MINISTRY OF COMMUNICATIONS

Republic of Ghana

SECTOR MEDIUM-TERM DEVELOPMENT PLAN, 2018-2021

JUNE, 2019

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LIST OF ABBREVIATIONS AND ACRONYMS

GoG	Government of Ghana
BPO	Business Process Outsourcing
GCNet	Ghana Community Network
PPP	Public Private Partnership
IRS	Internal Revenue Service
DP	Development Partners
RFP	Request for Proposal
CICs	Community Information Centres
eCICs	Enhanced Community Information Centres
GEA	Ghana Enterprise Architecture
e-GIF	Electronic Government Interoperability Framework
GOVNet	Government Network
WIMAX	Worldwide Interoperability Microwave Access
GDP	Gross Domestic Product
UNDP	United Nations Development Programme
GRA	Ghana Revenue Authority

KIA	Kotoka International Airport
GIS	Ghana Immigration Service
NCA	National Communications Authority
GMet	Ghana Meteorological Services
DPC	Data Protection Commission
MoC	Ministry of Communications
PCSRC	Postal and Courier Services and Regulatory Commission
RSIM	Research Statistics and Information Management
PPME	Policy Planning, Monitoring and Evaluation
F&A	Finance and Administration
HRM	Human Resource Management
BDU	Business Development Unit
ADC	Accra Digital Centre
ICT	Information and Communication Technology
I.T.	Information Technology
M2M	Machine to Machine
DTT	Digital Terrestrial Television

NDMMC	National Digital Broadcasting Migration Committee
EMF	Electromagnetic Field
QoS	Quality of Service
SSL	Secured Socket Layer
HTTPS	Hypertext Transfer Protocol Secure
HTTP	Hypertext Transfer Protocol
PKI	Public Key Infrastructure
UPS	Virtual Private Sector
RTP	Rural Telephony Project
CERT, GHANA	
GISC	Ghana Internet and Security Centre (GISC)

EXECUTIVE SUMMARY

The preparation of the Ministry of Communications' Sector Medium-Term Development Plan, 2018-2021 was guided by the President's Coordinated Programme of Economic and Social Development Policies 2017-2024 dubbed 'Agenda for Jobs', the 2017 State of the Nation's Address as well as Sections 1, 10 and 11 of the National Development Planning (System) Act 1994 (Act 480) which enjoins Ministries and Sector Agencies to undertake development planning functions in consultation with the National Development Planning Commission (NDPC) in accordance with the Civil Service Law, 1993 (PNDC Law 327). The preparation of the Plan was also influenced by the United Nations Sustainable Development Goals (Agenda 2030), and the African Union Agenda (Agenda 2063). This was to ensure synchronization of the plan with regional and international policies as well as serve as a fulcrum to achieving the goals and targets enshrined in those documents.

The Plan is composed of seven chapters with chapter one focusing on performance review of the implementation of the 2014-2017 Sector' Plan under the Ghana Shared Growth and Development Agenda (GSGDA) II, to ascertain extent of progress within the period, challenges encountered and lessons learnt. Chapter two highlighted on development issues arising from the implementation of the GSGDA II and juxtaposing it with current ICT industry issues. Chapter three looked at Development Projections, Goal, Adopted Objectives and Strategies. Chapter four is pivoted on Programme of Action for 2018-2021 and Chapter five is comprised of an Annual Action Plans developed to guide the implementation of the 2018-2021 Sector Medium-Term Development Plan (SMTDP). Finally, Chapter five states the Monitoring and Evaluation Plan developed to monitor progress of implementation and to periodically access performance, including a Communication Plan developed to inform and educate the citizenry on government policies, programmes and activities within the communications' sector aimed at improving the general well-being of all Ghanaians.

Summary of Achievements: 2014-2017

The medium-term policy interventions under the GSGDA II, 2014-2017 aimed at promoting rapid development and deployment of the national ICT infrastructure; strengthening the institutional and regulatory framework for managing the ICT sub-sector; and increasing the use of ICT in all sectors of the economy. In sequel, the period witnessed the completion of the Eastern Corridor fibre optic project where 780km fibre cable was laid from Tamale to Yendi linking 27 towns along its route. The landing of five (5) submarine cables namely SAT-3, GLO 1, MAIN ONE, ACE and WACS in the period also significantly improved broadband connectivity. Further, the

implementation of the policy objective of strengthening the institutional and regulatory framework saw the construction of Ultra-Modern Office Complex in 2015 which is currently housing the Ministry, NITA, GIFEC and the National Primary Data Centre which was also completed in 2015. To foster innovation, creativity as well as generate employment, particularly for the youth was the establishment of the Accra Digital Centre in 2016. In the area of developing an enabling policies to facilitate growth and use of ICTs, the following policies were developed: Type Approval Policy, Interconnect Clearinghouse Policy, review of ICT for Accelerated Development Policy, review of the Cyber Security Policy and Strategy, review of the Draft Broadcasting Bill aimed at strengthening and sanitizing the broadcasting industry, among others. The enabling environment created led to an increase in mobile penetration rate from 127% in 2015 to 136.34% in 2016. The proportion of internet service subscribers also increased from 66.3% as at August 2015 to 70.6% in 2016.

The e-Transform Ghana Project became effective on September 19, 2014. The project development objective is to improve the efficiency and coverage of government service delivery using information and communication technology (ICT). The project consists of four components: i) enabling environment for electronic government and business; ii) support for upgrading national identification system of Ghana, and providing online verification services; iii) scaling up applications to improve service delivery in priority sectors; and iv) project management. The project's intended closing date is June 30, 2019. Some of the achievements of the Project within the period were: the establishment of the Ghana Internet and Security Centre to ensure internet security of government data and e-Applications, advancing the process of developing guidelines for the Public Key Infrastructure (PKI) and Certification Authorities (CAs) which was to review additional technologies for secure electronic transactions, establish the role of the private sector and the need for a marketplace for electronic certificates. Others were; capacity building for Open Dta and Big Data Analytics and the commencement of the deployment of e-Immigration Systems at Tema, Takoradi (sea port), Paga, Elubu (land Borders), Kotoka International Border and Ghana Immigration Service Headquarters. The intervention was to regulate safe entry into and exist from Ghana. The project also supports Public Procurement Authority (PPA) to develop electronic system for government-wide procurement in Ghana. Scope requirements definition was done under eGhana Project.

The achievements indicated were not without some challenges, which includes inadequate interest and expertise in use of ICTs in service delivery, low quality of experience and service in mobile telephony, high cost of access to information and telecommunications infrastructure and services and lack of harmonization of ICT policies and strategies within the public sector. Others are; delays in release and in some cases the non-release of budgetary allocations for the ICT sector.

CHAPTER ONE

PERFORMANCE REVIEW/PROFILE/CURRENT SITUATION/BASELINE

1.1 INTRODUCTION

The Chapter describes the profile and current situation of the Ministry of Communications. It further presents the Vision, Mission, Core Values and Functions of the Ministry. It continued with analysis of performance of the Ministry, Departments and Sector Agencies implementing its programmes and projects under the Thematic Areas: Infrastructure and Human Settlements Development, and Transparent and Accountable Governance under the Ghana Shared Growth and Development Agenda (GSGDA) II, 2014 – 2017.

The analysis of the Sector's performance takes into consideration current development issues facing the Sector; institutional capacity needs as well as analysis of cross-cutting issues such as gender equality, poverty, inequality and social protection. It also includes: population dynamics, employment and Information and Communication Technology. The analysis of these issues examined their inherent risks/challenges and opportunities and implications for the Sector's new Medium-Term Development Plan.

The review was also to enable the Ministry identify the challenges, issues and opportunities available for future planning during implementation of GSGDA II, 2014-2017 that may have implications on the 2018-2021 plan period, chapter three comprised development projections, goal, objectives and strategies, chapter four focused on Programme of Action for the 2018-2021 Plan, chapter five delineates the annual action plans for implementing the Plan and finally chapter six accounts for monitoring and evaluation of performance, and ultimately a Communication Plan for informing on success and challenges encountered in implementation of the 2018-2021 plan.

The Chapter concluded with identification of lessons learnt and key development issues requiring attention in the implementation of the Sector's Medium-Term Development Plan, 2018-2021.

1.2 VISION, MISSION, CORE VALUES AND FUNCTIONS

The Ministry in the implementation of its sector plan was guided by the following Vision, Mission, Core Values and Functions:

1.2.1 VISION

To become a world class ICT policymaking body employing topnotch innovative skills in a knowledge-based economy.

1.2.2 MISSION

To facilitate the development of a reliable and cost-effective world-class communications infrastructure and services, driven by appropriate technological innovations and accessible by all citizens to enhance the promotion of economic competitiveness in a knowledge-based environment.

1.2.4 CORE VALUES:

The Ministry was guided by the under-listed core values in the discharge of its mandate:

- Efficiency and Effectiveness
- Openness, Transparency and Accountability
- Innovativeness and Creativity

1.2.3 FUNCTIONS:

- Initiate and formulate ICT policies taking into account the needs and aspirations of the people.
- Coordinate, monitor and evaluate the efficiency and effectiveness of the performance of the Communications Sector.

- Develop appropriate regulations to protect consumers and stimulate competition.
- Provide reliable and timely meteorological data to weather-sensitive sectors of the economy.

1.3 SECTOR PERFORMANCE REVIEW (GSGDA, 2014-2017)

The importance of Telecommunications/ICTs for sustainable development cannot be underestimated; it cuts across all the Sustainable Development Goals and are an enabler for growth and development. Since the inception of 2014, the Telecommunications/ICTs industry has continuously registered significant progress.

The Table below (Table 1) summarizes the achievements of the Ministry of Communications and its sector agencies during the implementation of the Ghana Shared Growth and Development Agenda II (2014-2017). Achievement of the Ministry covers general administration, ICT/Telecommunication policy developments and reviews, infrastructure development, human and institutional capacity development, data management and protection issues and climatological monitoring issues.

Table 1. 1: Summary of Performance of the Ministry and its Sector Agencies from 2014 to 2017

PERIOD	PROGRAMMES	SUB-PROGRAMMES	BROAD PROJECT/ACTIVITY	INDICATORS			REMARKS
				Baseline (2013)	MTDP Target	Achievements	
Thematic Area: Infrastructure and Human Settlement Development							
Policy Objective: To strengthen the institutional and regulatory framework for managing the ICT sub-sector							
2014	Management and Administration	F&A	Organize quarterly Audit Committee (AC) meetings	Four (4) Audit Committee Meetings held.	4 AC meetings organised.	Four (4) meetings held.	Fully implemented

PERIOD	PROGRAMMES	SUB-PROGRAMMES	BROAD PROJECT/ACTIVITY	INDICATORS			REMARKS
				Baseline (2013)	**MTDP Target**	**Achievements**	
2015				Four (4) AC meetings	Organise Four (3) AC meetings held	Three (3) meeting held.	Ongoing
2016				Three (3) AC meetings held	Organise Four (4) AC meetings	Two (3) meeting held.	Ongoing (85% implementation)
2017				Three (3) AC meetings held	Organise Four (4) AC meetings	Four (4) AC meetings held.	Fully implemented.
2014	Management and Administration	F&A	Organize quarterly budget committee meetings	2	4	Four (4) meeting meetings orgaised.	Fully implemented
2015				4	4	Four (4) meeting meetings orgaised.	Fully implemented
2016				4	4	Four (4) meeting meetings orgaised.	Fully implemented
2017				4	4	Four (4) meeting meetings orgaised.	Fully implemented
2014	Management and Administration	F&A	Budget Preparation workshops and meetings	0	1	Nil	Not implemented (Budget constraints)
2015				Nil	1	Nil	Not implemented (Budget constraints)

PERIOD	PROGRAMMES	SUB-PROGRAMMES	BROAD PROJECT/ACTIVITY	INDICATORS			REMARKS
				Baseline (2013)	**MTDP Target**	**Achievements**	
2016				Nil	1	1	Fully implemented
2017				1	1	1	Fully implemented
2014	Management and Administration		Prepare/Review Annual Assets Register	2013 Annual Asset Register available.	Prepare 2014 Annual Asset Register	Prepare 2014 Annual Assets prepared	Fully implemented
2015				2014 Annual Assets prepared	Prepare 2015 Annual Asset Register	Prepare 2015 Annual Assets prepared.	Fully implemented
2016				2015 Annual Assets prepared	Prepare 2016 Annual Asset Register	Prepare 2016 Annual Assets prepared.	Fully implemented
2017				2017 Annual Assets prepared	Prepare 2017 Annual Asset Register	Prepare 2017 Annual Assets prepared.	Fully implemented
2014	Management and Administration	F&A	Construction of Ultra-Modern Office Complex for MoC Head Office	Land acquired and contract awarded	Ultra-Modern Office Complex constructed.	Material, financial and Human resources for construction of Ultra-modern Office Complex acquired.	Ongoing (25% completion)

PERIOD	PROGRAMMES	SUB-PROGRAMMES	BROAD PROJECT/ACTIVITY	INDICATORS			REMARKS
				Baseline (2013)	**MTDP Target**	**Achievements**	
2015				Construction of Ultra-Modern Office Complex reached foundation level.	Complete Construction of Ultra-Modern Office Complex	Ultra-Modern Office Complex construction reaches roofing level	Ongoing (90% completion)
2016				Ultra-Modern Office Complex construction reaches roofing level	Complete Construction of Ultra-Modern Office Complex	Physical infrastructure completed, but furnishing was 98% completed.	Ongoing (98% completion level)
2017				Physical infrastructure completed, but furnishing was 98% completed.	Complete furnishing works on Ultra-Modern Office Complex	Fully furnished Ultra-modern Office Complex completed.	Fully implemented (Modern 7-Floor Office Complex has been built for MoC HQs, NITA, & GIFEC)
2014	Management and Administration	F&A	Treasury and Accounting activities	2013 Quarterly financial	Prepare Quarterly financial performance	Quarterly financial performance reports prepared over the medium-term.	Fully implemented
2015							
2016							

PERIOD	PROGRAMMES	SUB-PROGRAMMES	BROAD PROJECT/ACTIVITY	INDICATORS			REMARKS
				Baseline (2013)	**MTDP Target**	**Achievements**	
2017				performance reports	reports prepared		(Reduced infractions on financial misappropriations).
2014	Management and Administration	F&A	Preparation of Annual Procurement Plans	Nil	Prepare 2014 Procurement Plan prepared	2014 Procurement Plan prepared	Fully implemented
2015				2014 Procurement Plan prepared	Prepare 2015 Procurement Plan	2015 Procurement Plan prepared	Fully implemented
2016				2015 Procurement Plan prepared	Prepare 2016 Procurement Plan	2014 Procurement Plan prepared	Fully implemented
2017				2016 Procurement Plan prepared	Prepare 2017 Procurement Plan	2017 Procurement Plan prepared	Fully implemented
Thematic Area: Infrastructure and Human Settlement Development							
Policy Objective: To strengthen the institutional and regulatory framework for managing the ICT sub-sector							
2014 2015 2016	Management and Administration	PPME	Develop and review enabling Policies and Regulations	Inadequate/ weak laws and regulations	Develop/ review weak & ineffective laws and regulations in the	**Polices developed**: ▪ Interconnect Clearinghouse	Ongoing <u>Policies yet to be updated</u>

PERIOD	PROGRAMMES	SUB-PROGRAMMES	BROAD PROJECT/ACTIVITY	INDICATORS			REMARKS
				Baseline (2013)	**MTDP Target**	**Achievements**	
					Communications Sector.	Services Regulations, 2016 ▪ Electronic Communications Tribunal Regulations, 2016 **Polices Reviewed:** ▪ Cyber Security Policy and Strategy revised, 2015 ▪ Type Approval Revised Guidelines, 2015 ▪ Broadband Policy, 2012 (Revised)	▪ National Telecom Act, 2005 ▪ Interconnect Clearinghouse Services Regulations, 2016
2017							
2014	Management and Administration	PPME	Monitoring and Evaluation of DTT sites	Nil	Undertake One (1) M&E visits at DTT sites.	One (1) M&E visit undertaken at DTT sites.	Fully implemented

PERIOD	PROGRAMMES	SUB-PROGRAMMES	BROAD PROJECT/ACTIVITY	INDICATORS			REMARKS
				Baseline (2013)	MTDP Target	Achievements	
2015				One (1) M&E visits undertaken	Undertake One (1) M&E visits at DTT sites.	One (1) M&E visit undertaken on DTT sites.	Fully implemented
2016				One (1) M&E visit undertaken at DTT sites.	Undertake One (1) M&E visits at DTT sites.	One (1) M&E visit undertaken at DTT sites.	Fully implemented
2017				One (1) M&E visit undertaken at DTT sites.	Undertake One (1) M&E visits at DTT sites.	One (1) M&E visit undertaken at DTT sites.	Fully implemented
2014	Management and Administration	PPME	Development of Annual Action Plans	2013 Annual Action Plan	Develop 2014 Annual Action Plan	2014 Annual Action Plan prepared.	Fully implemented
2015				2014 Annual Action Plan	Develop 2015 Annual Action Plan	2015 Annual Action Plan prepared.	Fully implemented
2016				2015 Annual Action	Develop 2016 Annual Action Plan	2016 Annual Action Plan prepared.	Fully implemented
2017				2016 Annual Action Plan	Develop 2017 Annual Action Plan	2017 Annual Action Plan prepared.	Fully implemented

PERIOD	PROGRAMMES	SUB-PROGRAMMES	BROAD PROJECT/ACTIVITY	INDICATORS			REMARKS
				Baseline (2013)	MTDP Target	Achievements	
2014	Management and Administration	PPME	Preparation of Annual Progress Reports	2013 Annual Progress Report	Prepare 2014 Annual Progress Report	2014 Annual Progress Report Prepared	Fully Implemented
2015				2014 Annual Progress Report	Prepare 2015 Annual Progress Report	2015 Annual Progress Report Prepared	Fully Implemented
2016				2015 Annual Progress Report	Prepare 2016 Annual Progress Report	2016 Annual Progress Report Prepared	Fully Implemented
2017				2016 Annual Progress Report	Prepare 2017 Annual Progress Report	2017 Annual Progress Report Prepared	Fully Implemented
2014	Management and Administration	PPME	Digital Terrestrial Television (DTT)	Ghana signed into Budapest Convention for DTT	DTT project rolled out	▪ Blue print for action developed. ▪ Country zoned and project divided into three phases. ▪ Loan contracted for work to start.	Ongoing

PERIOD	PROGRAMMES	SUB-PROGRAMMES	BROAD PROJECT/ACTIVITY	INDICATORS			REMARKS
				Baseline (2013)	**MTDP Target**	**Achievements**	
						▪ Contract awarded.	
2015		PPME		Contract awarded for DTT project	Analogue switch-off commenced	▪ Contract signed for supply and installation of relevant equipment in July. ▪ First phase covering Headend and digital broadcast service for Greater Accra and Ashanti Regions completed. ▪ Adverts placed in the media for procurement and distribution of Set-Top-Boxes to identified poor communities. ▪ Process for auctioning of first Digital Dividend in the 800MHz	Ongoing (Project delayed for legal tussle between MoC and China Exim Bank)

PERIOD	PROGRAMMES	SUB-PROGRAMMES	BROAD PROJECT/ACTIVITY	INDICATORS			REMARKS
				Baseline (2013)	**MTDP Target**	**Achievements**	
						frequency band commenced. ▪ Educational and awareness campaigns intensified.	
2016 2017		PPME		First phase covering Headend and digital broadcast service for Greater Accra and Ashanti Regions completed.	Analogue switch-off commenced	▪ All three (3) phases of DTT Network project was completed. i. Phase 1: Six sites in Greater Accra and Ashanti Regions. ii. Phase 2: Sixteen sites in Volta, Northern, Upper East and Upper West Regions. iii. Phase 3: Twenty sites in Brong Ahafo, Eastern,	Ongoing (Analogue switch-off date moved to 2019 for delay in power supply to 19 DTT sites).

PERIOD	PROGRAMMES	SUB-PROGRAMMES	BROAD PROJECT/ACTIVITY	INDICATORS			REMARKS
				Baseline (2013)	**MTDP Target**	**Achievements**	
						Central and Western Regions ▪ National Operator hired to manage transmission.	
2014	Management and Administration	RSIM	Train girls in ICT courses	163 girls trained in ICT courses	500 girls trained in ICT courses	▪ 500 girls from 48 public schools in the Eastern Region trained in ICT courses	Fully implemented
2015		RSIM	Train girls in ICT courses	500 girls trained in ICT courses	900 girls trained in ICT courses	▪ 907 girls from public schools in in the Northern Region trained in ICT courses	Fully implemented
2016		RSIM	Train girls in ICT courses	900 girls trained in ICT courses	1,000 trained in ICT Courses	▪ 1,000 girls selected from public schools in beneficiary Districts in Volta Region trained in ICT courses	Fully implemented (100 more girls were trained resulting from partnership arrangements).

PERIOD	PROGRAMMES	SUB-PROGRAMMES	BROAD PROJECT/ACTIVITY	INDICATORS			REMARKS
				Baseline (2013)	MTDP Target	Achievements	
2017		RSIM	Train girls in ICT courses	1,000 trained in ICT Courses	450 girls to be trained.	450 girls selected from four (4) Districts in B/A Region trained in ICT.	Fully Implemented.
2014	Management and Administration	RSIM	Prepare Client Service Charters	2013 Client Service Charter	Prepare 2014 Client Service Charter	2014 Client Service Charter Developed for MoC and Sector agencies	Fully implemented
2015				2014 Client Service Charter	Prepare 2015 Client Service Charter	2015 Client Service Charter Developed for MoC and Sector agencies	Fully implemented
2016				2015 Client Service Charter	Nil	Nil	Suspended No need was identified to prepare or update the 2015 Client Service Charter
2017				2015 Client Service Charter	Prepare 2017 Client Service Charter	2017 Client Service Charter	Fully Implemented

PERIOD	PROGRAMMES	SUB-PROGRAMMES	BROAD PROJECT/ACTIVITY	INDICATORS			REMARKS
				Baseline (2013)	MTDP Target	Achievements	
2014	Management and Administration	RSIM	Publication of Sector Newsletter	2013 Newsletter	Publicize 2014 Sector Newsletter	2014 Newsletter was not publicized	Not implemented
2015				Nil	Publicize 2014 Sector Newsletter	Nil	Not Implemented (Inadequate funds to undertake the activity).
2016				Nil	Publicize 2016 Sector Newsletter	Nil	Not Implemented
2017				Nil	Publicize 2017 Sector Newsletter	2017 Sector Newsletter publicized	Fully Implemented
2014			Organize Meet-the-Press series	18 Meet-the-Press series organised	Organise 25 Meet-the-Press series	12 Meet-the-Press series organised.	Ongoing
2015				12 Meet-the-Press series organised.	Organise 25 Meet-the-Press series	18 Meet-the-Press series organised	Ongoing
2016				18 Meet-the-Press series organised	Organise 25 Meet-the-Press series	25 Meet-the-Press series organised	Fully implemented

PERIOD	PROGRAMMES	SUB-PROGRAMMES	BROAD PROJECT/ACTIVITY	INDICATORS			REMARKS
				Baseline (2013)	**MTDP Target**	**Achievements**	
2017				25 Meet-the-Press series organised	Organise 25 Meet-the-Press series	25 Meet-the-Press series organised	Fully implemented.
2014	Management and Administration	IT	Develop interactive Website for MoC Head Office	Outmoded Website	Interactive website developed for MoC Head Office	Committee formed to upgrade MoC website	Ongoing
2015				Interactive website for MoC Head Office	Regular updates of information on MoC Website	Weekly updates of Website achieved.	Ongoing (Frequency of update of information on MoC website is about 60%)
2016				Committee formed for regular update of information MoC website created.	Regular updates of information on MoC Website	Regular updates improved to 100%	Fully Implemented
2017					Upgrade website into more user-friendly	MoC website upgraded into more user-friendly	Fully Implemented

PERIOD	PROGRAMMES	SUB-PROGRAMMES	BROAD PROJECT/ACTIVITY	INDICATORS			REMARKS
				Baseline (2013)	MTDP Target	Achievements	
2014	Management and Administration	NCA	Mobile Number Portability (MNP)	Nil	Implement Mobile Number Portability	838,202 persons ported	
2015				838,202 persons ported		Nil	
2016				Nil		Nil	
2017				Nil		1,925,969	
2014	Management and Administration	NCA	Construction of office complex	Office complex reached roofing	Office complex roofed	Office complex roofed	Ongoing (70% complete)
2015				Office complex roofed	Office complex complete	Office complex completed	100% complete
2016	Management and Administration	NCA	Construction of regional offices	Land acquired for all the 4 regional offices	Construction regional office complex	5% Done	Ongoing
2017					Construction regional office complex	50% Done	Ongoing

PERIOD	PROGRAMMES	SUB-PROGRAMMES	BROAD PROJECT/ACTIVITY	INDICATORS			REMARKS
				Baseline (2013)	MTDP Target	Achievements	
2014	Management and Administration	NCA	Industry data verification exercise	Equipment acquired for the exercise	Publication of verified reports and reporting to ITU	Office set complete	Ongoing (20%)
2015				Office set up completed and verification started (20%) work done	Publication of verified reports and reporting to ITU	Some data verification exercise carried out	Ongoing (50%)
2016					Publication of verified reports and reporting to ITU	50% work done	50% work done. Work stalled as a result of inadequate personnel
2017					Publication of verified reports and reporting to ITU	50% work done.	50% work done. Work stalled as a result of inadequate personnel
2014	Management and Administration	NCA	Facilitate Digital Broadcasting Migration	DTT Services available in Ghana	Legislation, Policy and implementation Plan	10% done	Ongoing
2015				Private Digital Terrestrial TV networks	Provide technical assistance to MoC on Gov't DTT Network	20% Done	Ongoing

PERIOD	PROGRAMMES	SUB-PROGRAMMES	BROAD PROJECT/ACTIVITY	INDICATORS			REMARKS
				Baseline (2013)	MTDP Target	Achievements	
				deployed and in operation	procurement and implementation.		
2016		\		DTT Services available in Ghana	N/A	40% Done	Ongoing
2017				DTT Services available in Ghana	N/A	50% done	Ongoing
2014	Management and Administration	NCA	Quality of Service Monitoring	Quarterly QoS Monitoring across the country	N/A	60% done	Ongoing
2015				Quarterly monitoring of selected districts in Regions	Monitoring of at least Fifty percent (50%) of districts in each region	70% done	Ongoing
2016				3G & 4G Coverage Rollout Assessment	3G verification exercises completed in eight (8) regions	70% complete	Ongoing

PERIOD	PROGRAMMES	SUB-PROGRAMMES	BROAD PROJECT/ACTIVITY	INDICATORS			REMARKS
				Baseline (2013)	MTDP Target	Achievements	
2017				QoS tests for all services completed for all ten (10) regions twice in the year.	Monitoring of voice and data services in all Districts twice in a year	80% done	Ongoing
2014	Management and Administration	NCA	Public Awareness of DTT Migration	Guide all stakeholders in their preparations for the migration from analogue to digital broadcasting	Public knowledge of the DTT Migration project to stakeholders across the regions	50% Done	Ongoing
2015				Mass media tools needed to create awareness for the launch	Campaign launch	60% Done	Ongoing
2015	Management and Administration	NCA	Consumer Forum	Event reports; proposals; publication of event reports, information briefings	Reduced consumer complaints and enforced compliance	50% Done	Ongoing

PERIOD	PROGRAMMES	SUB-PROGRAMMES	BROAD PROJECT/ACTIVITY	INDICATORS			REMARKS
				Baseline (2013)	MTDP Target	Achievements	
2016							
2017				Report	To conduct 2 consumer fora	100% Done	Completed
2015	Management and Administration	NCA	Coordinate with neighbouring countries	To ensure interference free assignment and operations at the border towns.	Complete the signed Coordination Agreement with Togo, Cote D'Ivoire and Burkina Faso.	60% Done	Ongoing
2016				Signed Agreement between Ghana and Its neighbours	Well-coordinated usage of frequencies along the borders to prevent interference from neighbouring countries.	100% done	Completed
2015	Management and Administration	NCA	Implement HR Policies to support new work Culture by December 2017	Scattered and inconsistent internal policies and procedures	Develop Manuals for organizational procedures and processes	50% Done	Ongoing

PERIOD	PROGRAMMES	SUB-PROGRAMMES	BROAD PROJECT/ACTIVITY	INDICATORS			REMARKS
				Baseline (2013)	MTDP Target	Achievements	
2016				Approve HR and Admin Policies in place.	Review all existing HR Policies and Communicate Policies to Staff for implementation	60% complete	ongoing
2017				Review all existing HR Policies	Produce Employee Handbook and distribute to staff for their reference	100% done	100% complete and HR manual is in use
2014	Management and Administration	NCA	Administration of Special Numbering Resources (SNRs) and Harmonization of Network codes in Ghana	Indenting the range of services for harmonization and SNRs for the Identified services	Prepare a harmonization document for special numbering resources	50% Done	Ongoing
2015 2016 2017				Management approved for project to start	NCA to install numbering management system	100% Done	Completed and numbering plan in use

PERIOD	PROGRAMMES	SUB-PROGRAMMES	BROAD PROJECT/ACTIVITY	INDICATORS			REMARKS
				Baseline (2013)	MTDP Target	Achievements	
2014	ICT Capacity Development	KACE	Staff trained in Global ICT Policy Trends	4 staff	Train 4 staff in Global ICT Policy Trends	4 staff trained in Global ICT Trends	Fully Implemented
2015				4 staff trained	Train 4 staff trained in Global ICT Trends	One (1) staff trained in Global ICT Trends	Ongoing (Budgetary constraints)
2016				One (1) staff trained in Global ICT Trends	Train one (1) staff in Global ICT Trends	No staff was trained in Global ICT Trends	Not implemented
2017				Nil	Nil	Nil	Suspended (Budget for the activity could not be raised).
2014		KACE	Train staff in research initiatives	4 staff trained	Train 4 staff in research initiatives	4 staff trained in research initiatives	Fully implemented.
2015				4 staff trained in research initiatives	Train 4 staff in research initiatives	4 staff trained in research initiatives	Fully implemented
2016				4 staff trained	Train 4 staff in research initiatives	4 staff trained in research initiatives	Fully implemented.

PERIOD	PROGRAMMES	SUB-PROGRAMMES	BROAD PROJECT/ACTIVITY	INDICATORS			REMARKS
				Baseline (2013)	MTDP Target	Achievements	
2017				4 staff trained	Train 4 staff in research initiatives	4 staff trained in research initiatives	Fully implemented.
2014	ICT Capacity Development	KACE	Train students in Networking, Software development and mobile apps development, wireless and mobile computing and web apps development.	1,062 students trained.	Train 1,000 students	1,103 students trained in Networking, Software development and mobile apps development, wireless and mobile computing and web apps development.	Fully implemented
2015				1,103 students trained in Networking, Software development and mobile apps development, wireless and mobile computing and web apps development.	Train 1,000 students	877 students trained in Networking, Software development and mobile apps development, wireless and mobile computing and web apps development.	Ongoing
2016				877 students trained in Networking, Software development	Train 1,000 students	1,000 students trained in Networking, Software development and mobile apps development, wireless	Fully implemented

PERIOD	PROGRAMMES	SUB-PROGRAMMES	BROAD PROJECT/ACTIVITY	INDICATORS			REMARKS
				Baseline (2013)	**MTDP Target**	**Achievements**	
				and mobile apps development, wireless and mobile computing and web apps development		and mobile computing and web apps development.	
2017				383 students trained in Networking, Software development and mobile apps development, wireless and mobile computing and web apps development.	Train 500 students	201 students trained in Networking, Software development and mobile apps development, wireless and mobile computing and web apps development.	Ongoing (Budget for the activity could not be raised)
2014	ICT Capacity Development	KACE	Offer consultancy services to beneficiary institutions	4 institutions offered consultancy services	Offer consultancy services to four (4) beneficiary institutions	Five (5) institutions offered consultancy services	Fully implemented

PERIOD	PROGRAMMES	SUB-PROGRAMMES	BROAD PROJECT/ACTIVITY	INDICATORS			REMARKS
				Baseline (2013)	**MTDP Target**	**Achievements**	
2015				Five (5) institutions offered consultancy services	Offer consultancy services to five (5) beneficiary institutions	Five (5) institutions offered consultancy services	Fully implemented
2016				Five (5) institutions offered consultancy services	Offer consultancy services to five (5) beneficiary institutions	Two (2) institutions offered consultancy services	Ongoing (Budget for the activity was not released)
2017				Two (2) institutions offered consultancy services	Offer consultancy services to two (2) beneficiary institutions	Nil	Not implemented (eTransform project of MoC commenced, and includes aspects of the named activity).
2014	ICT Capacity Development	KACE	Introduce new customised courses of study	Three (3) new customised courses introduced	Introduce three (3) new customised courses	Seven (7) new customised courses were introduced	Fully implemented
2015				Seven (7) new customised courses introduced	Introduce three (3) new customised courses	Seven (7) new customised courses were introduced.	Fully implemented

PERIOD	PROGRAMMES	SUB-PROGRAMMES	BROAD PROJECT/ACTIVITY	INDICATORS			REMARKS
				Baseline (2013)	MTDP Target	Achievements	
2016				Seven (7) new customised courses introduced	Introduce seven (7) new customised courses	Three (3) new customised courses introduced	Ongoing (Budgetary and logistical constraints)
2017				Three (3) new customised courses introduced	Introduce four (4) new customised coursed	Four (4) new customised courses introduced	Fully implemented
2014	ICT Infrastructure Development	NITA	Construct National Secondary Data Centre in Kumasi	Land acquired and project visibility study completed	National Secondary Data Centre constructed	National Secondary Data Centre completed.	Fully implemented
2015			Link Primary Data Centre with National Primary Data Centre in Accra	National Secondary Data Centre constructed	Secondary Data Centre linked seamlessly with Primary Data Centre	Both Secondary and Primary Data Centres operations harmonised.	Fully implemented
2016			Conduct annual evaluation visits.	Nil	Annual project evaluation visit conducted	2016 Project evaluation visits conducted	Fully implemented
2017				2016 Evaluation Report	Annual project evaluation visit conducted	2017 Project evaluation visits conducted	Fully implemented

PERIOD	PROGRAMMES	SUB-PROGRAMMES	BROAD PROJECT/ACTIVITY	INDICATORS			REMARKS
				Baseline (2013)	MTDP Target	Achievements	
2014	ICT Infrastructure Development	NITA	Construct 780 km Eastern Corridor Fibre Optic Network Backbone	Nil	Construct 780 km Eastern Corridor Fibre Optic Network Backbone	702.34 km Eastern Corridor Fibre Optic Network Backbone constructed	On-going (90% completion)
2015				702.34 km Eastern Corridor Fibre Optic Network Backbone constructed	Construct 77.66 km Eastern Corridor Fibre Optic Network Backbone	780 km Project was duly completed, Operational Acceptance was carried out and project commissioned.	Fully implemented.
2016				Nil	28.35 km Project further extended to Accra and the Univ. of Ghana	28.35 km Project extension to Accra & UG was completed.	Fully implemented.
2017					-	Last mile connectivity project commenced.	Ongoing
2014	ICT Infrastructure Development	NITA	Construction of National Primary Data Centre	Nil	National Primary Data Completed by	Construction of National Primary Data Centre reached roofing level.	Ongoing (91 percent completion)

PERIOD	PROGRAMMES	SUB-PROGRAMMES	BROAD PROJECT/ACTIVITY	INDICATORS			REMARKS
				Baseline (2013)	**MTDP Target**	**Achievements**	
					December 2015		
2015				91 percent completion of National Primary Data Centre	National Primary Data Centre constructed	Physical infrastructure of National Primary Data Centre completed.	Ongoing (98 percent complete)
2016 2017				Construction of National Primary Data Centre at 98 percent complete	National Primary Data Centre constructed	National Primary Data Centre constructed	Fully implemented
2014	ICT Infrastructure Development	GIFEC	Construction of twenty (20) enhanced CICs (eCICs)	180 old models of CICs	20 eCICs constructed.	Construction sites secured.	Ongoing
2015				Construction sites secured.	20 eCICs constructed.	Contract Awarded	Ongoing

PERIOD	PROGRAMMES	SUB-PROGRAMMES	BROAD PROJECT/ACTIVITY	INDICATORS			REMARKS
				Baseline (2013)	**MTDP Target**	**Achievements**	
2016				Contract Awarded	20 eCICs constructed.	11 out of 20 eCICs constructed.	Ongoing (55 percent completed)
2017				11 eCICs constructed	9 eCICs constructed	9 eCICs constructed	Fully implemented
2014	ICT Infrastructure Development	NITA ADC	Construct BPO Centre in Accra (Accra Digital Centre)	Visibility report available.	Convert two PWD structure to BPO Centre	BPO site acquired at Circle, Accra Loan secured from WB, Rockefeller Foundation.	Ongoing
2015				BPO Site acquired	BPO Centre constructed in Accra (Accra Digital Centre)	Accra Digital Centre constructed.	Fully implemented
2016				Accra Digital Centre constructed.	Commission Accra Digital Centre	Accra Digital Centre commissioned	Fully implemented
2017							
2014	ICT Infrastructure Development	MoC, HQ NITA	Establishment of Technology Parks	Development of Technology	Completed by close of 2016.	▪ Administrative Block of Tema	Suspended. Project is being relocated to Dawa for
2015							

PERIOD	PROGRAMMES	SUB-PROGRAMMES	BROAD PROJECT/ACTIVITY	INDICATORS			REMARKS
				Baseline (2013)	**MTDP Target**	**Achievements**	
2016				Park at Tema underway.		ICT Park was completed.	commercial convenience.
2017						▪ Facility was rented out and employed about 500 Ghanaians ▪ Malaysian investors contacted for expansion of project to cover 500 acres of land.	
2014		MoC; Cyber Security Centre,	Operationalizing Cyber Security Strategy, 2012	National Cyber Security Policy and Strategy, 2012	Establish CERT Ghana	CERT, Ghana established	Fully Implemented
2015				CERT, Ghana Established	Review Cyber Security Policy and Strategy, 2012	Cyber Security Policy and Strategy reviewed.	Fully implemented

PERIOD	PROGRAMMES	SUB-PROGRAMMES	BROAD PROJECT/ACTIVITY	INDICATORS			REMARKS
				Baseline (2013)	**MTDP Target**	**Achievements**	
2016				Cyber Security Policy and Strategy reviewed.	Develop Child online Policy and Strategy	Child online Policy and Strategy developed	Fully implemented
2017				Child online Policy and Strategy developed	Establish Cyber Security Centre	Cyber Security Centre established	Fully implemented
2014	ICT Infrastructure Development	NITA	Construct Long Term Evolution (LTE) 4G Network	117 Districts Connected	171 Districts Targeted	171 Districts connected	Ongoing
2015				Nil	104 Districts Targeted	72 Districts connected	Ongoing
2016				32 Districts Connected	32 Districts Targeted	40 Districts Connected	Ongoing
2017				Nil	24 Districts Targeted	24 Districts Connected	Fully Implemented
2014			Fibre	17 MDAs/MMDAs Connected	17 MDAs/MMDAs Connected	17 MDAs/MMDAs Connected	Ongoing

PERIOD	PROGRAMMES	SUB-PROGRAMMES	BROAD PROJECT/ACTIVITY	INDICATORS			REMARKS
				Baseline (2013)	MTDP Target	Achievements	
2015				Nil	21 MDAs/MMDAs Connected	21 MDAs/MMDAs Connected	Ongoing
2016				Nil	33 MDAs/MMDAs Connected	33 MDAs/MMDAs Connected	Ongoing
2017				Nil	29 MDAs/MMDAs Connected	29 MDAs/MMDAs Connected	Fully Implemented
2014			eService's Support Portal	Nil	4 MDAs/MMDAs Targeted	4 MDAs/MMDAs Connected	Ongoing
2015				Nil	4 MDAs/MMDAs Targeted	4 MDAs/MMDAs Connected	Ongoing
2016				Nil	3 MDAs/MMDAs Targeted	3 MDAs/MMDAs Connected	Ongoing
2017				Nil	15 MDAs/MMDAs Targeted	15 MDAs/MMDAs Connected	Fully Implemented

PERIOD	PROGRAMMES	SUB-PROGRAMMES	BROAD PROJECT/ACTIVITY	INDICATORS			REMARKS
				Baseline (2013)	MTDP Target	Achievements	
2014			ePayment Rollout	Nil	4 MDAs/MMDAs	4 MDAs/MMDAs Reached	Ongoing
2015				Nil	4 MDAs/MMDAs	10 MDAs/MMDAs Reached	Ongoing
2016				Nil	20 MDAs/MMDAs	20 MDAs/MMDAs Connected	Ongoing
2017				Nil	174 MDAs/MMDAs	174 MDAs/MMDAs Connected	Fully Implement

PERIOD	PROGRAMMES	SUB-PROGRAMMES	BROAD PROJECT/ACTIVITY	INDICATORS			REMARKS
				Baseline (2013)	MTDP Target	Achievements	
2014	Meteorological Services	GMet					
2015							
2016							
2017							
2014	Postal and Courier Services		Establish L.I. 2005 as primary handbook for operators	Postal and Courier Services Regulators (L.I. 2025) passed into law.	Board, staff and Courier Operators familiarized with L.I. 2205	▪ Training workshop on L.I. 2205 held for operators. ▪ L.I. 2205 distributed to 67 operators.	Ongoing
2015			Postal Sector Expansion Programme	65 Courier Services and Operators registered.	Increase number of Courier operators to 100	No. of Courier and Postal Operators registered and licensed increased to 88.	

PERIOD	PROGRAMMES	SUB-PROGRAMMES	BROAD PROJECT/ACTIVITY	INDICATORS			REMARKS
				Baseline (2013)	**MTDP Target**	**Achievements**	
				45 operating license renewed.		No. of operating licenses renewed increase to 50.	
2016						No. of Courier and Postal Operators registered and licensed increased to 100. No. of operating licenses renewed increase to 50.	Ongoing
2017			Expand scope of Postal and Courier	Register five (5) food &	Register and license food	No. of Courier and Postal Operators registered and licensed increased to 103. No. of operating licenses renewed increased to 72. One food delivery company has initiated	

PERIOD	PROGRAMMES	SUB-PROGRAMMES	BROAD PROJECT/ACTIVITY	INDICATORS			REMARKS
				Baseline (2013)	**MTDP Target**	**Achievements**	
			Regulatory Commission Staff recruitment	online shopping operators. Seven (7) staff.	delivery companies and online shopping outlets engaged in courier activities. To recruit six (6) additional staff.	registration process with the Commission. No staff was hired.	Ongoing
2014	Data Management and Regulation	DPC	Sensitize the public on Data Protection Act, 2012	Data Protection Act, 2012	Data Protection Act launched.	Data Protection Act, Act 843, officially launched and publicized in various media.	Fully implemented.
2015	Data Management and Regulation		Launching	None	Launch Data Protection Act 2012, Act 843; Website and	Successful Launch of Data Protection Act 2012 (Act 843);	Fully implemented

PERIOD	PROGRAMMES	SUB-PROGRAMMES	BROAD PROJECT/ACTIVITY	INDICATORS			REMARKS
				Baseline (2013)	MTDP Target	Achievements	
					Registration system	Website and Registration system	
2016	Data Management and Regulations	Data Protection Commission	Annual conference	No annual conference organized	Organize annual conference	Annual conference organized (200 participants)	Fully implemented
	Data Management and Regulations	Data Protection Commission	Awareness creation	No awareness creation programme organized	Organize 15 awareness creation programmes	17 awareness creation programmes organized	Fully implemented
	Data Management and Regulations	Data Protection Commission	Registration	No data controller registered	Register 500 data controllers	678 data controllers registered	Fully implemented
2017	Data Management and Regulations	Data Protection Commission	Annual conference	Annual conference organized	Organize annual conference	Annual conference organized (500 participants)	Fully implemented
	Data Management and Regulations	Data Protection Commission	Awareness Creation	17 awareness programmes organized	Organize 20 awareness creation programmes	26 awareness creation programmes organized	Fully implemented
	Data Management and Regulations	Data Protection Commission	Complaints	2 complaints resolved	Resolve 10 complaints	13 complaints resolved	Fully implemented

PERIOD	PROGRAMMES	SUB-PROGRAMMES	BROAD PROJECT/ACTIVITY	INDICATORS			REMARKS
				Baseline (2013)	MTDP Target	Achievements	
	Data Management and Regulations	Data Protection Commission	Registration	678 data controllers registered with the Commission	Register 1,000 data controllers	1,229 data controllers registered	Fully implemented

Table 1. 2: Total Releases from Government of Ghana

TOTAL RELEASE FROM GOVERNMENT OF GHANA							
PERSONNEL EMOLUMENTS (WAGES ND SALARIES)							
YEAR	REQUESTED AS PLANNED (A)	APPROVED AS PER CEILING (B)	RELEASED (C)	DEVIATIONS		ACTUAL EXPENDITURE (D)	VARIANCE (C-D)
				(A) - (B)	(B) - (C)		

2014	9,241,597.00	8,266,482.00	8,266,482.00	975,115.00	-	8,266,482.00	-
2015	64,683,584.00	57,840,940.00	57,840,940.00	6,842,644.00	-	57,827,716.00	13,224.00
2016	73,637,769.00	55,184,797.00	55,184,797.00	18,452,972.00	-	55,287,780.00	(102,983.00)
2017	24,913,397.00	13,541,222.00	13,541,222.00	11,372,175.00	-	12,852,329.00	688,893.00
TOTAL	**172,476,347.00**	**134,833,441.00**	**134,833,441.00**	**37,642,906.00**	**-**	**134,234,307.00**	**599,134.00**
CAPITAL EXPENDITURES/ ASSETS							
2014	1,440,558.00	47,608.00	47,608.00	1,392,950.00	-	20,012,443.88	(19,964,835.88)
2015	750,000.00	-	-	750,000.00	-	-	-
2016	-	-	-	-	-	-	-
2017	96,600,000.00	1,287,550.00	1,287,550.00	95,312,450.00	-	1,137,888.00	149,662.00
TOTAL	**98,790,558.00**	**1,335,158.00**	**1,335,158.00**	**97,455,400.00**	**-**	**21,150,331.88**	**(19,815,173.88)**
GOODS AND SERVICES							
2014	532,227.00	66,359.00	66,359.00	465,868.00	-	65,545.68	813.32
2015	2,766,114.00	1,383,896.00	1,383,896.00	1,382,218.00	-	1,299,046.00	84,850.00
2016	1,383,057.00	370,569.00	370,569.00	1,012,488.00	-	1,299,046.00	(928,477.00)

2017	11,029,635.00	3,072,964.00	3,072,964.00	7,956,671.00	-	2,904,601.00	168,363.00
TOTAL	**15,711,033.00**	**4,893,788.00**	**4,893,788.00**	**10,817,245.00**	**-**	**5,568,238.68**	**(674,450.68)**

Table 1. 3: All Sources of Financial Resources for the Ministry of Communications

TOTAL RELEASE FROM GOVERNMENT OF GHANA							
DEVELOPMENT PARTNERS							
YEAR	**REQUESTED AS PLANNED (A)**	**APPROVED AS PER CEILING (B)**	**RELEASED (C)**	**DEVIATIONS**		**ACTUAL EXPENDITURE (D)**	**VARIANCE (C-D)**
				(A) - (B)	**(B) - (C)**		
2014	80,994,273.00	80,994,273.00	51,669,355.00	-	29,324,918.00	-	
2015	178,087,815.00	178,087,815.00	72,591,450.00	-	105,496,365.00	42,618,436.00	
2016	146,436,267.00	146,436,267.00	77,878,294.00	-	68,557,973.00	77,878,294.00	
2017	221,096,196.00	221,096,196.00	189,890,013.00	-	31,206,183.00	189,890,013.00	
TOTAL	626,614,551.00	626,614,551.00	392,029,112.00	-	234,585,439.00	310,386,743.00	

Table 1. 4: All Sources of Financial Resources for the Ministry of Communications

TOTAL RELEASE FROM GOVERNMENT OF GHANA							
INTERNALLY GENERATED FUNDS - IGF							
YEAR	REQUESTED AS PLANNED (A)	APPROVED AS PER CEILING (B)	RELEASED (C)	DEVIATIONS		ACTUAL EXPENDITURE (D)	VARIANCE (C-D)
				(A) - (B)	(B) - (C)		
2014	1,780,219.00	1,780,219.00	1,596,390.00	-	183,829.00	-	1,596,390.00
2015	52,348,480.00	52,348,480.00	25,155,435.00	-	27,193,045.00	19,788,536.00	5,366,899.00
2016	71,404,334.00	71,404,334.00	18,063,012.00	-	53,341,322.00	18,056,489.00	6,523.00
2017	13,877,836.00	13,877,836.00	4,937,009.00	-	8,940,827.00	4,236,008.00	701,001.00
TOTAL	**139,410,869.00**	**139,410,869.00**	**49,751,846.00**	**-**	**89,659,023.00**	**42,081,033.00**	**7,670,813.00**

1.4 Analysis of Existing Situation

The analysis of sector's existing situation took into consideration current development issues facing the sector, institutional capacity needs as well as analysis of cross-cutting issues such as information and communication technologies, climate change mitigation, migration, gender equality, poverty, inequality and social protection, science, technology and innovation (ICT), among others.

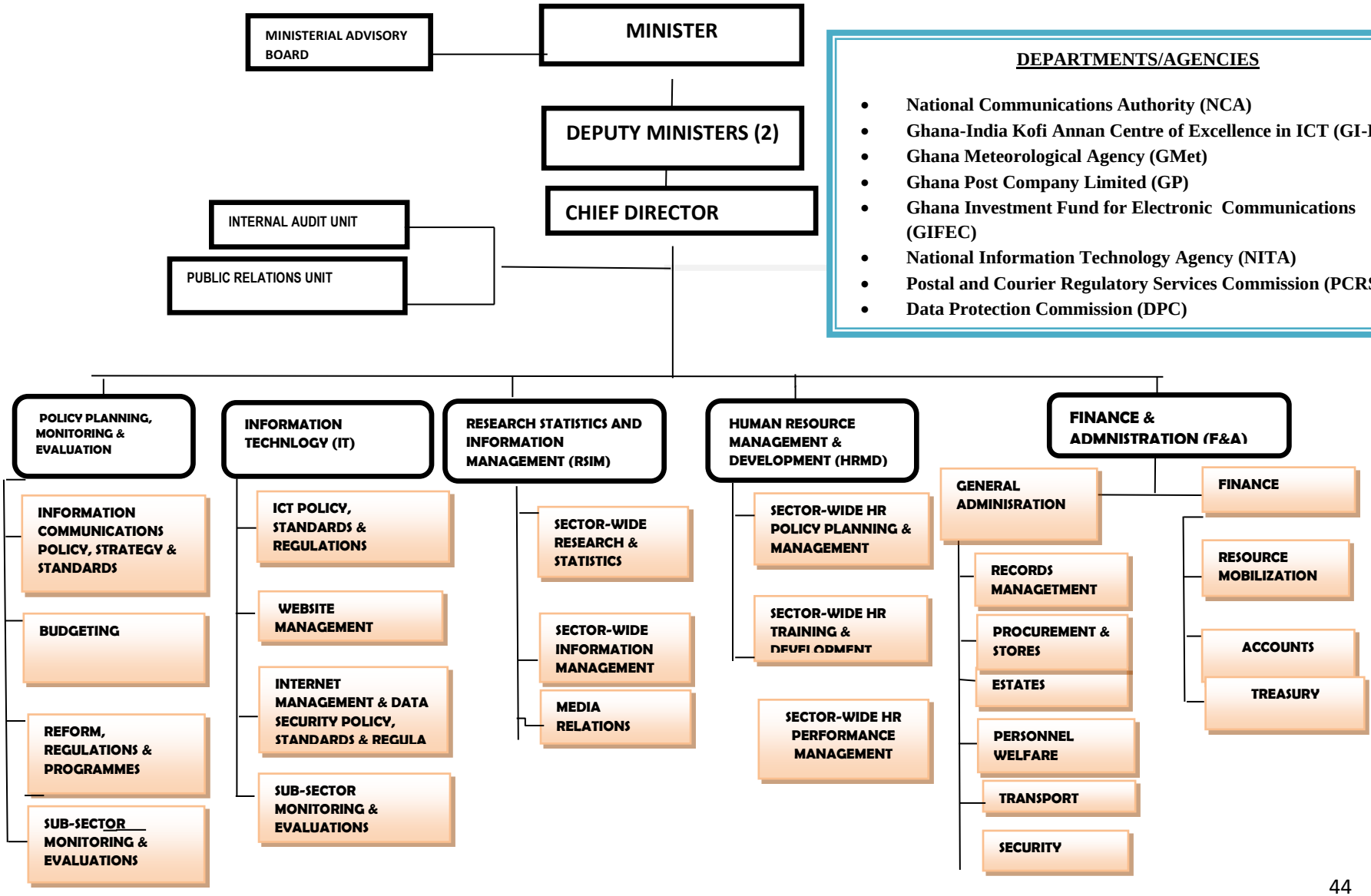
1.6.1 Institutional capacity

The Ministry of Communications is headed by a political leadership comprised of a Minister and supported by two Deputy Ministers. There is also an administrative head who is a technocrat, a Chief Director. To assist the Chief Director in the performance of his administrative functions are four line Directors responsible for Finance and Administration, Policy Planning, Monitoring and Evaluation, Human Resources, and Research and Information Management respectively. The Ministry also has a technical Director in Charge of Information Technology. The Ministry has the apex responsible for the development, deployment, adoption and utilization of information and communications infrastructure and services. This they do by facilitating the development of enabling policies and regulations for growth and development of the communications sector.

The Departments and Agencies under the Ministry of Communications are as follows:

- National Communications Authority (NCA)
- Ghana-India Kofi Annan Centre of Excellence in ICT (GI-KACE)
- Ghana Meteorological Agency (GMet)
- Ghana Post Company Limited (GP)
- Ghana Investment Fund for Electronic Communications (GIFEC)
- National Information Technology Agency (NITA)
- Postal and Courier Regulatory Services Commission (PCRSC)
- Data Protection Commission (DPC)

Figure 1. 1:Organizational Chart of the Ministry (HQ)



1.4.1.1 HUMAN RESOURCE CAPACITY

The current human resource capacity of the Ministry of Communications and its sector Agencies are as stated in the table below.

Table 1. 5: Staff Strength- Ministry of Communications, HQs

DIVISION/UNIT	NO. OF STAFF REQUIRED	NO. OF STAFF PRESENT	VARIANCE	GENDER		AGE DISTRIBUTION(YEARS)				
				M	F	BELOW 30	31-40	41-50	51-55	56-60
Acting Chief Director	1	1	0	1						1
Finance and Administration (F&A)	31	21	10	7	14	0	7	9	1	4
Policy Planning Monitoring and Evaluation (PPMED)	18	9	9	3	6	0	5	3	1	0
Research Statistics and Information Management (RSIMD)	9	4	5	3	1	0	2	0	0	2
Human Resource Management (HRMD)	10	8	2	2	5	1	2	3	1	1
Information Technology (ITD)		3		3	0	1	1	0	1	0
Accounts	11	6	5	1	5		3	0	1	2
Internal Audit	3	2	1	2	0	0	1	1	0	0
Public Relation (PRD)	2	2	0	1	1	0	2	0	0	0
Protocol		2		1	1	0	2	0	0	0
Transport	18	11	7	11	0	0	1	7	2	0
Estates	16	13	3	8	5	0	4	3	2	5

TOTALS	**119**	**82**	**42**	**43**	**39**	**2**	**30**	**26**	**9**	**15**

Table 1. 6: HUMAN RESOURCE CAPACITY: National Communications Authority (NCA)

DIVISION/UNIT	NO. OF STAFF REQUIRED	NO. OF STAFF PRESENT	GAP	GENDER		AGE DISTRIBUTION (YEARS)				
				M	F	BELOW 30	31-40	41-50	51-55	56-60
Director General		1			1				1	
Deputy Director General		4		1	3			3		1
Director		8		3	5			6	2	
Deputy Director		12		2	10		6	4	1	1
Chief Manager		10		2	8		1	7	2	
Principal Manager		10		5	5		3	7		
Senior Manager		7		2	5			4	1	2
Manager		21		8	13		16	5		
Deputy Manager		40		20	20	1	32	7		
Assistant Manager		52		21	31	10	37	5		

DIVISION/UNIT	NO. OF STAFF REQUIRED	NO. OF STAFF PRESENT	GAP	GENDER		AGE DISTRIBUTION (YEARS)				
				M	F	BELOW 30	31-40	41-50	51-55	56-60
Head of Transport (Assistant Manager)		1			1					1
Officer		51		20	31	33	14	4		
Officer-Trainee		1			1			1		
Senior Facility & Security Assistant		1			1				1	
Chief Driver		5			5			4	1	
Asst. Chief Driver		2			2			1	1	
Senior Driver		3			3		2	1		
Driver I		12			12	1	4	7		
Driver II		3			3		3			
Dispatch Rider		1			1		1			
Receptionist		1		1			1			
Cleaner		**16**		**13**	**3**	**2**	**4**	**10**		
TOTAL		**262**		**98**	**164**	**47**	**124**	**76**	**10**	**5**

Table 1. 7: HUMAN RESOURCE CAPACITY: National Information Technology Agency (NITA)

DIVISION/UNIT	NO. OF STAFF REQUIRED	NO. OF STAFF PRESENT	VARIANCE	GENDER		AGE DISTRIBUTION(YEARS)				
				M	F	BELOW 30	31-40	41-50	51-55	56-60
Bureaucratic Head		2		2	0		1	1		
Accounts		6		4	2	2	3		1	
HR		2		2	0			2		
Application		9		7	2	6	2	1		
BDU		10		5	5	7	3			
Infrastructure		34		31	3	19	13	2		
Administration		11		6	5	6	1	2	1	1
Cert-GH		3		1	2	3				
GNDR		2		1	1	1	1			
Drivers/ Cleaner/Security		10		9	1		3	4	1	2
GMIC		1		1	0				1	
Consultant		5		2	3		1	3	1	
TOTAL		**95**		**71**	**24**	**44**	**28**	**15**	**5**	**3**

Table 1. 8: HUMAN RESOURCE CAPACITY: Ghana Investment Fund for Electronic Communications (GIFEC)

DIVISION/UNIT	NO. OF STAFF REQUIRED	NO. OF STAFF PRESENT	VARIANCE	GENDER		AGE DISTRIBUTION(YEARS)				
				M	F	BELOW 30	31-40	41-50	51-55	56-60
Administrator	1	-		1						59
Deputy Administrator	1	-		1		-				
Director Finance and Administration	1	-		1				44		
Director, Operation	1	-		1		-				
Director, Sustainability and Partnership	1	-		1		-				
Principal Manager, Administration	1	-		1						59
Principal Internal Auditor	1		-	1						56
Senior Manager, Administration	1	-		1						59
Senior Manager, Programs	1	-		1						
Senior Manager, Finance	1	-		1		-				
Principal Manager, Administration	1	-		1						59
Principal, Manager, programmes	1		1					44		
Senior Research Manager	1	-		1			45			
Senior Sustainability and Partnership Manager	1		-	1		-				
Senior Monitoring and Evaluation Manager	1	-		1		41				
Managers	9	6	3	9		29-45				

DIVISION/UNIT	NO. OF STAFF REQUIRED	NO. OF STAFF PRESENT	VARIANCE	GENDER		AGE DISTRIBUTION(YEARS)				
				M	F	BELOW 30	31-40	41-50	51-55	56-60
Assistant Managers	23	17	6	23		27-35				
Principal Assistant Managers	3	3		3				30-44		
Drivers	7	7		7					43-56	
TOTAL		**46**	**11**	**57**						**57**

Table 1. 9: HUMAN RESOURCE CAPACITY: Ghana-India Kofi Annan Centre of Excellence in ICT (AITI-KACE)

Grade	Establishment	Number at Post		Total at Post	Variance	Age Distribution (years)				
		Male	Female			Below 30	31 - 40	41 - 50	51 -55	56 - 60
MANAGEMENT UNIT										
Director-General	1	1	0	1	0					x
Director of Finance and Administration	1	1	0	1	0				x	
Director of Research and Innovation (Acting)	1	1	0	1	0			x		
Director of Consultancy (Acting)	1	1	0	1	0			x		
Director of Studies	1	1	0	1	0				x	
Director of Corporate Affairs*	1	1	0	1	0					x

Grade	Establishment	Number at Post		Total at Post	Variance	Age Distribution (years)				
		Male	Female			Below 30	31 - 40	41 - 50	51 -55	56 - 60
Marketing Manager	1	0	1	1	0		x			
Human Resource Manager	1	0	0	0	1					
Project Manager*	1	0	1	1	0					
ACADEMICS UNIT										
Senior Lecturers	3	1	0	1	2		x	x		
Lecturers	4	3	3	6	-2		x	x		
Assistant Lectures	9	2	2	4	5		x	x		
Teaching Assistant	1	0	0	0	1					
Academic Secretary	1	1	0	1	0			x		
Webmaster	1	0	0	0	1					
SYSTEMS UNIT										
Systems Administrator	1	1	0	1	0	x				
Systems Support Officer	1	0	0	0	1					
BUSINESS DEVELOPMENT UNIT										
Business Liaison Officers	3	2	1	3	0		x			
Graphic Designer	1	1	0	1	0	x				
RESEARCH UNIT										
Knowledge Management Officer	1	1	0	1	0		x			
Research Associate	1	1	0	1	0	x				
ADMINISTRATIVE UNIT										

Grade	Establishment	Number at Post		Total at Post	Variance	Age Distribution (years)				
		Male	Female			Below 30	31 - 40	41 - 50	51 -55	56 - 60
Internal Auditor	1	1	0	1	0			x		
Executive Assistant	1	0	1	1	0		x			
Facilities Officer	1	1	0	1	0		x			
Administrative Assistants	2	0	1	1	1		x			
Drivers	2	1	0	1	1		x			
Electrical Technician	1	1	0	1	0		x			

Table 1. 10: HUMAN RESOURCE CAPACITY: Data Protection Commission (DPC)

GRADE	ESTABLISHMENT	NUMBER AT POST		TOTAL AT POST	VARIANCE	AGE DISTRIBUTION
		MALE	FEMALE			
DATA PROTECTION COMMISSION						
Executive Director	1		1	1	0	49
Director of Finance and Administration	1		1	1	0	53
Director of Legal and Operations	1	1		1	0	45
Data Protection Supervisor & Internal Audit	2	1		1	1	49
Head of Accounts	1		1	1	0	50
Assist. Administrative/HR Manager	2	1		1	1	30
Personal Assistant to Exe. Director	1		1	1	0	31
Accounts Officer	2		1	1	1	40
Policy Development Officer	2	1	1	2	0	32-38
Customer Support Officer	1		1	1		27
Creative Designer	2	1		1	1	30
Office Assistant	1	1		1	0	24
Administrative Officer	1	1		1	0	25
IT Officer	2	1		1	1	33
Accreditation and Certification officer	2	-	-	0	2	-
Registration officer	2	-	-	0	2	-
Compliance & Enforcement officer	2	-	-	0	2	-
Monitoring and Evaluation officer	1	-	-	0	1	-
Standards & Guidelines officer	1	-	-	0	1	-
Procurement officer	1	-	-	0	1	-
Regional Liaison officer	2	-	-	0	2	-

GRADE	ESTABLISHMENT	NUMBER AT POST		TOTAL AT POST	VARIANCE	AGE DISTRIBUTION
		MALE	FEMALE			
DATA PROTECTION COMMISSION						
Executive Director	1		1	1	0	49
Director of Finance and Administration	1		1	1	0	53
Director of Legal and Operations	1	1		1	0	45
Data Protection Supervisor & Internal Audit	2	1		1	1	49
Facilities management and transport officer	1	-	-	0	1	-
Complaints officer	2	-	-	0	2	-
Public affairs officer	1	-	-	0	1	-
Driver	2	1		1	1	32
TOTAL	**37**	**9**	**7**	**16**	**21**	**37**

Table 1. 11: HUMAN RESOURCE CAPACITY: Postal and Courier Services and Regulatory Commission (PCSRC)

GRADE	ESTABLISHMENT	NUMBER AT POST		TOTAL AT POST	VARIANCE	AGE DISTRIBUTION
		MALE	FEMALE			
Postal and Courier Services Regulatory Commission						
Executive Secretary	1	1		1	0	40-50
Deputy Executive Secretary	0		1	1	0	40-50
Director	3	1		1	2	51
Manager	9	1	1	2	7	40,51
Admin Assistant	1		1	1	0	40
Driver	2	2		2	0	39,51
Janitor	1	1		1	0	56
TOTAL	**17**	**6**	**3**	**9**	**9**	

Table 1. 12: HUMAN RESOURCE CAPACITY: Ghana Meteorological Agency (GMet)

GADE	ESTABLISHMENT	NUMBER AT POST		TOTAL AT POST	VARIANCE	AGE DISTRIBUTION
		MALE	FEMALE			
GHANA METEOROLOGICAL SERVICES						
Director-General	1	1		1	0	60
Deputy Director-General	2	2		2	0	46-59
Director (Research & Applied)	1	0	0	0	1	NIL
Director (Basic Network And Data Processing)	1	0	0	0	1	NIL
Director (Synoptic Meteorology & Forecasting)	1	0	0	0	1	NIL
Director (Engineering)	1	0	0	0	1	NIL
Director (Finance)	1	0	0	0	1	NIL
Director (Human Resource)	1	0	0	0	1	NIL
Director (Administration)	1	0	0	0	1	NIL
DEPUTY DIRECTOR (BASIC NETWORK)	1		1	1	0	54
Principal Meteorologist	3	0	0	0	3	NIL
Snr Meteorologist	3	1		1	2	35

Meteorologist	3	1		1	2	37
Asst. Meteorologist	3	0	0	0	3	NIL
DEPUTY DIRECTOR (RESEARCH)	1		1	1	0	45
Principal Meteorologist	4	0	0	0	4	NIL
Snr Meteorologist	4	2	1	3	1	37-44
Meteorologist	4	1	1	2	2	29-44
Asst. Meteorologist	4	0	0	0	4	NIL
DEPUTY DIRECTOR SM&F	1	1		1	0	50
Principal Meteorologist	10	0	0	0	10	NIL
Snr Meteorologist	15	2		2	13	39-48
Meteorologist	20	13	1	14	6	30-49
Asst. Meteorologist	20	13	4	17	3	24-32
DEPUTY DIRECTOR (ENGINEERING)	1	0	0	0	1	NIL
Principal Engineer/ Meteorologist	3	1	0	0	3	NIL
Snr Engineer/ Snr Meteorologist	3	0	0	0	3	NIL
Engineer/Meteorologist	4	1		1	3	41

Asst. Engineer/ Asst. Meteorologist	4	0	0	0	4	NIL
SM&F, RESEARCH, BASIC NETWORK						
Chief Met Technician	27	13	3	16	11	53-59
Principal Met Technician	86	27	7	34	52	49-59
Snr Met / Met Technician	176	77	14	91	85	30-49
Asst. Met Tech I&Ii				52		40-59
Raingauge Reader				12		43-59
Engineering						
Chief Met Technician (Engineering)	3	0	0	0	3	NIL
Principal Met Technician (Engineering)	4	0	0	0	4	NIL
Snr Met / Met Technician (Engineering)	22	0	0	0	22	NIL
DEPUTY DIRECTOR (ADMINISTRATION)	1	0	0	0	1	NIL
Principal Administrative Officer	6	0	0	0	6	NIL
Senior Administrative Officer	3	0	0	0	3	NIL
Administrative Officer	12	1		1	11	41

Assistant Administrative Officer	12	5	1	6	6	24-30
DEPUTY DIRECTOR (HUMAN RESOURCE)	1		1	1	0	57
Principal Human Resource Officer	3	0	0	0	3	NIL
Senior Human Resource Officer	3	0	0	0	3	NIL
Human Resource Officer	3		1	1	2	38
Assistant Human Resource Officer	3	2	1	3	0	25-30
DEPUTY DIRECTOR (FINANCE)	1	0	0	0	1	NIL
Principal Accountant	1	0	0	0	1	NIL
Senior Accountant	1	0	0	0	1	NIL
Accountant	1	1		0	1	29
Assistant Accountant	1	0	0	0	1	NIL
Chief Accounts Technician	1	0	0	0	1	NIL
Principal Accounts Technician	1	0	0	0	1	NIL
Senior Accounts Technician	1	0	0	0	1	NIL
Accounts Technician	10	0	0	0	10	NIL
Administrative Assistant	8	0	0	0	8	NIL

ESTATES						
Principal Estate Officer	1	0	0	0	1	NIL
Senior Estate Officer	1	0	0	0	1	NIL
Estate Officer	1	0	0	0	1	NIL
Assistant Estate Officer	1	0	0	0	1	NIL
Library						
Principal Librarian	1	0	0	0	1	NIL
Senior Librarian	1	0	0	0	1	NIL
Librarian	1	0	0	0	1	NIL
Assistant Librarian	1	0	0	0	1	NIL
PROCUREMENT						
Principal Procurement Officer	1	0	0	0	1	NIL
Senior Procurement Officer	1	0	0	0	1	NIL
Procurement Officer	1	0	0	0	1	NIL
Assistant Procurement Officer	1	0	0	0	1	NIL
Stores						
Chief Procurement Assistant	1	0	0	0	1	NIL

Principal Procurement Assistant	1	0	0	0	1	NIL
Senior Procurement Assistant	1	0	0	0	1	NIL
Transport						
Chief Transport Officer	1	0	0	0	1	NIL
Principal Transport Officer	2	0	0	0	2	NIL
Senior Transport Officer	3	0	0	0	3	NIL
Chief Driver	3	1		1	2	50
Principal Driver	4	6		6	-2	38-47
Snr Driver	4	0	0	0	4	NIL
Driver	5	0	0	0	5	NIL
INFORMATION TECHNOLOGY						
Principal I.T Officer	1		1	1	0	52
Senior I.T Officer	2	0	0	0	2	NIL
I.T Officer	3	1		1	2	41
Asst. I.T Officer	4	0	0	0	4	NIL
Chief I.T Technician	1	0	0	0	1	NIL
Principal I.T Technician	2	0	0	0	2	NIL

Senior I.T Technician	3	0	0	0	3	NIL
INTERNAL AUDIT						
Chief Internal Auditor	1	0	0	0	1	NIL
Principal Internal Auditor	1	0	0	0	1	NIL
Senior Internal Auditor	1	0	0	0	1	NIL
Internal Auditor	1	1		1	0	44
Assistant Internal Auditor	1		1	1	0	29
Chief Internal Audit Technician	1	0	0	0	1	NIL
Principal Internal Audit Technician	1	0	0	0	1	NIL
Senior Internal Audit Technician	1	0	0	0	1	NIL
DEPUTY DIRECTOR (PUBLIC RELATIONS)	1	0	0	0	1	NIL
Principal Public Relations Officer	1	0	0	0	1	NIL
Senior Public Relations Officer	1	0	0	0	1	NIL
Public Relations Officer	1	0	0	0	1	NIL
Assistant Public Relations Officer	1	0	0	0	1	NIL
LEGAL						

Principal Legal Officer	1	0	0	0	1	NIL
Senior Legal Officer	1	0	0	0	1	NIL
Legal Officer	1	0	0	0	1	NIL
SECURITY						
Chief Security Guard	1	0	0	0	1	NIL
Principal Security Guard	1	0	0	0	1	NIL
Senior Security Guard	4	0	0	0	4	NIL
Security Guard	48	16	1	17	31	25-59
CLEANERS						
Head Cleaner/Sweeper	1	0	0	0	1	NIL
Cleaner/ Sweeper	47		7	7	40	43-52
LABOURERS						
Head Labourer	1	0	0	0	1	NIL
Labourer	30	25		25	5	34-59
Artisans	0	0	0	0		
Foreman	2	5		5	-3	35-58
Junior Foreman	2	1		1		36

Foreman Gd. I	3	0	0	0	3	NIL
Foreman Gd. Ii	4	0	0	0	4	NIL
TOTAL						

1.4.1.2 INFRASTRUCTURE AND FACILITIES

The Ministry has an ultra-modern 7th Floor office complex located along the Alhaji Diouf Street, near Parliament House. The structure also houses the National Primary Data Centre, NITA and GIFEC. The structure also provides Conference Rooms on each floor, except the 7th Floor that has been converted into a Canteen for workers around the area. All the Agencies under the Ministry have permanent office accommodations. The challenge however is inadequate equipment. GMet has serious communications equipment gap. For instance, the Agency has only one Automatic Weather Observation System (AWOS) located at Kotoka Airport which serves the whole nation – it is even old and would soon be expected to be replaced. It is expected that there should be one each at the Tamale, Takoradi and Kumasi Airports. Computers and its accessories, and scanners are inadequate affecting the implementation of the Smart Workplce programme. Again, almost all the agencies do not have a dedicated vehicle and other resources required for carring out effective monitoring and evaluation excercises.

Stated in the table below is the satus of equipment and facilities in the Ministry and its Agencies.

Equipment

Table 1. 13: Ministry of Communications (MoC) HQs.

MINISTRY OF COMMUNICATIONS, HQs							
		Existing			Total No.		
Equipment	Type	Poor	Fair	Good	Existing	Number Required	Variance
Computers and accessories	Desktop	4	1	34	39	46	7
	Laptops			3	3	6	3
	Printers	4		20	24	27	3
	Scanners			4	4		
	Photocopiers			9	9		
	LCD Projectors			3	3		
	Fax machines				1		
	Paper shredder			5	5	8	3
	Telephones	1		18	19		
	Video Conf. Equip				1		
	Delegate Mics.						0
	Ups	3		9	12	34	22
	Voltage Stabilizers (AVR)			4	4		
	Generator			1	1		
	Air-Conditioner		8	72	80	84	4
Electrical	Refrigerators	2		7	9	11	2

MINISTRY OF COMMUNICATIONS, HQs							
Equipment	Type	Existing			Total No. Existing	Number Required	Variance
		Poor	Fair	Good			
Vehicles	Saloon cars	2		8	10		
	Cross country 4x4	1	2	12	15		
	Pickup		2	2	4		
	Motor Bike						
	Bus		2	1	3		

Table 1. 14: National Information Technology Agency

NITA							
Equipment	Type	Existing			Total No. Existing	Number Required	Variance
		Poor	Fair	Good			
Computers and accessories	Desktop	2	1	37	40	150	110
	Laptops	-	1	6	7	50	43
	Printers	2	4	6	12	20	8
	Scanners	-	2	3	5	10	5
	Photocopiers	2	-	1	3	10	7
	LCD Projector	-	-	1	1	3	2
	Fax machines	-	-	-	-	3	3
	Paper Shredders	-	-	2	2	6	4
	Telephones	-	-	16	16	40	24
	Video Conf. Equip	-	-	-	-	20	20
	Delegate Mics.	-	-	-	-	20	20

NITA							
Equipment	Type	Existing			Total No. Existing	Number Required	Variance
		Poor	Fair	Good			
	Ups	-	-	1	1	12	11
	Voltage Stabilizers(AVR)	-	-	-	-	2	2
	Generator	-	-	2	2	2	-
Electrical	Air-Conditioners	12	2	38	52	52	-
	Refrigerators	-	1	9	10	15	5
Vehicles	Saloon cars	-	1	6	7	15	8
	Cross country 4x4	1	1	2	4	7	3
	Pickup	2	2	6	10	20	10
	Motror Bike	-	-	-	-	1	1
	Bus	-	-	-	-	2	2

Table 1. 15: Ghana Investment Fund For Electronic Communications (GIFEC)

GHANA INVESTMENT FUND FOR ELECTRONIC COMMUNICATIONS							
Equipment	Type	Existing			Total No. Existing	Number Required	Variance
Computers and accessories	Desktop			17	17		
	Laptops			11	11		
	Printers			12	12	15	3
	Scanners			4	4	7	3
	Photocopiers			2	2	-	-
	LCD Projector			2	-	-	-

GHANA INVESTMENT FUND FOR ELECTRONIC COMMUNICATIONS							
Equipment	Type	Existing			Total No. Existing	Number Required	Variance
	Fax machines			-	-		
	Paper Shredders			5	5	-	-
	Telephones			20	20	-	-
	Video Conf. Equip.			-			
	Delegate Mics.			-			
	Ups			18			
	Voltage Stabilizers (AVR)						
	Generator						
Electrical	Air-Conditioners						
	Refrigerators			15	-	-	-
Vehicles	Saloon cars			6			
	Cross country 4x4			6			
	Pickup			13			
	Motor Bike			-			
	Bus			1			

Table 1. 16: Ghana-India Kofi Annan Centre of Excellence in ICT (AITI-KACE)

Equipment	Type	Existing			Total No. Existing	No. required	Variance
		Poor	Fair	Good			
Computer and Accessories	Desktop	13	17	63	93	309	216
	Laptop	10	0	27	37	65	28
	Printer	0	0	8	8	14	6
	Scanner	0	0	2	2	4	2
	Photocopier	1	0	1	2	4	2
	LCD Projector	1	0	5	6	17	11
	Fax Machine	0	1	0	1	1	0
	Paper Shredder	1	0	0	1	5	4
	Telephone (Digital/Analogue)	15	7	15	37		
	Video Conference Equipment	1	0	0	1	5	4
	UPS	2	3	0	5	16	11
	Voltage Stabilizers (AVR)	1	0	30	31	45	14
	Generator	0	1	0	1	3	2
	Air-Conditioner	6	3	29	38	43	15
	Refrigerator	1	0	2	3	5	2
	Servers	8	7	8	23	38	15
	HPC	1	1	0	2	6	4

Equipment	Type	Existing			Total No. Existing	No. required	Variance
		Poor	Fair	Good			
Other Infrastructure	GSM SMS TEMP MONITOR	0	0	0	0	4	4
	Access Points	0	2	0	2	8	6
Vehicle	Saloon cars	2	2	1	5	7	2
	Cross Country (4*4)	0	1	1	2	3	1
	Pickup	0	1	0	1	3	2
	Motor Bikes	0	0	0	0	0	0
	Bus	0	1	0	1	2	1

Table 1. 17: Ghana Meteorological Agency (GMet)

GHANA METEOROLOGICAL AGENCY							
Equipment	**Type**	**Existing**			**Total No. Existing**	**Number Required**	**Variance**
		Poor	**Fair**	**Good**			
Computers and accessories	Desktop	17	23	50	80	120	40
	Laptops			12	12	15	3
	Printers	2	5	33	40	45	5
	Scanners		1	2	3	5	2
	Photocopiers	1	1	2	4	7	3
	LCD Projector			2	2	3	1
	Fax machines	1			1	1	0
	Paper Shredders				0	5	5
	Telephones	2	5	85	92	92	0
	Video Conf. Equip.				0	0	0
	Delegate Mics.		1	2	3	3	0
	UPs	6	14	50	70	120	50
	Voltage Stabilizers (AVR)			1	1	1	0
	Generator			2	2	2	0
Electrical	Air-Conditioners	8	12	24	44	52	8
	Refrigerators			11	11	17	6
Vehicles	Saloon cars				0	17	17
	Cross country 4x4	1			1	5	4
	Pickup	2	2		4	7	3
	Motor Bike	1			1	12	11

	Bus		1		1	5	4

Table 1. 18: Postal and Courier Services Regulatory Commission (PCSRC)

POSTAL AND COURIER SERVICES REGULATORY COMMISSION							
Equipment	Type	Existing			Total No. Existing	Number Required	Variance
		Poor	Fair	Good			
Computers and accessories	Desktop		✓		9	19	10
	Laptops			✓	1	9	8
	Printers		✓		4	6	2
	Scanners	✓			1	3	2
	Photocopiers		✓		1	2	1
	LCD Projector	-	-	-	-	1	1
	Fax machines	✓			1	1	1
	Paper Shredders			✓	1	2	1
	Telephones			✓	9	15	6
	Video Conf. Equip.	-	-	-	-		
	Delegate Mics.	-	-	-	-		
	UPs	✓	✓		7	19	12
	Voltage Stabilizers (AVR)				-	5	5
	Generator				-	1	1
Electrical	Air-Conditioners		✓		6	9	3
	Refrigerators		✓		3	4	1
Vehicles	Saloon cars		✓		1	5	4
	Cross country 4x4		✓		1	3	2
	Pickup			✓	1	3	2

	Motor Bike				-		
	Bus				-		

Table 1. 19: Data Protection Commission (DPC)

DATA PROTECTION COMMISSION							
Equipment	**Type**	**Existing**			**Total No. Existing**	**Number Required**	**Variance**
		Poor	Fair	Good			
Computers and accessories	Desktop	4	6	22	32	42	10
	Laptops		1	11	12	20	8
	Printers			3	3	6	3
	Scanners			3	3	5	2
	Photocopiers				-	-	-
	LCD Projector				3	3	0
	Fax machines				-	1	1
	Paper Shredders			1	1	4	3
	Telephones	1		13	14	12	0
	Video Conf. Equip.				-	2	2
	Delegate Mics.				-	-	-
	Ups (Big)			2	2	2	0
	Ups (Small)	5		15	20	30	10
	Voltage Stabilizers (AVR)			1	1	1	0
	Unifier		2	5	7	7	0

DATA PROTECTION COMMISSION							
Equipment	**Type**	**Existing**			**Total No. Existing**	**Number Required**	**Variance**
		Poor	Fair	Good			
	Digital camera			2	2	2	0
	Generator			1	1	1	0
Electrical	Air-Conditioners				-	-	-
	Refrigerators				2	3	1
Vehicles	Saloon cars				-	-	-
	Cross country 4x4				-	-	-
	Pickup				-	-	-
	Motor Bike				-	-	-
	Bus				-	-	-

1.5 ANALYSIS OF CROSS CUTTING ISSUES

1.5.1 Information and Communication Technology (ICT)

Countries all over the world are increasingly using Information and Communication Technologies (ICTs) to transform their economies. There are indeed compelling examples of how ICTs have benefitted firms, individuals and governments. They do so by significantly reducing the cost of economic and social transactions: the cost of searching for and acquiring information, bargaining and making decision, and monitoring and enforcing transactions. They have indeed been used to inject efficiency into public sector service delivery across the developed and most developing countries and Ghana cannot be an exception.

It is in this respect that the government of Ghana through the Ministry of Communications has embarked on a digital inclusion agenda to develop and promote the widespread use of ICT infrastructure and services. The e-Transform Project under the Ministry of Communications is employing the use of ICTs in some beneficiary institutions such as: Ghana Immigration Service, Birth and Death Registry, Ghana Registrar-General's Department, Judicial Services of Ghana to provide services to the public. The Smart Workplace portals creates a seamless interaction and workflow amongst government agencies. The fibre optic network infrastructure and mobile telecommunications have also increased affordable access to internet and enhanced citizens' knowledge and participation in governance. The eServices Support Portal also ensures the integration of ICT into government business processes to achieve greater efficiency and effective service delivery to citizens.

The challenge for the Ministry in this area is the low quality of experience and service in use of mobile telephony despite significant improvements over the years. Akin to this was the high cost of services and inadequate ICT infrastructure which has created a digital gap between the haves and have-nots. Finally, inadequate funds have also constrained most of the Ministry's development projects.

1.5.2 Science, Innovation and Technology

The use of information and communication technologies (ICTs) has no limitatitation. It cust across all disciplines and is multisectorial in nature. For instance, in the area of science, technology and innovation, it can be used in designing smart buildings. Using ICT smart grids can be implemented in energy generation and power consumption, ICT can control transmission and distribution of energy. Micro-

sensor Wireless Network is one of the most popular technologies among the technologies that gained recognition and approval in the 21st century. Further, wireless sensor network applications are been used in commercial or human centric applications, environmental monitoring, military applications and robotics just to mention a few.

The transformational reach of ICTs can also be seen in the area of eduction. For instance, the collaborative Network Connectivity Project of the National Information Technology Agency (NITA) and the Ghana Investment Fund for Electronic Communications (GIFEC), being implemented particularly in the rural areas has immensely improve upon access to quality education. Rural folks are thus more able to access educational and research materials from any part of the world. The migration of public data/information to the National Data Centre has also improve data security and reduced cost of access to both public and private instotutions that are housing their data at the National Data Centre. Looking ahead, the system will provide the foundation to support future security initiatives such as Smartcard-based authentication, network access control technologies, device-based authentication to meet the future requirement for e-governance initiatives like National ID Card, e-Services, E-Passport, e-Payment Gateway, e-Procurement, e-Immigration-Justice-Parliament and other e-Government documents applications where so required.

1.5.3: Climate Change

ICT is contributing in almost all fields of human life. ICT enhance the capability and functionality of our daily routine life activities and serving mankind in its best.

Information and Communication Technology plays a pivotal role in monitoring, mitigation and adaptation of Climate changes challenges. These ICT technologies includes Geographical Information System (GIS), Wireless Sensor Networks (WSN), Mobile Technology (MT), Web based applications, Satellite Technology, Remote Sensing (RS). Weather patterns are changing intensively due to change in temperature globally. ICTs are enabling tools if integrated strategically can improve efficiency and effectiveness of efforts doing in climate change mitigation and adaptation; it includes knowledge centers, community radio, mobile phones and interactive media. ICT can help vulnerable community to reduce the risk related to climate changes by education and awareness at lowest level of community, sharing practical and theoretical knowledge, empowering community to access the knowledge and relevant information applicable locally to save lives.

ICTs also assist in analyzing the causes and effects of climate change. In fact, observation and early warning capabilities are of critical importance for many vulnerable countries. ICTs will be instrumental in helping to develop new, climate-friendly technologies that can help economies growth sustainably and reduce emissions in the years ahead. However, we do not always have to think of huge investments and large scale projects. Each of us can significantly reduce our carbon footprint in our daily lives by using smart ICTs. For example, instead of traveling to business meetings we can use new video-conferencing technology.

ICTs are clearly important tools, catalysts, and instruments that can contribute to the preservation of our environment and the stabilization of the world's climate. But like all tools, success depends as much on how we use them as who has them.

1.5.4 Food Security

To help the poor farmers and to support the agricultural sector in tribal area ICT based project eArik (e-agriculture) was initiated in 2007. The purpose of this project is to sharing the climate smart agricultural practices among the farmers plus food security. A knowledge center equipped with digital devices like Computer, printer, scanner, internet, TV and phone, is established in the community. Agricultural Professionals, computer instructor and farmer facilitator are also contributing in this knowledge center each of above facilitate farmers according to his/her expertise. . A web portal www.earik.org contains information regarding crop cultivation, agricultural practice, farmer welfare program, day to day market information and weather forecast. Mobile phone and laptops are use in the fields for recording and updating information. Emails and web cams are used to communicate to each other. E-Arik staff regularly visits the fields and observes crop conditions, pets and disease possibilities then update this information using ICT.

However, ICT to some extent has contributed to the Greenhouse gasses which affects the climate. For instance, electronic gadgets which are burnt, electronic waste generated at the end of use of ICT gadget and carbon dioxide produced from the electronic devices we use either at home or office.

1.5.5: Population Dynamics

Ghana's population is a very youth one according to the 2010 population census. As such the use of ICT equipment is predominately used by the youth as against the elderly. Most of the elderly lack the understanding due to frequent innovations and technicalities that comes with ICT.

According to an in-depth evaluation of the impact of ICT on youth published in the 2003 World Youth Report prepared by the United Nations, ICT has changed the way young people interact socially, as digital communication has increasingly replaced traditional forms of interaction. ICT offers youth autonomy from families with access to vast virtual social networks that provide more instantly-gratifying, but less personal interactions.

Information and Communication applications such as e-Learning have enabled young people to access education remotely irrespective of geographical location at a comparatively reduced cost. This has reduced the number of delinquencies including robbery, thievery, teenage pregnancies and also early childbirths among idle young folks and increased their prospects of employment and improved well-being in future.

ICTs have also helped greatly in the communication system for the disabled who now have the opportunity to communicate through electronic communication boards and specialized computers software.

1.5.6 Employment

Information and communication technologies also offer opportunities for youth empowerment and education, particularly in societies where resources are limited. Researches has shown that the youths in various locations can use ICT to maintain cultures, gain knowledge, develop skills and generate income. According to the 2005 World Youth Report section on youth in civil society, "ICT is increasingly being used to improve access to education and employment opportunities, which supports efforts to eradicate poverty. ICT currently provides lucrative employment to lots of young men and women in the private sector. The Accra Digital Centre currently provides one thousand jobs to young adult and nurturing thousands of them in innovative use of ICTs. In the medium-term, the sector is expected provide more jobs than any other in Ghana.

The four main areas ICT had an effect on employment include Manufacturing, Shop work, Banking, Office work.

1.6: Increase in Employment Opportunities:

There are many new job opportunities created due to the introduction of ICT:

- Network managers/Administrators – these are the people who keep the networks running for all the users and see to the taking of backup copies.
- Website designers – these are the people who design and create websites for others, as well as keep them up-to-date.
- Development staff – these include system analysts and programmers who develop software programs.
- Increase in the number of delivery staff – as more goods are bought online.
- Increased demand for programmers – programs are required as more tasks are performed by computers.

1.7 ICT had both positive and negative effects on employment.

1.7.1 Positive Effects of ICT on Employment

- Fewer people needed to complete the same amount of work.
- Increased number of people working from home using IT equipment hence prompt response and delivery of work.
- More automation in factories due to the introduction of robots – assembling, packing, welding, painting, etc.
- More availability of part-time works as many organization needs to be staffed 24/7.
- More variation in tasks undertaken and staff need to be flexible and well trained to cope with this.
- Fewer 'real' meetings as 'video conferencing' is used to reduce travel time and travel costs.
- Increase in the number of technical staff needed such as network engineers, programmers, web designers, etc.

1.7.2 Negative Effects of ICT on Employment

- Many jobs, where number of people employed have been reduced due to introduction of robots/automation.
- Many manual repetitive jobs such as paint spraying, welding, packing goods, assembly work in work have been replaced by robots.

- Continual need for training as IT systems change.

1.8: Summary of Issues Identified under GSGDA II

The table below outlines the key issues identified under the performance review and the situation analysis liked to ist corresponding thematic areas:

Table 1. 20: Summary of Identified Issues

Thematic areas of GSGDA II	**Identified issues (from performance review and profile)**
Infrastructure and Human Settlements	Inadequate ICT infrastructure base across the country *Limited and obsolete equipment/tools* *Frequent fibre cuts* *Poor road network to transport ICT equipment* *Vehicle for courier*
	High cost of providing ICT services
	Poor quality of ICT services
	Insufficient institutional and regulatory framework to support ICT development
	Difficulties associated to application for official documents including passport, driving license, vehicle registration, taking consignment from the ports.
	Insufficient ICT professional in the public sector.
	Limited use of ICT as a tool to enhance management and efficiency of business.

Transparent, Responsive and Accountable Governance	Low public engagement
	Inadequate and unreliable data for decision making.
	Unattractive conditions of work for ICT professionals/technical staff.
	Limited access to public information.

Development Issues

- Lack of a sense of ownership by the District Assemblies
- Non-payment of services provided to MDA's/MMDA's depriving NITA of the needed revenue for the purchase of bandwidth to improve the quality of our services.
- Increase cost of Network management as network expands.
- Inadequate Technical human resource to run our operations.
- Lack of funds to meet the incremental cost of Network Consumables
- Inadequate Meteorological Communication Equipment
- Inadequate skilled human resource
- Lack of equipment
- Inadequate funds
- Inadequate and obsolete Vehicle
- Inadequate supply of Power
- Unstable electric power
- Frequent cut of fiber optic cables by land developer, contractors and encroachers.
- Poor road network to transport ICT Network Equipment's.
- Land litigation and high compensation.
- High incremental cost of ICT materials and equipment.

- Sustainability of GIFEC projects

- Limited Community support for GIFEC's project
- Successive plan for the Community Information Centers
- Low level of digital literacy among the population

Key Challenges and Lessons Learnt

Key Challenges

The following were the key challenges encountered during the implementation of the 2014-2017 sector medium term development framework.

- Lack of power supply in some rural communities
- Inadequate ICT infrastructure base across the country
- Inadequate budget allocation to ICT
- Inadequate budget releases for ICT development
- Inadequate public awareness and expertise on potential of ICTs

Lessons Learnt

The under-listed were the lessons learned during the implementation of the 2014-2017 Sector Medium-Term Development Plan and this would inform the preparation of the 2018-2021 sector medium-term development plan.

- Created Sustainability and Partnership Directorate
- Increase in sustainable partnership
- Creation of zonal offices to enhance operations

- GMet have been able to manage with the communication equipment we currently have to its very best to deliver their core mandate which is weather services.
- The lack of Manpower has forced the staff to work excess hours.

CHAPTER TWO

DEVELOPMENT ISSUES FOR 2018-2021

2.0 Introduction

This chapter outlines the development issues identified from the performance review and situational analysis with implication for the next medium-term plan and appropriately linked to the identified issues and development dimensions in the medium-term development policy framework; Agenda for Jobs – Creating prosperity for all. The chapter also indicates how the issues identified from the Agenda for Jobs, 2018-2021, have been prioritised using the criteria provided in the NDPC guidelines to ensure effective and efficient implementation.

2.1 Harmonisation of Identified Development Issues of GSGDA II with Agenda for Jobs, 2018-2021

This section seeks to harmonise the development issues identified from the performance and situational analysis with that in the new Medium-Term Development Policy Framework – Agenda for Jobs, 2018-2021 to ensure continuity in programming.

Table 2. 1: Identified Development Issues under GSGDA II andAgenda for Jobs, 2018-2021

GSGDA II, 2014-2017		**Agenda for Jobs, 2018-2021**	
THEMATIC AREAS	ISSUES	DEVELOPMENT DIMENSION	ISSUES
Infrastructure and Human Settlements	Inadequate ICT infrastructure base across the country	Environment, Infrastructure and Human Settlements	Inadequate ICT infrastructure base across the country
	High cost of providing ICT services		Poor quality of ICT services

	Inefficient institutional and regulatory framework to support ICT development		Low broadband wireless access
	Difficulties associated to application for official documents including passport, driving license, vehicle registration, taking consignment from the ports.		Limited use of ICT as a tool to enhance the management and efficiency of business and provision of public services
	Insufficient ICT professionals in the public sector		
	Limited use of ICT as a tool to enhance management and efficiency of business		
Transparent, Responsive and Accountable Governance	Weak capacity for public dialogue	Climate Vulnerability and Change	Vulnerability to climate change
	Limited access to public information		Low institutional capacity to adapt to climate change and undertake mitigation actions
	Inadequate and unreliable data for decision making		
	Unattractive conditions of work for ICT professionals/technical staff		

The table below presents the output of the harmonisation of the adopted development issues with the Development Dimensions in Agenda for Jobs, 2018–2021.

Table 2. 2: Development Dimension and adopted Issues of SMTDP of MoC

DEVELOPMENT DIMENSIONS 2018-2021	ADOPTED ISSUES
Environment, Infrastructure and Human Settlement	Inadequate ICT infrastructure base across the country
	Poor quality of ICT services
	Inadequate online privacy and security of data.
	Low broadband wireless access
	Limited use of ICT as a tool to enhance the management and efficiency of business and provision of public services
Governance	Low public engagement
Climate Vulnerability and Change	Vulnerability to climate change
	Low institutional capacity to adapt to climate change and undertake mitigation actions

2.2 Prioritisation of Development Issues

Following harmonization of outstanding and current issues arising from in-depth analysis, the Ministry noted that due to resource constraints, it would not be able to implement all identified issues, hence the need to prioritise by giving credence to issues with high socio-cultural and economic impact on Ghanaians.

- Inadequate ICT infrastructure base across the country
- Limited use of ICT as a tool to enhance the management and efficiency of business and provision of public services
- Poor quality of ICT services
- Low broadband wireless access
- Inadequate online privacy and security of data.
- Vulnerability to climate change
- Low institutional capacity to adapt to climate change and undertake mitigation actions
- Low public engagement

2.2.1 Application of potentials, opportunities, constraints and challenges (POCC) analysis

The section analysis the identified issues for addressing in the medium-term plan, 2018-2021 to ascertain its potential, opportunities, constraints and challenges.

Table 2. 3: Application of POCC

Issues to be addressed	Potentials	Opportunities	Constraints	Challenges
Limited use of ICT as a tool to enhance the management and efficiency of business and provision of public services	▪ Human Resource ▪ Computers ▪ Internet ▪ Laptops ▪ Conference rooms ▪ Office space	▪ Public ▪ Telcos/ Postal Operators / Aviation ▪ MDAs / MMDAs ▪ Global information age ▪ Educational/ Training Institutions ▪ Youthful Populations ▪ Conventions and treaties	▪ High attrition rate ▪ Limited competences ▪ Obsolete equipment ▪ Attitude/resistance change ICT generational gap	▪ Cyber crime ▪ Encryption ▪ Legal frameworks ▪ Cyber Terrorism ▪ High cost of ICT equipment

Issues to be addressed	Potentials	Opportunities	Constraints	Challenges
Conclusion: There is limited use for ICT tool to enhance management and businesses in the country, though there are available skilled personnel and equipment to address ICT generational gap. However there are some challenges to be addressed, such as high attrition rate, obsolete equipment and regulatory framework to meet the expectation of the public and to enable the Ministry go along with global information age.				
Poor quality of ICT services	▪ Modern equipment ▪ Professional ICT personnel ▪ Data center ▪ Broadband Policy and Strategy, 2012	▪ General Public ▪ ICT investments ▪ ICT Markets; MNOs ▪ Strong Regulators	▪ Poor internet connections ▪ Obsolete equipment ▪ Inadequate ICT infrastructure ▪ Weak enforcement	▪ Hacking ▪ Fiber Cuts ▪ Unstable power supply ▪ Restricted software
Conclusions: Notwithstanding the poor quality of ICT services in the country, there are available modern equipment and professional ICT personnel to take advantage of the increasing investments in the sector driven by global technological trends in the use of ICTs. Further, the country has strong regulators such as the NCA, DPC, NITA and Cybersecurity Centres to ensure secured use of ICTs and to overcome challenges such as hacking, fibre cuts.				
Inadequate ICT infrastructure base across the country.	▪ Fibre optics platform ▪ Communication masts ▪ Computers/accessories ▪ Internet ▪ GMet Radar ▪ Automatic weather stations ▪ NITA, GIFEC	▪ MNOs ▪ Availability of communication accessories/gadgets ▪ Social media	▪ Inadequate fibre optic cables ▪ Inadequate professionals ▪ High cost of investment in ICT equipment ▪ Poor maintenance culture	• High cost of ICT equipment • Land litigation • Fibre cuts • Misconception about effects of ICTs (masts, satellite)
Conclusions: Though the country has the capacity to facilitate development and deployment of ICT infrastructure and radar to enable timely and reliable prediction of weather conditions, the ICT infrastructure base is woefully inadequate because of the high cost of ICT equipment, land litigations and frequent fibre cuts. The Ministry can however, create the enabling environment for its agencies and MNOs to expand their infrastructure base as well as carry out sensitization programmes to erode the misconceptions surrounding erecting of masts.				

Issues to be addressed	Potentials	Opportunities	Constraints	Challenges
Low broadband wireless access	▪ Type Approval Labs ▪ Spectrum Analysers ▪ Guidelines on Broadband ▪ Broadband Policy and Strategy 2012 ▪ National Data Centres ▪ Fibre Optics	▪ ICT Investments ▪ ICT Treaties and Conventions ▪ Global information age	▪ Obsolete equipment ▪ Outdated policy on Broadband	▪ Country's Landscape ▪ Fibre Cuts
Conclusions: In spite of efforts at improving access to broadband through development of a National Broadband Policy and Strategy, establishment of a National Primary and Secondary Data Centres and the construction of 808.34km optic fibre cables across the Eastern Corridors of the Country, there is still limited access to broadband wireless connectivity because of obsolete equipment, outdated broadband policy framework and strategies, the country's undulating landscape affecting network access to hard-to-reach communities and frequent fibre cuts.				
Vulnerability to climate change	▪ Strong institutional capacity (GMet) ▪ Modern equipment for weather forecast ▪ Availability of University and research institutes ▪ Human resource	▪ Mass media (social media, media houses) to broadcast climatic change prediction. ▪ Availability of Information to Agric Sector and Aviation. ▪ Technical /Professional personnel	▪ High attrition rate ▪ Inadequate equipment	▪ Legal framework ▪ High cost of equipment ▪ Inappropriate human behavior contributing to climate change.

Issues to be addressed	Potentials	Opportunities	Constraints	Challenges
		provided by the universities		
Conclusions: The country has a meteorological agency with qualified human resources to provide timely and reliable meteorological data. However, high attrition rate of qualified staff, inadequate and high cost of weather prediction equipment, coupled with ineffective legal framework has left the country vulnerable to climate change. The country can, notwithstanding the above, take advantage of Ghanaians' high attraction to social media, electronic media and the high number of tertiary institutions to generate and provide timely and reliable weather-sensitive information to the general public.				
Low institutional capacity to adapt to climate change and undertake mitigation actions.	▪ Presence of Universities and research institutes ▪ Human resource ▪ Disaster mitigation institutions (NADMO, NGOs &CSOs) ▪ National digital property addressing system	▪ Political commitment ▪ Media institutions ▪ Social Media	▪ Low inter-sectorial collaboration ▪ Poorly resourced disaster mitigation institutions ▪	▪ Weak legal framework ▪ Illegal mining operations ▪ Weak regulatory bodies ▪ Poor town planning
Conclusions: There is low institutional capacity to take mitigation actions to facilitate adaptation to climate change, though the country has human resource, universities, research and disaster management institutions to mitigate the effects of climate change. Further the use of social media platforms and the Media institutions to communicate climate changes to the public. However, there are still challenges which include: Weak legal system, Poor Town Planning, low inter-sectorial collaborations.				
Low public engagement	▪ Human resource ▪ Internet ▪ Smart phones	▪ Public ▪ Conferences ▪ Online portals	▪ High cost of engagements	▪ Low public interest and attitude to change ▪ right time and venues

Issues to be addressed	Potentials	Opportunities	Constraints	Challenges
	▪ Computer ▪ Conference rooms ▪ Office space ▪ Public address systems	▪ Meet- the- press ▪ Mass Media ▪ NCCE ▪ Ministry of Information(Policy dialogue)	▪ Inappropriate channel of communication ▪ Inappropriate message ▪ Bureaucratic barriers	▪ poor road network ▪ generational gap
Conclusions: The public is not effectively engaged as a result of the cost involved, inappropriateness of the communication channels, the type of messages giving to the public, poor road network, bureaucratic barriers and many more. However, the availability of qualified personnel, access to internet, smart phones, computers, offices, public address system and conference rooms to improve the engagement of the public.				
Inadequate online privacy and security of data.	▪ Human resource ▪ Internet ▪ Smart phones ▪ Computer ▪ Office space	▪ Data protection ▪ Cyber security center ▪ Child on line policy	▪ Weak enforcement ▪ Poor internet connectivity ▪ Obsolete equipment ▪ Inadequate ICT infrastructure	▪ Inadequate Legal frameworks ▪ Cyber crime ▪ Cyber terrorism ▪ Fiber cut ▪ Inadequate ICT legal professionals
▪ *Conclusion: Online privacy and security of data is a problem though we have human resource, internet, computers, data protection centres, cyber security centres,* Inadequate Legal frameworks, cyber-crime, cyber terrorism, fiber cut, inadequate ICT legal professionals *to deal with the issue. Weak enforcement,* poor internet connectivity, obsolete equipment and inadequate ICT infrastructure are all challenges facing data security in the country.				

2.2.2 Impact Analysis

The issues identified and prioritised through POCC analysis were further taken through impact analysis to ensure that it will have the necessary impact on the society as a whole. Assessing the issues identified, it was evident that addressing them would have a positive impact on the socio-economic development of the nation.

Firstly, there is limited use for ICT tool to enhance management and businesses in the country, though there are available skilled personnel and equipment to address the ICT generational gap. However, there are some challenges to be addressed, such as high attrition rate, obsolete equipment and adequate regulatory framework to meet the expectation of the public and to enable the Ministry go along with global information age. With improved use of ICTs in provision of service delivery such as the provision of e-Gates and automation of processes at the Ghana Immigration Services, the automation of services at the ports, automation of passport acquisition processing, the e-Payment system have all facilitated the flow of service delivery in the country. An optimal use of ICTs would enhance job opportunities, increased productivity and wages and salaries, and ultimately improved standard of living of most Ghanaians.

Secondly, notwithstanding the poor quality of ICT services in the country, there are available modern equipment and professional ICT personnel to take advantage of the increasing investments in the sector driven by global technological trends in the use of ICTs. Further, the country has strong regulators such as the NCA, DPC, NITA and Cybersecurity Centres to ensure secured use of ICTs and to overcome challenges such as hacking, fibre cuts high cost of access to ICT services. With the development of the Conformance Assessment (Type Approval) Polices and the establishment of the National Cyber Security Centre and National Data Centre, and the existence of a vociferous Consumer Protection Agency has led to an increased use of information and communication technologies.

Thirdly, though the country has the capacity to facilitate development and deployment of ICT infrastructure and radar to enable timely and reliable prediction of weather conditions, the ICT infrastructure base is woefully inadequate because of the high cost of ICT equipment, land litigations and frequent fibre cuts. The Ministry can however, create the enabling environment for its agencies and MNOs to expand their infrastructure base as well as carry out sensitization programmes to erode the misconceptions surrounding erecting of masts.

Fourthly, in spite of efforts at improving access to broadband through development of a National Broadband Policy and Strategy, establishment of a National Primary and Secondary Data Centres and the construction of 808.34km optic fibre cables across the Eastern

Corridors of the Country, there is still limited access to broadband wireless connectivity because of obsolete equipment, outdated broadband policy framework and strategies, the country's undulating landscape affecting network access to hard-to-reach communities and frequent fibre cuts. To overcome this challenge the Ministry of Communications through its Universal Access and in collaboration with the National Investment Fund for Electronic Communication (GIFEC) is constructing telephone masts and building Community Information Centres (CICs) across the country particularly in the underserved and unserved communities of the country.

Again, the country has a meteorological agency with qualified human resources to provide timely and reliable meteorological data. However, high attrition rate of qualified staff, inadequate and high cost of weather prediction equipment, coupled with ineffective legal framework has left the country vulnerable to climate change. The country can, notwithstanding the above, take advantage of Ghanaians' high attraction to social media, electronic media and the high number of tertiary institutions to generate and provide timely and reliable weather-sensitive information to the general public.

Further, there is low institutional capacity to take mitigation actions to facilitate adaptation to climate change, though the country has human resource, universities, research and disaster management institutions to mitigate the effects of climate change. Further the use of social media platforms and the Media institutions to communicate climate changes to the public. However, there are still challenges which include: Weak legal system, Poor Town Planning, low inter-sectorial collaborations.

Finally, the public is not effectively engaged as a result of the cost involved, inappropriateness of the communication channels, the type of messages giving to the public, poor road network, bureaucratic barriers and many more. However, the availability of qualified personnel, access to internet, smart phones, computers, offices, public address system and conference rooms to improve the engagement of the public.

2.2.3 Sustainability analysis of the issues (internal consistency/compatibility)

The adopted issues for implementation in the medium-term plan were analysed to ensure their internal consistency while identifying inconsistencies for mitigation. To achieve this, the issues were listed horizontally and vertically and their interactions assessed. …..

Table 2. 4: Sustainable prioritised issues as categorised under Development Dimensions

DEVELOPMENT DIMENSION	FOCUS AREAS OF MTDP 2018-2021	ADOPTED SUSTAINABLE PRIORITISED ISSUES
Environment, Infrastructure and Human Settlement	Information, Communication, Technology	▪ Low broadband wireless access ▪ Poor quality of ICT services ▪ Limited use of ICT as a tool to enhance the management and efficiency of businsesses and provision of public services> enhance the management and efficiency Inadequate online privacy and security of data
	Climate Variability and Change	▪ Vulnerability to climate change ▪ Low institutional capacity to adapt to climate change and undertake mitigation actions.

CHAPTER THREE

DEVELOPMENT PROJECTIONS, GOAL, ADOPTED OBJECTIVES AND STRATEGIES

3.0 Introduction

This chapter provides the development projections for the ministry and its departments and agencies during the medium-term (2018-2021) and also outlines the goals, adopted objectives and strategies to be used in achieving the needed development within the sector. The adopted objectives and strategies will form the basis for the programmes and projects to be pursued within the period (2018 – 2021).

3.1 Development Projections

The Sector Development Projections for the Ministry of Communications Sector Medium-Term Development Plan (SMTDP) 2018 is directly linked to the national development goals and objectives of the National Medium Term Development Policy Framework, Agenda 2030, Agenda 2063, and current national priorities of Government. The projections were derieved from lessons learned and challenges encountered during the implementation of GSGDA II, 2014-2017 and current national and global trends. These are particularly hinged on the following:

- historical sector development trend analysis,
- increased sector policy targeting,
- efficient use of available development resources,
- commitment to achieve sector development goals and objectives of this Plan
- enhanced institutional capacity for improved service delivery, and
- high level of political commitment to sector/national development**.**

The development projections for the 2018-2021 OAMOJ Plan are classified under ***the Ministry, its Departments and Agencies*** *and* they are as follows:

Ministry of Communications

- Continue with the implementation of Girl-in-ICT initiative by training and mentoring girls in various ICT programmes

- Continue with the implementation of Girl-in-ICT initiative by training and mentoring girls in various ICT programmes.
- Successful completion of the eTransform project by end of 2020 with the underlisted underlisted outcomes:
    - Automation of company registration and certification at the Ghana Revenue Authority;
    - Successful completion of the eImmigration Project at the Kotaka Internation Airport, 3 land and 2 sea ports;
    - Complete the authomation of
    - Improved functionality of the Accra Digital Centre
    - Improved functionality of Data Protection Capacity

National Communications Authority (NCA)

National Information Technology Agency (NITA)

Ghana Investment Fund for Electronic Communications (GIFEC)

Ghana Postal Services (GP)

Postal and Courier Regulatory Services Commission (PCRSC)

Data Protection Commission (DPC)

Ghana Meterological Services (GMet)

3.2 ADOPTED DEVELOPMENT ISSUES, THEMATIC GOALS, OBJECTIVES AND STRATEGIES, 2018-2021

This section outlines the adopted goals, policy objectives and strategies the Ministry is going to implement over the period 2018-2021. The National Medium Term Development Policy Framework (*Agenda for Jobs)* identifies fourstrategic goals that would guide development of the country. Based on the key development issues identified and in line with the mandate and function of the Ministry, two of the goals have been adopted, namely: Build a prosperous society; and maintain a stable, united and safe society. Table 9 below, outlines the goals, objectives, strategies and issues for 2018-2021

Table 3. 1: Adopted Development Issues, Thematic Goals, Objectives and Strategies, 2018-2021

THEMATIC AREA	FOCUS AREA	ISSUES	POLICY OBJECTIVES	STRATEGIES	IMPLEMENTING AND COLLABORATING AGENCIES	GLOBAL /REGIONAL LINKAGES
Goal: To safeguard the natural environment and ensure a resilient built environment						
		Inadequate ICT infrastructure base across the country	Expand the digital landscape	10.2.1 Build an integrated national ICT digital infrastructure (National ID system, addressing system, interoperability of	GIFEC, NITA, Ghana Post, NCA, MOC, ADC, KACE	SDG Target 9.c

THEMATIC AREA	FOCUS AREA	ISSUES	POLICY OBJECTIVES	STRATEGIES	IMPLEMENTING AND COLLABORATING AGENCIES	GLOBAL /REGIONAL LINKAGES
				payments and telecommunications systems, citizen's services centre nationwide using government infrastructure such as post offices, Community Information Centres, etc.) 10.2.3 Develop and implement regulations to facilitate public private partnerships (PPPs 10.2.6 Deepen national internet availability and accessibility especially in schools (citizen digital index 10.2.9 Establish innovation hubs and promote a software and applications industry 10.2.11 Promote deployment of an e-voting system for national, parliamentary and constituency elections 10.2.12 Ensure adequate digital capability to support production and use of ICTs for development		SDG Target 17.17 SDG Target 9.c, 16.10 SDG Targets 9.c, 16.10 SDG Targets 9.c, 16.10, 16.7 SDG Targets 9.c, 16.10

THEMATIC AREA	FOCUS AREA	ISSUES	POLICY OBJECTIVES	STRATEGIES	IMPLEMENTING AND COLLABORATING AGENCIES	GLOBAL /REGIONAL LINKAGES
				10.2.13 Promote the establishment of ICT parks across the country **(SDG Targets 9.c, 17.8)**		

CHAPTER FOUR

DEVELOPMENT PROGRAMMES AND SUB-PROGRAMMES OF THE MDA

4.0 INTRODUCTION

4.1 PROGRAMMES AND SUB-PROGRAMMES

Table 4. 1: MDA's adopted goal

ADOPTED OBJECTIVES	ADOPTED STRATEGIES	PROGRAMMES	SUB-PROGRAMMES
10.1 Enhance application of ICT in national development	10.1.1 Position the country as a regional ICT hub (SDG Target 9.c) 10.1.2 Mainstream ICT in public sector operations (SDG Target 17.8) 10.1.3 Improve telecommunications accessibility (SDG Targets 9.c, 17.8) 10.1.4 Create opportunities for entrepreneurship in ICT (SDG Targets 9.c, 17.8) 10.1.5 lease itizes access to data platforms (SDG Targets 9.c, 17.18) 10.1.6 Collaborate with the private sector to increase the broadband, bandwidth and speed of connections nationwide (SDG Target 17.17) 10.1.7 Accelerate investment in development of ICT infrastructure (SDG Target 17.17) 10.1.8 Improve the quality of ICT services, especially internet and telephony (SDG Target 9.c) 10.1.9 Develop and maintain online database for all categories of properties and provide secure data access (SDG Target 16.10) 10.1.10 Develop and integrate identification coding schemes for landed properties and online tracking services for registered properties (SDG Target 16.10)	Management and Administration	NITA, GIFEC, MMDAs

10.2 Expand the digital landscape	10.2.1 Build an integrated national ICT digital infrastructure (National ID system, addressing system, interoperability of payments and teleouiatios sstes, itizes seies ete nationwide using government infrastructure such as post offices, Community Information Centres, etc.) (SDG Target 9.c) 10.2.2 Provide regulatory framework to use national ICT digital infrastructure as a platform for e-government services (SDG Targets 9.c, 17.14) 10.2.3 Develop and implement regulations to facilitate Public-Private Partnerships (PPP's) (SDG Target 17.17) 10.2.4 Create a favourable environment to promote e-commerce and offline cashless payments (SDG Target 10.5 10.2.5 Provide real-time information to all segments of the population and economy (SDG Targets 16.10, 17.19) 10.2.6 Deepen internet availability and accessibility nationally especially in schools (citizen digital index) (SDG Target 9.c, 16.10) 10.2.7 Increase internet capacity and quality training in and out of school (SDG Target 9.c) 10.2.8 Promote business process outsourcing and IT enabled services (SDG Targets 9.c, 16.10) 10.2.9 Establish innovation hubs and promote a software and applications industry (SDG Targets 9.c, 16.10) 10.2.10 Develop and use ICT as a platform to increase the flow of information on employment and teleworking opportunities (SDG Targets 9.c, 16.10) 10.2.11 Promote deployment of an e-voting system for national, parliamentary and constituency elections (SDG Targets 9.c, 16.10, 16.7) 10.2.12 Ensure adequate digital capability to support production and use of ICTs for development (SDG	Communications Infrastructure Development	NITA, GIFEC, MoC, DPC

	Targets 9.c, 16.10) 10.2.13 Promote the establishment of ICT parks across the country (SDG Targets 9.c, 17.8)		
7.1 Enhance climate change resilience	7.1.1 Ipleet Ghaas oitets ude Pais Cliate Ageeet (COP21) (SDG Targets 13.a, 16.8) 7.1.2 Collaborate with international partners to have more access to the Green Climate Fund ($30 billion Global Fund) for climate change purposes (SDG Targets 13.a, 16.8) 7.1.3 Develop climate-resilient crop cultivars and animal breeds (SDG Target 2.4) 7.1.4 Promote and document improved, climate-smart, indigenous agricultural knowledge (SDG Targets 2.4, 16.6) 7.1.5 Improve and harmonise agricultural research, including application of climate models (SDG Targets 2.4, 2.a) 7.1.6 Promote climate-resilience policies for women and other vulnerable groups in agriculture (SDG Targets 1.5, 13.1, 13.2, 13.b, 16.6) 7.1.7 Develop coordinated response to climate change challenges through linkages between research, industry and government (SDG Targets 13.2, 16.6) 7.1.8 Manage climate-induced health risks (SDG Targets 1.5, 16.6) 7.1.9 Develop climate-responsive infrastructure (SDG Target 9.1) 7.1.10 Mainstream climate change in national development planning and budgeting processes (SDG Targets 11.b, 13.2)	Meteorological Services	Min. of Aviation, Min. of Agric, GAA, GCAA, MESSTI

DEVELOPMENT DIMENSION	FOCUS AREAS OF MTDP 2018-2021	ADOPTED SUSTAINABLE PRIORITISED ISSUES
Environment, Infrastructure and Human Settlement	Information, Communication, Technology	▪ Low broadband wireless access ▪ Poor quality ICT services ▪ Limited use of ICT as a tool to enhance the management and efficiency of businesses and provision of public services ▪ Inadequate online privacy and security of data
	Climate Variability and Change	▪ Vulnerability to climate change ▪ Low institutional capacity to adapt to climate change and undertake mitigation actions.

4.2 PROGRAMME OF ACTION

This section provides details on the impact of the programmes on the society. To ensure that the programmes that have been adopted for implementation would have the needed impacts, the programmes were subjected to a prioritisation matrix showing its environment, social, economic and spatial impact.

Table 4. 2: Prioritisation Programme Matrix

Programme	Criteria

	Social impact (educational, health, etc.)	Economic Impact (e.g. employment generation, poverty reduction)	Environmental impact (e.g. climate change, green economy, etc.)	Spatial impact (e.g. nationwide / selected region)	Total Score	Average Score	Rank
Management and Administration	2	2	0	2	6	1.50	4th
ICT Capacity Development	3	3	1	2	9	2.25	2nd
ICT Infrastructure Development	3	3	2	2	10	2.50	1st
Meteorological Services	1	2	3	1	7	1.75	3rd
Postal and Courier Services	1	2	0	1	4	1.00	5th
Data Management Services	0	2	0	1	3	0.75	6th

Table 4. 3: Programme of Action of the Ministry of Communications

Development Dimensions: Environment, Infrastructure and Human Settlement

Adopted MoC's Goal: The Ministry envisage Ghana as a free, united, development-oriented knowledge society based on attitudinal change towards adaptation and innovative use of ICTs and its services.

Adopted Objectives	Adopted strategies	Programmes	Sub-programmes	Projects/ activities	Outcome/ Impact Indicators	Time frame				Indicative Budget			Implementing Agencies	
						2018	2019	2020	2021	GoG	IGF	Donor	Lead	Collaborating
Expand the digital landscape		Management and Administration	F&A	Prepare Annual Budget estimates	Existence of annual budget estimates	Aug. 31	Aug 31	Aug 31	Aug. 31	20,000.00			F&A	All Agencies
				Prepare Annual financial reports	Existence of Financial Report	Feb. 28	Feb. 28	Feb. 28	Feb. 28	10,000.00			F&A	All Agencies
				Prepare budget performance reports	Existence of Budget performance report	July 31	July 31	July 31	July 31	20,000.00			F&A	All Agencies
				Update assets register	Existence of Asset Register	Dec. 31	Dec. 31	Dec. 31	Dec. 31	8,000.00			F&A	All Agencies
				Respond to audit reports	Existence of Audit Report	April 30	April 30	April 30	April 30	20,000.00			F&A	MoC

				Pay contractors and suppliers	No. of Cheques and RFT's	Dec. 31	Dec. 31	Dec. 31	Dec. 31	-			F&A	MoC, All Agencies
			PPME	Develop and update sector plans and programmes and monitor and evaluate	Existence of SMTDP	Dec. 31	Feb. 28	-	-	50,000.00			PPME	All Agencies
				Update performance indicators	Existence of performance indicators	Dec. 31	Feb. 28	Mar.31	Mar. 31				PPME	All Agencies
				Review sector performance	Existence of sector performance report	Mar. 31 Jun. 30 Sept.	Mar. 31 Jun. 30 Sept. 30	Mar. 31 Jun. 30 Sept. 30 Dec. 31	Mar. 31 Jun. 30 Sept. 30 Dec. 31	20,000.00			PPME	All Agencies

						30 Dec. 31	Dec. 31							
				Develop and review Sector Strategic Plan	Existence of Sector Strategic Plan	Jun. 30 Dec. 31	Jun. 30 Dec. 31	Jun. 30 Dec. 31	Jun. 30 Dec. 31	50,000 .00			CD	All Agencies
				Effect Performance management reporting system	Existence of Performance Management Reporting System	Mar. 31 Jun. 30 Sept. 30 Dec. 31	Mar. 31 Jun. 30 Sept. 30 Dec. 31	Mar. 31 Jun. 30 Sept. 30 Dec. 31	Mar. 31 Jun. 30 Sept. 30 Dec. 31	60,000.00			CD	MoC
			HRM	Train Staff in Competency	Number of staff trained.	March 31 June 30	March 31 June 30	March 31 June 30	March 31 June 30	GH₵ 25,000		$50,000	HR	F&A & PPME NCA GIFEC

				based programs		September 30 December 31	September 30 December 31	September 30 December 31	September 30 December 31					
			HRM	Create Awareness on Cyber Security	Number of Schools sensitized	Jan - Dec	Jan - Dec	Jan - Dec	Jan - Dec	GH₵30,000			HR	Cyber Security Center
			HRM	Validate Staff Salaries	Number of staff validated	Jan. – Dec.	Jan. – Dec.	Jan. – Dec.	Jan. – Dec.	GH₵10,000			HR	Accounts, Audit IT
			HRM	Provide Inputs for HRMIS	Number of entries made	March 31 June 30 September 30 December 31	March 31 June 30 September 30 December 31	March 31 June 30 September 30 December 31	March 31 June 30 September 30 December 31	GH₵25,000			HR	PSC
			HRM	Develop annual workplan	Number of Seminars &	Jan - Dec	Jan - Dec	Jan - Dec	Jan - Dec	GH₵35,000				

				for the MoC	Conferences participated									
			HRM	Update Staff Records (Attendance, Job Schedules)	Existence of Updated Staff Records	Jan - Dec	Jan - Dec	Jan - Dec	Jan - Dec	GH₵ 5000			HR	
			HRM	Create Health Awareness	Number of Staff: - Awareness - Screened	Jan - Dec	Jan - Dec	Jan - Dec	Jan - Dec	GH₵8000			HR	F&A
			RSIM											

			IT	Reorganisation and Integration of Website into Operations	New Interactive website meshed into operations		Assesment of the website based on operations	TOR prepared	Establishment of Extranet	$30,000			IT	RSIM & NITA
				Operationalised e-MoC Project	Smart work Environment established (Smartworkplace, E-Workflow System, etc)	Pilot Intranet Portal Established, Emails migrated	E-Doc Workflow /Document Mgt System Installed, Training of Users	Digitisation of Ministerial records Development of useful Informative materials Training of New staff		¢100,000		$1.2m	IT	HR, F&A, RSIM & NITA, GIFEC
				Promote Digital Transfor	No of New digital services generated			Adoption and Integrate other	¢200,000				IT	RSIM,.HRD, F&A, PPME, NITA & NITA SOC

				mation services				digital Services to Portal Training of Users						
				Enhance Physical & logical Security of Ministerial Block	Well established Staff and Visitor Movement Policies	TOR prepared	Installation of security systems & develop security policies	Training of staff		¢200,000		$300,000	IT	RSIM & NITA(SOC), CSC, GIFEC,
			NCA	Regulate Market Competition within the Communications industry	Proportion of the interconnection rate Number of Audit conducted among all Mobile	Jan 1-Dec 31	Jan 1-Dec 31	Jan 1-Dec 31	Jan 1-Dec 31		9,840,000.00		NCA	MNOs, Broadcasters, MoC, Value Added Service providers,

					Network Operators (MNO's)									
				Conduct Nationwide Spectrum Audit and Regulation	Number of Frequency Coordination along the borders of the country. Number of Consumer Outreach Proportion of (Digital Terrestrial Transmission) DTT Migration Project completed over the total proportion	Q1, Q2, Q3, Q4	Q1, Q2, Q3, Q4	Q1, Q2, Q3, Q4	Q1, Q2, Q3, Q4		27,198,096.00		NCA	MNOs, Broadcasters, MoC,
				Develop and review Policies and Procedures.	Number of Updated Standard Operation Procedures Number of Industry Policies, Guidelines and Procedures	Oct 31	Oct 31	Oct 31	Oct 31		14,800,000.00		NCA	MoC, ITU, RTU, WRC,

				Engage Stakeholders	Access for government agencies to deliver services through ICT Provision of services by government agencies through ICT	Q1, Q2, Q3, Q4	Q1, Q2, Q3, Q4	Q1, Q2, Q3, Q4	Q1, Q2, Q3, Q4		36,492,000.00		NCA	Broadcasters, MoC,
				Sustain the environment	Proportion of Electromagnetic Field (EMF) monitoring compliance Number of Industry Licenses Renewed	Jan 1-Dec 31	Jan 1-Dec 31	Jan 1-Dec 31	Jan 1-Dec 31		6,600,000.00		NCA	MoC, MNOs, Dealers
				Increase use of Information and Communications Technology	Value of public and private investment in the ICT sectors Total broadband capacity of the country Ratio of population with access to	Aug 1-Sept 31	Aug 1-Sept 31	Aug 1-Sept 31	Aug 1-Sept 31		9,880,000.00		NCA	K-NET, NITA, GIFEC, MNOs, MoC

					internet to total population, expressed as a percentage									
				Conduct Quality of Service (QoS) Monitoring and Compliance	Number of QoS Sanctions Regime Proportion of Compliance of QoS standards across the country	Q1, Q2, Q3, Q4	Q1, Q2, Q3, Q4	Q1, Q2, Q3, Q4	Q1, Q2, Q3, Q4		3,020,000.00		NCA	MNOs, Broadcasters
				Optimize Income and Revenue Assurance	Proportion of revenues and treasury management Number of Bill Distributed	Aug 1-Sept 31	Aug 1-Sept 31	Aug 1-Sept 31	Aug 1-Sept 31		70,120,000.00		NCA	GRA, MoC,
				Upgrade Industry Database	Proportion of Data for Decision making and reporting Existence of Billing Verification System	Q1, Q2, Q3, Q4	Q1, Q2, Q3, Q4	Q1, Q2, Q3, Q4	Q1, Q2, Q3, Q4		5,600,000.00		NCA	GSS, MoC,

				Provide assurance services for Business Systems	Existence of Risk management controls	Aug 1-Sept 31	Aug 1-Sept 31	Aug 1-Sept 31	Aug 1-Sept 31		5,200,00.00		NCA	MoC
		ICT Infrastructure Development	NITA,	Microsoft Enterprise Agreement with the GoG	Reduce pirated and illegal Software Help prevent the issue of cyber attacks							Over 60% Discount	NITA	Microsoft

				Implementation of Smart Workplace to MDAs	seamless interaction and workflow amongst government Agencies								NITA and E-Solutions	MDAs/MMDAs
				Development and Implementation of Security Operations Centre	Arrest and minimise new cyber threats impact on Government network.								NITA	MDAs/MMDAs
				Development and Implementation of National Public Key Infrastructure (PKI)	Ensuring the implementation and enforcement of the provisions of the Electronic Transactions Act 2008								NITA	MDAs/MMDAS, Private Sector
				Development and Implementation of	Automating Services such as VPS in the cloud for	G-Cloud polic	Setting up and operationalisi	Operations and	Operations and				NITA	MDAs/MMDAs , E-

				National G-Cloud Strategy	Gov't and Private Sector	y and design document for a Government Cloud Infrastructure has been completed	ng G-Cloud	Maintenance	Maintenance					Solutions and Private Sector
				Development and Implementation of National Government Network Strategy (e-GovNet)	Easy access to internet and Government services for MDAs/MMDAs, Security Institutions and Schools	Develop Tender Document and Tender Bidding	Implementation and Operation (Reg.10 Gig (Reg.10 Gig	Operation and Maintenance (Reg.10 Gig Dst. 4 Gig)	Operation and Maintenance (Reg.10 Gig Dst. 4 Gig)				NITA, e-Transform	Telcos,MDAs/MMDAs, Schools, Security Agencies

							Dst. 4 Gig)							
				Restructuring of NITA to a Technology focused Agency										
	Build and integrated national ICT digital infrastructure (National ID system, addressing system, interoperabil		GIFEC											

	ity of payment and telecommunication systems, citizens service centre nationwide using government infrastructure such as post office CICs etc) Deepen national internet availability and accessibility in schools (citizen digital index) Ensure adequate digital capability to													

	support production and use of ICT development Promote the establishment of ICT parks across the country.													
	Develop and implement regulations to facilitate Public-Private partnerships.	Postal and Courier Services Commission	Ghana Post											
	Rationalise mail delivery network	Ghana Post Company Ltd	- Invest in logistics (mail trucks, vans and motor bikes)	Nationwide	Numbers of mail trucks, vans and motor bikes procured	Jan - Dec	Jan - Dec	Jan - Dec	Jan - Dec		3,700,000		Ghana Post	
	Modernise and fully network all the post offices	Ghana Post Company Ltd	Invest in ICT in 134 post offices	Nationwide	-134 post offices fully networked -provide wifi technology and e-service	Jan – Dec	Jan – Dec	Jan – Dec	Jan – Dec		804,000		Ghana Post	

					areas in these post offices -automate letter box billing & payment processes									
	Improve and give facelift to customer service areas	Ghana Post Company Ltd	Invest in fixtures, fittings & furniture to uplift counter & customer areas	Nationwide	- modernise counter, front desk and customer areas in 100 post offices	Jan – Dec	Jan – Dec	Jan – Dec	Jan – Dec		5,000,000		Ghana Post	
	Improve Productivity	Ghana Post	Restructure its current aged labour force	Nationwide	-Pay off 400 aged technology deficient staffs -Recruit 100 graduates in 3 years	Jan – Dec	Jan – Dec	Jan – Dec	Jan – Dec	11,520,000			Ghana Post	MOF
Enhance the application of ICT in national development	Efficient Mail Delivery System	Ghana Post Company Ltd	- Invest in Security (x-ray mail bag scanning devices) - Invest in Mail Management Technology	Nationwide	- International mail tracking systems for all 10 regional post offices -Procure x-ray mail bag scanning devices for all	Jan – Dec	Jan – Dec	Jan – Dec	Jan – Dec		6,500,000		Ghana Post	

					10 regional post offices - Procure driver & rider scheduling & delivery system for all 10 regional post offices									
			GI-KACE	Train public sector staff for effective use of IT in operations.	*Report of public sector staff trained.*			Sept 30th	Sept 30th				GI-KACE	PSC, OHCS, MDAs MMDAs
			GI-KACE	Develop standards for IT professionals in public service.	Existence of Manual for IT standards developed. *% of IT Professionals certified.*			Sept 30th	Sept 30th				GI-KACE	PSC, OHCS, MDAs MMDAs

			GI-KACE	Develop and deploy e-governance application for MDAs/MMDAs	*Report of e-governance app developed for MDAs/ MMDAs.* *# of public sector service improved*		Oct 30th	Oct 30th	Oct 30th				GI-KACE	PSC, OHCS, MDAs MMDAs
10.2 Expand the digital landscape	10.2.9 Establish innovation hubs and promote a software and applications industry (SDG Targets 9.c, 16.10)	ICT Capacity Development	GI-KACE	Establish ISO certified research laboratories.	*report on research labs established* *# of international certifications obtained.*		Oct 30th	Oct 30th	Oct 30th			India	GI-KACE	Research Institutions, PPA, CDAC[1]
			GI-KACE	Provide and promote Software Quality	Report of Software Quality Assurance		Oct 30th	Oct 30th	Oct 30th				GI-KACE	GSA, Software Industry, NITA,

1 Centre for Development of Advanced Computing (CDAC), India

				Assurance Services.	Services carried out.									
			GI-KACE	Develop demand-driven ICT products and services for national development	*Report of commercial innovations with ICT entrepreneur and other institutions developed*			Oct 30th	Oct 30th				GI-KACE	CDAC, Research Institutions
			GI-KACE	Train needed manpower for Software industry.	*Report of people trained in various IT disciplines.*	Sept 30th	Sept 30th	Sept 30th	Sept 30th				GI-KACE	CDAC, ICT entrepreneurs,
			GI-KACE	Re-open CIC[2] as training/ innovation hubs	*Report of CIC and/or Jubilee ICT Centres re-opened and functional*		Sept 30th	Sept 30th	Sept 30th				GI-KACE	GIFEC,

2 CIC – Community Information Centres

				and business service centres.										
	10.2.7 Increase internet capacity and quality of training in and out of school (SDG Target 9.c)		GI-KACE	Re-open CIC as training/ innovation hubs for the youth.	*Report of training /workshops/seminars organised for youth and special interest group*		Sept 30th	Sept 30th	Sept 30th				GI-KACE	GIFEC, NITA, GetFund
			GI-KACE	Provide Internet Services using TVWS[3] technology	*Report of schools and businesses connected using TVWS.*		Sept 30th	Sept 30th	Sept 30th				GI-KACE	NITA, GIFEC, NCA
	Enhance revenue mobilisatio		GI-KACE	Develop draft Bill and submit	Existence of a draft bill.		May 30th	Mar. 30th					GI-KACE	MoC, Parliament,

	n and capacity			to Parliament.	Passage of Bill									

Enhance climate change resilience	Develop and coordinated response to climate change challenges through linkages between research , industry and government Mainstream climate change in national development planning and budget processes	Meteorological Services	GMet	Provide early weather warning	• Lead time prediction • Accuracy rate	daily	daily	daily	daily	**66,602,216**			GMet	Nadmo Media
				Provision of climate indices	Establish Change in Climate	Monthly	Monthly	Monthly	Monthly	**500,000**				

				Comply with World Meteorological organization standards	Completed rate with WMO Standards					10,511,110				
				Provide Meteorological services to -Aviation -Marine -Agriculture	. • Lead Time prediction • Accuracy rate	Hourly Daily Daily Monthly	Hourly Daily Daily Monthly	Hourly Daily Daily Monthly	Hourly Daily Daily Monthly	51,432,000.00			GMet	World Bank (Green Climate Fund)
				Improve meteorological data collection and dissemination	• Percentage Change in station data received	Daily	Daily	Daily	Daily	**2,780,000**			GMet	

				Communication and Dissemination	•						756,000		GMet	
				Compensation and Goods and Services	•						**30,761,000**	**19,000,228**	GMet	GoG
Enhance application of ICT in national development	Develop and maintain online database for all categories of properties and provide secure data access (SDG Target 16.10) 10.1.8 Improve the quality of ICT services, especially internet and telephony (SDG Target 9.c)	Data Protection Services	DPC											

CHAPTER FIVE

ANNUAL ACTION PLAN OF THE MINISTRY OF COMMUNICATIONS

This section o*ut*lines the *2018*-2021 development Operations (Annual Action Plan) to be executed by the Ministry. It establishes a direct linkage between Adopted NMTDPF Goal, the Programmes and Sub-programmes, planned activities, their location, timeframe for execution and plan implementation partners. It also provides some set of indicators that will help access progress during implementation.

Table 5. 1: 2019 Action Plan of the Ministry of Communications

Programmes & Sub-programmes	Activities (Operations)	Baseline	Output Indicators	Quarterly Time schedule				Indicative Budget			Responsibility	
				1st	2nd	3rd	4th	GoG (GH₵)	IGF	Donor	Lead	Collaborating
Management and Administration (MoC-Headquarters)	Organise quarterly Audit Committee meetings	Audit Committee	Minutes of Audit Committee meetings	Jan.	Apr.	Jul.	Sep.	40,000			D/F&A	Ag. Chief Director Principal Internal Auditor, Chief Accountant
Management and Administration (MoC-HQs)	Prepare 2020 Budget Estimates	Standing Budget Committee constituted	Budget preparation workshop/meeting reports				Jul.	20,000			PPME/ F&A	HRM, RSIM, Accounts Chief Internal Auditor
			2020 Budget Estimates completed.				Sep.	10,000				

	Maintenance & rehabilitation and upgrade of existing office assets.	Estate Officer	Annual Assets Register prepared				Nov.	5,000			F&A	IT Accounts Chief Internal Auditor PPME, HRM, RSIM,
	Hold Entity Tender Committee (ETC) meetings	ETC meeting organised in 2018	ETC reports	Feb.				10,628			F&A	Procurement Unit, MoC, Principal Internal Auditor,
	Organise 2020 draft budget review meeting	2019 budget review meeting held at MoC	Budget review meeting report.	Mar.				500			DD/F&A	Ag. CD PPMED HRM RSIM IT
	Complete installation of fire safety system	Nil	Fire safety system installed			July		20,000			DD/F&A	Ag. CD NITA

			for entire ministerial block									GIFEC
	Prepare 2019 Procurement Plan	2018 Procurement Plan prepared	2019 Procurement Plan submitted and uploaded in MoC website.	Feb.				5,000			ADIIA, F&A/ Supply Officer	Ag. CD AD1/F&A ADIIA/ F&A PPME HRM RSIM
	Organise Management meetings	Schedule of Management meetings	Minutes of Monthly Management meetings	3	3	3	3	7,000			DD/F&A	Ag. CD All Dep. Director All Directors
Management and Administration – F&A	Organise Staff Durbars	Schedule of Staff meetings	Minutes of quarterly staff durbars.	Mar.	June	Sep	Dec	5,000			DD/F&A	Ag. CD NITA GIFEC
	Prepare Budget Implementation Plan	2018 Budget implementation plan	Budget implementation report submitted.	Mar.	June	Sep	Dec	-			DD/F&A	Ag. CD PPMED HRM RSIM IT

	Fumigate entire Ministerial Block	Ministerial Block was fumigated in 2018	Certificate of completion of work		June		Dec				DD/F&A	MoC NITA GIFEC
	Constitute Ministerial Advisory Board	Nil	Ministerial Advisory Board duly constituted.	Feb.				1,000			DD/F&A	Ag. CD Hon. Minister Deputy Ministers Board Nominees
	Organise Ministerial Advisory Board meetings	Nil	Minutes of Board meetings	Mar.	June	Sep	Dec	10,000			DD/F&A	Ag. CD Hon. Minister Deputy Ministers Board Nominees
Management and Administration - PPME	Undertake monitoring and evaluation of budgeted policies, programmes and projects	PPME Directorate	M&E reports					5,209			D/PPME	F&A HRM RSIM IT Sector Agencies

Management and Administration - PPME	Prepare 2019 M&E Plan	MoC 2018 M&E Plan available	2019 M&E plan prepared	Feb.							D/PPME	PPME F&A HRM RSIM IT Sector Agencies
	Girls-in-ICT Project	488 girls given training in coding	600 girls given ICT training in coding		Apr.						D/PPME	F&A HRM RSIM IT Sector Agencies
	Prepare 2018 Annual Progress Report (APR)	2017 APR submitted to NDPC	2018 APR submitted to NDPC	Feb. 21				500			D/PPME	PPME F&A HRM RSIM IT Sector Agencies

	Prepare 2019 Annual Progress Report (APR)	2018 Annual Action Plan submitted to OHCS	2019 Annual Action Plan submitted to OCHS	Mar.				50			D/PPME	PPME F&A HRM RSIM IT Sector Agencies
	Meet CTO/ITU membership subscriptions annually	Regular payments effected.	Acknowledgement of membership in good standing			Sep		12,000			Ag. CD	PPME F&A MoC GIFEC NCA
	Digitised public records at RGD	Two million records digitised.	Certification of completion of work							US$2.2 million	e-Transform Team	RGD MoC NITA GIFEC
	Birth registration process digitised.	Decreased rate of issuing/authenticating birth & death certificates.	Birth and Death Registry								e-Transform Team	RGD MoC NITA

	Digitise paper records at B&D Registry	Two million company records digitised.	Birth and Death Registry								e-Transform Team	RGD MoC NITA
	Install new e-Government applications	No. of new e-Government applications installed.	Selected public sector institutions				1			US$3.2 million	e-Transform Team	GIS GRA KIA MoC NITA
	Facilitate Amendment of GMet Act	GMet Act, 2008	GMet Amendment Bill passed into law				Dec.				GMet/MoC	M. of Aviation GAA GCAA Cabinet Parliament
	Train and develop staff capacity	31 staff trained	50 staff trained					50,000			D/HRM	All Directorates GIMPA CSTC Other Training institutions
	Organise pre-interview for staff	Nil	Pre-interview report for 14 staff					1,000			D/HRM	HRM PPME

												RSIM IT
	Organise orientation for National Service Persons (NSPs)	Orientation was organised for NSPs	Orientation report					2,000			D/HRM	HRM PPME RSIM IT
	Collate and evaluate staff appraisal forms	Phases 1&2 out phase 4 of carried out.	Staff appraisal report								D/HRM	HRM PPME RSIM IT
	Organise medical screening exercise for staff	Medical screening organised for staff	Summary report					5,000			D/HRM	HRM PPME RSIM IT Civil Service Clinic
	Organise clinical eye test for staff	One eye screening exercise was organised for staff	Summary report					5,000			D/HRM	HRM PPME RSIM IT

												Eye Clinic
	Organise Excursion	Nil	List of participants				1		5,000		D/HRM	HRM F&A PPME RSIM IT
	Validation of salaries	2	Register of staff validated	1	1	1	1	N/A	-	-	D/HRM	HRM F&A PPME RSIM IT
	Organise three In-House Training for staff	2 In-House training organised.	Training reports		1	1	1	6,000			D/HRM	HRM F&A PPME RSIM IT
Management and Administration (MoC-Headquarters)	Organise MoC turn of Meet-the-Press Series	MoC participated in 2018 Meet-the-Press series	Copy of Press caption			Aug		20,000			RSIM	F&A PPME HRM IT

												MoI
	Organise Sector Agencies Media Engagements	Nil	Reports on Agencies media engagements								RSIM	All sector agencies All Directorates MoI Media Houses
Management and Administration (MoC-HQs)	Deploy Unified Active Directory System in collaboration with NITA	Non-Interoperable Active Directory deployed	Unified Active Directory System deployed at MoC HQs.					500			D/IT	NITA
	Facilitate the implementation of Smartworkplace Office 365	Pilot Application installed.	Full installation of smartworkplace	Mar.	June	Sep	Dec				D/IT	Ministers Ag. CD staff of PPMED staff of F&A staff of HRM NITA
Management and Administration (MoC-HQs)	Undertake ICT training need assessment of staff	Nil	ICT training need assessment report				Nov				D/IT	F&A HRM NITA

	Provide training for users and technical support staff		No. of staff trained in use of ICTs								D/IT	HRM KACE NITA
	Facilitate digitisation of paper records at the MoC Registries	High volume of paper records archived.	No. of paper records digitised.								D/IT	Records Offices Minister and DMs Offices Vendor
	Update Standard Procedural Documents	Outdated Standard Procedural Documents	Standard Procedural Documents prepared.									NCSC NITA
	Operationalise IT Steering Committee	Nil	IT Governance Framework document developed.				Nov.				D/IT	Ag. CD F&A NITA
	Undertake regular updates of MoC website	MoC Website available	Quarterly reports	Mar.	June	Sep	Dec				D/IT	RSIM PPME F&A HRM
	Conduct IT audits (hardware, software, applications and security systems)		IT Audit Reports prepared annually.								D/IT	RSIM PPME F&A

												HRM NITA
Management & Administration – ADC	Create digital jobs for Ghanaians	1,500 Ghanaians employed by ADC	2,000 Ghanaians employed by ADC								ADC	MoC eTransform Project Team NITA GIFEC
Management & Administration – Cyber Security Secretariat	Operationalisation of Domain Name Registry	Automation of Domain Name Registry completed.	Migration of domains from private management to public domain registry								Cyber Security Secretariat	MoC MDAs/MMDAs
Management & Administration – Cyber Security Secretariat	Review Cyber Security Policy	Cyber Security Policy and Strategy, 2014	Revised Draft Cyber Security Policy document				Oct-Dec				MoC	Cyber Security Secretariat AG's Department Parliament NGOs, CBOs, MNOs Other relevant stakeholders – Ghana and oversees
			Revised Draft Cyber Security				Oct-Dec				Cyber Security	MoC

			Strategy document								Secretariat	NGOs, CBOs, MNOs Other relevant stakeholders – Ghana and oversees
Management and administration – GIFEC	Extend mobile network coverage to communities with population less than 1,000	200 deployed	Number of Rural Telephony sites built	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec		1,050,000		GIFEC	MOC, GRA, MMDAs, Traditional authorities, MNOs, Huawei
	Support government institution with internet services, computers and accessories.	200 institutions supported	Number of government institutions connected to the internet	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec		12,720,000		GIFEC	GES, MMDAs, NITA MDAs
Management and administration – GIFEC	Build capacity of students and community members in basic ICT skills	17,000 trained	Number of people trained with basic ICT skills	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec		2,385,000		GIFEC	MMDAs, Traditional authorities, MOC,GES, NABCO
	Renovate dilapidated CICs across the country.	36 renovated	Number of CICs renovated	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec		800,000		GIFEC	MMDAs, Traditional

	Provide a community based access point to facilitate the provision of government e-services	200 schools benefitted	Number of schools supported	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec		14,553,800		GIFEC	MOE,GES MMDAs, Traditional authorities, MOC
	Provide digital access to and use of formal financial services by the unbanked and excluded in the underserved population.	Nil	Number of communities covered in the selected regions	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec		200,000		GIFEC	MMDAs, Traditional authorities, MOC
Management and administration – GIFEC	Support annual national Girls-in-ICT initiative with computers and accessories.	10 girls supported in 2018	Number of girls supported	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec				GIFEC	MMDAs, Traditional authorities, MOC
Management and Administration - NCA	Conduct monitoring audit	Numbering Audit 2017	Proportion of Numbering Audit	Mar. 31		Sep 31			492,000.00		RA Division	MNOs, Service Providers
	Coordinate Frequency along the borders of the country.	Frequency Coordination 2017	Number of Frequency Coordination along the borders of the country.	Mar, 31	Jun, 31	Sep, 31	Dec, 31		1,359,904.80		Eng. Division	Broadcasters, Togo, Burkina Faso, Cote D'Ivoire
	Update Interconnect rate	Interconnect rate 2017	Existence of Interconnect rate.			Sep, 31			492,000.00		Research & Admin. Division	MNOs, Service Providers,

ICT Infrastructure Development - NITA	Commence Tender process to procure essential ICT equipment	Tender Bid Completed	Number of MDAs/MMDAs connected	Jan - March	March- June	June - Sept	Sept- Dec				NITA	MDAs/MMDAs
	Implement e-Services in all MDAs/MMDAs	MDAs = 45 MMDAs = 0	Number of: -MDAs -MMDAs reached	Jan - March	March - June	June - Sept	Sept- Dec				NITA	MoC MMDAs/MMDAs
		MDAs = 5 MMDAs = 0	Number of MDAs/MMDAs	Jan – Mar.	March - June	June- Sept	Sept- Dec				NITA	MDAs
		MDAs = 5 MMDAs = 0	Number of MDAs/MMDAs	Jan - March	March - June	June- Sept	Sept - Dec				NITA	MDAs
		MDAs =12 MMDAs=0	Number of MDAs/MMDAs	Jan - March	March- June	June- Sept	Sept Dec				NITA	e-Solutions and MDAs
Postal and Courier Services Regulatory Commission	Licence Postal and Courier operators	105	Number of postal and courier operators licensed								PCSRC (Licensing & Regulations)	Ghana Post Company Limited Postal and courier operators
	Register and licenced new courier operators	15	Number of New courier operators registered and duly licensed									

	Carry out routine inspections	4	Number of inspections carried out								PCSRC (Licensing & Regulations	
	Hire experienced staff	8	6 new additional staff recruited								PCSRC(Admin. & HR Mgr)	MoC, Ministry of Finance
	Stakeholder meetings	0	2 Stakeholder meetings held								PCSRC (PRM, Director L&R)	

Adopted MoC Goal(s): To Safeguard the natural environment and ensure a resilient built environment

MDA Programmes and Sub-programmes	Activities (Operations)	Location	Baseline 2017	Output Indicators	Quarterly Time schedule				Indicative Budget			Implementing Agencies	
					1st	2nd	3rd	4th	GoG	IGF	Donor	Lead	Collaborating

Management and Administration	Determine Wholesale interconnect rate	Accra	Interconnect rate 2017	Existence of Interconnect rate.			Sep, 31			492,000.00		RA Division	MNOs, Service Providers,
	Implement Mobile to Mobile (M2M) numbering Scheme.	Accra	Numbering Scheme 2017	Existence of numbering plan.		Jun, 31				492,000.00		RA Division	MNOs,
ICT Infrastructure Development - NITA	Connect MDAs / MMDAs to the e-Government Network Operating Service.	Accra	Tender Bid Completed	Number of MDAs/MMDAs connected	Jan-March	March-June	June - Sept	Sept-Dec				NITA	MDAs/MMDAs
	Rollout eWorkspace	Accra	MDAs = 45 MMDAs = 0	Number of: -MDAs -MMDAs reached	Jan-March	March-June	June - Sept	Sept-Dec					
	Rollout ePayment	Accra	MDAs = 5 MMDAs = 0	Number of MDAs/MMDAs	Jan-March	March-June	June-Sept	Sept-Dec				NITA	MDAs
	Support eServices Portal	Accra	MDAs = 5 MMDAs = 0	Number of MDAs/MMDAs	Jan-	March-	June-	Sept -				NITA	MDAs

					March	June	Sept	Dec					
	Provide Smart Workplace Solution	Accra	MDAs =12 MMDAs=0	Number of MDAs/MMDAs	Jan - March	March-June	June-Sept	Sept Dec				NITA	ESolutions and MDAs

Postal and Courier Services Regulatory Commission	License and Register postal and courier operators	Accra	105	Number of postal and courier operators licensed								PCSRC (Licensing & Regulations)	

		Accra	15	Number of New courier operators registered and duly licensed									
	Inspect postal and courier operators	Accra, Kumasi, Takoradi, Tamale	4	Number of inspections carried out								PCSRC (Licensing & Regulations	
	Human resource capacity	Accra	8	6 new additional staff recruited								PCSRC(Admin. & HR Mgr)	MoC, Ministry of Finance
	Consumer outreach programmes	Accra, Kumasi	0	2 Stakeholder for a held								PCSRC (PRM, Director L&R)	

Table 5. 2: Annual Activities 2019

Adopted MDAs Goal(s):													
MDA **Programmes and Sub-programmes**	**Activities (Operations)**	**Location**	**Baseline 2018**	**Output Indicators**	**Quarterly Time schedule**				**Indicative Budget**			**Implementing Agencies**	
					1st	**2nd**	**3rd**	**4th**	**GoG**	**IGF**	**Donor**	**Lead**	**Collaborating**
Management and Administration - NCA	Conduct Numbering Audit	Accra	Numbering Audit 2017	Proportion of Numbering Audit	Mar, 31		Sep 31			492,000.00		RA Division	MNOs, Service Providers
	Coordinate Frequency along the borders of the country.	Accra, Ho, Takoradi, Sunyani, Bolga	Frequency Coordination 2017	Number of Frequency Coordination along the borders of the country.	Mar, 31	Jun, 31	Sep, 31	Dec, 31		1,359,904.80		Eng. Division	Broadcasters, Togo, Burkina Faso, Cote D'Ivoire
ICT Infrastructure Development - NITA	Connect MDAs / MMDAs to the e-Government Network Operating Service.	Accra	Implementation Phase 1	Number of MDAs/MMDAs connected	Jan - March	March - June	June - Sept	Sept - Dec				NITA	MDAs/MMDAs

	eWorkspace rollout	Accra	Forty Five (45) MDAs Reached	Numbers of MDAs/MMDAs reached	Jan - March	March - June	June - Sept	Sept - Dec					
	ePayment Rollout	Accra	Five (5) MDAs	Number of MDAs/MMDAs	Jan - March	March - June	June- Sept	Sept - Dec				NITA	MDAs
	eServices Portal Support	Accra	Five (5) MDAs	Number of MDAs/MMDAs	Jan - March	March - June	June- Sept	Sept- Dec			3 M (USD)	NITA	MDAs
	Smart Workplace Solution	Accra	National Implementation : Phase 1	Number of MDAs/MMDAs	Jan - March	March - June	June - Sept	Sept - Dec				NITA	eSolutions and MDAs

Postal and Courier Services Regulatory Commission	Renew postal and courier licenses	Accra	110	Number of postal and courier license renewed	Mar. 31	Jun. 30	Sept. 30	Dec. 31	0	1500	0	PCSRC	
	License new postal/ courier operators	Accra	15	Number of new courier operators licensed	Mar. 31	Jun. 30	Sept. 30	Dec. 31	0	3000	0		
	Issue demand notices	Accra,		70 Demand notices issued	Mar. 31	Jun. 30	Sept. 30	Dec. 31	0	1000	0		
	Meet with Ghana Post to agree on Payment Plan for licence fees.			Minutes of Meetings held			Sept. 30		0	500	0		

	Publish names of operators in good standing			Number of publications in Daily Graphic/ Ghanaian Times		Jun. 30			7592	2000	0		
	Publish names of illegal operators in print and electronic media			Number of publications in Daily Graphic /Ghanaian Times and radio/TV announcements		Jun 30			0	10000	0		
	Monitor postal/courier operators at the Airports, lorry stations, restaurants			Monitoring report(s) available		Jun 30	Sept. 30		5000	0	0		
	Establish three Regional offices			Offices established in Kumasi, Takoradi, Tamale	Mar. 31	Jun. 30	Sept. 30	Dec. 31	60000	90000	0		
	Inspect/monitor quality of service			Monitoring report(s) available	Mar. 31	Jun. 30	Sept. 30		10000	25000	0		
	Organize Stakeholders' meeting			Minutes of meetings available			Sept. 30		27000	0	0		

	Commence processes to approve issuance of new stamps and rates for universal services			Subject to submission of proposals to the Commission by Ghana Post	Mar. 31	Jun. 30	Sept. 30	Dec. 31	0	5000	0	PCSRC	Ghana Post
	Media engagements/appearances			No. of PCSRC news stories on radio/TV and in print	Mar. 31			Dec. 31	2600	5000	0	PCSRC	Media
	Media outreach	Kumasi, Takoradi		No. of Media programs in Ashanti and Western regions		Jun 30	Sept. 30		0	6151	0	PCSRC	
	Build/Update website	Accra		Active website	Mar. 31				0	2500	0		
	Create social media accounts	Accra		Facebook, twitter accounts	Mar. 31				0	2500	0		
	Meet with GPRTU parcel service managers	Kumasi, Takoradi		Minutes of meetings with GPRTU parcel offices		Jun. 30	Sept. 30		0	6000	0		
	Publicity			Number of: Directional signs erected,	Mar. 31	Jun. 30	Sept. 30	Dec. 31	50000	18000	0		

				IEC materials developed Poster/Bill Boards erected									
	Commemorate World Post day	Accra		Report of commemoration available			Sept. 30	Dec. 31	15000	0	0		
	Maintain/Run official vehicles and brand them			Number of vehicles maintained and branded	Mar. 31	Jun. 30	Sept. 30	Dec. 31	21144	35000	0		
	Attend mandatory WAPCO/PAPU/UPU international conference	Subject to confirmation		No. of International Conferences attended and Conference Reports	Mar. 31	Jun. 30	Sept. 30	Dec. 31		95000	0		
	Train staff in local training institutions			No. of Training Programs organized and Training Reports		Jun. 30	Sept. 30		20000	20000	0		
	Study tour to other sister regulatory bodies			No. of Countries visited and Tour Report		Jun. 30	Sept. 30		45000	25000	0		

	Review Scheme of Service, Organogram, Job descriptions and Conditions of Service			Reviewed documents available		Jun. 30	Sept. 30		30000	0	0		
	Organize meetings, workshops and retreats for Management and staff			No of Capacity Building programs organized and Training Reports available			Sept. 30		20000	8000	0		
	Renovate current office building			No of new offices created	Mar. 31	Jun. 30	Sept. 30	Dec. 31	10,000	15000	0		
	Appraise staff			Staff Appraisal Reports		Jun. 30			0	10000	0		
	Pay utility bills			No. of utility bills paid	Mar. 31	Jun. 30	Sept. 30	Dec. 31	10000	33000	0		
	Maintain furniture/fixtures/machinery			No. of furniture, fixtures, machinery maintained	Mar. 31	Jun. 30	Sept. 30	Dec. 31	10000	0	0		
	Pay employee compensation			Number of employees paid from January to December	Mar. 31	Jun. 30	Sept. 30	Dec. 31	663,280	0			

	Pay staff engaged on contract			Number of contract staff paid from January to December	Mar. 31	Jun. 30	Sept. 30	Dec. 31	40000	0			
	Refund medical bills			Number of medical bills refunded	Mar. 31	Jun. 30	Sept. 30	Dec. 31	19000	0			
	Procure new computers and accessories			Number of new computers and accessories procured	Mar. 31	Jun. 30	Sept. 30	Dec. 31	30000	0			
	Procure new air condition units			Number of new air condition units procured	Mar. 31	Jun. 30	Sept. 30	Dec. 31	18000	0			
	Procure additional motor vehicles			Number of additional motor vehicles procured	Mar. 31	Jun. 30	Sept. 30	Dec. 31	230600	0			
	Install new fixture and fittings			Number of new fixtures and fittings installed	Mar. 31	Jun. 30	Sept. 30	Dec. 31	60000	0			

Table 5. 3: Annual Activties, 2020

Adopted MDAs Goal(s): The ministry envisages Ghana as a free, united, development-oriented knowledge society based in attitudinal change towards adaptation and innovative use of ICTs and its services.

MDA **Programmes and Sub-programmes**	**Activities (Operations)**	**Location**	**Baseline**	**Output Indicators**	**Quarterly Time schedule**				**Indicative Budget**			**Implementing Agencies**	
					1st	**2nd**	**3rd**	**4th**	**GoG**	**IGF**	**Donor**	**Lead**	**Collaborating**
Management and Administration - NCA	Coordinate National Preparation for WRC	Accra	Nil	Number of National Preparation for WRC			Sep, 31	Dec, 31		1,359,904.80		RA Division	MNOs, Service Providers,
	Organise Consumer Outreach	Across the Country	Consumer Outreach 2017	Number of Consumer Outreach	Mar, 31	Jun, 31	Sep, 31	Dec, 31		829,363.64		CCA Division	Broadcasters, MoC
NITA-ICT Infrastructural Development	Connect MDAs / MMDAs to the e-Government Network Operating Service.	Accra	Implementation Phase 2	Number of MDAs/MMDAs connected	Jan - March	March - June	June - Sept	Sept - Dec				NITA	MDAs/MMDAs
	eWorkspace rollout	Accra	Forty Five (45) MDAs Reached	Numbers of MDAs/MMDAs reached	-	-	-	-					

	ePayment Rollout	Accra	Five (5) MDAs	Number of MDAs/MMDAs	Jan - March	March-June	June - Sept	Sept - Dec				NITA	MDAs
	eServices Portal Support	Accra	Five (5) MDAs	Number of MDAs/MMDAs	Jan - March	March-June	June - Sept	Sept-Dec				NITA	MDAs
	Smart Workplace Solution	Accra	National Implementation : Phase 2	Number of MDAs/MMDAs	Jan - March	March-June	June - Sept	Sept - Dec				NITA	eSolutions and MDAs

Table 5. 4: Annual Activities 2021

Adopted MDAs Goal(s):													
MDA **Programmes and Sub-programmes**	**Activities (Operations)**	**Location**	**Baseline 2020**	**Output Indicators**	**Quarterly Time schedule**				**Indicative Budget**			**Implementing Agencies**	
					1st	**2nd**	**3rd**	**4th**	**GoG**	**IGF**	**Donor**	**Lead**	**Collaborating**
Management and Administration – HQ F&A													
Management and Administration - PPME													

Management and Administration - HRM													
Management and Administration - RSIM													
Management and Administration - IT													
Management and Administration - NCA	Conduct nationwide Electromagnetic Field (EMF) monitoring exercise	Across the Country	Electromagnetic Field (EMF) monitoring exercise 2017	Number of Electromagnetic Field (EMF) monitoring exercise	Mar, 31		Sep, 31			550,000.00		RA, Eng. Division	MNOs, Broadcaster, Service Providers
	Conduct Quality of Service (QoS) Monitoring for Voice and Data	District Capitals the Country	Quality of Service (QoS) Monitoring 2017	Proportion of Quality of Service (QoS) Monitoring	Mar, 31	Jun, 31	Sep, 31	Dec, 31		686,36.36			MMDCs, MoC, MNOs
ICT Infrastructural Development - NITA	Connect MDAs / MMDAs to the e-Government Network Operating Service.	Accra	Implementation Phase 2	Number of MDAs/MMDAs connected	Jan - March	March - June	June- Sept	Sept - Dec				NITA	MDAs/MMDAs
	eWorkspace rollout	Accra	Forty Five (45) MDAs Reached	Numbers of MDAs/MMDAs reached	-	-	-	-					

	ePayment Rollout	Accra	Five (5) MDAs	Number of MDAs/MMDAs	Jan - March	March - June	June- Sept	Sept - Dec				NITA	MDAs
	eServices Portal Support	Accra	Five (5) MDAs	Number of MDAs/MMDAs	Jan - March	March - June	June- Sept	Sept- Dec				NITA	MDAs
	Smart Workplace Solution	Accra	National Implementation : Phase 2	Number of MDAs/MMDAs	Jan - March	March - June	June - Sept	Sept - Dec				NITA	eSolutions and MDAs

Postal and Courier Services Regulatory Commission – **PCSRC**	License postal and courier operators	Accra	135	Number of postal and courier operators licensed	Jan - Mar	Apr - Jun	Jul - Sept	Oct - Dec	0	3500	0	PCSRC	
	Register new postal/courier operators	Accra	20	20 new courier operators registered and duly licensed	Jan - Mar	Apr - Jun	Jul - Sept	Oct - Dec	0	7000	0		
	Issue demand notices	Accra,	135	120 Demand notices issued	Jan - Mar		Jul - Sept	Oct - Dec	0	6000	0		
	License reactivated operators	Accra	15	25 dormant courier operators reactivated and duly licensed	Jan - Mar	Apr - Jun	Jul - Sept	Oct - Dec	0	2500	0		

	Publish names of operators in good standing			Publications in Daily Graphic and Ghanaian Times		Apr - Jun	Jul - Sept		1492	5000	0		
	Publish names of illegal operators in print and electronic media			Publications in Daily Graphic /Ghanaian Times and radio announcement		Apr - Jun	Jul - Sept		10000	25000	0		
	Clamp down illegal postal/courier operators at the Airport, lorry stations, restaurants in Accra, Kumasi, Takoradi, Koforidua, Cape Coast			Number of illegal operators clamped down in Accra, Kumasi, Takoradi, Koforidua, Cape Coast	Jan - Mar		Jul - Sept	Oct - Dec	10000	14000	0		
	Inspect/monitor quality of service by Ghana Post in 15 districts selected from 3 regions			Monitoring reports from 15 districts available		Apr - Jun	Jul - Sept		10000	18000	0		
	Organize Stakeholders' meeting			Minutes of meetings available			Jul - Sept		15000	35000	0		
	Commence processes to approve issuance of			Subject to submission of			Jul -		7000	20000	0		

	new stamps and rates for universal services			proposals to the Commission by Ghana Post			Sept						
	Media engagements/appearances			No. of PCSRC news stories on radio/TV and in print	Jan - Mar		Jul - Sept	Oct - Dec	10000	15000	0	PCSRC	Media
	Engagement with GPRTU Parcel Offices in Dormaa, Aflao, Elubo, Techieman	Dormaa, Aflao, Elubo, Techieman		Minutes of meetings with GPRTU parcel offices available		Apr - Jun			16000	28000		PCSRC	GPRTU
	Update website	Accra		Active updated website	Jan - Mar				0	6000	0	PCSRC	
	Publicity	Accra, Dormaa, Aflao, Elubo, Techieman,		IEC materials developed Poster/Bill Boards erected	Jan - Mar	Apr - Jun	Jul - Sept	Oct - Dec	15000	20000	0	PCSRC	
	Commemorate World Post day	Accra		Report of commemoration available			Jul - Sept	Oct 7	15000	18000	20000		

	Establish new offices in two regions	Ho, Takoradi		Two new offices established	Jan - Mar	Apr - Jun	Jul - Sept	Oct - Dec	50000	40000	50000		
	Maintain/Run official vehicles			Number of vehicles maintained	Jan - Mar	Apr - Jun	Jul - Sept	Oct - Dec	35000	40000	0		
	Attend mandatory WAPCO/PAPU/UPU international conference	Subject to confirmation		No. of International Conferences attended and Conference Reports	Jan - Mar	Apr - Jun	Jul - Sept	Oct - Dec	50000	90000	0		
	Train staff in local training institutions			No. of Training Programs organized and Training Reports	Jan - Mar		Jul - Sept		30000	25000	0		
	Train staff in international institutions	Sister Postal regulators in Europe		Report of study tour to one sister regulator in Europe		Apr – Jun	Jul - Sept			25000	40000		

	Organize meetings, workshops/retreats for Management/staff			No of workshops/retreats organized and reports available		Apr – Jun		Oct - Dec	20000	8000	20000		
	Maintain current office building			Maintenance report available			Jul - Sept	Oct - Dec	10000	25000	0		
	Appraise staff			Staff Appraisal Reports available	Feb. 28				0	15000	0		
	Pay utility bills			No. of utility bills paid	Jan - Marc	Apr – Jun	Jul - Sept	Oct - Dec	25000	45000	0		
	Maintain furniture/fixtures/machinery			No. of furniture, fixtures, machinery maintained	Jan - Marc	Apr – Jun	Jul - Sept	Oct - Dec	12000	18000	0		
	Pay employee compensation			Number of employees paid from January to December	Jan - Marc	Apr – Jun	Jul - Sept	Oct - Dec	145,280	0			

	Pay staff engaged on contract			Number of contract staff paid from January to December	Jan - Marc	Apr – Jun	Jul - Sept	Oct - Dec	80000	0			
	Refund medical bills			Number of medical bills refunded	Jan - Marc	Apr – Jun	Jul - Sept	Oct - Dec	30000	0			
	Procure new computers and accessories			Number of new computers and accessories procured		Apr – Jun	Jul - Sept		40000	0			
	Procure new air condition units			Number of new air condition units procured		Apr – Jun	Jul - Sept		28000	0			
	Procure additional motor vehicles			Number of additional motor vehicles procured		Apr – Jun	Jul - Sept		365600	0			
	Install new fixture and fittings			Number of new fixtures and fittings installed		Apr – Jun	Jul -		90000	0			

							Sept						

Adopted MDAs Goal(s):													
MDA **Programmes and Sub-programmes**	**Activities (Operations)**	**Location**	**Baseline**	**Output Indicators**	**Quarterly Time schedule**				**Indicative Budget**			**Implementing Agencies**	
					1st	**2nd**	**3rd**	**4th**	**GoG**	**IGF**	**Donor**	**Lead**	**Collaborating**

CHAPTER SIX

IMPLEMENTATION, MONITORING AND EVALUATION

6.0 Introduction

This chapter outlines the monitoring and evaluation processes to be utilised in the implementation of the Ministry's Medium Term Development Plan (MTDP 2018-2021). It provides the indicators for monitoring, the process of data collection and analysis, reporting arrangements and communication strategies. The chapter also proves the evaluations and participatory monitoring and evaluation arrangements for the plan period.

6.1 Monitoring Matrix

The Ministry as part of efforts to ensure the effective monitoring of all outcomes expected from the implementation of the Medium-Term Development Plan, has developed a list of indicators. These indicators have been outlined in a matrix format and provides amongst others a definition of the indicators, the baselines and targets and the frequency of data collecting for reporting. Table 6.1 provides the monitoring matrix for the period 2018-2021.

Table 6. 1: Monitoring Matrix, 2018-2021

Development Dimension: Environment, Infrastructure and Human Settlements **Goal as adopted in SMTDP 2018-2021: To safeguard the natural environment and ensure a resilient built environment**										
Policy Objective: Expand the digital landscape										
Indicators	**Indicator Definition**	**Indicator Type**	**Baseline 2017**	**Targets**				**Disaggregation**	**Monitoring Frequency**	**Responsibility**
				2018	**2019**	**2020**	**2021**			

Existence of Interconnect rate.	MNOs charges – interoperability rate per minute	Outcome	MNO = 0.04 ICH = 0.0056	MNO = 0.04 ICH = 0.0056	MNO = 0.04 ICH = 0.0056	MNO = 0.04 ICH = 0.0056	MNO = 0.04 ICH = 0.0056	International Wholesale Carrier rates MNO rates	Annually	Dir. Regulatory Admin.
Existence of numbering plan.	Existence of Mobile to Mobile (M2M) numbering Scheme.	Output	Numbering Plan - 05x - 02x - 03x, - Short code - Toll Free - Premium numbers	Numbering Plan - 05x - 02x - 03x, - Short code - Toll Free - Premium numbers	Numbering Plan - 05x - 02x - 03x, - Short code - Toll Free - Premium numbers	Numbering Plan - 05x - 02x - 03x, - Short code - Toll Free - Premium numbers	Numbering Plan - 05x - 02x - 03x, - Short code - Toll Free - Premium numbers	MNO Internet Providers (Long-Term Evolution Providers)	Annually	Dir. Regulatory Admin.
Proportion of Numbering Audits to total number of audits	Times of Numbering Audits to total audits	Output	Numbering Audit = 2	2/8	2/8	2/8	2/8	MNO BWA (Broadband Wireless Access)	Bi-Annual	Dir. Regulatory Admin.
Number of Electromagnetic Field (EMF) monitoring exercise	Electromagnetic Field (EMF) emissions	Outcome	EMF Monitoring = Nil	EMF Monitoring = Nil	EMF Monitoring = 24 out of 72 Selected areas	EMF Monitoring = 24 out of 72 Selected areas	EMF Monitoring = 24 out of 72 Selected areas	Broadcasters Service Providers with Radio	Bi-Annual	Dir. Regulatory Admin. Dir. Engineering

Proportion of Quality of Service (QoS) Monitoring	Quality of Service conducted in all districts.	Output	QoS Monitoring = 216/216	216/864	216/864	216/864	216/864	District Capitals	Quarterly	Dir. Regulatory Admin.
Policy Objective: To improve ICT infrastructure in rural areas										
Number of Rural Telephony sites built	Rural telephony sites completed	Output	199 sites built	200/800	200/800	200/800	200/800	Districts Towns Villages	Quarterly & Annually	Dir. Operations
Number of government institutions connected to the internet	Government institutions digitised and equipped with IT systems	Output	30 institutions	40/160	40/160	40/160	40/160	Regional Districts Towns	Quarterly	Dir. Operations
Number of CICs connected	Community Information Centres (CICs) equipped and connected to the internet	Output	70 CICs equipped	65/260	65/260	65/260	65/260	Districts Towns Villages	Quarterly Annually	Dir. Operations
Number of schools supported	Schools equipped with	Output	70 schools	100/400	100/400	100/400	100/400	Regional	Quarterly	Dir. Operations

	computers and accessories									
Number of communities connected	Server connected to facilitate eServices - E-Agric - eTransaction-eCommerce - eProcurement	Output	4 pilot communities	44/176	44/176	44/176	44/176	District Towns Villages	Quarterly & Annually	Dir. Operations
Number of D4I project-support entrepreneurs and communities	Entrepreneurs supported with Zeepay kiosks	Output	Entrepreneurs = 60 Communities = 5	Entrep.= 40 Communities = 10	Entrep.= 40 Communities = 10	Entrep.= 40 Communities = 10	Entrep.= 40 Communities = 10	Regions Districts	Quarterly & Annually	Dir. Operations
Policy Objective: To promote electronic transactions for public and private businesses										

Number of MDAs/MMDAs Connected e-Government Network	Number of MDAs/MMDAs to the e-Government Network	Output Indicator	MDAs = 0/55 MMDAs = 0/245	10/55	25/55	10/55	10/55	Ministries, Departments & Agencies Metro. Municipal & District Assemblies Regions	Quarterly & Annually	CTO
Number of: -MDAs -MMDAs reached	Number of MDAs/MMDAs to eWorkspace	Output Indicator	MDAs = 45 MMDAs = 0	10/55 80/245	- 80/245	- 50/245	- 35/245	Ministries, Departments & Agencies Metro. Municipal & District Assemblies Regions	Quarterly & Annually	CTO
Number of MDAs/MMDAs	Number of MDAs/MMDAs connected to ePayment	Output Indicator	MDAs = 5 MMDAs = 0	15/55 90/245	15/55 80/245	15/55 50/245	10/55 25/245	Ministries, Departments and Agencies Metro, Municipal and District Assemblies	Quarterly and Annually	CTO
Number of MDAs/MMDAs	Number of MDAs/MMDAs connected to eServices Portal	Output Indicator	MDAs = 5 MMDAs = 0	15/55 70/245	15/55 70/245	10/55 60/245	10/55 45/245	Ministries, Departments and Agencies	Quarterly and Annually	CTO

								Metro, Municipal and District Assemblies		
Number of MDAs/MMDAs	Number of MDAs and MMDAs connected to Smart workspace solution	Output Indicator	MDAs =12 MMDAs=0	9/55 70/245	9/55 60/245	8/55 60/245	7/55 55/245	Ministries, Departments and Agencies Metro, Municipal and District Assemblies	Quarterly and Annually	CTO
Number of postal/ courier licences renewed	Annual renewal of licences by registered operators	Output	105	110	120	130	140	Int. Large Int. Medium Inter. Small Domestic Small Domestic Medium Domestic Small	Quarterly Annually	Director, Licensing and Regulations
Number of new courier operators licensed	Postal/Courier operators registered and licensed	Output	17	10	10	10	10	Int. Large Int. Medium Inter. Small Domestic Large	Quarterly Annually	Director, Licensing and Regulations

								Domestic Medium Domestic Small		
Number of publications of Operators in good standing	Annual publication of names of operators with renewed licences.	Output	2 publications	2 publications	2 publications	2 publications	2 publications	Daily Graphic And Ghanaian Times	Quarterly Annually	Director, Licensing & Regulations
Number of Publications of unlicensed operators	Annual publication of names of operators unlicensed	Out come	52 published list	19	19	19	19	Media	Quarterly Annually	Director, Licencing & Regulations
Number of Offices established	New offices established in three regions	Output	0	0	1/3	1/3	1/3	Kumasi Takoradi Tamale	Quarterly Annually	Executive Secretary
No. of International Conferences attended	Ghana's representation on WAPCO, PAPU and UPU	Output	5	4	5	5	5	WAPCO Report PAPU Report UPU Report	Annually	Executive Secretary

6.2 Data Collection, Collation and Analysis

Gathering data is an essential part of accessing information on the implementation of programmes and projects outlined in the MTDP as well as provide information for monitoring and evaluation process. Data gathered provides a platform for analysis to arrive at a result that will help inform decision making. Given the crucial nature of data collection, the Ministry will design data gathering templates for its agencies and departments as well as regional and district offices for data collection on interventions of the Ministry. Table 6.2 provides the data collection matrix that outlines the data collection period and method, level of disaggregated and the anticipated results.

Table 6. 2: Data collection matrix, Ministry of Communications

Indicator	Data collection period	Data collection method	Data disaggregation	Results
Ghana Investment Fund for Electronic Communications (GIFEC)				
Number of Rural Telephony sites built	October to December 2019	Field visits to verify the number	Districts Towns/Villages	200 Communities benefitted in 2018 and 200 more will benefits by December 2019
Number of government institutions connected to the internet	September 2019	Field visits	Districts Towns/Villages	30 institutions benefitted in 2018, 30. more will benefit in 2019
Number of people trained	June, 2019	Field visits	Districts Towns/Villages	17,000 people were trained in 2018 and 20,000 more people to be trained
Number of CICs connected	July, 2019	Field visits	Districts Towns/Villages	100.CICs got connected to the internet as of 2018 and 100 CICs will benefit in 2019

Number of communities covered in the selected regions	October to December 2019	Field visits	Districts Towns/Villages	5 communities were piloted in 2017 and the other regions will benefit in 2019
National Communications Authority (NCA)				
Existence of Interconnect rate.	TBD	Benchmarking	MNOs, BWA	Standardized Interconnection rate
Existence of numbering plan.	June	Discussions and Regulations	MNO, BWA	Ensure even allocation of numbering blocks.
Proportion of Numbering Audit to total number of Audits	Jan-Jun, Jul, Dec	Forms	MNO, BWA	Management of Numbering Resource
Number of Electromagnetic Field (EMF) monitoring exercise	Mar-Jul, Sept-Nov	Spectrum Analyzers	Broadcasters, Service Providers with Radio Frequency	Regulation of EMF emitting devices to ensure they emit within their respective limits
Proportion of Quality of Service (QoS) Monitoring	Quarterly	Drive Test, Network Monitoring System (NMS)	All District Capitals	Enforced Quality of Service Standards by MNOs
Postal and Courier Services Regulatory Commission (PCRSC)				

Number of postal/ courier licences renewed	December 31	Licences renewed	International Domestic	105 operators renewed their licences
Number of Courier operators registered	December 31	New registration numbers/new licences	International Domestic	10 new operators were registered and licensed
Publication of operators in good standing	Second quarter	Newspapers	Dailies	2 publications in the dailies
Number of Publications in the media	Second quarterly	Media	Print/Electronic	19 publications were made in the electronic media
Number of Offices established	December 31	Office address	Locations	No office was established
Number of Conferences attended	December 31	Reports	Regional/Continental/World	5 conferences were attended
National Information Technology Agency (NITA)				
Number of MDAs/MMDAs Connected	June	-Paper Questionnaires	MDAs/MMDAs	Easy access to Government network
Number of: -MDAs -MMDAs reached	March	-Paper Questionnaires	MDAs/MMDAs	Eliminate the use of paper and human interface in Government transactions
Number of MDAs/MMDAs	December	-Paper Questionnaires	MDAs/MMDAs	Easy Payment of Government Services

Number of MDAs/MMDAs	December	-Paper Questionnaires	MDAs/MMDAs	Citizen Easy Access to essential Government Services
Number of MDAs/MMDAs	December	-Paper Questionnaires	MDAs/MMDAs	Eliminate the use of paper and human interface in Government transactions
Ghana Meteorological Services (GMet)				
Lead time of early warning	Daily	Observation	By zones, by Agric activity By Aviation By Marine	To provide adequate time to the weather event
Establish Change in Climate	Monthly		By zones	Reduce change in climate change
Accuracy rate of early warning	Daily	Observation	National	Close to perfection of Event
Timeliness	Daily	Observation	National	Adequate time to Event
Percentage Change in station data received at headquarters	Daily	Observation Recording	National	Reduce loss of data

Dissemination of Data over GTS	Weekly		National	Provide information across the country
Compliance rate with WMO Standards	Annually		National	Attain Set Standard
No. of automatic weather stations installed			National regional	Collect data relating to weather.
Accuracy of forecasts produced.	Daily		National	Accurate weather produced
Database updated Daily	Daily		National	To have readily available data
Subscription Paid	Annual		National	Affiliation to International Organisation
Certification obtained	Annual		National	Operated within Quality management standards
No. of seasonal forecast issued	Annual		National regional	To inform and Educate
No. of workshops organised	Seasonal		National	

No. of Bulletins Published	Monthly		National	To inform and Educate
No. of TV presentations			National	To inform and Educate
Law House Project completed		Site inspection report		100% completed
Number of Regional residential bungalows renovated		Site inspection report	Regional	100% completed
Number of Regional Office buildings renovated		Site inspection report	Regional	100% completed
Number of records staff trained		Training reports	Male Female	50% of males 50% of females
Records system of the Ministry automated		Procurement report, Questionnaire	Department/Agency	
Sector policy framework completed		Questionnaire	Policy documents	
Number of Research on policy and socio-economic issues in justice delivery conducted		Questionnaire	Research documents	

Outcomes of research implemented	2018-2021	Implementation report		
Official vehicles maintained.	2018-2021	Inventory		

Data Validation

Validating data gathered through primary and secondary means, is essential for ensuring that all errors or duplications are removed to ensure the authenticity of the data. The process also allows for stakeholders to buy into the process and own the outcome of the process. The PPME Division of the Ministry shall ensure that data validation workshops/meetings are organised with stakeholders.

Data Analysis

Analysis data gathered from different sources is essential to allow for better interpretation of the results. The PPME Division of the Ministry shall ensure that data gathered or received are rigorously analysed to ensure accurate results are produced and communicated to stakeholders. The PPME Division would utilise software like SPSS, Excel, etc. The analysis would present the performance of the Ministry in relation to the implementation of the MTDP as well as highlight areas that require further attention and proffer solutions.

6.3 Reporting Arrangement

Reporting to stakeholders is an essential element of any M&E system. The PPME Division of the Ministry will ensure that all stakeholders are well informed on the progress of implementation of all programmes and projects undertaken during the year. This is expected to help them make informed decisions based on current data and trends. The PPME Division will report on progress on quarterly and annual basis using the format providing by the National Development Planning Commission in the Planning Guidelines (2018-2021). Fig. 6.1 provides the quarterly and annual progress report format.

Figure 6.1: Quarterly and Annual Progress Reports Format

Title Page

i. Name of the MDA
ii. Time period for the M&E report

Introduction

i. Summary of achievements and challenges with the implementation of the SMTDP
ii. Purpose of the M&E for the stated period
iii. Processes involved and difficulties encountered

M&E Activities Report

i. Programme/Project status for the quarter or year
ii. Update on funding sources and disbursements
iii. Update on indicators and targets
iv. Update on critical development and poverty issues
v. Evaluations conducted; their findings and recommendations
vi. Participatory M&E undertaken and their results

The Way Forward

i. Key issues addressed and those yet to be addressed
ii. Recommendations

6.4 Dissemination and Communication Strategy

Communicating results of a process or the process itself to stakeholders is crucial for their appreciation and buy-in. It is therefore paramount that a communication strategy is outlined to guide the way in which different products are communicated to the varied stakeholders of the Ministry. The PPME Division will ensure that the communication strategy is develop and the various outputs well communicated to the key stakeholders. Table 6.3 provides a detail breakdown of the communication strategy for the plan period

Table 6.3: Communication Activity Matrix

6.4 Dissemination and Communication Strategy

Table 6. 3: An example of communication activity matrix

Activity	Purpose	Audience	Method/Tool	Timeframe	Responsibility
National Communications Authority					
Determine Wholesale interconnect rate	Ensure that all MNOs and International Carriers have a standardizes termination rate	NCA, International Carriers, MNOs	Stakeholder Deliberations	Annually	NCA
Implement Machine to Machine (M2M) numbering Scheme.	Ensure adequate regulation of M2M interactions.	Internet Service Providers, BWA, MNOs	Policies, International Regulations, Stakeholder Deliberations	June	NCA

Conduct Numbering Audit	Management of Numbering Resource within a regulated framework	MNO, BWA	Forms	Bi-annual	NCA
Coordinate Frequency along the borders of the country.	To Minimize cross-border frequency interference.	Regulators from Neighboring Countries, MNOs, BWAs, Broadcasters	Spectrum Monitoring, Stakeholder Deliberations	Quarterly	WRC
Coordinate National Preparation for World Radiocommunication Conference (WRC)	Review, and revise the Radio Regulations and the international treaty governing the use of the radio-frequency spectrum.	WRC Participants, Telecom Stakeholders and Regulators	Conferences	Sept - Nov	WRC
Organise Consumer Outreach	Awareness creation on Regulator Practices and Consumer Rights	Public	Fora, Outreach	Quarterly	NCA
Conduct nationwide Electromagnetic Field (EMF) monitoring exercise	To Regulate EMF emitting devices to ensure they emit within their respective limits	Broadcasters, Service Providers with Radio Frequency	Spectrum Analyzers	Bi annually	NCA
Conduct Quality of Service (QoS) Monitoring for Voice and Data	Enforce Quality of Service Standards by MNOs	MNO, BWA	Drive Test, Network Monitoring System (NMS)	Quarterly	NCA

National Information Technology Agency					
Connect MDAs / MMDAs to the e-Government Network Operating Service.	Introduction of MDAs/MMDAs to e-Gov.net	MDAs/MMDAs	Forums Workshops	25th – 29th March,2019 10:00 am - 5:00pm	Chief Technology Agency (CTO)
Rollout ePayment	Introduction of MDAs/MMDAs to ePayment Rollout	MDAs/MMDAs	Forums Workshops	25th – 28th February,2019 8:30 am – 2:00PM	Chief Technology Agency (CTO)
Support eServces Payment	Introduction of MDAs/MMDAs to ePayment Rollout	MDAs/MMDAs	Forums Workshops	15th – 17th July,2019 8:30 am – 2:00PM	Chief Technology Agency (CTO)
Support Smart WorkPlace Solution	Introduction of MDAs/MMDAs to Smart WorkPlace Solution Rollout	MDAs/MMDAs	Forums Workshops	8th – 12th April,2019 8:30 am – 2:00PM	Chief Technology Agency (CTO)
Data Protection Agency					

Youth Sensitization	The Commission aims to increase awareness on Data Protection nationally by targeting the youth and engaging them in activities that can promote good Data Protection practice in Ghana with regards to Globalization ,Digitization and Social media	Youth	Debates Quiz Theatre Arts (e.g. Drama) Social media (e.g. Facebook, Twitter, WhatsApp etc.)	January to December 2018	Director of Finance & Administration & Director Legal & Operations
Public Engagement	To enlighten people about their rights to privacy and data protection	Public	TV Radio Print (e.g. Newspaper, Flyers etc.) Global Week event	January to December 2018	Director of Finance & Administration & Director Legal & Operations

6.5 Evaluation

Table 15: Evaluation Matrix Evaluation Criteria Evaluation Questions Data Needed

Evaluation Criteria	Evaluation Questions		Data Needed	Data Sources	Data Collection Methods
	Main Questions	Sub-Questions			
National Communications Authority					
Relevance	Why the need for the projects?	Will these projects benefit the Country?	World Interconnect rates, KPIs	Industry evaluation reports, reports from ITU, MNOs, Broadcasters, BWAs, Service Providers	Call sheets, Forms, stakeholder forums, questionnaires.
Efficiency	What is the cost and time for the implementation of the projects?	What resources will be needed? What time frame is required?	World Interconnect rates, KPIs	Industry evaluation reports, reports from ITU, MNOs, Broadcasters, BWAs, Service Providers	Call sheets, Forms, stakeholder forums, questionnaires.
Effectiveness	Will the projects improve technology and communication use in the country?	Will the projects reduce the time and costs spent in communicating?	World Interconnect rates, KPIs	Industry evaluation reports, reports from ITU, MNOs, Broadcasters,	Call sheets, Forms, stakeholder forums, questionnaires.

				BWAs, Service Providers	
Impact	How many people have access to ICT services?	Has the use of ICT increase productivity?	World Interconnect rates, KPIs	Industry evaluation reports, reports from ITU, MNOs, Broadcasters, BWAs, Service Providers	Call sheets, Forms, stakeholder forums, questionnaires.
Sustainability	How will the available ICT resources enhance continuity of the projects?	What resource plans are in place to sustain the projects? What implementation strategy and enforcement will be in place?	World Interconnect rates, KPIs	Industry evaluation reports, reports from ITU, MNOs, Broadcasters, BWAs, Service Providers	Call sheets, Forms, stakeholder forums, questionnaires.
Ghana Investment Fund for Electronic Communication					
Relevance	Why the need for the projects?	How will the projects serve the needs of beneficiary communities? Are the projects the appropriate one for	Number of people served User experience	GIFEC reports	Survey

		the problem identified?			
Efficiency	Will GIFEC commit the resources in a timely manner to produce results?	How much will be spent on the project? How long will it take for the project to be implemented? How much is the project in the market?	Project cost Time	GIFEC reports	Questionnaire
Effectiveness	Will the project achieve the results that it set to achieve?	Will the people able to make calls easier?	User experience	GIFEC	Questionnaire
Impact	What difference will the project make in the lives of the beneficiaries	Has the project made life easier for the beneficiaries? How will the project change the lives of the beneficiaries?	Monitoring and evaluation report	GIFEC	Questionnaire

Sustainability	To what extent is the project likely to continue after GIFEC support?	How will the project stand the test of time? What measures have been put in place to make the project survive on its own?	Status report	GIFEC	Questionnaire
National Information and Technology Agency (NITA)					
Relevance	Why need for the projects?	How can this project benefit government institutions?	Number of MDAs/MMDAs User Experience	Progress & Evaluation Report	Electronic/Paper Questionnaires ie mail Phone Calls Social Media
Efficiency	What will be the time taken to implement? What is the cost for the implementation of the project?	What equipments will be needed? *cost of equipments *Duration	Cost and Time per MDA/MMDAs	Progress & Evaluation Report	Electronic/Paper Questionnaires ie mail Phone Calls Social Media

Effectiveness	Will it completely digitize the work place?	Will it eliminate the use of paper at work**?**	Number of MDAs/MMDAs User Experience	Progress & Evaluation Report	Electronic/Paper Questionnaires ie mail Phone Calls Social Media
Impact	Will it improve productivity at work?	Will the use of paper be a thing of the past?	Number of MDAs/MMDAs User Experience	Progress & Evaluation Report	Electronic/Paper Questionnaires ie mail Phone Calls Electronic Questionnaires ie mail Social Media
Sustainability	Will Government have a sustainability plan for the project?	Will Government be able to maintain the project in terms of finance and Human resource?	Number of MDAs/MMDAs User Experience	M&E Report	Electronic/Paper Questionnaires ie mail Phone Calls Social Media
Postal and Courier Regulatory Commission					

Relevance	How important is the renewal of licenses?	How does license renewal help create sanity in the postal market? Is licensing the appropriate means by which the sector could be sanitized?	Number of licenses renewed	PCSRC (L & R)	Licenses renewed
Efficiency	Did PCSRC process renewals and new issuances timely?	How many renewals were completed within ten working days? Averagely how long did it take for a renewal to be completed?	Number of licenses renewed in every ten day period	PCSRC (L & R)	Subscription payment dates
Effectiveness	Did the publication archive its set goal?	Is the illegal operators list getting shorter?	Illegal operators list	PCSRC (L&R)	Illegal operators list Number of new issuances

Impact	How many operators are on the operators' list	How many new operators have been licensed out of the illegal operators list? Is application for new licence increasing?	Monitoring and evaluation report	PCSRC (L&R)	Operators Data Base
Sustainability	Is the Commission seeing a steady increase in its IGF?	Is the illegal operators' list exhausted? Can the Commission account for every operator active in the sector?	Accounts Report Monitoring	PCSRC (L&R)	Monitoring reports
Data Protection Commission					
Relevance	Why the need for the various projects?	What is the benefit of completing these projects to stakeholders?	Number of registered companies	DPC Annual Report Registrar General's Dept. database	Telephone calls Social media platforms (e.g. Twitter, Facebook and WhatsApp) • Electronic mails

Efficiency	What is the cost and time for implementing these projects?	How can waste be minimized in implementing these projects?	Number of registered companies	DPC Annual Report Registrar General's Dept. database	• Telephone calls Social media platforms (e.g. Twitter, Facebook and WhatsApp) • Electronic mails
Effectiveness	Will these projects improve productivity?	What tools will be used to implement these projects?	Number of registered companies	DPC Annual Report Registrar General's Dept. database	• Telephone calls Social media platforms (e.g. Twitter, Facebook and WhatsApp) • Electronic mails
Impact	How knowledgeable will the public be about Data privacy matters?	Will Data Controllers be able to carry out compliance assessment?	Number of registered companies	DPC Annual Report Registrar General's Dept. database	• Telephone calls Social media platforms (e.g. Twitter, Facebook and WhatsApp) • Electronic mails
Sustainability	Does the Commission have a sustainability plan?	Are there skilled personnel and technical resources?	Number of registered companies	DPC Annual Report Registrar General's Dept. database	• Telephone calls Social media platforms (e.g. Twitter, Facebook and WhatsApp) Electronic mails

6.5 Evaluation

One key feature of the Ministry's development effort is a strong commitment to conducting evaluations. The PPME Division will assess the performance of each project when completed to ascertain if the intervention has achieved its original objectives and assess the overall changes caused by the intervention.

The Ministry will adopt the following processes in the conduct of all its evaluation;

1) Assess the need for an evaluation.
2) Develop clear ideas on the rationale and objectives of the evaluation.
3) Determine the type of evaluation to undertake.
4) Specify the methods, scope and timing of the evaluation.
5) Identify and analyse stakeholders.
6) Consider the costs involved (budget).
7) Prepare the Terms of Reference (TOR) and contractual agreement based on items 1 to 4. The preparation of the evaluation exercise will start with the elaboration of the TOR. This will be prepared by the PPME Division in collaboration with stakeholders.
8) Discuss the TOR with key stakeholders. The Ministry will always have a broad consultation and agreement on the TOR that will form the basis of each evaluation.
9) Recruit a consultant or a team in accordance with the provisions of the Procurement Act, Act 663 of 2003.
10) Commission the evaluation.
11) Constitute a technical committee to review the work and reports of the consultant.
12) Disseminate the results and act on the findings and recommendations.

The Ministry shall during the plan period conduct Mid-Term and Terminal Evaluations as well as other Evaluations as needed.

6.6 PARTICIPATORY MONITORING AND EVALUATION

Participatory Monitoring and Evaluation (PM&E) refers to the practice where all key stakeholders are directly involved in the M&E design and implementation process. PM&E is a valuable tool that the Policy Planning Monitoring and Evaluation Department (PPME) would use to capture perceptions and assess whether interventions have met the expectations of the general public especially of the poor and vulnerable in society. The Ministry will adopt the **Participatory Rural Appraisal (PRA)** and **Citizens Report Card (CRC)**approaches to solicit the views and opinions of the general public on the implementation of interventions.

Annex 1:Situation Analysis of Monitoring and Evaluation of the Office of the Attorney General and Ministry of Justice

SMTDP	The 2014 -2017 sector medium term development plan of the Office of Attorney-General and Ministry Of Justice was approved by the National Development Planning Commission. This plan was used during the four years' implementation period. The activities and projects were largely implemented during the planned period.
HUMAN RESOURCES	The Ministry has assigned five Assistant Research Officers to conduct monitoring and evaluation exercises of the sector. The officers responsible for monitoring and evaluation lacks the adequate skills to perform the assigned task, therefore the need to give them the needed training to discharge their duty effectively and efficient. The stakeholders identified for the preparation of the Ministry's monitoring and evaluation plan lacked the needed skills to prepare the plan which contributed to the delay in preparing the plan which affected the implementation schedule. Four of the assigned officers had taken basic courses in monitoring and evaluation at the Civil Service Training Centre but the officers still require the needed skills in Monitoring and Evaluation to work. The Officers lack skills in areas like database management, development planning, facilitation skills, team and consensus-building techniques and they would require report writing skills to enable them work efficiently. The PPMED requires adequate office space to accommodate staff in the unit.
MATERIAL RESOURCES	The monitoring and evaluation unit requires logistics such as computers, printers, cameras photocopiers and scanners since the monitoring and evaluation unit lacks some of the material resources to run it programs and activities in the ministry effectively those available are in adequate. Currently, the five Officers assigned to monitor and evaluate activities and programmes of the Ministry are housed in the research office. The monitoring and evaluation unit lack computers, printers, cameras, photocopier machines and scanners but share computers with their research department and it always delay work. The unit does not have a vehicle to run it activities

	effectively and the internet connectivity is not reliable which slows down work. These kinds of challenges impede the process of monitoring and evaluation exercise.
FINANCIAL RESOURCES	There is always a delay in releases from Ministry of Justice and when there is release, it is inadequate to carry out Monitoring and Evaluation.
RECOMMENDATIONS	• The officers should be given the needed training to enable them work. • Adequate logistics should be provided to enable officers discharge their work efficiently • Ministry of Finance should release funds on time for the Ministry to carry out M&E activities • Officers assigned to conduct M&E activities should be motivated

Annex 2: Internal consistency matrix for the analysis of adopted issues

No	ISSUES	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	Adopted Issues / **Adopted Issues**	Revenue under performance due to leakages and loopholes, among other causes	Tax burden on business	Informality and lack of an effective legal, regulatory and institutional regime for the creative arts industry	Ineffective monitoring and evaluation of implementation of development policies and plans	Weak research capacity of MDAs and MMDAs	High perception of corruption among public office holders and citizenry	Misappropriation of funds by public office holders	Increase in and diversification of economic crimes including Money laundering, tax evasion, cyber-crime	Abuse of discretionary powers	Poor documentation and record keeping	Decline in public confidence in the Legal System	High cost of justice and slow pace in getting judgment	Protracted pre-trial detention	Lack of technical training and know-how among many judges and state attorneys to handle specialty cases
1	Revenue under performance due to leakages and loopholes, among other causes		√	√	√	√	√	√	√	√	√	√	√	√	√
2	Tax burden on business	√		√	√	√	√	√	√	√	√	√	√	√	√
3	Informality and lack of an effective legal, regulatory and institutional regime for the creative arts industry	√	√		√	√	√	√	√	√	√	√	√	√	√
4	Ineffective monitoring and evaluation of implementation of development policies and plans	√	√	√		√	√	√	√	√	√	√	√	√	√
5	Weak research capacity of MDAs and MMDAs	√	√	√	√		√	√	√	√	√	√	√	√	√
6	High perception of corruption among public office holders and citizenry	√	√	√	√	√		√	√	√	√	√	√	√	√
7	Misappropriation of funds by public office holders	√	√	√	√	√	√		√	√	√	√	√	√	√
8	Increase in and diversification of economic crimes including Money laundering, tax evasion, cyber-crime	√	√	√	√	√	√	√		√	√	√	√	√	√
9	Abuse of discretionary powers	√	√	√	√	√	√	√	√		√	√	√	√	√
10	Poor documentation and record keeping	√	√	√	√	√	√	√	√	√		√	√	√	√

11	Decline in public confidence in the Legal System	√	√	√	√	√	√	√	√	√	√		√	√	√
12	High cost of justice and slow pace in getting judgment	√	√	√	√	√	√	√	√	√	√	√		√	√
13	Protracted pre-trial detention	√	√	√	√	√	√	√	√	√	√	√	√		√
14	Lack of technical training and know-how among many judges and state attorneys to handle specialty cases	√	√	√	√	√	√	√	√	√	√	√	√	√	