

SMART ZIMBABWE 2030 MASTER PLAN

ICT TRANSFORMATION FOR A SMART ZIMBABWE

MINISTRY OF ICT, POSTAL AND COURIER SERVICES

Table of Contents

1. Executive Summary 2
2. Background 3
3. ICT Sector Challenges in Zimbabwe 4
4. The SMART Zimbabwe 2030 Master Plan 4
4.1. Vision and Mission 5
4.2. Goals 6
4.3. SMART Zimbabwe 2030 Structure 7
5 Impact of the Smart Zimbabwe 2030 Initiative 19
6 Outcomes of SMART Zimbabwe 2030 20
6.1. Digital Government 21
6.2. Digital Economy 22
6.3. Digital Society 22
7 Implementation Strategy of Smart Zimbabwe 2030 Master Plan 23
7.1 Smart Zimbabwe 2030 Institutional Arrangement 23
8.1. Implementation plan 24
8.2. Project implementation strategy summary & timeline 25

1. Executive Summary

Zimbabwe, like many other countries globally, is fully aware of the importance of information technologies for socio-economic development and transformation. It acknowledges that those countries from both developed and developing world who recognized the potential of information communication technologies (ICTs) and developed policies and implementation strategies, and invested in ICTs have realized immense benefits for their economies and their peoples. Zimbabwe has great potential and leveraging on its high literacy level, strong infrastructure base (communication, energy and road networks), geographical location and favorable climatic conditions, can leap frog and overtake the developments made by some countries in Africa.

The Government of the Republic of Zimbabwe is highly committed to promoting ICTs because they are cross-cutting and enablers across all sectors of the society and economy. Admittedly, there are some challenges we have to overcome and these include inadequate infrastructure (communications and electricity), cost of access to ICT devices, and interoperability challenges among others. As we enter a new era of advanced ICTs technological developments characterized by fifth generation technologies where all things are sensing, connected and intelligent, countries which do not embrace these technologies will be left out and will lag behind and most likely be dominated over by those who will have invested in new technologies. To systematically exploit the potential of ICTs for national development and transformation, Zimbabwe needs to develop an all-inclusive guideline that clearly articulates how the country will develop, deploy and manage ICTs across all sectors. We need to develop a Smart Zimbabwe 2030 Master Plan.

The Smart Zimbabwe 2030 Master Plan will work through key specific sector-focused pillars that act as Smart Solutions and these include: a) Smart Government, b) Smart Cities, c) Smart Agriculture, d) Smart Education, e) Smart Transport, f) Smart Health, g) Smart Tourism, and h) Smart Mining. These pillars are anchored on a strong foundation of; i) Policy, Regulatory and Standards, ii) Secure and Shared Infrastructure and iii) Skills, Capacity Building and Content Development.

The operationalization of the Smart Zimbabwe 2030 Master Plan calls for a new paradigm shift where Government Ministries will be critical in the development of programmes and projects for specific Smart Solutions for sectors they superintend. Models of Smart Government, Smart Education and Smart cities are presented as examples of what is expected in a Smart Solution. As the country moves towards becoming an Upper middle-

income society by 2030, we need to adopt a completely new approach and exploit the potential of ICTs by developing appropriate and cost-effective applications that can improve the country's productivity and competitiveness. Various ICT applications and solutions can improve industrial processes and quality of products, increase agricultural yields, enhance teaching and learning, positively impact on health among many other areas in the society. With systematic adoption and implementation of Smart Zimbabwe 2030 Master Plan, the country will be transformed into a knowledge-based and fully inclusive Smart Society by year 2030. For this reason, the Ministry of Information Communications Technologies, Postal and Courier Services presents here a comprehensive, focused, forward thinking approach on how Zimbabwe can exploit the potential of ICTs for socio-economic development and transformation.

2. Background

The uptake and use of ICTs has greatly increased in recent years resulting in considerable reduction on the "digital divide" between rural and urban areas. A recent survey conducted by the Zimbabwe National Statistics Agency (ZIMSTAT) shows that the country's literacy rate stands at 94 percent — the highest in Africa. This growth is evidenced by Zimbabwe's ICT indicators where mobile penetration has reached 93.1% and internet penetration was at 62.9% as at 31 December 2018.

Rapid and robust infrastructural development and rejuvenation has enabled the development and availability of a plethora of e-services, which consumers have embraced as easier means to communicate and transact between person to person, person to business and business to business, government to government and various e-Government services to the citizenry. There has been an increase in the adoption of mobile money transfer, mobile wireless broadband, use of plastic money and various social applications such as WhatsApp, Facebook, Twitter, You Tube and Skype to name but a few.

Zimbabwe is now connected to the undersea optic fibre cable networks through SEACOM and EASSy cables in the Indian Ocean and WACS cable in the Atlantic Ocean. The efforts of the public and private sectors in this development are commendable.

The SMART Zimbabwe 2030 Master Plan seeks to exploit the potential of ICTs so that Zimbabwe attains its Vision of becoming an Upper Middle-income economy by 2030. This Vision is predicated on, among others, building on the achievements of the Zimbabwe National Policy on ICTs of 2016 to 2020 which further strengthens Zimbabwe's economic base and improve its economic environment for accelerated growth towards achieving a

predominantly information and knowledge-based economy by 2030. The current National ICT Policy now requires review and re-orientation that is aligned to the new initiatives of SMART ICT as defined by the SMART Africa Manifesto of the Transform Africa Summit. Such efforts will result in the formulation of a new National ICT Strategy, the SMART Zimbabwe 2030 Master Plan, which will guide Zimbabwe as it accelerates the adoption of digital technologies.

3. ICT Sector Challenges in Zimbabwe

Despite the developments and potential that are outlined in 2 above, the ICT sector has been faced with a number of challenges which include the following: -

i) Inadequate communications infrastructure

ii) Inadequate Electricity and road networks

iii) Affordability of smart devices

iv) Inadequate ICT skills

v) Low digital literacy level

vi) Inadequate investment capital

vii) Limited local ICT innovation, R&D and entrepreneurship

viii) Interoperability challenges

There are no cross-network transactions for digital financial services and the country has not yet reaped the advantages of number portability. There is also no interoperability between data centres, systems and databases that currently exist across Ministries and public sector institutions.

4. The SMART Zimbabwe 2030 Master Plan

Having realized the importance of ICTs and their potential to transform the country into a knowledge-based smart and fully inclusive society, the Government of Zimbabwe has developed the SMART Zimbabwe 2030 Master Plan and Implementation Strategy, which is inclusive and cross-sectoral. The Master Plan identifies and prioritizes clear programs, projects and targets which the country should vigorously pursue while driving towards realizing the National 2030 Vision. Treasury and the Public Service Commission are expected to provide adequate financial and skilled human resources to ensure successful

implementation of SMART Zimbabwe 2030 programs and projects. Public, Private sector Partnerships should be encouraged in order to realise the aspirations of Smart Zimbabwe 2030 goals. The Master Plan also puts in place a strong and well-coordinated institutional arrangement which is inclusive and has the mandate to coordinate ICT interventions in all sectors of the economy, through the Ministry of ICT, Postal and Courier Services. The Smart Zimbabwe 2030 Master Plan thus serves as a roadmap for the country's development and transformation through ICTs.

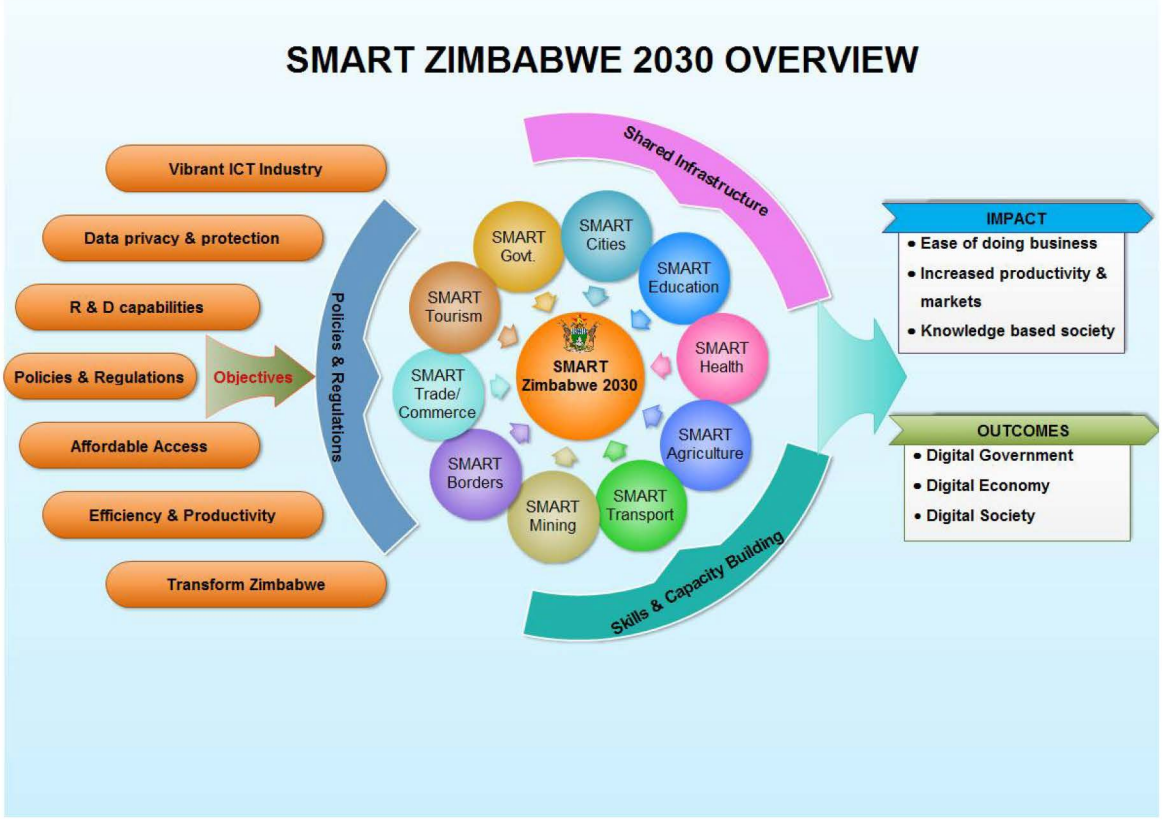


Fig. 1 SMART Zimbabwe 2030 Master Plan Overview

4.1. Vision and Mission

4.1.1. Vision

"To create a knowledge-based and digitally inclusive society and a globally integrated economy by 2030."

This ICT Master Plan anticipates that by year 2030, Zimbabwe will have successfully developed and deployed ICTs that:

- Respond to national needs and priorities of all in the society;
- Improve governance, deepen democracy and deliver services to citizens on demand;
- Develop the human capacity needed to drive and sustain an information economy;
- Boost economic activities at home and abroad with increased exports of Zimbabwe branded goods and services; and
- Develop standards of living of all citizens through ICT Interventions.

4.1.2. Mission

"To fully integrate information and communications technologies throughout society and into all sectors of the economy in order to realize rapid, sustainable socio-economic development."

As Zimbabwe charts its course to join and fully participate in the global economy, it must embrace strategies to develop and deliver information to all its citizens. Thus, the Mission of the Government of Zimbabwe must therefore:

- Create and expand knowledge to impact all sectors of the economy and enrich the intellectual capital and capacity of the nation;
- Strive to incorporate ICTs in the everyday life of citizens, so as to realize the vision of a Zimbabwe that is a fully integrated part of the global economy; and
- Promote the use of appropriate, scalable ICT services and applications so as to eradicate poverty, strengthen democracy and improve the quality of life for all who call Zimbabwe home.

4.2. Goals

The overall SMART Zimbabwe 2030 goals are to:

i) Increase wealth creation and improve quality of lives through the adoption and use of ICTs.

ii) Promote affordable, universal access to ICT products and services.

iii) Promote effective regulation of the sector by establishing rules, practices, regulations and standards that promote competition, protect and educate the

consumer, create a level playing field among operators and service providers and encourage local and foreign investment in the ICT sector.

iv) Increase ICT and digital literacy levels in the country.

v) Provide mechanisms for empowering local participation in the ICT sector.

vi) Develop a vibrant ICT industry that creates employment and contributes to national economic development and position the ICT industry as one of the key exporters;

vii) Transform Zimbabwe into a Regional Hub through the development of innovation hubs that produce goods and services that are competitive nationally and in the region;

viii) Enable Government, organizations, business and individuals to become more efficient and productive through ICTs;

ix) Establish and maintain information and communications technology data privacy and personal data protection.

4.3. SMART Zimbabwe 2030 Structure

Smart Zimbabwe 2030 is therefore a bold and innovative commitment/initiative by the Government of Zimbabwe to accelerate sustainable socio-economic development of the country thereby ushering Zimbabwe into a knowledge-based economy by 2030 through affordable access to broadband and usage of ICTs. The initiative relies on several Pillars or 'enablers' that guide achievements of a range of economic and social objectives all aimed at Zimbabwe attaining an increasingly digitized and knowledge-based economy.

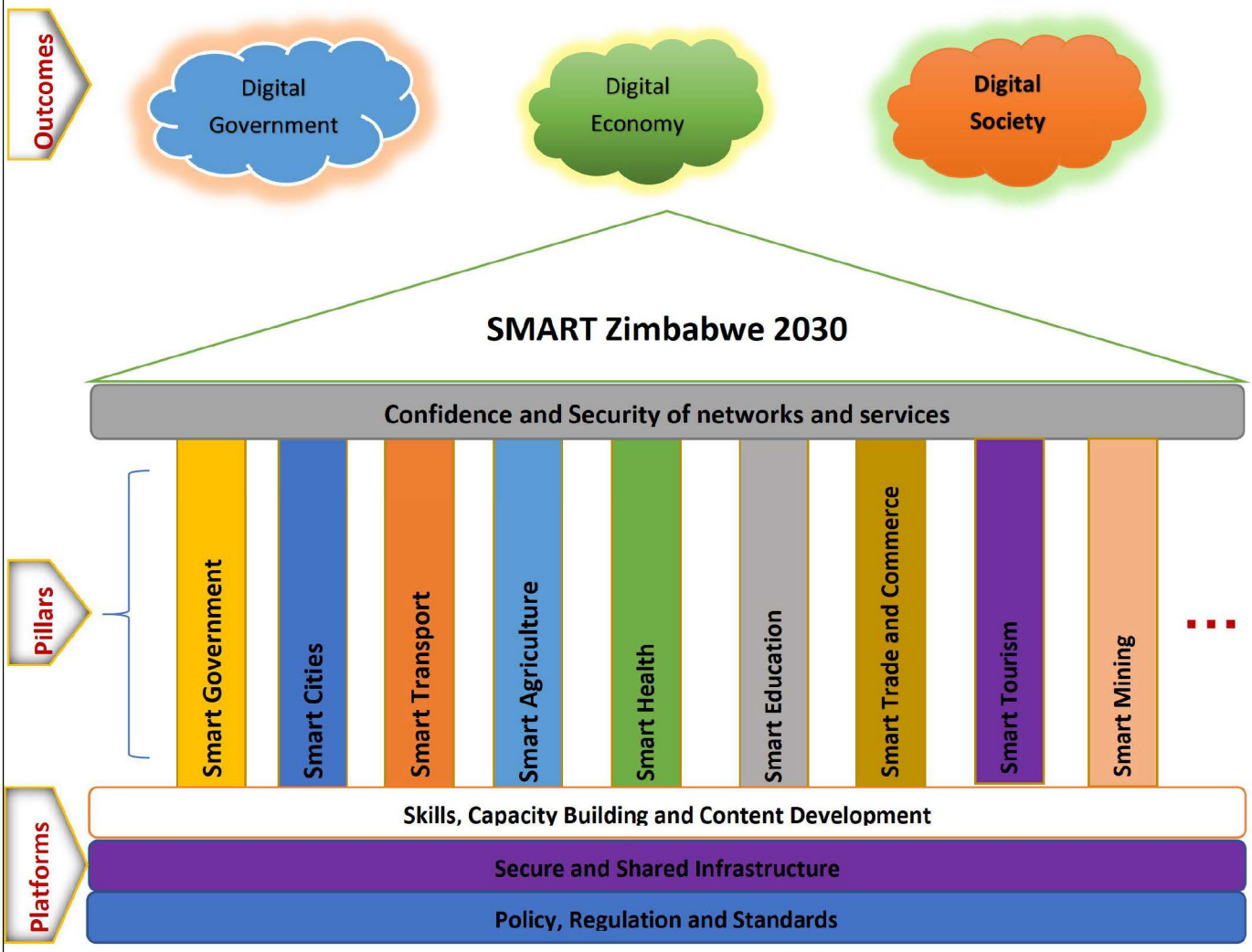


Fig. 2. SMART Zimbabwe 230 Structure

4.3.1. SMART Zimbabwe Common PLATFORMS

SMART Zimbabwe Master Plan can be likened to a structure that is solidly anchored on three common Platforms which act as the foundation on which the various SMART Pillars are rooted on. The common Platforms described below should constantly be reviewed to ensure their alignment to technology and skills trends.

4.3.1.1 Policy, Regulation and Standards

The enabling policy and regulatory environment platform will initiate long-term support for integrated national ICT policy and standards reviews for sectors and the country, to assess the overall status of ICT sector reform and market liberalization, and support national broadband strategy development. The Policy, Regulatory and standards should respond to regional dictates.

4.3.1.2 Secure and shared Infrastructure

All ICTs work through and on a secure, reliable and expansive communications infrastructure nationwide.

ICTs need good road networks countrywide and for ICTs to work there is need for reliable and secure electricity supply network.

4.3.1.3 Skills, Capacity Building and Content Development

Zimbabwe has a high literacy level and should leverage on this to become a software and hardware development hub. The Government of Zimbabwe intends to increase innovation through promoting local content, heritage and culture applications development.

4.3.1.4 Confidence and Security of Networks and Services

There will be need for reliable and secure communication networks by establishing Computer Emergency Response Teams and standards for fibre optic cable laying and topologies, in order to minimize downtimes. Given the heavy investment in the ICT infrastructure to support the economic development goals, it is imperative that infrastructure be resilient and secure against cyber threats.

Core Objectives:

- Creation of a comprehensive legislative framework to govern the cyberspace.
- Implementation of technical and procedural measures for cyber security.
- Establishment of effective organizational structures to implement cyber security.
- Cyber security capacity building for the public and private sectors.
- Increasing cyber security awareness and adopting a cyber-security culture through public and private sector partnerships.
- Developing local cyber security capabilities through research and development programs.
- Establishing information sharing capabilities to foster regional and international cooperation in cyber security.

4.4 The PILLARS of SMART Zimbabwe 2030 Master Plan

In order to achieve SMART Zimbabwe 2030, several SMART Solutions focusing on specific sector should be developed and implemented. These Smart solutions should be developed working with sector Ministries and stakeholders to ensure that the solutions are comprehensive and there is enough collaboration to ensure effective implementation. The following examples demonstrate the frameworks that can be further developed to form Smart Solutions that address Smart Government, Smart Cities and Smart Education.

4.4.1 Smart Government

Smart Government is the use of innovative policies, business models, and technology to address the financial, environmental, and service challenges facing public sector organizations. The concept of Smart Government relies on consolidated information systems and communication networks. Smart Government is about using technology to facilitate and support better planning and decision making. Smart Government improves democratic processes and transforms the ways that public services are delivered. Smart Government therefore is a new way of governance relying on information and communication technologies and it is citizen centric, data driven and performance focused.

The Smart Government Pillar will result in reforming of the Government of Zimbabwe through ICTs. The Pillar covers all forms of digital interaction between Government and its citizens. The strategies employed can be divided into the following Six (6) key areas:

a) Infrastructure including networks and equipment
b) Digitised Government content
c) Platforms and Services where citizens access government services
d) National Data Centre and national systems
e) Capacity Development
f) ICT Security

All these are supported by the anchor platforms of security, infrastructure, skilled manpower, content development and regulatory framework.

Key stakeholders

- Office of The President and Cabinet
- Government Ministries,
- Parastatals and State Owned enterprises
- Business and Communities
- Citizens

Benefits

- Improved service delivery
- Efficient Government that is responsive to the needs of Citizens
- Paperless Cabinet
- Efficient management of Government resources (financial, personnel and assets).
- Participation in governance issues by Citizens
- Improved communication within Government and between Government and Citizens.

4.4.2 Smart Education

The Government of Zimbabwe intends to increase ICT usage in primary and secondary schools and tertiary institutions to enhance teaching and learning. The success of SMART Education hinges on the provision of connectivity and infrastructure (electricity, ICT equipment), Skilled and well-equipped Teachers/Instructors and appropriate content that address diversities in Zimbabwe.

We seek to achieve knowledge-based economic developments through education and human resources development and utilization. Therefore, it is necessary for Zimbabwe to adopt strategies and structures that ensure Zimbabwe maintains its high education level and skilled manpower development thrust which include.

- Schools Systems, Platforms and Records
- Teaching delivery (pedagogy) including children with special needs

- Skills identification and development
- Staff and students' welfare
- Communication

All these are supported by the anchor platforms of security, infrastructure, skilled manpower, content development and regulatory framework.

There is need to collaborate with relevant institutions, Government Ministries, schools, colleges and universities to develop programs that increase ICT human resource capacity and skills through the provision of equitable access to ICT enabled education and training in all parts of the country, including disadvantaged communities.
We should encourage and support research and development in ICTs in and promote e-learning and use of e-learning materials throughout Zimbabwe.

Key Stakeholders

- Ministry of Higher and Tertiary Education Science and Technology Development
- Ministry of Primary and Secondary Education
- Office of the President and Cabinet
- Other Government Ministries
- Citizens

Benefits:

- Transformation of the Education sector into a regional manpower development hub.
- Export of Human skills and earn revenue for the country.
- Application of education to enhance sustainable livelihoods and entrepreneurship.
- Use of schools and tertiary institutions as content development solutions
- Connection of all learning institutions to the national education network with full online access to digital content in the education cloud.
- Increased education opportunities and information for ordinary citizens.
- Reduced education costs and improved service quality.
- Enhanced students/teacher interaction through open and distance learning
- Integrated students and teacher's information.

4.4.3 Smart Cities

A Smart City is a developed urban area that creates sustainable economic development and high quality of life by excelling in multiple key areas such as: economy, mobility, transportation, built environment, Smart Infrastructure(electricity, lighting, surveillance, road networks, water, waste management,), people, accommodation(houses and offices), and government.

The advent of Smart Cities is one of the greatest challenges and field of opportunities in the goal to achieve sustainable, comfortable, and socially responsible living environments. A large number of factors, spanning from Government / administration / citizen interaction models, heterogeneous communication network, interoperability, or security determine the capabilities and functionalities that can be deployed resulting in a new model of public organization.

Data and Information in a smart city is collected through integrated set of sensors strategically located throughout the city and monitored through a network operating centre. The collected data and information is stored in databases and city data centre where it is accessed by Citizens and City Authorities through specific applications such as health, traffic management and waste management.

These layers are shown Fig 6 below.

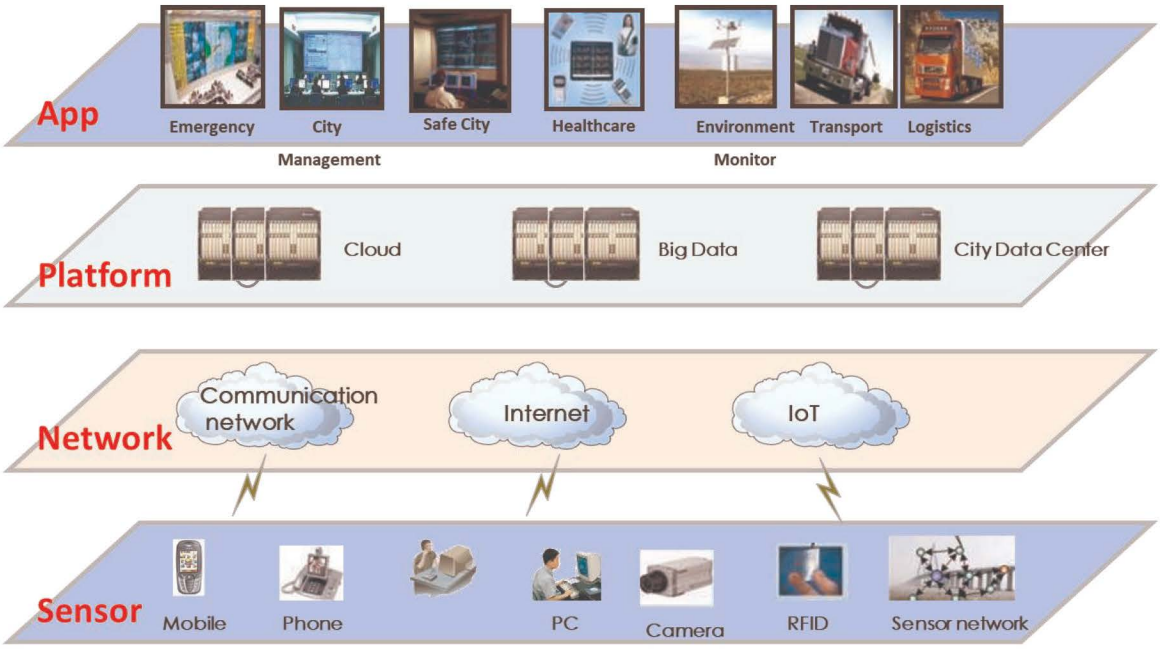


Fig. 6 SMART City Layers

Key Stakeholders

- Ministry of Local Government, Public works and National Housing
- Office of the President and Cabinet
- Government Ministries
- Citizens

Benefits:

- A better quality of life for residents and visitors
- Economic competitiveness to attract industry and talent
- An environmentally conscious focus on sustainability
- Make governance Citizen-friendly and cost effective
- Better city services and a higher quality of life

4.4.4 Smart Agriculture

Smart Agriculture is a concept of farming management using modern Information and Communication Technologies to increase the quantity and quality of products. Smart Agriculture seeks to enhance overall productivity in all subsectors of agriculture and

provide basis for industrialization as well as the provision of timely and relevant information to the farming community.

In identifying the ways in which ICT can help agriculture, it is useful to broadly view the farming life cycle as a three-stage process:

- ***Pre-cultivation**:* including crop selection, land selection, calendar definition, access to credit, etc.
- ***Crop cultivation and harvesting**:* including land preparation and sowing, input management, water management and fertilization, pest management, etc.
- ***Post-harvest*:** including marketing, transportation, packaging, food processing, etc.

Some technologies available for present-day farmers include;

- ***Sensing technologies*** - including soil scanning (type and nutrients), water and moisture, light, humidity, temperature management;
- ***Software applications*** - specialized software solutions that target specific farm types and crops suitable for agricultural regions in the country, software for livestock farming;
- ***Weather forecasting*** – precise weather prediction and dissemination of same information to stakeholders;
- ***Communication platforms -*** mobile communication access, access to markets (local, regional and international), GPS, and drone technologies;
- ***Storage technologies*** – storage technologies for all crops, grading and regrading before marketing,
- ***Hardware and software systems*** - for IoT-based solutions, robotics and automation, mechanization, drip irrigation and water conservation, and

- ***Databases and Data centre for the agriculture sector – collection and storage of agriculture data and information,*** *Data analytics*, agricultural inputs, dissemination of information to farmers, agritex officers and decision makers,

Key Stakeholders

- Ministry of Lands, Agriculture, Water, Climate and rural Settlement
- Office of the President and Cabinet
- Government Ministries
- Organisations and industries involved in Agriculture
- Citizens

Benefits:

- Improved productivity and increased efficiency in the agriculture value chain
- Diversified agriculture product portfolio
- Evolve from subsistence farming to commercial farming with export potential

4.4.5 Smart Health

New technologies have influenced many parts of our daily life. Today's healthcare system has also recognized the advantages of using Information and Communication Technology (ICT) to improve the quality of healthcare, turning traditional into smart healthcare.

Smart healthcare is defined by the technology that leads to better diagnostic tools, better treatment for patients, and devices that improve the quality of life for anyone and everyone.

Key Stakeholders

- Ministry of Health and Child Care
- Ministry of Local Government, Public Works and National Housing
- Office of the President and Cabinet
- Government Ministries

- Health Organisations
- Citizens

Core Objectives:

- Provide better social security and higher quality of lives through enhancement of information sharing between government institutions
- Increase access to medical information and service and provide digitalized network for health information (e-Health)
- Provide technology platform for an integrated health information system and digitalized insurance claim system to systematically manage information for preemptive and efficient response measures.

Benefits:

- Ensure universal access to affordable preventive, curative, and rehabilitative health services of the highest attainable quality.
- Empowering and transforming communities through improved access to health information and services
- Have an effective infrastructure, applications and information systems supporting effective and efficient delivery of healthcare services

4.4.6 Smart Transport

Key Stakeholders

- Ministry of Transport and Infrastructural Development
- Office of the President and Cabinet
- Ministry of Industry and Commerce
- Ministry of Energy and Power Development
- Other Government Ministries
- Transport Sector Stakeholders
- Citizens

Core Objectives:

Intelligent transport system can be defined as the technology applied to transport infrastructure (Road networks, traffic and transit systems) to:

- Manage traffic and reduce congestion
- Enable users to make informed decisions
- Integrate technologies and expertise to create and provide innovative services
- Improve safety and mobility
- Increase the efficiency of existing transport infrastructure

Benefits:

- Improving traffic safety and reduce traffic accidents
- Reducing infrastructure damage
- Traffic control
- Parking management
- Gathering traffic data
- Increase revenue collection including from vehicles in transit

4.4.7 Smart Trade / Commerce

Key Stakeholders

- Ministry of Industry and Commerce
- Office of the President and Cabinet
- Ministry of Foreign Affairs and International Trade
- Other Government Ministries
- Industry Players
- Citizens

Core Objectives:

- Diversify the sources of profit to promote national economic growths by developing new products and service portfolios beyond the current agriculture.
- Fortify social infrastructures including transportation and electricity to increase business opportunities and expansion of industrial development
- Empower all key economic sectors by enhancing the ICT productivity

Benefits:

- Increase the competitiveness of private sector
- Provide one-stop services and established integrated channels to support companies
- Created business-friendly environments by enhancing the public participation

- Facilitated well-managed foreign investment management system to effectively regulate potential risks even during the global economic fluctuations
- Improved transportation system to enhance the productivity and reduce the transportation costs and delivery time
- Enhanced the electricity monitoring system to maximize the “stability of power supply” and minimize the “systemic energy loss”

4.4.8 Smart Tourism

Key Stakeholders

- Ministry of Environment, Tourism and Hospitality Industry
- Office of the President and Cabinet
- Ministry of Foreign Affairs and International Trade
- Ministry of Transport and Infrastructural Development
- Other Government Ministries
- Tourism Sector Players
- Citizens

Core Objectives:

Benefits:

- Increased revenue through tourism
- Improved country’s image

5 Impact of the Smart Zimbabwe 2030 Initiative

The SMART Zimbabwe 2030 Initiative will have the following impact to the country and its sectors:

i) ***Impact on Government-*** Ease of doing business (e.g. time to taken obtain passports will be reduced), improved service delivery, improved revenue collection, reduced corruption, improved Human Resource Management in the

civil service. Efficient utilisation of Government resources. Transformation of public sector and public service delivery.

ii) ***Impact on the Economy -*** ICTs are widely recognized as critical enablers of economic activity. An ITU analysis revealed that a 10% increase in a country's digitization score fuels a 0.75 percent growth in its GDP per capita. Additionally, the economic effect of digitization accelerates as countries move to more advanced stages of digitization. Further, ICT transformation leads to economic improvements in agricultural crop yields, innovation efficiency, production efficiency, reduction of global CO2 emissions, in addition to increase in employment rate and increase in GDP. According to World Bank Statistics, "A 10-point increase in the digitization score can lead to a 1.02 percent drop in the unemployment rate". Every 10 percent increase in broadband penetration leads to 2 percent to 3 percent increase of the employment rate. Financial inclusion is improved.

iii) ***Impact on Society -*** The real benefit of ICTs on Society is invaluable but cannot easily be measured. ICTs have changed the way transactions are conducted, the way in which information is circulated, and the way in which we educate and inform ourselves. Social inclusion is improved.

6 Outcomes of SMART Zimbabwe 2030

The outcomes of SMART Zimbabwe can be summarized in three categories, namely Digital Government, Digital Economy and Digital Society. Some of the characteristics of these outcomes are captured in the diagram below (Fig 7.) and the ensuing descriptions outlined thereafter.

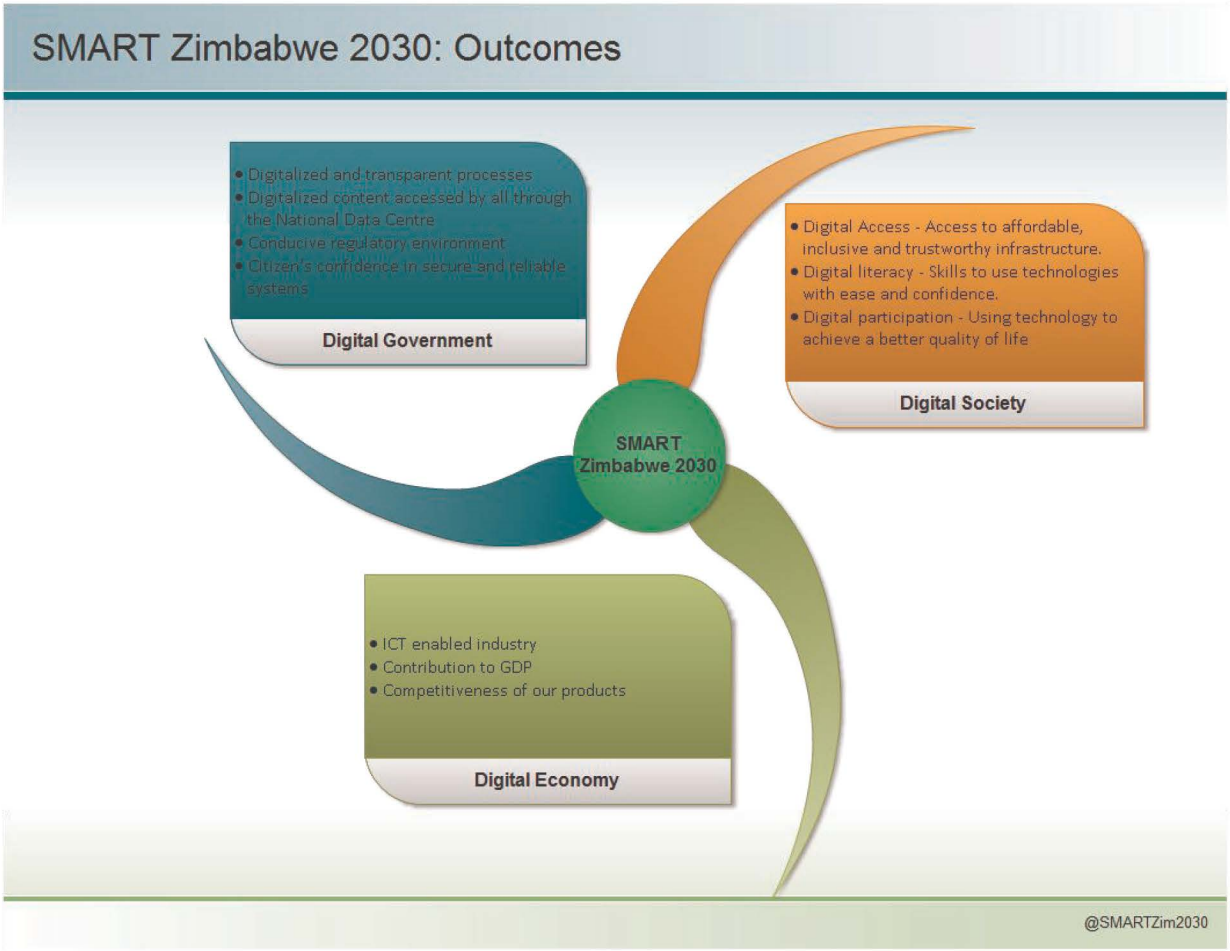


Fig. 7 SMART Zimbabwe 2030 Outcomes

6.1. Digital Government

As an outcome of the Smart Zimbabwe 2030 Initiative, agile governance, an innovative model of Government inspired by the software industry, could redefine the relationship between the Government of Zimbabwe and its citizens. By making Government more flexible and nimble, Government efficiency will be increased while Government programmes will be improved and citizenry will emerge more empowered and engaged. The following are the key characteristics of a digital Government.

- Digitalized and transparent processes
- Digitalized content accessed by all through the National Data Centre
- Conducive regulatory environment
- Citizen's confidence in secure and reliable systems

6.2. Digital Economy

One of the outcome of the Smart Zimbabwe 2030 Initiative is the Digital Economy that will emerge as a network of economic activities, commercial transactions and professional interactions that will be facilitated by a systematic adoption and deployment of Information and Communications Technologies. The digital economy will be most felt in the following areas:

- ICT enabled industry
- Contribution to GDP
- Competitiveness of our products

6.3. Digital Society

A modern digital society entails that its citizens benefit from the following:

- *Digital Access* - Having ready access to affordable, inclusive and trustworthy infrastructure.
- *Digital literacy* - Having the motivation and skills to use technologies with ease and confidence.
- *Digital participation* - Using technology to achieve a better quality of life (e.g. convenience in day-to-day activities, better social and economic outcomes).

As an outcome of the Smart Zimbabwe 2030 Initiative, the Digital Society will usher in the 'Age of Networked Intelligence'. It will not simply be about the networking of technology but about the networking of humans in society through technology. It will not just be an age of smart machines but of humans who, through networks can combine their intelligence, knowledge, and creativity for breakthroughs in the creation of wealth and social development. It will not just be an age of linking computers but of internetworking human ingenuity.

An inclusive, sustainable, and trustworthy digital future can be made possible by focusing on access and adoption, responsible digital transformation, governance, secure and resilient processes, human-centric digital identities, and data sharing.

7 Implementation Strategy of Smart Zimbabwe 2030 Master Plan

7.1 Smart Zimbabwe 2030 Institutional Arrangement

The Ministry of ICT, Postal and Courier Services acts as the central hub to which ICT sector players feed and from which they are coordinated.

i) Ministry of ICT, Postal and Courier Services

The Ministry provides guidance, policy oversight and overall ICT sector coordination and leadership.

ii) Converged Regulatory Authority

A converged regulatory authority (following the merger of Postal and Telecommunications Regulatory Authority of Zimbabwe and Broadcasting Authority of Zimbabwe) will promote policy harmonization.

iii) Zimbabwe ICT Innovation Hub

Responsible for ICT skills development, content creation and innovation. These hubs will collaborate with other related hubs in the innovation ecosystem e.g. at Government level.

iv) The National ICT Advisory Committee

A grouping of eminent Zimbabwean and international experts drawn together to provide strategic direction in the ICT Sector.

v) National Economic Consultative Forum (NECF)

The NECF is responsible for fostering partnerships between Government and the private sector in national developmental initiatives including ICTs. They are also responsible for coordinating the activities of the private sector leading to investment and Private Public Partnerships (PPPs) in the ICT sector.

vi) National Cybersecurity Agency

An independent institution responsible for all cyber security activities and will relate to the Ministry of ICT, Postal and Courier Services.

vii) Development partners

Foreign institutions and local companies that are in partnership with Zimbabwe in its developmental initiatives particularly ICTs.

viii) Government Ministries and Departments

Implementation of ICT programs and projects in Government Ministries and Departments. These become key partners in implementing the SMART sector solutions contained in this Master Plan.

8.1. Implementation plan

Delivery of the Smart Zimbabwe 2030 Strategy is broadly divided into the following three (3) phases:

Phase I:

Short terms goals 2018-2020 period is focused on deriving benefits and relative quick wins which include deploying the basic communications infrastructure, enhancing the universal mobile access, building national optic fibre backbone, scaling up the public cloud platform, and deploying the smart energy grid system, transport network, et cetera.

We need to revise the policies and regulations that will anchor long-term implementation of SMART Zimbabwe 2030 Strategy. There must be adequate energy and road network infrastructure. Provided funds are available, the following Short-Term programs can be implemented:

i) Complete the policies, regulations and standards necessary to support Smart Zimbabwe Masterplan.

ii) Establish Cyber Security Framework and systems.

iii) Complete Communications Infrastructure countrywide (Optic Fibre, Mobile Networks, PFMS Network)

iv) Set up the necessary institutional arrangements to manage, coordinate and implement Smart Zimbabwe Masterplan.

v) Establish assembly plants for ICT equipment and accessories.

vi) Ensure Government content is digitized, National Data Centre operationalized.

vii) Set up software development structures.

viii)Capacity Building

Phase 2:

Smart Sector specific and detailed programs should be developed and structured so that they effectively contribute to Smart Zimbabwe global agenda

i) Smart Government

ii) Smart Education

iii) Smart Health

iv) Smart Agriculture

Phase 3:

i) Smart Energy and Grid

ii) Smart Local Government

iii) Smart Cities

iv) Smart transport

v) Smart Mining

vi) Smart Boarders

vii) Smart Trade/Commerce.

8.2. Project implementation strategy summary & timeline

PLATFORMS						
1.	**Policy, Regulation and Standards**					
	Strategic	Project	Budget	Funding	Action Party	Timeline

	Interventions	Activities	US$('000)	Source		
2.	**Confidence and Security in Networks and Services**					
	Strategic Interventions	Project Activities	Budget US$('000)	Funding Source	Action Party	Timeline
3.	**Shared Infrastructure**					
	Strategic Interventions	Project Activities	Budget US$('000)	Funding Source	Action Party	Timeline
4.	**Skills, Capacity Building and Content Development**					
	Strategic Interventions	Project Activities	Budget US$('000)	Funding Source	Action Party	Timeline
	PILLARS					
5	**Smart Government**					
	Strategic Interventions	Project Activities	Budget US$('000)	Funding/Action Party		Timeline
6	**Smart Cities**					
	Strategic Interventions	Project Activities	Budget US$('000)	Funding/Action Party		Timeline
6	**Smart Agriculture**					
	Strategic Interventions	Project Activities	Budget US$('000)	Funding/Action Party		Timeline
