framework
<ul style="list-style-type: none"> ● Emerging ICT technologies such as Big Data and IoT's 	<ul style="list-style-type: none"> ● High technological obsolescence
<ul style="list-style-type: none"> ● Emergence of a data economy 	

CHAPTER 3

3 RATIONALE

It is widely accepted that Information and Communication Technology and e-Government in particular are a catalyst for Socio-economic development capable of eradicating poverty by stimulating growth in the rural and urban sectors of the country. The convergence of technologies on the digital platform is opening up immense new possibilities of improving the quality of human life.

The 2017 Global Connectivity Index states that:

“Investment in ICT infrastructure brings multiplier effects to economic growth with \$1.00 invested in ICT could bring a return of up to US \$5.00 in GDP from 2016 to 2025. As such with an additional 10% of ICT infrastructure investment each year, this will bring an accumulative potential impact of US \$17.6 trillion in GDP by 2025”.

Further, evidence reveals that implementation of e-Government in public service delivery has the potential to achieve the following:

- a) Improved citizen experience and thus improved perception value of Government;
- b) Better decision making for the Government;
- c) Targeted benefits distribution;
- d) Reduction in the cost of doing business;
- e) Material efficiency improvement in service delivery;
- f) Reduction in the real cost of transacting with Government; and

- g) Effective communication strategy for connecting with the large youth population in Zambia such as E-Society and E-Participation among others.

In addition, investment in broadband ICTs has a multiplier effect in terms of job creation as it brings enhanced ICT applications and high opportunities for self-employment.

Arising from the benefits that could be realized by the country, through investment in ICT, the SMART Zambia e-Government Master Plan will provide a harmonized and coordinated approach.

CHAPTER 4

4 THE PLAN

The strategic direction for e-Government in Zambia is as follows;

4.1 Vision Statement

The Master Plan has adapted the Vision 2030 statement which states that:

“A Zambia transformed into an information and knowledge-based society and economy supported by consistent development of and pervasive access to ICTs by all citizens by 2030”.

4.2 Guiding Principles

In order to streamline the e-Government vision in a more coherent, strategic and informative way, the following guiding principles will be adopted;

- a) Citizen and business focused.** E-Government focus will be on citizen and business centric services. Government will enable interactive processes that are simple, effective, and based on the user’s needs and capabilities, rather than on government’s traditional business models;
- b) Transformational.** Government will design transformational integrated business processes which are streamlined, collaborative, and citizen-focused thereby simplifying and focusing service delivery;
- c) Efficient.** Government will seek solutions with the goal of reducing long-term operational costs and create opportunities to evaluate and eliminate redundant steps and processes as well as improve responsiveness by transitioning from paper-based to electronic processes;

- d) **Integrated.** While recognizing the unique missions and capabilities of its various departments, the e-Government projects will be designed and implemented in an integrated approach putting in mind forward and backward compatibility. This integrated approach will be founded on the Government's enterprise architecture;
- e) **Security and data privacy.** Government will endeavor to mitigate cyber security threats and ensure data protection through a coordinated approach involving all stakeholders, technology tools, policy guidance, and training; and
- f) **Partnership and Outsourcing:** Government will promote partnerships with the private sector and cooperating partners in delivering public e-services.

4.3 Strategic Areas of the SMART Zambia e-Government Master Plan

The key outcomes of the SMART Zambia e-Government Master Plan with objectives, strategies and programmes are as follows:

4.3.1 Key Outcome 1: Improved Country Competitiveness

The objectives, key strategies and associated programmes to this outcome are outlined as follows:

4.3.1.1 Objective #1: To improve the country's ranking on major global indices

The following **key strategies** will drive this objective:

- i. Increase the number of services provided on digital platforms;
- ii. Increase access to services provided on digital platforms;
- iii. Expand the use of Online and other electronic service delivery platforms and promote the implementation of online services in state agencies;
- iv. Create a digital payment platform that enable clients pay for private sector related Government services online;
- v. Make available relevant information for business online; and
- vi. Promote online client feedback mechanisms for Government services.

4.3.1.2 Objective #2: To support the country's economic diversification programme using ICT's

- i. Implementing smart platforms that support Agriculture, Mining and Tourism;
- ii. Promote local production of ICT products to ensure relevance of content and use of appropriate technologies that meet international standards; and
- iii. Implement platforms that will support online marketing and purchasing of goods and services.

4.3.1.3 Objective#3: To establish an enabling environment for the development and growth of ICT specific industries and value-added industrial chains.

The following key strategies will drive this objective:

- i. Creation of an ecosystem that supports digital start-ups and ICT companies to grow;
- ii. Fostering and development of information technology industrial parks and bases in strategic regions of the country;
- iii. Creation of ICT assembly and maintenance plants in Zambia, and lay a firm foundation for proprietary computer software development; and
- iv. Development of new ICT-enabled business opportunities and entrepreneurial supporting systems.

4.3.1.4 Objective#4: To enhance capacities and human capital development

The following key strategies will drive this objective:

- i. Increasing talent in ICT's;
- ii. Mainstreaming of ICTs in education; and
- iii. Promoting ICT Research and Development (R&D).

4.3.1.5 Programmes:

To achieve the above outcomes, objectives and strategies the following are the programmes to be carried out:

- i. Electronic Services;
- ii. ICT Industries and value chains; and
- iii. Human Capital Development to enhance capacities and human capital development.

4.3.2 Key Outcome 2: Improved ICT Infrastructure for Service Delivery

The objectives, key strategies and associated programmes to this outcome are outlined as follows:

4.3.2.1 Objective#1: Establishment of efficient, highly reliable, manageable distributed cloud data centers, using converged infrastructure

The following key strategies will drive this objective:

- i. Enhance the Backbone Network connecting the districts nation-wide, and building of Metropolitan Networks;
- ii. Extend access technologies to all unserved and underserved areas;
- iii. Speed up the deployment and delivery of fixed broadband to the people in high density populated urban areas;
- iv. Building internal Local Area Networks for the government MPSA's;
- v. Establishing and implementing a national distributed cloud computing data centre to consolidate services; and
- vi. Promoting the efficient usage of limited resources through data centre integration and transition towards Cloud based ICT infrastructure and services.

4.3.2.2 Objective#2: Secure national information and infrastructure

The following key strategies will drive this objective:

- i. Enhance systematic cyber-attacks response system;

- ii. Develop and adopt information security strategies, standards and guidelines; and
- iii. Promote information, education and communication in cyber security.

4.3.2.3 Programmes

To achieve the above outcomes, objectives and strategies the following are the programmes to be carried out:

- i. Network Infrastructure;
- ii. Data Centre Infrastructure; and
- iii. ICT Security.

4.3.3 Key Outcome 3: Strengthened Policy, Legal, and Regulatory Framework of Information and Communication Technology

The objectives, key strategies and associated programmes to this outcome are outlined as follows:

4.3.3.1 Objective#1: To enhance the policy and legal framework in order to support e- Government

The following key strategies will drive this objective:

- i. Formulate appropriate cyber laws and regulations to facilitate the sharing of data, infrastructure, services and systems;
- ii. Review and create smart institutions and structures to facilitate consultations and collaborations on e-Government matters; and
- iii. Review and align existing ICT-related national legislation.

4.3.3.2 Objective#2: To enhance regulatory mechanisms for effective provision of e-services

- i. Create ICT standards, rules and regulations for the entire ICT sector for easy governance;

- ii. Make timely adjustments to established standards in order to facilitate the constantly changing E-Government environment; and
- iii. Strengthen the institutional framework for effective regulatory processes.

4.3.3.3 Programmes

To achieve the above outcomes, objectives and strategies the following are the programmes to be carried out:

- i. Institutional and governance framework;
- ii. ICT Legislation and regulations; and
- iii. ICT Standards.

CHAPTER 5

5 IMPLEMENTATION AND COORDINATION

5.1 Implementation Plans

Sector Ministries, Provinces, Districts and Government Agencies will jointly come up with implementation plans drawn from the main outcomes of the Master Plan. The sectoral implementation plans will focus on programmes that are assigned to specific sectors as prescribed in the Master plan, National Development Plans and drill down to those activities which can be implemented at district level.

The institution responsible for electronic government shall ensure that each of the organisations involved in the planning and implementation of programmes in each outcome area will be assigned performance targets that are time bound, in line with the overall national targets required to attain that outcome.

Similarly, Local Authorities will be required to come up with five-year Implementation Plans drawn from the main development outcomes of the Master Plan as well as from their District Integrated Development Plans. Their Implementation Plans will draw some of the programmes from the various cluster Implementation Plans at national level for those programmes that are national in nature but require being implemented at district level. The institution responsible for electronic Government shall coordinate the implementation framework to ensure that integration is enhanced.

5.2 Master Plan Implementation Approach

The implementation of the SMART Zambia e-Government Master Plan will adopt a phased approach as shown in Table 2 below:

Table 2: e-Government Roadmap

Description	Foundation Stage 2018 - 2021	Integration Stage 2022-2026	Connected Government Stage 2027-2030
Policy, Legal, Regulatory & Institutional Arrangement	<ul style="list-style-type: none"> a) Establishment of Policy, Legal, and Regulatory Environment b) Institutional Frameworks; and c) Human Resources Development d) Developing and adoption of ICT standards and guidelines 	<ul style="list-style-type: none"> a) Enhancement of the Policy, Legal, Regulatory and Institutional Framework 	<ul style="list-style-type: none"> a) Review of policy, legal, regulatory and institutional framework
ICT Infrastructure	<ul style="list-style-type: none"> a) Implementation of: <ul style="list-style-type: none"> ▪ Cloud computing National Data Centre ▪ National Optical fibre broadband backbone ▪ Metropolitan Area Networks ▪ Local Area Networks ▪ Information security ▪ Universal access mobile communication services - 	<ul style="list-style-type: none"> a) Integration and enhancement of: <ul style="list-style-type: none"> ▪ ICT network connectivity infrastructure to unserved and underserved districts, ▪ Value added services on the cloud computing ▪ Information security 	<ul style="list-style-type: none"> a) Enhanced integration of: <ul style="list-style-type: none"> ▪ infrastructure and value-added services to unserved and underserved areas ▪ Information security
E-Services (Enhancing country competitiveness & social wellbeing)	<ul style="list-style-type: none"> a) Developing and adoption of: <ul style="list-style-type: none"> ▪ e-applications and online services ▪ Core eGovernment Foundational e-Applications ▪ Common applications ▪ Sector specific applications ▪ Multiple Channels of electronic Service delivery 	<ul style="list-style-type: none"> a) Enhanced Integration of e-applications to cloud computing environment and more online services on government transactional portal 	<ul style="list-style-type: none"> a) Seamless and highly customised interactive systems on the cloud with value added services

5.2.1 Implementation Approach

This Plan will be implemented in three key Phases:

a) Foundation Phase

The foundation phase which is from 2018 to 2021 will be based on implementation of Policy, Legal, Regulatory, Institutional and Standards frameworks that are responsive to the SMART Zambia Vision. This phase shall also include the establishment of SMART institutions and commencement of human resources development. Furthermore, the phase lays a firm foundation for key ICT infrastructure and priority information systems development and integration.

b) Integration Phase

The integration phase commences in 2022 to 2026 and shall leverage on the foundation stage by increasing the ICT connectivity infrastructure and enhancing the integration of systems and services. This integration will be based on the cloud computing environment linked to the official Government Web Portal.

c) Connected Government Phase

The final phase spans from 2027 to 2030 for intensive integration of online services and value-added services. This integrated electronic platform will transform the Government into a connected entity that responds to the needs of its citizens, businesses and within Government.

5.3 Roles and responsibilities of various institutions in the management of the plan

Management of the Plan will be based on the principles of results-based management whose emphasis is on the need for all players to account for programme results and ensure timeliness on the delivery of those results. It will also recognise the need to focus attention on the outcomes while allowing for flexibility and innovativeness in meeting the desired outcomes. The institutions will, however, ensure that the management process conforms to the provisions of various Policy, Legal and Regulatory frameworks, which include the Constitution of Zambia, National ICT Policy, e-Government Act, Information and Communications Technologies Act, Cyber laws (such as Cyber Security Act, Data Protection Act, Electronic Transactions Act) Public Finance Act, and the Planning and Budget Policy among others.

The following institutions will play key roles in ensuring that the management of the Plan is in line with the set objectives and targets.

a) Office of the President

The Presidency will provide overall leadership and policy direction so that development outcomes contained in the Plan are met on time. The Presidency will receive regular briefs on progress through the relevant channels. The Office of the President will from time to time inform Cabinet on the implementation of the programme in the Master Plan.

b) Parliamentary Committee responsible for Information and Communication Technologies

Parliamentary Committee in charge of ICT will play an oversight role to ensure that Central and Local Government and Government Agencies delivers on the e-Government programmes under their jurisdiction. The process of achievement of development outcomes will be based on principles of accountability, transparency and value for money.

c) e-Government Steering Committee

The Committee of Permanent Secretaries and Heads of Government Agencies Chaired by the Secretary to the Cabinet shall be responsible for strategic leadership, decision making and monitoring of the implementation of the Master Plan.

The Committee will be required to submit reports to the President through the Secretary to the Cabinet.

d) Seventh National Development Plan Planning Committee

The Seventh National Development Plan consists of a number of committees and working groups that will have a bearing on the implementation of the eGovernment Master Plan. Specifically, the following committees will play a vital role in the ICT programmes and projects implementation:

i. National Development Coordinating Committee

This committee is a coordination group that provides a dialogue platform for monitoring and evaluating Government Programmes and Projects to ensure the attainment of the National outputs as outlined in the 7th National Development Plan.

ii. Cluster Advisory Groups

This committee is an Advisory group that provides a dialogue platform for monitoring and evaluating of Government Programmes and Projects for Ministries, Provinces and Spending Agencies to ensure the attainment of the sustainable development goals as outlined in the 7th National Development Plan. The CAGS share the same common overall objectives.

a) The Electronic Government Division

The eGovernment Division will coordinate the overall implementation of the Master Plan. The Division will also be responsible for implementation of common platforms of e-Government systems and infrastructure.

b) The Ministry of Transport and Communications

The Ministry will be responsible for ICT Policy formulation and coordination of its implementation.

c) Zambia Information and Communication Technology Authority

The Authority shall perform regulatory and facilitating functions as provided in its legislation to ensure successful implementation of the Master Plan.

d) Ministries, Provinces and Spending Agencies

The Ministries, Provinces and Spending Agencies shall be responsible for detailed planning and execution of the e-Government Programmes and Projects under their charge in line with the Master Plan and approved by their respective Permanent Secretaries. They will also submit periodic progress reports to the eGovernment Steering Committee

e) Zambia Cyber Security Agency

The Agency shall be responsible for national cyber security and cybercrime prevention and will collaborate with defence, security, and other law enforcement institutions/agencies.

CHAPTER 6

6 MONITORING AND EVALUATION

The Monitoring and Evaluation (M&E) framework for the SMART Zambia e-Government Master Plan will be aligned to the National Development Plans M&E framework to effectively monitor, evaluate and report on results. This is to ensure that planning and M&E processes are standardised, interconnected, fully internalised and applied by the relevant institutions with the view to generate coordinated development results to inform decision-making processes.

Figure 7: Illustrates the measurement framework that will be used for the monitoring, evaluating and reporting of results.

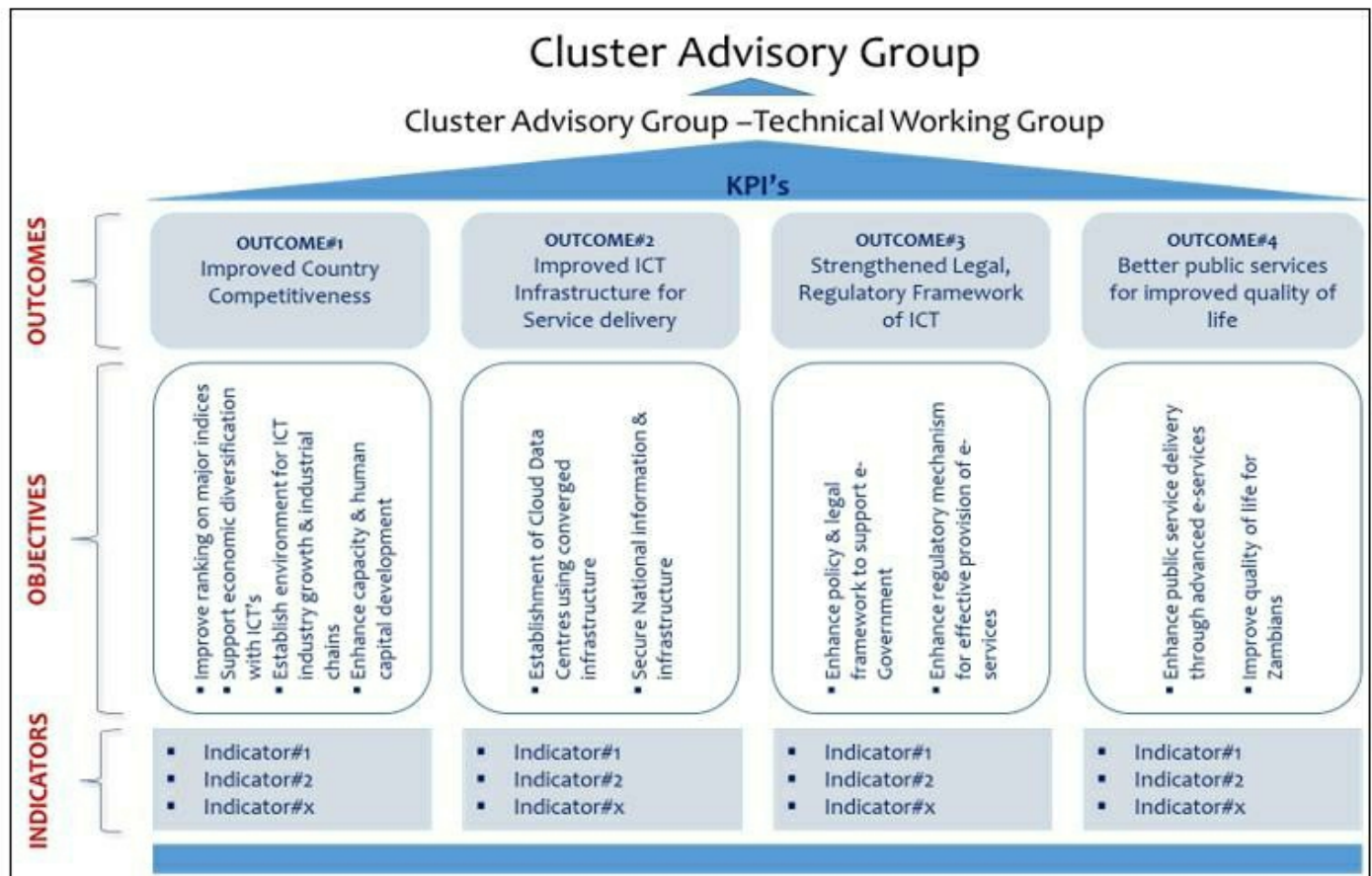


Figure 8: M&E Measurement Framework

6.1 Monitoring

The Government will facilitate monitoring of programmes and projects of the master plan, including the impact of the programmes (both intended and unintended) on the economy and

population. Implementation of the plan will be closely monitored through budget execution reports, tracking of output indicators monthly and quarterly, while annual progress will be assessed through agreed key performance indicators.

Different monitoring indicators at different levels will be used based on international best practices mainly on the successful implementation of E-Government programmes and projects. Qualitative and quantitative indicators covering both internal and external environment and ICT processes will be used to monitor and measure performance/progress.

In particular, system-wide indicators (Key performance Indicators) will be used to provide an overview of the functional ICTs across the entire government. Sector-related indicators will be used to provide a pointer to the breadth and depth of e-governance activities undertaken within the entire plan, while output indicators will provide an overview of the internal capacity of sectors implementing ICT policies. Information on indicators will be collected through the use of routine data, vital statistics, surveys and censuses.

6.2 Evaluation

Plan implementation and impacts will be evaluated at mid-term and at end-term. Evaluation will involve an analysis of both process and impact, to generate evidence to inform the development, strategic focus and implementation of future development plans. The evaluation will be commissioned by the Government and will be conducted by independent entities with competencies in evaluation of National Development Plans.

Outcomes and impact indicators will be measured through surveys, research processes, policy and programme reviews and evaluations, including mid-term and final evaluations. Policy recommendations from the reports will be synthesised and feedback provided to implementers for action. The Policy makers and the general public will also be provided with information through appropriate modes and channels.

Table 3: The Key Performance Indicators for the Master Plan.

Key Performance Indicator	Baseline	Targets					Source	Frequency
		2017	2018	2019	2020	2021		
ICT Industry contribution to GDP	2%	3%	5%	8%	10%	11%	CSO	Annually
Foreign Direct Investment in United States Dollars	800m	\$1.2 Billion	\$1.5 Billion	1.8 Billion	1 Billion	1.5 Billion	ZDA	Quarterly reports
Direct Jobs Created	500	1,500	2,500	6,000	10,000	13,000	ZICTA & IBA	Quarterly reports
Number of Internet Subscribers per 100 inhabitants	32.2	40	45	50	55	60	ZICTA	Quarterly
% of penetration by Institutions with affordable access to actual speeds of at least 2mbps	28	32	35	43	50	62	ZICTA	Once a year December
Number of mobile subscribers per 100 inhabitants	76	82	90	98	100	100	ZICTA	Quarterly
Number of Digital Television Subscribers per 100 inhabitants	45	56	70	75	80	90	IBA	Yearly
Number of online Government electronic services	25	56	62	87	115	180	e-Government Division	Once in a year

CHAPTER 7

7 RESOURCES MOBILISATION

7.1 Financing of e-Government and Budget

Achieving the vision of a SMART Zambia e-Government Master Plan will require the mobilisation of significant financial and human resources. Funding of the flagship programmes and projects in this Master Plan will be in line with the approved National Budget, Medium Term Expenditure Framework (MTEF) and the Government Economic Stabilisation Programme. In this regard, financing requirements for master plan programmes and projects will be from a combination of financing sources, which will include:

a) Domestic Revenues from the Treasury

Government through the Ministry of Finance shall ensure that adequate funds are made available in each fiscal year to implement and finance programmes/projects for the implementation of the SMART Zambia eGovernment Master Plan. In order to fast track the plan implementation, the Government will work with cooperating partners and the private sector into partnership ventures.

b) Cooperating Partners

Grants from cooperating partners will be one of the modes of financing in order to obtain highly favourable financing terms and the best value for money in view of the limited fiscal resource envelope.

c) Public Private Partnerships

Priority will also be directed at private initiatives such as PPPs and direct private sector financing. The use of PPP's enables an innovative alternative way of financing developmental projects and also ensures that the private sector plays a critical role in the financing of infrastructure projects while relieving stress from the Central Government.

d) Multilateral Sources

The Plan will be financed through accessing loans and grants from Multilateral and Bilateral partners such as the World Bank, African Development Bank and many more. This financing will be accessed at both favourable concessional and commercial rates.

e) Concessional Loans

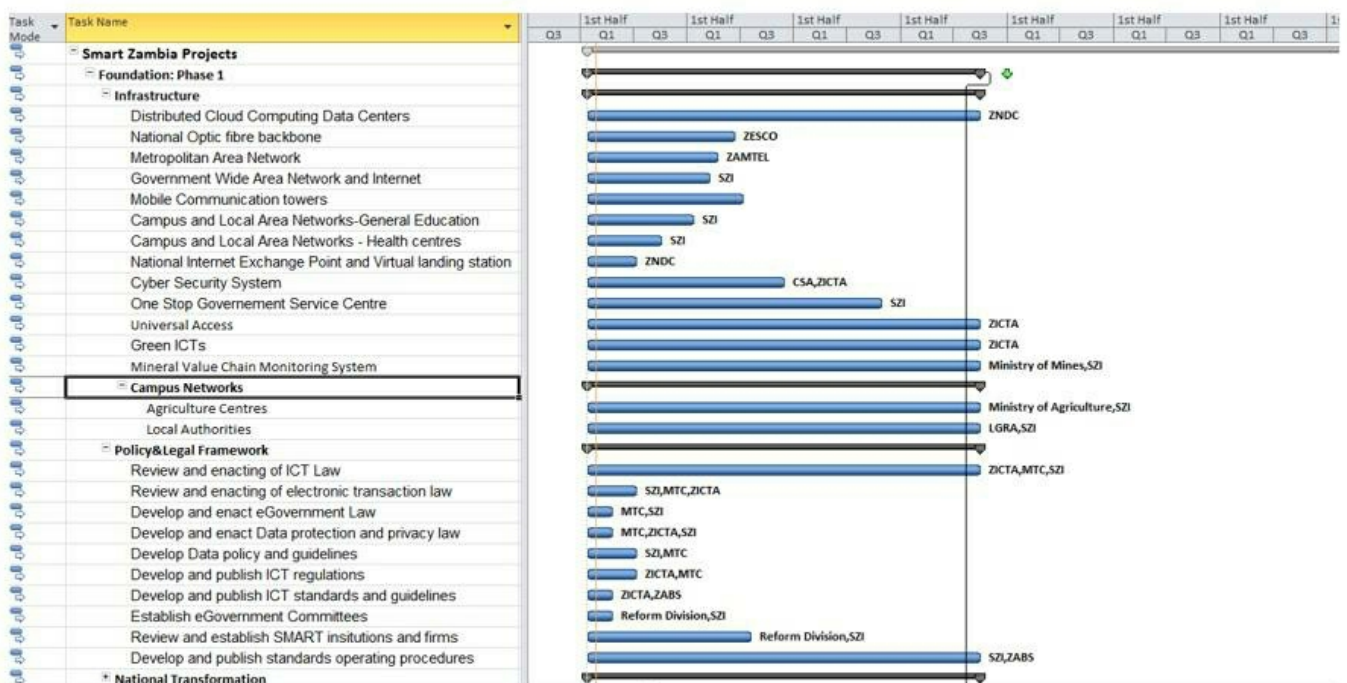
The eGovernment Master Plan will also be financed through concessional loans that will be extended on terms substantially more generous than commercial loans. The concessionality of this financing will be achieved either through interest rates below those available on the market or by grace periods, or a combination of both based on bilateral and multilateral terms.

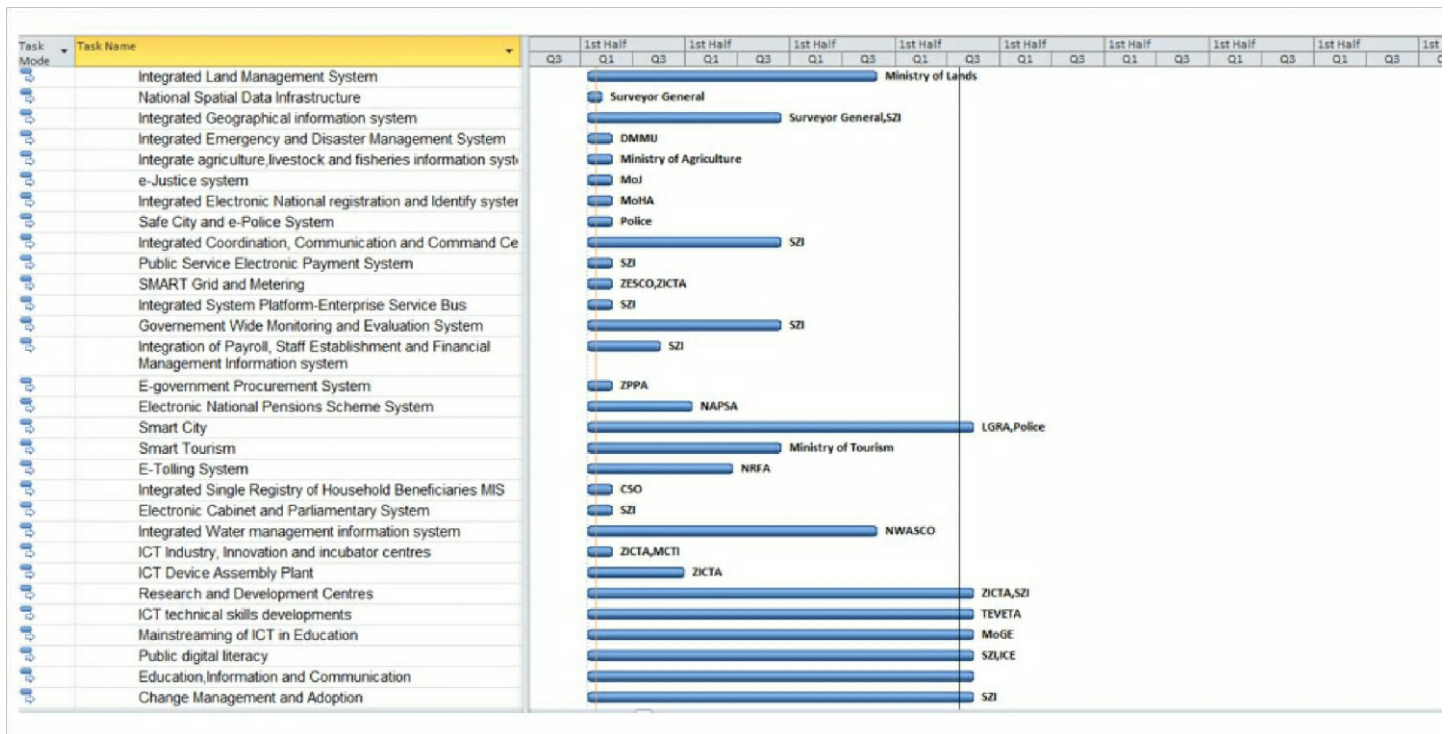
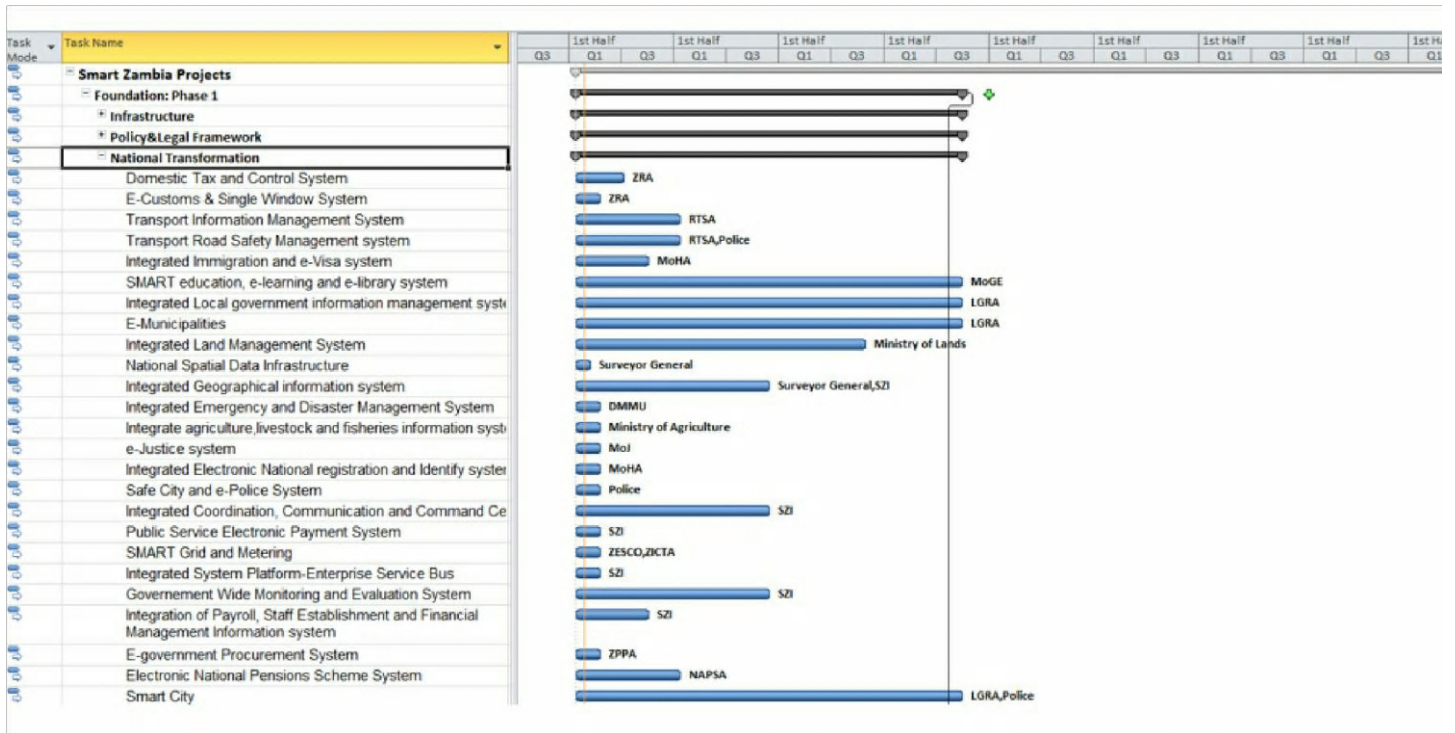
ANNEX 1 – PROGRAMMES

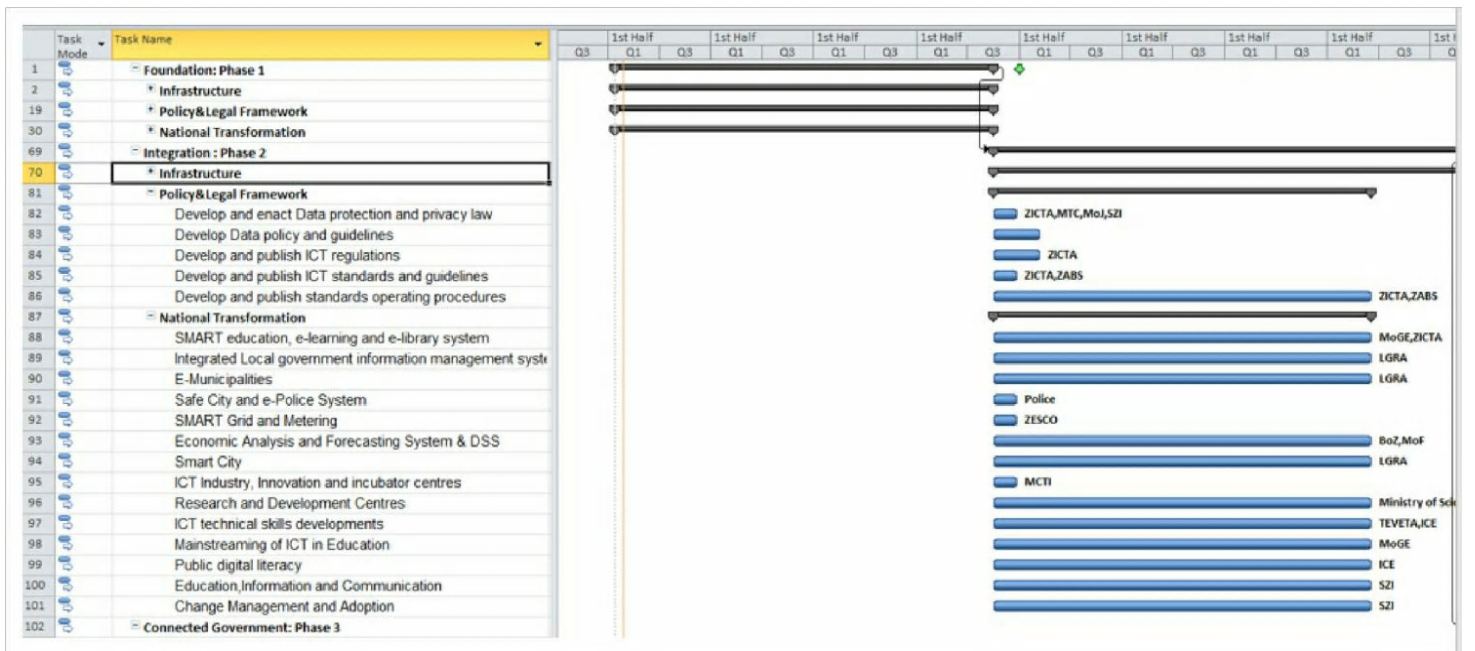
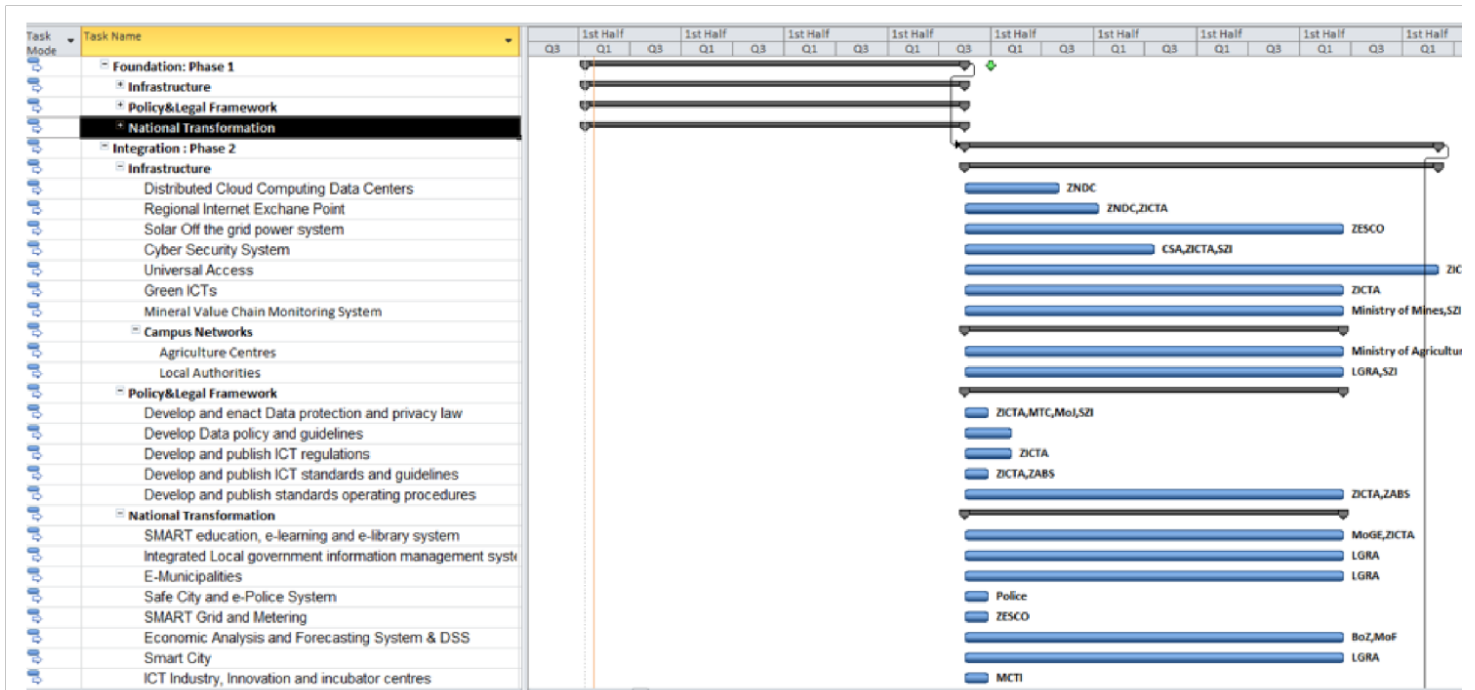
Programmes Identification

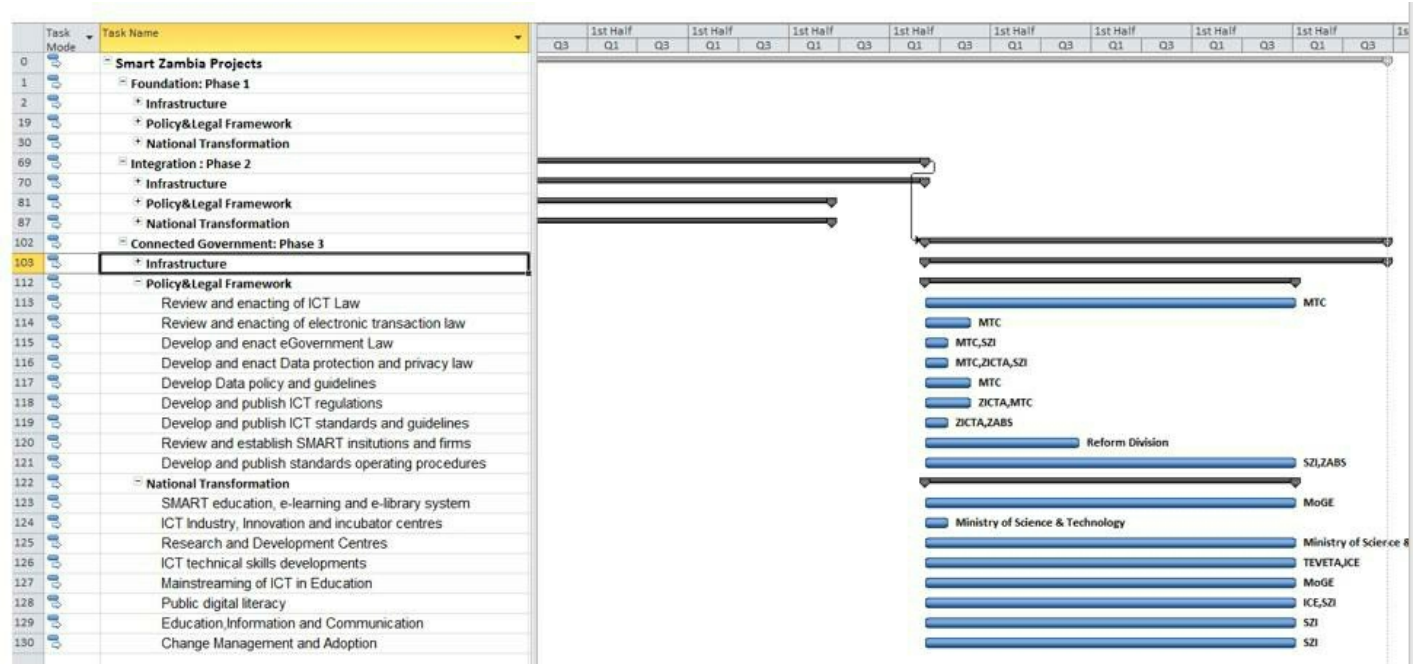
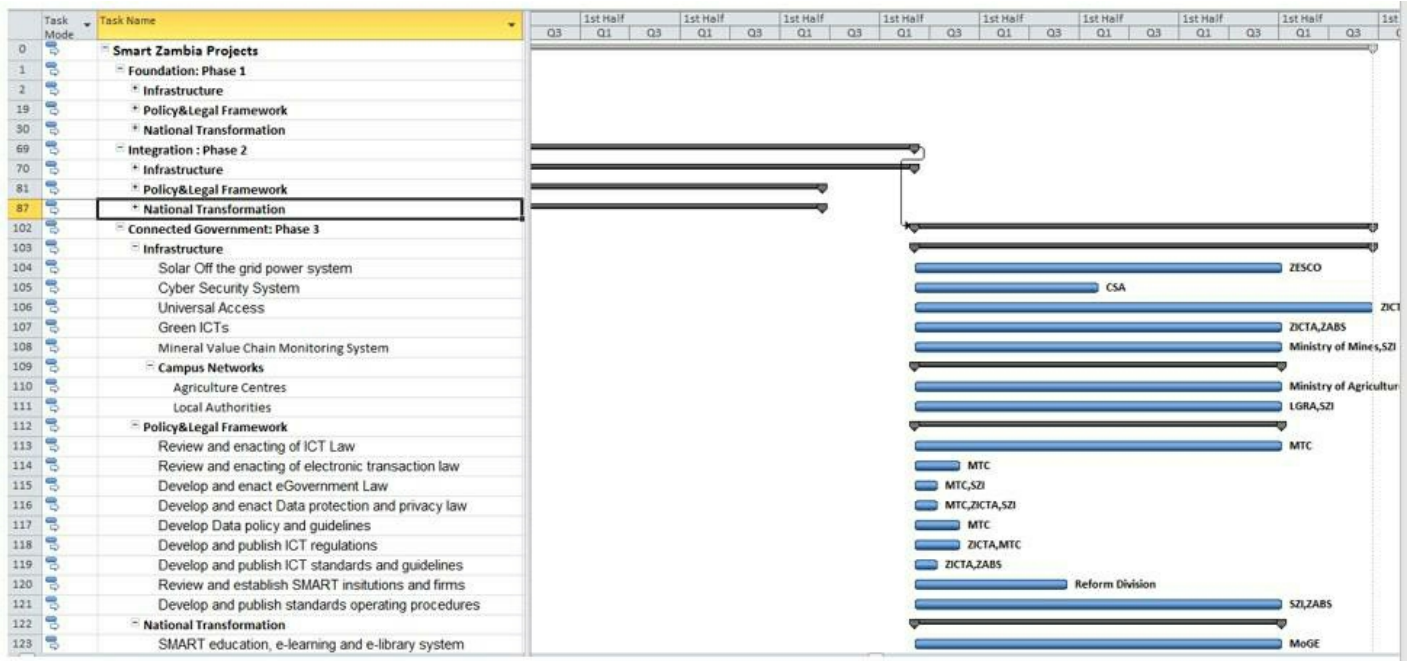
The selection of programmes was based on conformity to national strategic development focus and the new vision of embracing a transformational culture for a SMART Zambia now. Other factors of consideration include:

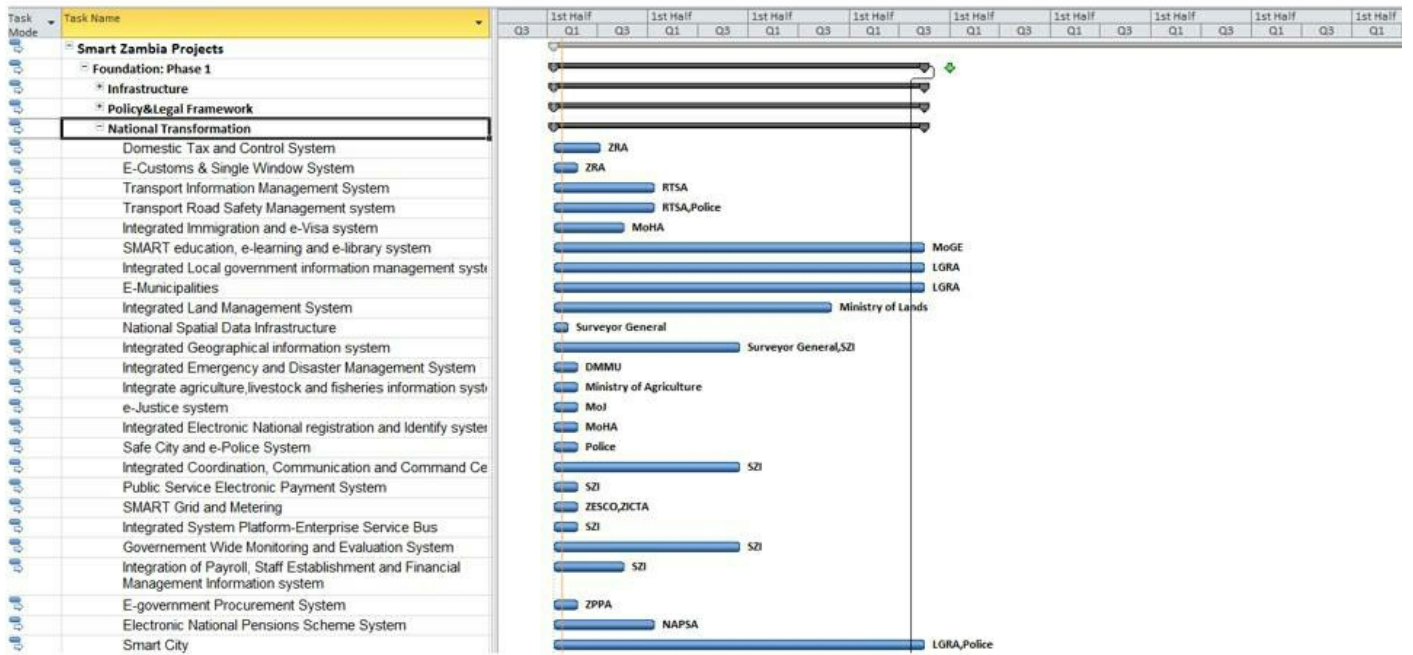
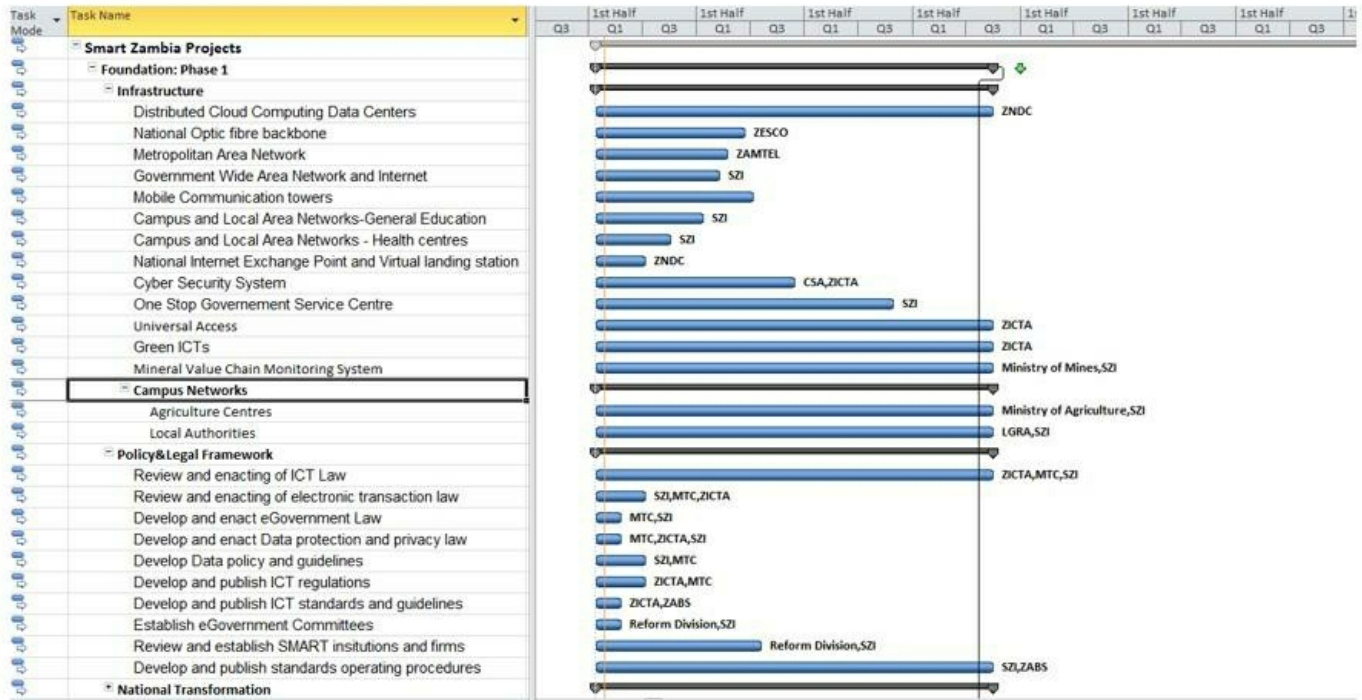
- a) Level of linkages among government agencies and utilisation of shared information;
- b) Level of contribution to service delivery including service target and service area;
- c) Impact on Socio-economic development;
- d) Improved quality of life;
- e) Advanced business competitiveness;
- f) Promotion of ICT Industry;
- g) Level of ICT Policy, Legal, Regulatory and Institutional reform for facilitating SMART Zambia Vision;
- h) Level of contribution to resolve social issues and meeting future demands;
- i) Alignment to the 7NDP.

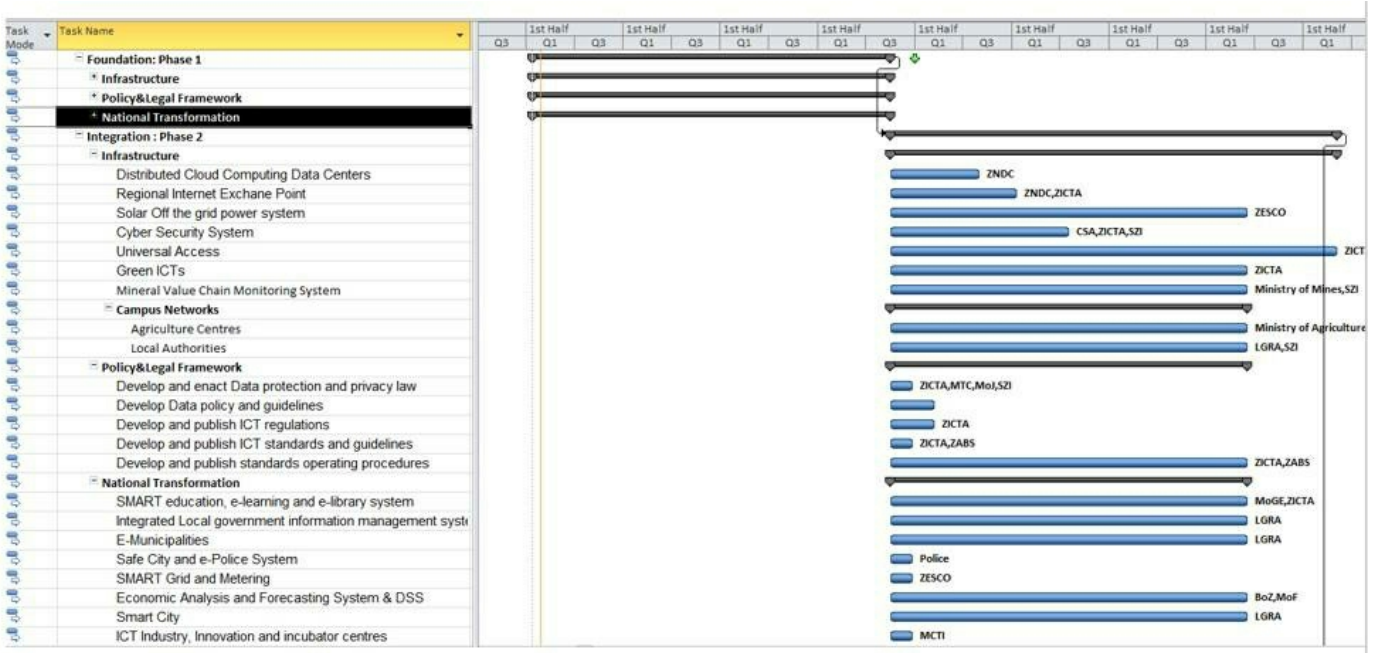
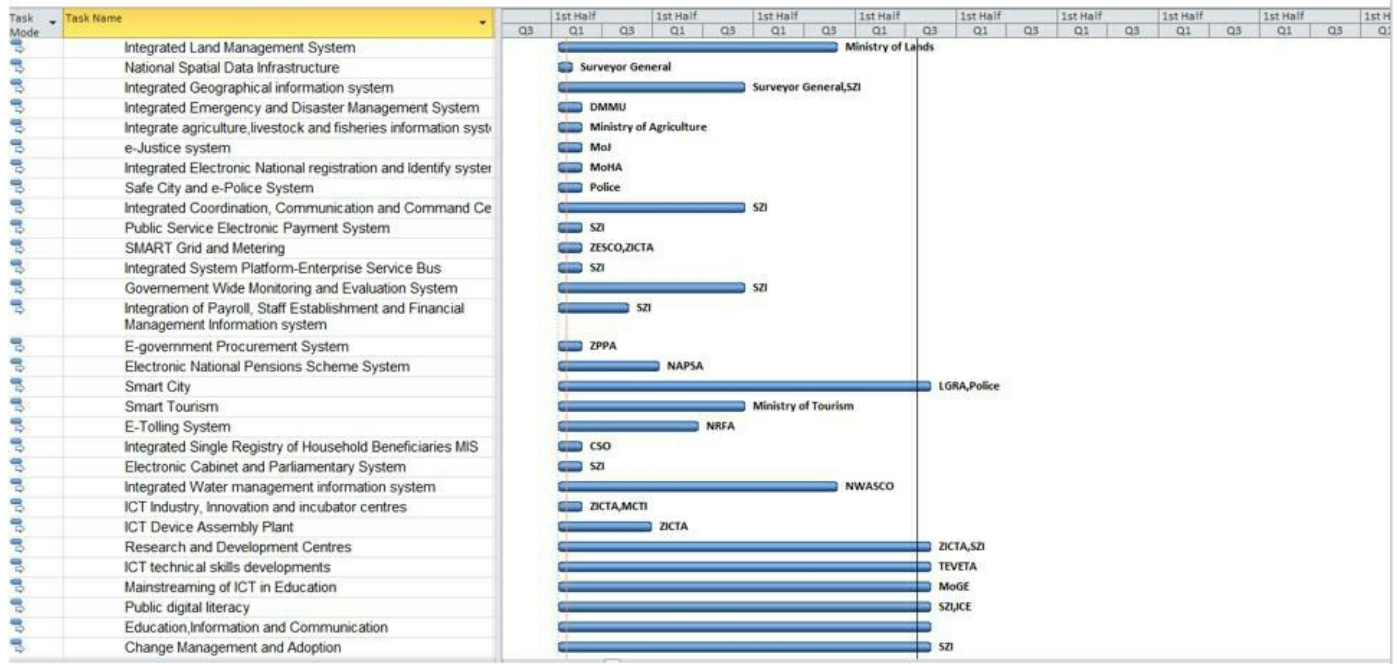


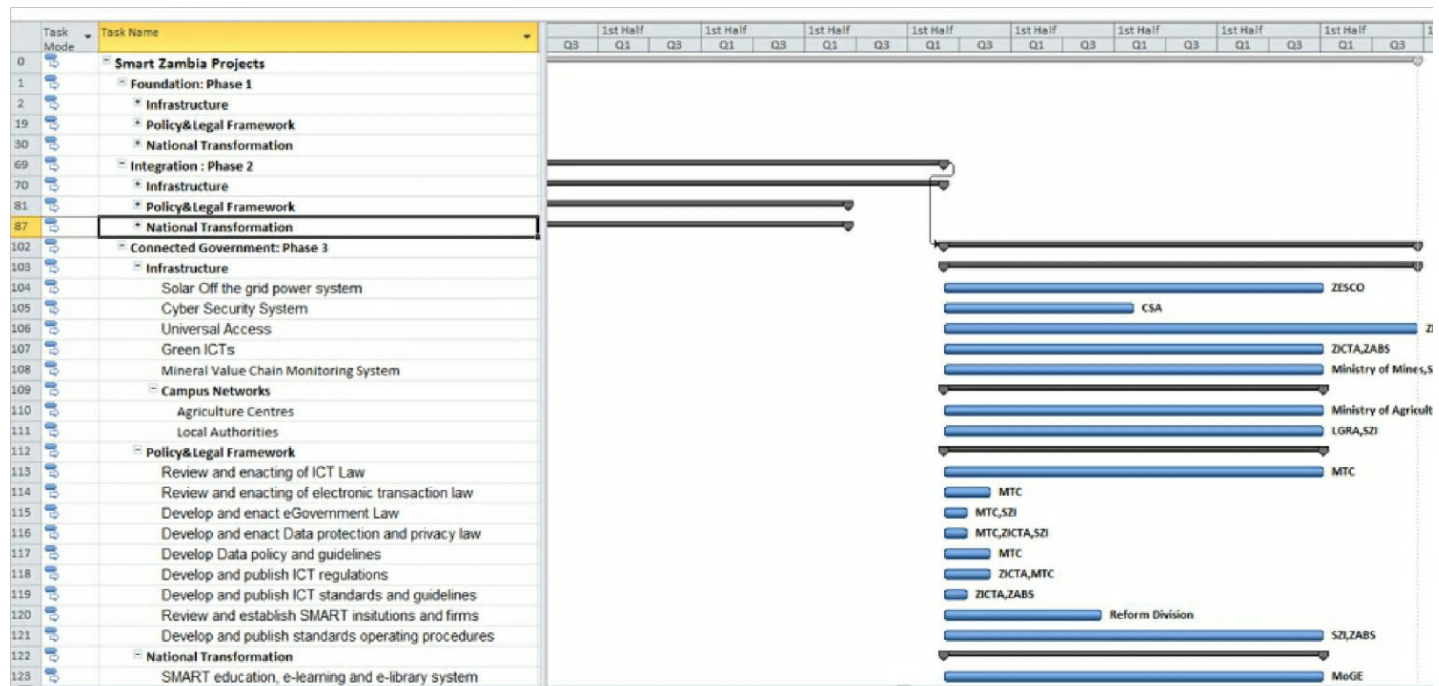
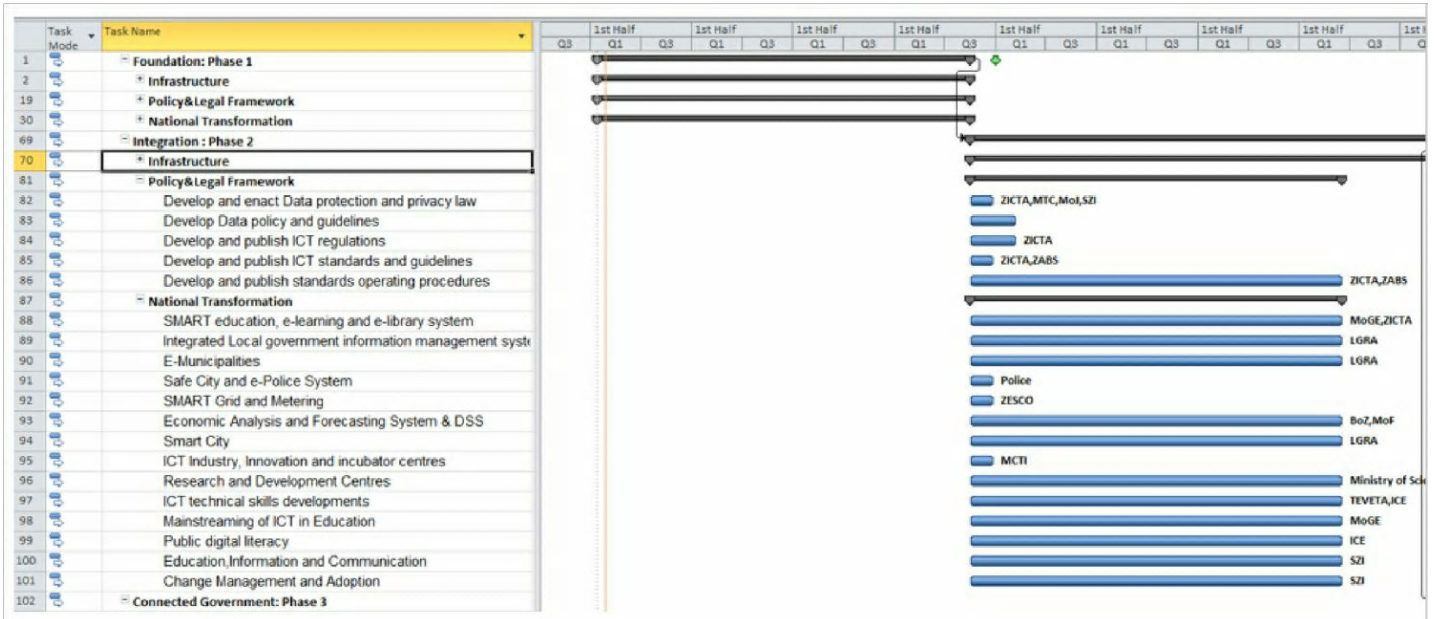


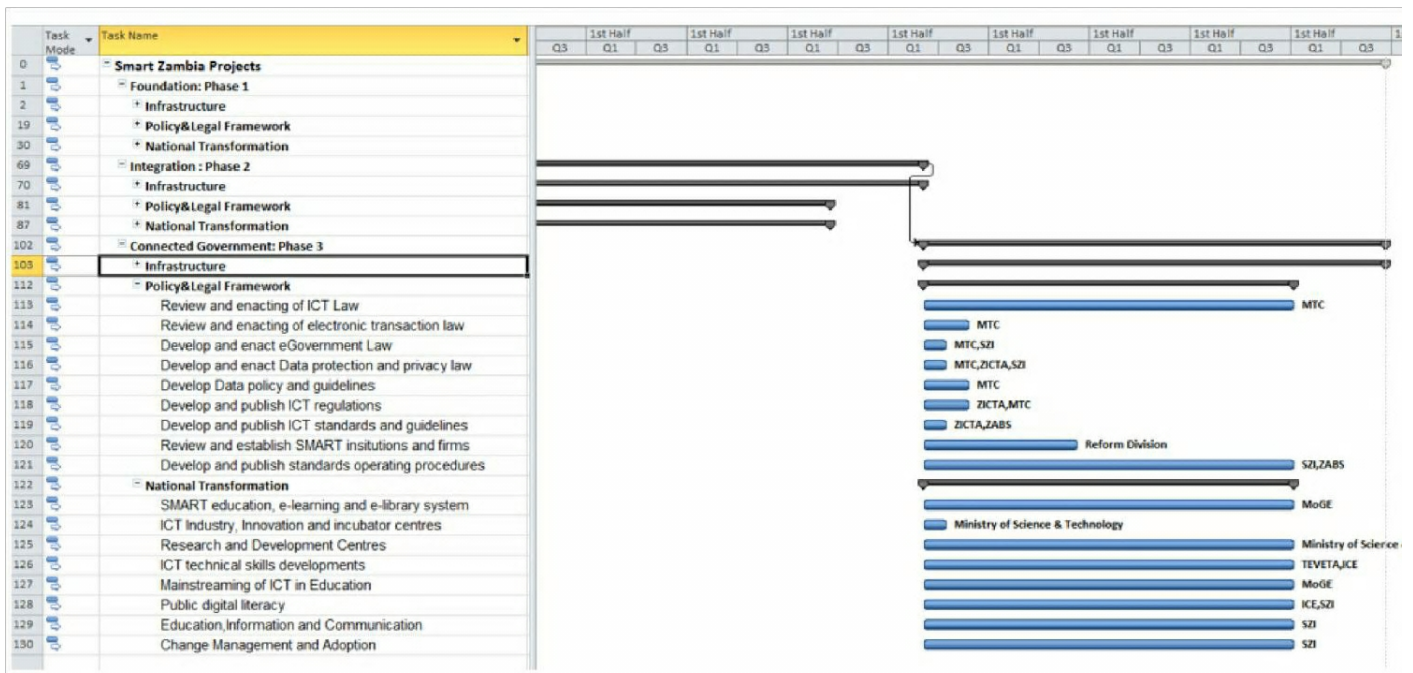












Priority Projects

