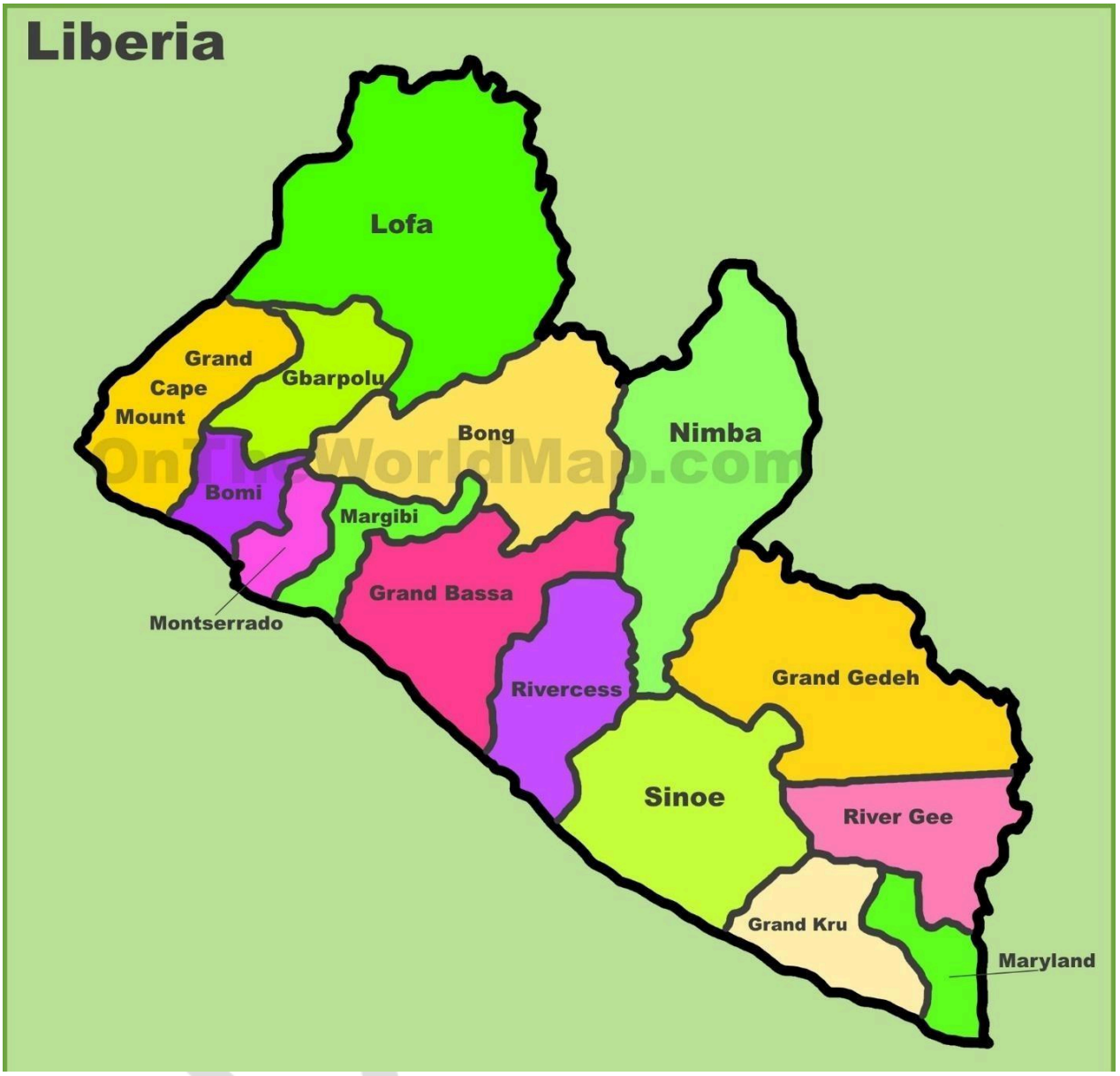
Republic of Liberia

National Information & Communications Technology (ICT) Policy (2025-2030)

"Empowering Liberia Through Digital Transformation: Innovation, Inclusion, and Sustainability"

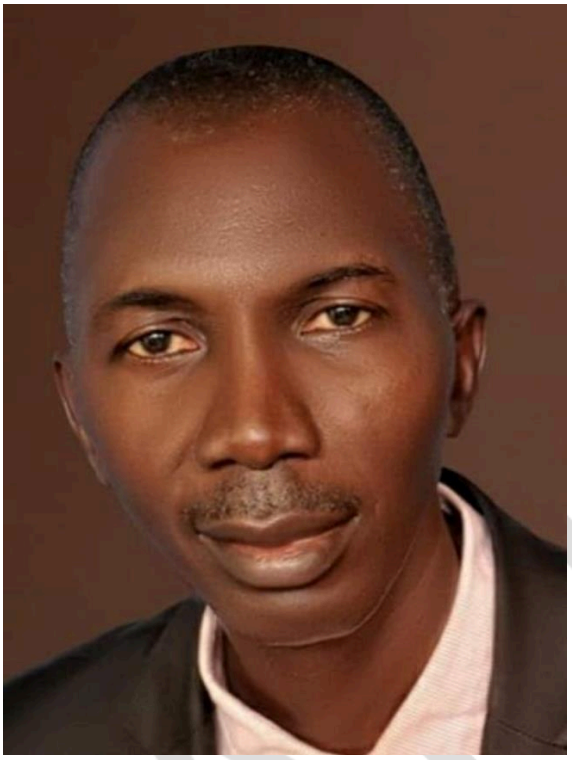
Map of Liberia



President's Message

His Excellency Joseph N. Boakai
President
Republic of Liberia

Minister's Message



Hon. Sekou Kromah
Minister & Postmaster General
Ministry of Posts and Telecommunication
Republic of Liberia

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Acronyms and Abbreviations

5G - Fifth Generation (Wireless Network Technology)

AC3 - Amilcar Cabral Cable Consortium of Liberia

AfDB - African Development Bank

AI - Artificial Intelligence

Big Data - Refers to large and complex data sets

CBL - Central Bank of Liberia

CCL - Cable Consortium of Liberia

CERT - Computer Emergency Response Team

CIO - Chief Information Officer

CSIRT - Computer Security Incident Response Team

CSR - Corporate Social Responsibility

DLT - Distributed Ledger Technology

DRR - Disaster Risk Reduction

e-Learning - Electronic Learning

EPA - Environmental Protection Agency

EU - European Union

GIS - Geographic Information System

GSA - General Services Agency

HRD - Human Resource Development

ICT - Information and Communication Technology

IoT - Internet of Things

IPv6 - Internet Protocol Version 6

ISP - Internet Service Provider

IT - Information Technology

ITU - International Telecommunication Union

LRREN - Liberia Research and Education Network

LTA - Liberia Telecommunications Authority

LTC - Liberia Telecommunications Corporation

MGSP - Ministry of Gender, Children, and Social Protection

MIA - Ministry of Internal Affairs

ML - Machine Learning

MNO - Mobile Network Operator

MoD - Ministry of National Defense

MoE - Ministry of Education

MoFDP - Ministry of Finance and Development Planning

MoJ - Ministry of Justice

MoPT - Ministry of Posts and Telecommunications

MOYS - Ministry of Youth and Sports

NREN - National Research and Education Network

NSA - National Security Agency

OIT - Office of Information Technology

PPP - Public-Private Partnership

R&D - Research and Development

RE - Renewable Energy

SDG - Sustainable Development Goal

STEM - Science, Technology, Engineering, and Mathematics

TVET - Technical and Vocational Education and Training

UNDP - United Nations Development Program

USAID - United States Agency for International Development

WB - World Bank

Executive Summary

To be written upon completion of this document

EXECUTIVE SUMMARY

The National ICT Policy 2025–2030 sets a unified direction for Liberia's digital transformation. It establishes clear priorities, targets, and institutional arrangements to expand connectivity, strengthen trust and cybersecurity, modernize public services, and enable a competitive digital economy that supports inclusive growth under the ARREST Agenda.

The Policy is structured around eight strategic pillars: (1) ICT infrastructure expansion and modernization; (2) e-government and digital public services; (3) digital literacy, skills and inclusion; (4) cybersecurity, data protection and trust; (5) innovation, entrepreneurship and emerging technologies; (6) sector digitization to accelerate ARREST Agenda sectors; (7) digital financial inclusion; and (8) climate-smart ICT and sustainability.

To translate policy into delivery, Liberia will implement a portfolio of National Priority Programs (2025–2030) with time-bound milestones and measurable indicators. The Policy introduces a strengthened governance framework led by the Executive, the Ministry of Posts and Telecommunications (MoPT), the National Chief Information Officer (CIO) regime, and a cross-Ministerial CIO Council, supported by technical working groups and implementing institutions across government, private sector, academia, and development partners.

Core national outcomes by 2030 include: achieving 70% active broadband adoption nationwide (with interim targets for coverage footprint and public access), launching at least 10 high-value e-government platforms, certifying at least 60,000 citizens in intermediate and advanced digital skills (with larger reach for basic digital literacy), generating approximately USD 200 million in digital economy revenue, and creating at least 50,000 ICT-related jobs across sectors.

Successful implementation will require coordinated planning, sustainable financing, regulatory certainty, procurement and interoperability standards, and rigorous monitoring, evaluation, reporting and learning (MERL). This Policy provides the foundation for that coordinated national effort.

Chapter 1

1.1 Introduction

The National ICT Policy 2025–2030 of Liberia establishes a forward-thinking strategic framework to accelerate the nation's digital transformation agenda. Building on the achievements of the 2019–2024 ICT Policy, it addresses emerging global trends, lessons learned, and evolving national priorities to position Liberia as a digitally empowered, resilient, and inclusive economy. Recognizing the transformative potential of Information and Communications Technology (ICT) as a critical enabler of socio-economic growth, the policy outlines strategies to integrate technology across key sectors, driving efficiency, transparency, and innovation.

This policy Aligns with the government's ARREST Agenda which is built on the following pillars:

- **Agriculture**: Developing and supporting local agriculture;
- **Roads:** Modernizing infrastructure;
- **Rule of Law**: Strengthening the justice system and promoting transparency;
- **Education:** Reforming the educational system to build a skilled workforce;
- **Sanitation:** Improving public health and sanitation infrastructure; and
- **Tourism:** Boosting the tourism sector.

Through this alignment, the policy ensures that ICT serves as a transformative enabler across all sectors of national development. It also seeks to address persistent challenges—such as limited rural connectivity, gaps in digital literacy, and a nascent ICT industry—while capitalizing on opportunities presented by global trends like artificial intelligence (AI), blockchain, and the Internet of Things (IoT).

The policy also acknowledges the pressing need to promote social equity and environmental sustainability. It emphasizes inclusivity, aiming to bridge Liberia's digital divide by ensuring that marginalized groups, particularly women and rural communities, have access to affordable ICT services and resources. Additionally, the policy incorporates green ICT strategies, leveraging technology to address climate resilience and environmental challenges.

The establishment of a robust foundation for digital infrastructure, human capital development, and an innovation-friendly regulatory environment will allow the National ICT Policy 2025–2030 to aspire, not only to integrate Liberia into the global digital economy, but also to enhance the quality of life for its citizens, fostering economic empowerment, transparency, and sustainability.

The rest of this document is structured as follows: Chapter 1 continues with the introduction of the Policy, its background, as well as its vision, mission and goals**.** It delves into its alignment with national priorities, and its relevance to global and regional ICT trends. Chapter 2 provides the status of the sector by examining the current landscape, including market dynamics, institutional structures, infrastructure development, policy frameworks, human capacity, adoption rates, challenges, opportunities, and the sector's impact on national development. Chapter 3 presents the Policy which outlines the policy objectives and focused areas, as well as specific interventions aimed at transforming Liberia's ICT sector to drive economic growth and social development. Chapter 4 provides the policy implementation framework that details the governance structures, roles of stakeholders, funding mechanisms, and monitoring and evaluation systems to ensure the effective execution of the policy. Chapter 5 delineates the expected outcomes by highlighting the anticipated impacts, including increased connectivity, digital inclusivity, and economic empowerment. The Conclusion reaffirms the government's commitment to fostering a robust ICT ecosystem as a cornerstone of Liberia's development agend.

1.2 Background

Over the last decade, Liberia has achieved notable progress in Information and Communication Technology (ICT), which has contributed to its socio-economic transformation. The expansion of telecommunications infrastructure, particularly mobile networks, has increased connectivity, albeit unevenly, with urban areas seeing more progress than rural communities. The government has implemented e-governance solutions such as digital records for public services and has initiated programs to enhance digital literacy, laying the groundwork for a more inclusive digital society.

Despite these strides, significant gaps persist. Rural areas remain underserved, with limited internet access and unreliable infrastructure. Gender disparities in ICT access and participation highlight systemic challenges, while issues such as inadequate cybersecurity frameworks and low adoption of advanced technologies—such as Artificial Intelligence (AI), block chain, and cloud computing—hinder Liberia's ability to compete in the global digital economy.

The National ICT Policy 2025–2030 seeks to address these challenges while building on the successes of the 2019–2024 ICT Policy**.** It integrates lessons learned, such as the need for better collaboration between public and private stakeholders and more aggressive capacity-building initiatives and aligns with global trends to ensure a future-ready approach. By addressing emerging technologies, the policy aims to strengthen Liberia's ability to innovate, drive sustainable development, and improve the quality of life for its citizens.

Additionally, the policy reflects Liberia's commitment to regional and international frameworks such as the ECOWAS ICT Development Framework**,** the African Union's Digital Transformation Strategy**,** and the United Nations Sustainable Development Goals (SDGs)**.** It also prioritizes cross-cutting issues like climate change by promoting green ICT strategies and sustainable infrastructure. Similarly, it underscores gender equality by targeting initiatives that empower women and marginalized groups to participate actively in the digital economy.This policy serves as a testament to Liberia's determination to leverage ICT as a critical tool for national transformation, ensuring no one is left behind in the pursuit of a resilient and inclusive digital future .

1.2 Liberia's Vision and Mission for ICT

The National ICT Policy 2026–2030 outlines a transformative vision for Liberia's digital future, emphasizing inclusivity, innovation, and sustainability. It provides a strategic roadmap to harness ICT as a driver for national development, aligning with the government's ARREST Agenda for Inclusive Development (AAID).

1.2.1 Vision

2.0Vision and Mission Statement

Vision:

"To transform Liberia into a regional knowledge- based economy and inclusive information society with enhanced social development for all."

This vision aspires to:

- Bridge the digital divide by ensuring equitable access to ICT infrastructure and services.
- Promote economic growth through digital innovation and entrepreneurship.

- Seek to promote national reform by focusing on developing human capacity.
- Strengthen governance, transparency, and public service delivery using e-governance tools.
- Address global and local challenges through ICT, including climate change adaptation and gender equity.

Mission:

"To enable fully integrated Information Communication Technologies that support economic development and social inclusion for all Liberians."

This mission aspires to leverage technology to promote governance, digital inclusion, and environmental sustainability, and to create a digitally inclusive society, protect national cybersecurity, and drive job creation and entrepreneurship for a prosperous and equitable future. This statement ties directly to the AAID's goals while incorporating the key pillars of the ICT policy.

1.2.2 Summary of the Policy Objectives

The policy identifies the following strategic objectives to achieve the vision for ICT development:

1. Ensure equitable access to modern and affordable ICT infrastructure for all citizens, including marginalized and underserved communities.
2. Enhance productivity and innovation in health, education, agriculture, governance, and other critical sectors in alignment with the ARREST Agenda for Inclusive Development.
3. Protect national ICT infrastructure, ensure data privacy, and build resilience against cyber threats.
4. Address gender disparities and empower marginalized groups, including rural communities, women, and persons with disabilities, to benefit from ICT opportunities.
5. Foster research, innovation, and the adoption of emerging technologies such as AI, blockchain, and IoT to drive development.
6. Integrate ICT initiatives with environmental sustainability efforts to support climate resilience and green technology adoption.
7. Leverage ICT to modernize public administration, improve transparency, accountability, and service delivery through e-governance platforms.
8. Use ICT as a catalyst for economic growth by creating jobs, supporting startups, and promoting entrepreneurship in the digital economy.
9. Enforce Liberalization of the telecommunication sector to ensure competitive service markets and affordable prices.
10. Provide five thousand (5,000) career employments for Liberians in the telecommunications and ICT

sectors in technical, administrative, operational, teaching, and project management areas by 2029.

11. Collaborate with the Ministry of Education and relevant stakeholders establish telecommunications curriculum in high schools, colleges and universities and to build capacity in telecommunications related careers.

12. Coordinate the efforts of Government, the private sector, civil society, development partners and individuals in order to ensure a shared national development vision in telecommunications and ICT.

These objectives establish a foundation for the policy to address Liberia's developmental challenges while fostering an inclusive digital ecosystem.

1.3 Guiding Principles

The following principles underpin the National ICT Policy 2026–2030:

1. **Inclusivity** - Ensure equitable access to ICT resources for all citizens, particularly underserved and marginalized populations.

2. **Sustainability** - Embed environmental sustainability in ICT development through green practices and climate-smart solutions.

3. **Resilience** - Build robust systems that can withstand environmental, economic, and cyber challenges.

4. **Innovation**: Foster a culture of creativity and technological advancement to drive development.

5. **Collaboration**: Encourage partnerships between government, private sector, academia, and civil society for holistic ICT growth.

6. **Accountability** - Promote transparency and accountability in the implementation and governance of ICT initiatives.

Localization - Ensure ICT solutions are relevant to Liberia's cultural, social, and economic context, addressing local needs effectively.

1.4 Policy Development Process

The development of the National ICT Policy 2026–2030 involved a multi-stakeholder, consultative approach to ensure inclusivity and alignment with national priorities. Key steps included:

Policy Development Process

Explanation

- **Stakeholder Consultations**: Engaging government agencies, the private sector, academia, civil society, and development partners.
- **Review of Existing Policies**: Evaluating the performance and impact of the National ICT Policy 2019–2024 to identify lessons learned.
- **Benchmarking Best Practices**: Drawing from successful ICT policies in Africa and beyond.
- **Public Participation**: Gathering inputs from citizens to align the policy with their needs and expectations.
- **Validation Workshops**: Conducting workshops to finalize the policy draft and ensure stakeholder consensus.

1.5

1.6 International and Regional Frameworks

The National ICT Policy 2026–2030 aligns with several international and regional frameworks to ensure Liberia's integration into the global digital economy:

- **United Nations Sustainable Development Goals (SDGs)**: Particularly SDG 9 (Industry, Innovation, and Infrastructure), SDG 5 (Gender Equality), and SDG 13 (Climate Action).
- **African Union Digital Transformation Strategy**: Promoting ICT as a driver for social and economic development across Africa.
- **ECOWAS ICT Development Framework**: Aligning Liberia's initiatives with regional ICT standards and priorities.
- **International Telecommunications Union (ITU) Guidelines**: Ensuring compliance with global telecommunications standards.
- **Paris Agreement on Climate Change**: Leveraging ICT for climate adaptation and mitigation

2 Chapter 2: Status of the ICT Sector

The status of Liberia's ICT sector is shaped by a comprehensive evaluation of several critical pillars. These critical pillars include the ICT Sector Market Indicators and Market Dynamics which provide insights into the size, growth, and competitiveness of the industry. Institutional Structures which assess the effectiveness of governance, regulatory frameworks, and coordination among stakeholders, while Infrastructure Development and Services measure the availability and quality of ICT networks and services.

The Policy and Legal Framework ensures alignment with global standards and addresses gaps to foster innovation and security. Human Capacity and Skills evaluate the readiness of the workforce to adopt and utilize ICT tools, while ICT Adoption and Usage examine how individuals, businesses, and institutions leverage technology. The sector also faces Challenges, such as limited connectivity and funding constraints, but equally presents Opportunities, including digital transformation and regional integration.

Together, these pillars underscore ICT's Impact on National Development, driving economic growth, social inclusion, and governance reform. The following sections provide detailed explanation of these pillars.

- **ICT Sector Market Indicators**
- **ICT Sector Market Dynamics**
- **Institutional Structures**
- **Infrastructure Development and Services**
- **Policy and Legal Framework**
- **Human Capacity and Skills**
- **ICT Adoption and Usage**
- **Challenges**
- **Opportunities**
- **Impact on National Development**

2.1 ICT Sector Market Indicators

Liberia's ICT sector market indicators are based on the International Telecommunication Union (ITU) globally recognized frameworks and metrics to measure the development and performance of ICT sectors. Integrating these indicators into Liberia's National ICT Policy 2026-2030 ensures alignment with international standards, allowing for accurate benchmarking and informed policy interventions, highlights underserved areas needing targeted interventionsdemonstrates Liberia's ICT readiness to attract investors and provides measurable outcomes for evaluating policy success.

1. **Access Indicators**

    a. Mobile Cellular Subscription Density_____?

b. Fixed Broadband Penetration_____?

c. International Bandwidth per Internet User_____?

2. Usage Indicators

a. Internet Usage Rates_____?

b. Average Monthly Data Consumption_____?

c. Active Mobile Money Accounts_____?

3. Quality of Service (QoS) Indicators

a. Network Latency_____?

b. Internet Speeds _____?

c. Call Completion Rates_____?

4. Affordability Indicators

a. Price of 1GB Mobile Data_____

b. Broadband Cost as a Percentage of Income_____

5. Economic Contribution Indicators

a. ICT Sector's Share of GDP_____

b. ICT-Related Employment_____

c. Foreign Direct Investment (FDI) in ICT_____

6. Digital Skills and Literacy Indicators

a. Digital Literacy Rates_____?

b. ICT Graduates Per Capita_____?

c. Participation in ICT Training Programs_____?

7. **Inclusivity Indicators**

   a. Gender Gap in ICT Usage_____?

   b. Rural vs. Urban Connectivity Rates_____?

   c. Accessibility for People with Disabilities

8. **Innovation and Research Indicators**

   a. ICT Patent Filings_____?

   b. Number of Startups in the ICT Sector_____?

   c. R&D Expenditure in ICT_____?

9. **Cybersecurity and Safety Indicators**

   a. Number of Reported Cyber Incidents _____?

   b. Cybersecurity Readiness Score_____?

   c. Implementation of Cyber Laws_____?

10. **E-Government and Digital Services Indicators**

   a. E-Government Development Index (EGDI)_____?

   b. Digital Identity Enrollment

   c. Usage of Online Government Services_____?

2.2 ICT Sector Market Dynamics

The ICT market in Liberia reflects growth potential despite structural challenges. The sector is predominantly driven by private telecommunications companies, including mobile network operators (MNOs) and internet service providers (ISPs).

- **Competition:** Dominated by Lonestar Cell MTN and Orange Liberia, the market is competitive but suffers from pricing concerns. High costs of services and devices continue to hinder affordability for low- income populations.

- **Internet Service Providers (ISPs):** There is a growing number of ISPs, but affordability remains a barrier. Emerging players like Starlink are introducing satellite internet, which has the potential to address connectivity gaps in remote areas.

- **Emerging Players:** New entrants like Starlink and initiatives like AC3 Liberia signal potential market disruptions.

POLICY PILLARS, OBJECTIVES, AND TARGETS

The following policy pillars, objectives, and targets outline the strategic framework for advancing Liberia's ICT sector from 2025 to 2030. Each pillar addresses a critical area ranging from infrastructure expansion and digital service delivery to cybersecurity, innovation, financial inclusion, modernized postal systems, and climate sustainability. Together, these pillars aim to drive nationwide connectivity, enhance public services, foster digital skills and inclusion, and support the emergence of a resilient and innovative digital economy.

Policy implementers must be guided by these policy objectives and outcomes and should endeavor to align their interventions with the objectives herein.

Pillar 1: Expand and Modernize ICT Infrastructure

Objective:

- Achieve nationwide, affordable and resilient broadband connectivity through coordinated infrastructure investment and modernized networks.
- Expand national fiber backbone and metro rings; promote infrastructure sharing and open access where feasible.
- Accelerate last-mile connectivity (3G/4G/5G and fixed wireless) and connect priority public institutions.
- Increase international capacity and resilience through submarine cable redundancy and secure core infrastructure.

Key Targets

- 95% of the population within broadband coverage footprint by 2027 (coverage definition standardized by MoPT/LTA).
- 1,000 public Wi-Fi hotspots operational by 2026.
- 50% of legacy systems upgraded and a national resilience plan adopted by 2028.

Pillar 2: Digitize ARREST Agenda Sectors and Public Services

Objective:

- Use ICT to modernize service delivery and sector productivity in health, education, agriculture, sanitation, tourism and transportation, while improving government efficiency and transparency.
- Develop and deploy sector platforms: e-Health, e-Learning, e-Agriculture, e-Sanitation, e-Tourism, and transport/smart mobility solutions where approved.
- Design and deploy AI-enabled learning solutions aligned with the national curriculum and safeguards.
- Implement integrated e-government platforms for high-value services (registries, payments, case management, approvals).

Key Targets

- At least 6 sector platforms launched by 2026 with defined adoption metrics.
- AI in Education Platform piloted by 2026 and scaled by 2028 (recommended).
- At least 10 e-government platforms deployed by 2030 (minimum: 2025–2028 for initial 10).

Pillar 3: Digital Literacy, Skills and Inclusion

Objective:

- Build digital skills at scale, increase participation of women and marginalized groups, and strengthen ICT skills for public service delivery and private sector competitiveness.
- Deliver multi-tier digital skills programs (basic, intermediate and advanced) through schools, TVET, hubs and partners.
- Strengthen teacher training, digital learning resources and community ICT access points.
- Implement inclusion measures for women, persons with disabilities and underserved counties.

Key Targets

- 500,000 youth reached through structured digital skills training by 2030 (reach definition finalized in Year 1).
- At least 60,000 citizens certified in intermediate/advanced digital competencies by 2030 (recommended alignment with employment outcomes).

Pillar 4: Cybersecurity, Data Protection and Trust

Objective:

- Protect citizens, institutions and critical infrastructure through effective cybersecurity governance, operational capabilities and compliance frameworks.
- Establish a National Cybersecurity Operations Center (SOC) and coordinate incident response across operators and institutions.
- Adopt national cybersecurity frameworks, minimum security baselines and regular audits for critical systems.
- Strengthen legal and institutional arrangements for cybercrime response, digital evidence and public awareness.

Key Targets

- [List key targets for this policy pillar]

Pillar 5: Innovation, Entrepreneurship and Emerging Technologies

Objective:

- Enable a competitive ICT ecosystem that supports startups, local innovation and emerging technologies such as AI, cloud, and data analytics.
- Establish innovation hubs and structured incubation/acceleration programs in partnership with academia and private sector.
- Create incentives and financing mechanisms (grants, venture funds, tax incentives, procurement pathways).
- Promote local content, research, and adoption of emerging technologies for national priorities.

Key Targets

- 100 startups funded (cash support) and at least 500 startups supported through hubs/incubation by 2030 (recommended reconciliation of targets).
- Increase the number of locally developed digital solutions adopted by government and private sector (metrics defined in Year 1).

Pillar 6: Digital Financial Inclusion

Objective:

- Expand access to safe, interoperable and affordable digital financial services to deepen inclusion, improve collections and enable commerce.
- Promote rural agent expansion and interoperable payment infrastructure in partnership with CBL, operators and financial institutions.

- Enable e-payments for government services and public utilities, consistent with national PFM requirements.
- Support consumer protection, fraud controls and digital literacy for users.

Key Targets

- [List key targets for this policy pillar]

Pillar 7: Postal, Addressing and GIS Modernization

Objective:

- Modernize postal and addressing systems to support service delivery, logistics, e-commerce and emergency response.
- Establish an autonomous postal and addressing regime and modernize services through ICT (tracking, digital addressing, GIS integration).
- Complete the national addressing system and integrate with priority registries and service delivery platforms.

Key Targets

- Liberia Posts & Addressing Services/Agency established and operational framework approved by 2027 (recommended).
- National Addressing and GIS Program implemented 2025–2028 with adoption by key service providers.

Pillar 8: Climate-Smart ICT and Sustainability

Objective:

- Promote environmentally sustainable ICT infrastructure and deploy ICT solutions that improve climate adaptation and resilience.
- Promote energy-efficient data centers and green network deployment standards.
- Adopt e-waste management practices and energy monitoring for ICT operations.
- Deploy ICT solutions supporting climate adaptation (early warning, analytics, smart operations).

Key Targets

- [List key targets for this policy pillar]

2.3 Institutional Structures

Sectoral Structure

Currently, the mandate for the ICT portfolio is within the Ministry of Posts and Telecommunication. However, this limits its mandate in carrying out the objectives set out in this policy. The Government will ensure MoPT's mandate is sufficient to see the **SET** agenda to fruition.

1.1 Government Institutional Structures

1. MoPT, being a ministry with a broad mandate having oversight on telecommunications, information technology, broadcasting infrastructure (masts and spectrum), and postal services;
2. A Chief Information Officer (CIO) for the government based at the Executive Office and supported by a CIO Council comprising all MAC CIOs and a Secretariat. CIOs in each ministry will have dual reporting functions - to the CIO Council, and to their Ministry (see below);
3. The LTA continues as the ICT regulator with responsibility for telecommunications, broadcasting radio frequencies, and with possibility of postal services were the posts to be

made autonomous;

4. The National Engineering Coordinating team (NECT) hosted by Ministry of Public Works and co-chaired by MoPT to coordinate ICT planning on all civil works, to agree on standards, and ensure ICT infrastructure is incorporated in all roads (existing, resurfaced and new roads), rail, electricity lines, etc.;

1.2 Role of Government

The key roles of government in the ICT sector are:

1. Strategic leadership and coordination in promoting the use of ICT. To be most effective, this should be driven by the office of the Head of State;
2. Ensuring there is an enabling environment for the commercial deployment of ICT infrastructure; This is the responsibility of the MoPT and the regulatory authorities;
3. Providing support for ensuring access to voice and data services is affordable and available to all members of Liberian society; This is the job of the regulatory authorities and the Universal Access Fund;
4. Supporting the adoption of ICT within government, both for internal administration and for transactions with the public and business; this extends to providing connectivity to government institutions, hosting data and supporting the development of relevant e-government applications.

1.3 The Role of the National ICT Governing Board

Given the importance and cross-cutting role of ICT, it is important that coordination takes place at the top executive level guided by representatives from each of the key stakeholder ministries. Hence, this policy establishes a National ICT Governing Board, to include MOPT, Ministry of Public Works, Ministry of Finance and Development Planning, LTA, Ministry of State, Mobile Network Operators and representatives from the Civil society. The National ICT Governing Board shall be responsible to set the mandate and the programs of the ICT sector. The board shall be headed by the Minister of Posts and Telecommunications.

ICT Champions and the CIO Council

The President of Liberia shall assume the leadership of the National ICT Champion network. All heads of public institutions such as Ministries, Agencies and Academic Institutions shall play equally supporting roles in their various institutions as local ICT Champions to promote the usage of ICT in Government. As such, the executive line ministries shall nominate a CIO from each ministry who will become a part of the CIO Council.

The CIO Council shall be responsible for interpreting the vision of the ICT Governing Board which represents the vision of the country. All stakeholders including government Ministries and agencies shall ensure budgetary allotment to support ICT objectives and programs in their respective organizations.

Functions of the CIO

The CIO shall be responsible for formulating programs in pursuit of the vision of the ICT Governing Board. This shall include:

- Setting standards for computer hardware and software within government, i.e. approved operating system(s), type and version of office tools and type(s) of network equipment.
- Providing adequately protected Internet and email access for use by government offices employees as well as intra-government ministries;
- Creating an efficient and cost-effective intra-government communications and information sharing system (ICT-enabled tools for sharing, collaborating on and storing documents and electronic transactions;
- Setting and ensuring compliance with basic computer security procedures (to viruses hampering the use of ICT by the government);
- Defining a government enterprise architecture across ministries that includes:
- Where software applications need to be integrated or have interfaces; which software applications will be shared across the government (e.g., those related to human resources and payroll);
- Which ministries are responsible for which data bases; and how databases will be defined (e.g., to ensure that individuals and businesses are consistently identified across ministries);
- Ensuring that security, confidentiality and risks are well assessed, as well as putting in place rules with the appropriate strategies to enforce them;
- Managing the procurement processes related to ICT to not fall behind technologically because of a slow process; not stifle innovation; and how to use technology to help strengthen Liberia‘s own small ICT sector;
- Establishing a transparent governance process related to the use of ICT that will balance decentralized actions with the need to manage standards and rules centrally;
- Strengthening transparency; improve citizen participation in government and support the growth of Liberia‘s businesses – instilling a strong focus on customer satisfaction regardless of who the customer is (e.g., an internal government unit, a citizen, resident or business);
- Setting performance measures to enable the GoL – and citizens – to monitor how well the GoL is doing in using ICT to achieve its ARREST’s Agenda for Inclusive Development (AAID);
- Building the capacity of GoL‘s employees to use ICT effectively and also provide them adequate compensation and incentives.

Program Management Office (PMO):

The structure of the PMO is designed to better support the implementation of the Government of Liberia e-Government strategy. In implementing this structure, it is imperative to cater for alignment in the current infrastructure, organization structure and availability of resources within MoPT. As part of MoPT, the PMO set-up is called "e-Liberia Office".

The Project Management Office - e-Liberia Office is a directorate under the Ministry of Posts and Telecommunication and supports the e-Government Strategy implementation through monitoring projects delivery, controlling the relation with vendors, managing the procurement process, ensuring compliance with policies and standards, auditing projects at hand over, knowledge management and sharing for areas related to project management. The PMO plays the following roles:

Functions of the PMO:

- Provide technical advice, updates and recommendations to ensure that appropriate methods, tools, products and applications, framework policies for e-Government that cover the planning, development and maintenance of information systems and technology, are consistently communicated across, adopted and used effectively across MACs.
- Develop business cases for new technologies required to enhance or maintained the level of performance, thereby assessing the financial impact and requirement
- Provide e-Services solutions, options and alternatives to MACs exploring e-services delivery to the end-users
- Conduct requirements gathering and business analysis to translate MACs user business needs into technical requirements.
- Coordinate the communication exchange between MACs (inter and intra) on eServices projects and developments
- Engage project sponsors and stakeholders and facilitate project processes such as Change Management, Business Process Re-engineering
- Manage the content and advice the MACs on the content management on the eGovernment Portal.
- Encourage the adoption of Government-wide Shared Services and promote the benefits of sharing information across the MACs.

1.4 The Role of the Ministry

To align and coordinate the development of ICT infrastructure across the different ICT sectors and ensure overall coordination, formulation, implementation, review, and oversight of the National ICT Policy. This includes coordination with the independent regulatory authorities (LTA, IBA), as well as the Universal Access Fund, and the National ICT Agency, to achieve the objectives of this policy.

Additional roles include:

1. Carrying out periodic Impact Analysis of ICT initiatives to advise policy;
2. Ensure the collation, openness and availability of comprehensive and accurate ICT data in collaboration with other Ministries and agencies;
3. Establish the periodic review of policies and its continual alignment to the overall vision and mission of the GoL through an inclusive multi stakeholder consultation process;
4. A name change to the Ministry of Communications (with post implied) will better position the Ministry to broaden its scope in the digital space. The change of name would take place in the near future but in the interim the MoPT would assume the responsibility of the objectives set out in this policy.

1.5 The Role of the ICT Regulator

Periodic policy reviews should be undertaken to strengthen the role of the LTA in light of ongoing technology convergence which brings together Telecommunications and broadcasting sub-sectors/ sub-divisions and emerging digital services. In the interim the LTA will continue to perform the regulatory role for the telecommunications and broadcast infrastructure sector. The requisite changes in policy and laws[14] should be carried out to ensure

LTA's is able to carry out its stated objectives including the following:

1. Ensure there is a level playing field and no barriers to entry for the provision of communication services;
2. Ensure those unserved by affordable services are able to connect themselves, with the support of The Universal Access Fund if necessary;
3. Continue leadership of the Universal Access Fund to advance connectivity in underserved areas;
4. Promote and protect investment in the industry with fair and competitive management practices;
5. Establish and enforce quality of service standards including technical ones;
6. Ensure the prudent/efficient allocation and management of spectrum including fair, transparent and competitive good practices;
7. Make provisions to allocate spectrum to smaller providers and increase competition for unserved areas;
8. Develop guidelines to promote efficient and effective infrastructure sharing and open access;
9. Protect the consumer via awareness and the development of consumer protection standards in line with international good practices;
10. Carry out periodic assessment of the sector and publish results in an open and easily accessible format;
11. Carry out evidenced based research and forecasts and advise the MoPT on policy for the ICT sector;
12. Pursue an infrastructure sharing policy to guide growth of independent infrastructure management companies, encourage innovation competition and open access across all ICT owned infrastructure across multiple sectors;
13. Develop a strategy to manage the Postal Sector.

[14] The current Telecommunications Act 2007 has stated objectives the LTA is working toward

1.6 The role of Independent Broadcasting Regulator

Broadcasting content will be regulated by an independent broadcasting regulator under the Ministry of Information, Tourism and culture. The LTA will however continue to be responsible for the orderly and efficient management, allocation, assignment and use of radio frequencies, including all civilian, non-civilian and commercial uses of radio frequencies.

The LTA has implemented the broadcast frequency management function since the establishment of the Authority and has the requisite skills and human capital to implement this responsibility. The LTA has worked with the ITU and has developed Liberia's National Table of Frequency Allocations, the National Frequency Register and National Radio Spectrum Plan. Liberia is informed by international and regional best practice and needs to retain radio spectrum management with the LTA to avoid regulatory uncertainty in the Telecommunications/ICT sector, duplication of functions and the waste of scarce national resources.

1.7 The Role of Libtelco

The government has made considerable investments in Libtelco for which it is currently evaluating the most effective strategy moving forward in order to leverage this investment to the benefit of the

country. One option is that Libtelco could be responsible for operating the necessary ICT infrastructure so that all government agencies are fully interconnected nationally, and to regional and international networks such as the ECOWAS Wide Area Network (ECOWAN). Another option would be to privatize Libtelco so that it can compete effectively with other players in the market. These and other options will be assessed in 2020 to ensure government's investment in Libtelco is leveraged for the benefit of the Liberian people.

1.8 The Role of the Universal Access/Service Fund

The core mandate of Universal Access/Service Fund is to channel collective industry financial resources toward investments that will fill gaps in access and stimulate overall market expansion[15]. The USAF therefore, can be viewed as equivalent to a financial institution, such as a commercial bank or investment fund: it manages capital assets, evaluates and defines projects for investment opportunities, and provides financing to implementing contractors, whose operations must be overseen and evaluated to ensure the Fund‘s resources are well spent. In fulfilling this mission, the LTA is responsible for USAF‘s management and will thus employ human and technical resources of comparable quality and magnitude to similar organizations in the public and private sector. Legislative and regulatory changes may be needed in order to give the USAFs the flexibility to support initiatives and programs. The fund‘s responsibilities include the following:

1. Establish strategic planning and internal operating procedures, which guide management and staff, as well as public stakeholders, in the Fund‘s mission and activities;
2. Provide an annual gap analysis of underserved and unserved areas in collaborations with the Regulator and requisite ministries (eg. Interior, Health, Education);
3. Establish and implement a strategy for closing gaps to achieve universal access objectives in a fair and transparent manner;
4. Undertake periodic assessment of initiatives and publish annual reports;
5. Provide adequate technical resources and support, such as internal equipment and software, field personnel and equipment, access to outsourced expertise, etc;
6. promote cooperation with the ICT industry and government, to obtain necessary sector data, regulatory and policy support, and collaboration on partnership projects;
7. Establish autonomy and authority in both administrative budgeting and allocation of Fund resources, without undue political interference or constraints and delays in budgeting and spending;
8. Employ appropriate and trained personnel, with sufficient skills and resources to perform the various essential roles (*e.g.,* finance, market analysis, procurement, project management, monitoring and evaluation, etc.).

[15] — The role of USAF in broadband strategies‖ http://a4ai.org/wp-content/uploads/2015/03/A4AI-USAFs-2015_Final- v.2.pdf

1.9 The Role of Government Ownership in Operating Companies

1.9.1 Libtelco

As indicated in 6.7 above, the strategy for the future of Libtelco is currently being evaluated.

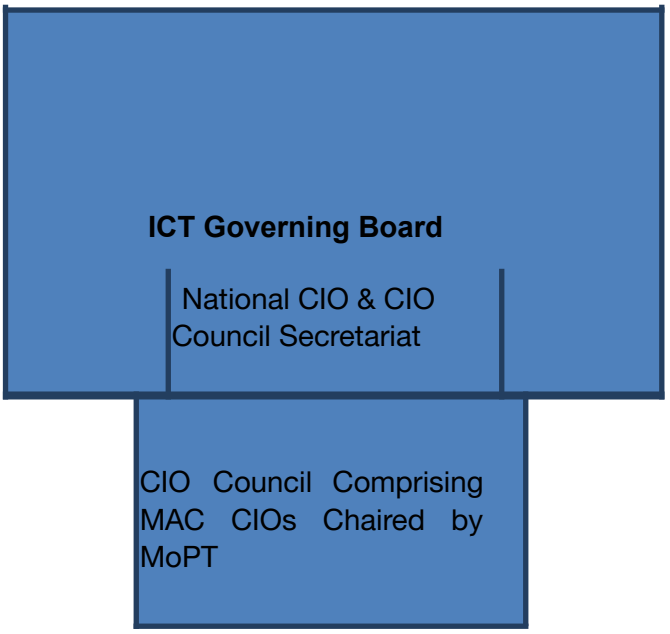
1.9.2 Cable Consortium Liberia (CCL)

The government is currently a partial shareholder in CCL and although it would likely retain a minority share for its own international traffic and for the academic-research sector, it is expected to divest the remainder to existing and new operators. To stimulate healthy competition, operators should be granted access in a non-discriminatory manner with connectivity to international internet capacity. Options that will be considered include:

1. To create a —Consortium-within-the-Consortiumll, for small ISPs
2. To allow small operators to invest directly in CCL.

1.10 Specific Specialized Governments Institutions

This national ICT policy must be relevant to all sectors of the economy and society. Understanding how the ICT policy will contribute to advance each government institution‘s agenda is critical to ensuring full support and engagement by all institutions. Indeed, the ICT sector is an engine of economic and social development. To ensure full coordination and progress, as indicated above, a cross-Ministerial CIO Council would be established to monitor progress and address any challenge that may be faced through the period of implementation. The following diagram provides a simple illustration of the collaborative nature of this effort, which requires the participation and support of all the government institutions responsible for each of the areas noted.



1.11 Summary of Proposed Roles of Institutions

Role of Cabinet and Executive (ICT leadership)
Given the importance and cross-cutting role of ICT, it is important that coordination takes place at the top executive level guided by representatives from each of the key stakeholder ministries. This will take the form of the appointment of a CIO to the Presidency and sponsorship by the Vice President for an inter-ministerial ICT task team to assist with coordination and resource sharing in the ICT development activities of each ministry in alignment with the National vision, targets and reporting. The Executive will ensure the availability of resources to requisite ministries to facilitate ICT services and most importantly be a leading user and anchor tenant of ICT services.

Role of the Ministry of Posts and Telecommunications
To formulate, align and coordinate the development of ICT policy and infrastructure across the different ICT sectors and ensure the implementation of this Policy. This includes responsibility for the regulatory authority (LTA,) and the Universal Access Fund. Additional roles may include:

1. Carrying out periodic Impact Analysis of ICT initiatives to advise policy;
2. Ensure the collation of comprehensive and accurate ICT data in collaboration with other Ministries and agencies;
3. The periodic review of policies and its continual alignment to the overall vision and mission of the GoL through an inclusive multi stakeholder consultation process.

The Role of the ICT Regulator
Periodic policy reviews will continuously be undertaken to strengthen the role of the LTA in light of ongoing and emerging technology convergence which brings together oversight of the telecommunications, Information Technology, and broadcasting sub-sectors. The LTA will continue to perform the regulatory role for the telecommunications sector, along with management of spectrum for broadcasting. The requisite changes in policy and laws will be carried out to ensure LTA is able to carry out its objectives.

Recommendations for Proposed Changes in Government Institutional Structures

1. The Chief Information Officer (CIO) for the government would be based within the Executive Office of the President. The CIO‘s responsibility will be to ensure the coordinated and efficient adoption of the use of ICT platforms within all government MACs and SOEs. CIO in each ministry, agency and commission will have dual reporting functions - to the Executive CIO, and to the head of their respective institutions;
2. The Liberian Telecommunications Authority (LTA) would continue to be the regulator for the Telecoms sector, which includes, broadcasting frequency allocation;
3. The CIO Council is tasked with oversight on government connectivity provision, as well as setting standards and strategy for government applications;
4. The current Infrastructure working group of the Ministry of Public Works would be upgraded to a National Engineering Coordinating Team (NECT) hosted under

Ministry of Public Works but co-chaired by MoPT to coordinate all civil works and project such as roads, railways, utility ducts and aerial cables etc to agree on standards, ensure ICT infrastructure is incorporated in designs and deployment;

5. A set of targets would be established for the adoption and use of ICT in government, which would include:
    a. The national CIO shall I put in place common standards for website development for all MACs and SOEs by year 1 of approval of this policy;
    b. Establish a redundancy plan and maintenance policy in all MACs and SOEs information systems to ensure reliability in all MACs and SOEs connections and server/applications – year 1;
    c. Ensure ICT architecture systems design enforces consistency across MACs and SOEs to help ensure interoperability – year 1;
    d. All MACs and SOEs should have a web presence that is current and updated - year 1;
    e. All MACs and SOEs should transition from web presence to providing *interactive web* service by year 2;
    f. All concerned MACs and SOEs should transition from interactive web service to providing *transaction services* by year 3;
    g. All MACs and SOEs should have *enhanced web presence* by year 4[16].

This section of the document outlines the structure of Liberia's ICT sector, guided by the Telecommunications Act of 2007, which established a clear framework for roles and responsibilities within the sector. The Ministry of Posts and Telecommunications serves as the "Policy Maker" and head of the sector, responsible for developing and coordinating national ICT policies. The Liberia Telecommunications Authority (LTA) acts as the "Regulator," ensuring compliance and fostering a competitive environment. The Liberia Telecommunications Corporation (LTC Mobile) is designated as the "National Operator," tasked with delivering telecommunication services across the country.

The sector also includes diverse stakeholders such as Mobile Network Operators (MNOs), Internet Service Providers (ISPs), Infrastructure Providers, ICT Solutions Providers, Academia, the Liberia Research and Education Network (LRREN), which serves as the country's National Research and Education Network (NREN), and several other players. Together, these entities drive Liberia's ICT development, fostering innovation and connectivity for national growth.

1. **National ICT Governing Board**

The composition of the National ICT Governing Board includes representatives from key government agencies, the private sector, academia, and civil society to ensure diverse perspectives and expertise in overseeing the ICT sector. For Liberia, the board may include the following:

- **The President of Liberia:** The President of Liberia is the Champion of the National ICT Governing providing strategic leadership and ensuring alignment with national ICT policies.
- **Ministry of Posts and Telecommunications (MoPT):** TheChair of the Board, and policy maker of the ICT sector.
- **Liberia Telecommunications Authority (LTA):** Represents the regulatory body for

telecommunications, ensuring compliance with laws and standards.

- **Ministry of Finance and Development Planning (MFDP):** Oversees the financial planning and budgeting aspects of ICT projects.
- **Ministry of Education (MoE):** Represents education sector needs, focusing on ICT integration in schools and higher learning institutions.
- **General Services Agency (GSA):** Manages ICT procurement within government institutions.
- **Liberia Electricity Corporation (LEC):** Provides insight into energy needs and solutions for powering ICT infrastructure.
- **Ministry of Justice (MoJ):** Addresses legal and cybersecurity issues related to ICT.
- **National Security Agency (NSA):** Provides expertise on national security concerns, including cyber threats.
- **Private Sector Representatives:** Includes stakeholders from telecommunications companies (MNOs, ISPs), infrastructure providers, and innovators driving ICT growth.
- **Academic Institutions and Research Bodies:** Includes universities and entities like the Liberia Research and Education Network (LRREN) to promote ICT research and capacity building.
- **Civil Society Organizations (CSOs):** Represents the interests of citizens, ensuring inclusivity and accountability in ICT development.
- **International Development Partners:** Includes representatives from organizations like the World Bank, UNDP, or ITU, offering technical and financial support.
- **Chief Information Officer (CIO) or ICT Advisor:** Provides technical guidance and oversees the implementation of ICT strategies across government sectors.

The composition aims is to ensure a balanced and inclusive representation to drive effective ICT development and policy implementation.

2. **Ministry of Posts and Telecommunications (MoPT)**

The Ministry of Posts and Telecommunications (MOPT**)** is a critical player in Liberia's ICT sector that plays a central role in shaping national policies that govern the ICT landscape, ensuring that ICT services are accessible, affordable, and effectively integrated into the broader national development strategy. Designated as the "Policy Maker" by the Telecommunications Act of 2007, the MoPT is responsible for developing policies that lead to the expansion of telecommunication networks, improvement in internet access, and the promotion of digital literacy across the country, with a particular focus on bridging the digital divide between urban and rural areas. It oversees the promotion of e-government services, which enhances public service delivery and improves access to government services for citizens.

Additionally, the Ministry manages postal services and courier systems, contributing to the country's logistics and communication infrastructure, which is essential for business operations and the digital economy. Furthermore, MoPT houses the National Addressing System (NAPAS)**,** aimed at improving the country's addressing system for more efficient delivery of services.

Overall, MOPT plays an instrumental role in Liberia's ICT sector by fostering an enabling environment for digital innovation, improving connectivity, and ensuring the efficient functioning of ICT infrastructure across the country.

- **Postal and Courier Services**: Postal and courier services in Liberia are essential for enabling communication, commerce, and logistics, especially in a country with limited infrastructure and digital access. The Ministry of Posts and Telecommunications postal services department oversees the national postal services which includes the regular mail services, and the Expedited Mail Services (EMS), playing a regulatory and operational role.

- **National Postal Addressing System (NAPAS)**: NAPAS at the Ministry of Posts and Telecommunications' role is to develop a standardized addressing framework for Liberia, which is essential for effective service delivery, commerce, emergency response, and governance. The Department assigns unique, verifiable addresses, that enhances accessibility to homes and businesses, supports mail and parcel delivery, and facilitates e-commerce growth.

- **Chief Information Office (CIO):** The Chief Information Office governs and provides technical advice for government ICT systems. The Chief Information Officer (CIO) of the Republic of Liberia holds a critical role in overseeing the government's digital and technological landscape, ensuring the efficient use of information technology (IT) resources within the government. As the head of the Chief Information Office Regime, the CIO is responsible for leading and guiding the government's ICT strategy and policy development, which aligns with Liberia's broader development goals. The CIO's role is crucial for driving the digital transformation agenda, enhancing government service delivery, and ensuring that technology is effectively utilized to improve public sector operations, governance, and citizen engagement.

  Key Roles and Responsibilities:

  A. **Strategic Leadership and e-Government Policy Development**: The CIO formulates policies, strategies, and frameworks that support Liberia government's digital transformation. This includes working closely with other government agencies to ensure that the country's ICT goals are aligned with national development priorities, such as economic growth, education, healthcare, and infrastructure development.

B. **Digital Government Transformation**: As the head of the CIO regime, the CIO is responsible for advancing e-government initiatives, which include digitizing public services, promoting online platforms for government transactions, and improving transparency and accountability in the public sector. The CIO ensures that the government embraces digital solutions to enhance delivery service to citizens, making services more accessible and efficient.

C. **IT Governance and Coordination**: The CIO plays a key role in establishing IT governance structures that promote accountability, transparency, and efficiency in the use of government IT resources. This involves coordinating efforts across various government ministries, agencies, and institutions to ensure that ICT systems are well-integrated, standardized, and optimized for public service delivery. The CIO ensures that the public sector IT investments are aligned with national priorities and that they yield measurable benefits to society.

D. **Cybersecurity and Data Protection**: One of the CIO's primary responsibilities is overseeing government's cybersecurity strategies to safeguard government data, critical infrastructure, and online services. This includes the creation of frameworks for data privacy and protection, ensuring that citizens' personal data and government records are secure from cyber threats. The CIO leads efforts to raise awareness about cybersecurity and establishes protocols to respond to data breaches and cyber-attacks.

E. **Building Human Capacity and ICT Training**: The CIO is instrumental in developing human capacity, particularly within the public sector. The CIO regime works to enhance the technical skills of government employees by providing training programs, workshops, and capacity-building initiatives to ensure that the public sector can effectively manage and utilize ICT tools. This also includes fostering a culture of innovation and continuous learning within government institutions.

F. **Digital Inclusion and Bridging the Digital Divide**: The CIO is responsible for promoting digital inclusion in Liberia government, ensuring that ICT access is available to all government institutions, regardless of their geographic location or socio-economic status
.

G. **Public-Private Partnerships**: The CIO fosters collaborations between the government and private sector players in the ICT industry. These partnerships help drive innovation and provide the expertise and resources needed to implement large-scale ICT projects. The CIO may facilitate collaborations with international development partners, donors, and technology companies to support national ICT infrastructure development and public service modernization.

Project Management Office - E-Liberia: This office oversees the implementation of e-government projects and initiatives. The Project Management Office (PMO) or E-Liberia Office, ensures the successful planning, execution, and delivery of ICT projects that align with the country's broader digital transformation goals. E-Liberia, which is an initiative of the Liberian government, focuses on harnessing ICT to improve government services, enhance public sector efficiency, and promote economic development. The E-Liberia office serves as the central coordinating body for ICT projects, ensuring that they are implemented on time, within budget, and according to the desired specifications and outcomes. The PMO or E-Liberia office works in collaboration with the Office of the CIO.

Key Roles and Responsibilities:

A. **Project Oversight and Coordination**: The PMO/E-Liberia Office oversees the implementation of e-

Government projects across various government ministries and agencies. It ensures that all e-Government

projects are aligned with national development objectives and that they contribute to the achievement of Liberia's digital transformation agenda. The PMO/E-Liberia Office acts as a central hub for coordinating these projects, ensuring that there is consistency, transparency, and efficiency in their execution. It helps to avoid duplication of efforts and facilitates collaboration among different stakeholders in the ICT sector.

B. **Project Planning and Execution**: The PMO/E-Liberia Office is responsible for the detailed planning and execution of e-Government projects, including defining project goals, establishing timelines, allocating resources, and managing project teams. It applies recognized project management methodologies to ensure that projects are carried out systematically, with clear milestones and performance indicators. The PMO/E-Liberia Office works closely with project managers to ensure that projects are progressing as planned and are adjusted when necessary to stay on track.

C. **Monitoring and Evaluation**: A key responsibility of the PMO/E-Liberia Office is monitoring and evaluating e-Government projects throughout their lifecycle. This includes tracking project progress, performance, and outcomes against pre-established targets. The PMO/E-Liberia Office conducts regular reviews to assess whether projects are meeting objectives and delivering the expected benefits to the public sector and citizens. It provides timely reports to stakeholders, such as government officials and donors, on project status and results. The PMO/E-Liberia Office also ensures that lessons learned from ongoing or completed projects are captured and used to improve future project implementation.

D. **Risk Management**: The PMO/E-Liberia Office is responsible for identifying and managing potential risks associated with e-Government projects. This includes analyzing risks related to technical challenges, resource constraints, policy changes, and external factors like security concerns or geopolitical issues. The PMO develops mitigation strategies and contingency plans to address these risks and minimize their impact on project success.

E. **Capacity Building and Training**: One of the primary functions of the PMO/E-Liberia Office is to build the capacity of Liberia's public sector in ICT project management. This involves providing training to government officials, project managers, and other stakeholders on best practices in project management, ICT implementation, and digital transformation.

F. **Resource Allocation and Budget Management**: The PMO/E-Liberia Office ensures that the resources needed for E-Government projects—whether financial, human, or technical—are allocated efficiently and effectively. It oversees budget planning and ensures that project costs are within the allocated budget. It also manages procurement processes, ensuring that the right vendors and technology providers are selected based on criteria such as expertise, cost, and ability to meet project requirements. Budget tracking is an ongoing process to ensure that projects do not face financial overruns or delays.

G. **Quality Assurance and Compliance**: The PMO/E-Liberia Office ensures that all e-Government projects comply with national standards, regulations, and quality benchmarks. This includes ensuring that the project outcomes meet the expectations of both the government and the citizens, and that they adhere to best practices in technology, security, and project management. It also ensures that all e-Government projects are compliant with relevant data protection and cybersecurity regulations, safeguarding government data and citizens' privacy.

H. **Driving Innovation**: The PMO/E-Liberia Office encourages the adoption of innovative technologies to drive the country's digital transformation. This includes supporting the implementation of emerging technologies such as cloud computing, big data analytics, artificial intelligence, and blockchain to modernize public sector operations and deliver more efficient services. It fosters an environment of

innovation by encouraging collaboration with global technology providers and engaging in knowledge exchange with other countries at the forefront of digital governance.

13. Liberia Telecommunications Authority (LTA)

Designated by the Telecommunications Act of 2007 as the "Regulator", the Liberia Telecommunications Authority (LTA) plays a key regulatory and oversight role in Liberia's ICT sector, ensuring the development, management, and operation of telecommunications services in the country. Established to promote a competitive, efficient, and sustainable telecommunications market, the LTA is responsible for regulating the country's telecommunications services, including mobile networks, internet service providers, and broadcasting.

Key functions of the LTA include:

A. **Regulation of Telecommunications and Broadcasting Services**: The LTA sets and enforces rules governing the operations of telecom and broadcasting companies in Liberia. This includes granting licenses, managing spectrum allocation, and ensuring compliance with national regulations. The authority also ensures that services are provided equitably across Liberia, with particular attention to underserved and rural areas.

B. **Promoting Competition and Consumer Protection**: The LTA fosters a competitive environment within the telecommunications market, which benefits consumers by improving service quality, lowering prices, and encouraging innovation. The institution also works to protect consumers' rights, addressing issues such as service complaints, pricing transparency, and fair treatment by telecom operators.

C. **Broadband and Internet Development**: The LTA plays a key role in ensuring the expansion of broadband internet access and promoting the country's digital infrastructure. It works closely with the Ministry of Posts and Telecommunications (MoPT**)** and other stakeholders, to implement national strategies aimed at expanding internet coverage, improving service quality, and ensuring affordable access, particularly in rural areas.

D. **Policy and Strategy Formulation**: As part of the regulatory framework, the LTA provides input into national ICT policies, strategies, and guidelines. It collaborates with other government entities to develop and promote policies that align with Liberia's broader development goals, such as enhancing digital inclusion, advancing e-governance, and integrating ICT into key sectors like education and healthcare.

E. **Cybersecurity Oversight**: The LTA also plays a role in enhancing cybersecurity in Liberia's ICT ecosystem by working with relevant agencies to ensure safe and secure use of digital services. This includes overseeing policies and regulations that protect critical infrastructure, secure personal data, and promote a safe digital environment for businesses and citizens.

F. **Universal Service and Access**: The LTA ensures that the benefits of telecommunication services, including mobile communication and the internet, are accessible to all Liberians, regardless of their geographic location or socio-economic status. It works with operators to implement projects aimed at increasing network coverage in underserved regions, facilitating digital inclusion, and narrowing the digital divide.

4. Liberia Telecommunications Corporation (Formerly LIBTELCO, now LTC Mobile)

The Telecommunications Act of 2007 designated the Liberia Telecommunications Corporation, previously known as LIBTELCO, as the “National Operator”. The LTC was subsequently renamed “LTC

Mobile" in 2022 as part of an amendment to the Telecommunications Act of 2007. LTC Mobile plays a pivotal role in Liberia's ICT sector as a state-owned enterprise that provides essential telecommunications services, infrastructure, and broadband connectivity certain parts of the Country. As Liberia's national telecom operator, LTC Mobile is key to the development of the country's telecommunications landscape, contributing to national economic growth and digital inclusion. The institution primarily operates as an internet service provider (ISP) and partners with the government and other players in the sector to expand broadband access.

Key roles of LTC Mobile in Liberia's ICT sector include:

A. **Provision of Telecommunications Infrastructure**: LTC Mobile is responsible for building and maintaining critical telecom infrastructure, including fiber-optic networks and broadband connectivity. The corporation was established to play an essential role in improving telecommunications access across Liberia. Its infrastructure, though partially obsolete, is vital for ensuring nationwide connectivity, which supports various sectors, including education, healthcare, and business.

B. **E-Government Services and GovNet**: As a state-owned entity, LTC Mobile is tasked with the responsibility to provide secure and reliable telecommunications services to the Liberian government and its agencies via a government network known as "GovNet". LTC mobile is a key player in implementing connectivity for e-government initiatives, offering the infrastructure, including the national data center**,** needed to enable online government services, streamline operations, and improve public service delivery. LTC Mobile's role in supporting e-government services contributes to the government's digital transformation agenda.

C. **Broadband Access and Digital Inclusion**: One of LTC Mobile's key priorities is expanding access to broadband services across Liberia. This is essential for fostering digital literacy, facilitating access to education and healthcare, and enabling economic opportunities.

D. **International Connectivity and Collaboration**: LTC Mobile is a key player in enhancing Liberia's international telecom connectivity. Through partnerships with regional and international organizations and the Cable Consortium of Liberia (CCL), LTC Mobile helps improve Liberia's connection to global networks. This is crucial for enhancing international communication, trade, and access to global digital resources.

E. **Promoting National ICT Policy Objectives**: As a state-owned entity, LTC Mobile plays an important role in supporting Liberia's national ICT policies and strategies. It works closely with the Ministry of Posts and Telecommunications and other government agencies to implement national goals related to digital infrastructure, broadband expansion, and ICT development.

5. Cable Consortium of Liberia (CCL)

The Cable Consortium of Liberia (CCL) is a special purpose vehicle (SPV) under the Ministry of Finance Development and Planning (MFDP), that manages Liberia's connection to the Africa Coast to Europe (ACE) submarine cable. CCL is a public-private-partnership (PPP) mechanism that involves the Government of Liberia and other MNOs and ISPs in Liberia. Hence, the capacity in the ACE Cable is distributed on a "Share" basis, where the Government owns 55% of the capacity, LTC Mobile owns 20%, while Lonestar MTN owns 15% and Orange Liberia owns 10%. The government's share of the ACE capacity is expected to be divested, leaving only 15% for E-Government, Education and Health. CCL plays a significant role in the country's ICT sector by providing essential submarine cable connectivity that enhances Liberia's internet access and overall telecommunications infrastructure.

Key roles of CCL in Liberia's ICT sector include:

A. **Provision of International Internet Connectivity**: CCL operates the ACE submarine cable infrastructure that links Liberia to international broadband networks. This connectivity is critical for boosting internet speeds and improving the quality of telecommunication services in the country.

B. **Improved Bandwidth and Service Delivery**: Through its submarine cable infrastructure, CCL contributes significantly to the availability of high-bandwidth services in Liberia. This enhanced capacity helps telecom operators, businesses, and government entities to offer more reliable and cost-effective internet services to the public.

C. **Collaboration with Telecom Providers**: It provides wholesale broadband connectivity to mobile network operators and internet service providers, which enables them to offer enhanced services to end-users at competitive prices.

D. **Contributing to Regional Connectivity**: CCL's involvement in regional initiatives, enhances Liberia's regional connectivity with neighboring countries, further integrating Liberia into the broader West African digital ecosystem.

6. Amilcar Cabral Cable Consortium (AC3)

The Amilcar Cabral Cable Consortium of Liberia (AC3 Liberia) has been established to manage the Amilcar Cabral Submarine Cable System which is expected to play vital role in enhancing Liberia's telecommunications infrastructure and improving the country's access to international broadband services. AC3 Liberia is a special purpose vehicle (SPV) under the Ministry of Post and Telecommunications, is a public-private-partnership (PPP) mechanism that involves the Government of Liberia, MNOs and ISPs based in Liberia. The capacity in the ACCS shall be distributed on a "share" basis, as is done with the ACE Cable.

The ACCS is expected to provide redundancy for the ACE cable to prevent outages. It is also expected to provide affordable internet infrastructure to MNOs, ISPs, and other stakeholders, and connect various counties, particularly those in the southern and eastern parts of the country. The cable is expected to land in Buchanan, Grand Bassa County.

Key roles of the AC3 Liberia in Liberia's ICT sector include:

A. **Improving International Connectivity**: AC3 Liberia will be instrumental in linking Liberia to global internet networks, primarily through its involvement with other submarine cable projects. This connection will boost the availability of high-speed broadband, improving the overall quality of telecommunications and internet services in Liberia.

B. **Cost-Effective Broadband Access**: AC3 Liberia will offer access to more affordable and reliable international bandwidth, to help reduce the cost of internet services for consumers and businesses in Liberia. This is particularly important for fostering digital inclusion and enabling sectors such as education, healthcare, agriculture and e-commerce to thrive .

C. **Supporting Economic Growth**: AC3 Liberia's infrastructure will support the broader digital economy in Liberia by enabling the delivery of ICT services across various industries. The availability of high-speed internet facilitates e-government services, online education**,** telemedicine, and the growth of local startups, all of which contribute to Liberia's socio-economic development.

D. **Promoting Regional Integration**: Through its regional collaboration, the AC3 Liberia will strengthen regional connectivity in West Africa, helping to integrate Liberia's ICT ecosystem with neighboring countries. This integration enhances cross-border communication, business transactions, and regional collaboration in technology, education, and trade.

E. **Building National ICT Infrastructure**: The AC3 Liberia will improve the national telecommunications infrastructure, ensuring that rural and underserved areas in Liberia have access to the same quality of broadband services as urban centers. This support is crucial for bridging the digital divide and promoting equitable access to digital resources for all Liberians.

F. **Ministry of Information, Culture and Tourism (MICAT)**

The Ministry of Information, Culture, and Tourism (MICAT) in Liberia serves as the principal government body responsible for managing and disseminating information about the country's policies, programs, and activities. MICAT plays a critical role in fostering transparency and public engagement by acting as the voice of the government, ensuring citizens are informed about national developments and initiatives. It oversees various communication channels, including press releases, radio broadcasts, and other forms of media, to bridge the gap between the government and the public. The Ministry also monitors and regulates the media landscape to promote responsible journalism and uphold press freedom while safeguarding the country's socio- political stability.

Beyond its role in information dissemination, MICAT is tasked with preserving and promoting Liberia's rich cultural heritage and advancing its tourism sector. The Ministry supports cultural institutions, documents Liberia's historical narratives, and promotes traditional arts and crafts to reinforce national identity. It also develops strategies to attract domestic and international tourists, leveraging Liberia's unique historical sites, biodiversity, and scenic landscapes to boost economic growth. Through its initiatives, MICAT seeks to foster cultural pride, promote sustainable tourism, and enhance Liberia's global image as a culturally vibrant and hospitable nation.

Additionally, MICAT collaborates with other governmental bodies, such as the Ministry of Posts and Telecommunications and the Liberia Telecommunications Authority, to help foster the growth **of** digital content creation and media infrastructure**.**

14. Liberia Broadcasting System (LBS)

The Liberia Broadcasting System (LBS) plays a central role in Liberia's media landscape by providing public service broadcasting across radio and television platforms. As the state-run broadcaster, LBS serves as a vital tool for information dissemination, education, and national unity. It plays a key role in promoting government policies, cultural preservation, and public awareness through news, entertainment, and educational programs. LBS's role in the ICT sector is also significant, as it leverages digital technologies to expand its reach, improving access to media content, particularly in rural and underserved areas. Additionally, LBS collaborates with other media organizations, contributing to a vibrant media ecosystem that supports democratic governance, freedom of expression, and the overall development of the ICT sector in Liberia.

15. Liberia Research and Education Network (LRREN)

Established to support the development of Liberia's academic and research community, LRREN is expected to connect universities, colleges, and research centers to fast, reliable, and cost-effective broadband infrastructure, facilitating collaboration, access to digital resources, and participation in global research initiatives.

Key functions of LRREN in Liberia's ICT landscape include:

A. **Enhancing Access to Research Resources**: LRREN will enable Liberian institutions to access global academic and research databases, online journals, and other scholarly resources, which are essential for higher education and innovation.

B. **Supporting E-Learning and Digital Education**: LRREN will facilitate the delivery of e-learning platforms and digital education resources across Liberia's universities and colleges. It will play a key role in enhancing the quality of education by enabling students and educators to access online courses, virtual classrooms, and global educational content.

C. **Collaboration and Research Networking**: The LRREN will link academic and research institutions both within Liberia and internationally, to promote collaboration in areas such as science, technology, health, and agriculture. It will help Liberian researchers engage in international academic networks, share findings, and collaborate on innovative projects, contributing to the global knowledge economy.

D. **Building National and Regional Connectivity**: LRREN's will provide high-speed internet connectivity to strengthen Liberia's digital infrastructure and enhances the country's position within the regional and global research and education community.

E. **Digital Inclusion and Capacity Building**: LRREN will play a key role in digital inclusion by providing rural and underserved institutions with access to affordable, high-speed internet. It will help bridge the digital divide within Liberia's education sector, ensuring that all students and researchers, regardless of their geographic location, can participate in the digital economy. Additionally, LRREN will support capacity-building programs that train students and faculty in digital literacy and advanced technologies.

F. **Supporting Government Initiatives**: LRREN will contribute to the government's digital transformation goals, particularly in the education sector.

16. Mobile Network Operators (MNOs)

Mobile Network Operators (MNOs) play a pivotal role in Liberia's ICT sector by providing essential telecommunication services, including voice, SMS, and mobile internet, which are critical for communication, economic activities, and digital inclusion in the country. MNOs are at the forefront of expanding access to mobile technology, particularly in a country like Liberia, where internet infrastructure remains underdeveloped, and mobile phones serve as a primary means of communication for many citizens.

Key roles of Mobile Network Operators (MNOs) in Liberia's ICT sector include:

A. **Broadband Internet Access**: MNOs in Liberia, including major operators like Lonestar Cell MTN, and Orange Liberia, provide mobile broadband services through 3G and 4G networks. Their mobile data services enable millions of Liberians to access the internet, facilitating communication, online education, business, and e-government services. As internet penetration via fixed broadband remains low, mobile internet remains the primary means of accessing the internet.

B. **Driving Digital Inclusion**: MNOs have been key in bridging the digital divide in Liberia by offering affordable mobile services to a wide range of populations, including those in rural and underserved areas. Their networks ensure that citizens in remote parts of the country can access basic communication services and the internet, which is essential for participation in the digital economy,

access to education,

healthcare, and social services.

C. **Mobile Financial Services**: MNOs have facilitated the growth of mobile money services, such as **MTN** Mobile Money and Orange Money, which allow users to send and receive money, pay bills, and perform financial transactions using their mobile phones. These services are particularly important in a country with a low banking penetration, as they promote financial inclusion and offer a secure, convenient way for people to engage in economic activities without the need for traditional banking infrastructure.

D. **Job Creation and Economic Development**: MNOs are significant contributors to Liberia's economy, creating jobs in areas such as network infrastructure development, sales, customer service, and mobile content creation. They provide affordable and reliable mobile services, which enable small businesses and entrepreneurs to thrive, promoting local innovation and stimulating economic growth in both urban and rural areas.

E. **Promotion of ICT Ecosystem Development**: MNOs play a central role in the broader development of Liberia's ICT ecosystem by promoting digital literacy and facilitating the adoption of mobile technologies. They partner with government agencies, educational institutions, and development partners to provide ICT training programs, improving digital skills among Liberians and preparing them for the demands of a digital economy.

F. **Network Infrastructure Investment**: MNOs are key investors in Liberia's telecommunications infrastructure, investing in the expansion and improvement of mobile networks, including the installation of cell towers**,** fiber-optic cables**,** and data centers**.** These investments not only improve the quality of mobile services but also help develop the country's overall digital infrastructure, supporting other ICT initiatives such as e-commerce, online services, and digital content creation.

17. Internet Service Providers (ISPs)

Internet Service Providers (ISPs) also play a role in Liberia's ICT sector by facilitating access to the internet, enabling digital communication, economic activities, and the provision of a variety of online services to both individuals and businesses. ISPs in Liberia are responsible for delivering the infrastructure and connectivity that allow for internet usage across the country, including in urban and rural areas where broadband options may be limited.

Key roles of ISPs in Liberia's ICT sector include:

A. **Providing Internet Access**: ISPs are the primary entities responsible for delivering internet services to households, businesses, and public institutions across Liberia. They offer both fixed broadband (such as fiber-optic and satellite) and mobile internet services, which are crucial for users to access digital content, conduct business, and participate in online activities.

B. **Supporting Digital Transformation**: ISPs are at the core of Liberia's digital transformation initiatives. As the country moves toward e-government services, online education, telemedicine, and digital commerce, reliable internet access provided by ISPs is essential for the success of these initiatives.

C. **Economic Development and E-commerce**: ISPs enable businesses to operate online by providing the necessary infrastructure for e-commerce, online banking, and digital marketing.

D. **Partnerships with Telecom Providers and Government**: ISPs often collaborate with telecom

providers, government institutions, and international organizations to expand Liberia's digital

infrastructure. These partnerships help improve service delivery, enhance network quality, and support the implementation of national digital policies and strategies. They also help ISPs comply with regulatory requirements, such as those set by the Liberia Telecommunications Authority (LTA).

18. ICT Solutions Providers

ICT Solutions providers are private sector companies offering software development, cybersecurity, and IT consultancy services. ICT solutions providers in Liberia play a key role in the development and expansion of the country's digital infrastructure. These companies offer a range of technological services and solutions that support various sectors, from education and healthcare to government and business. Their contributions are crucial in enhancing the capacity of the ICT ecosystem, improving digital service delivery, and enabling the country's economic growth through technology.

Key roles of ICT solutions providers in Liberia's ICT sector include:

A. **Software Development and Custom Solutions**: These providers design and develop custom software applications that cater to the specific needs of businesses, educational institutions, and government organizations. For example, they create enterprise resource planning (ERP) systems, customer relationship management (CRM) software, and learning management systems (LMS) that help improve operations, data management, and service delivery. They also develop mobile apps, e-commerce platforms, and other digital solutions that empower users and enhance service accessibility.

B. **Cybersecurity Services**: As cybersecurity threats increase globally, ICT solutions providers in Liberia offer critical cybersecurity services that help protect businesses, government institutions, and individuals from cyber-attacks, hacking, and data breaches.

C. **Network and Communication Solutions**: ICT solutions providers supply and install telecommunication systems and network solutions that improve connectivity within organizations and across Liberia.

D. **Training and Capacity Building**: Many ICT solutions providers in Liberia offer training and capacity-building programs to enhance digital literacy and technical skills. This includes training for IT professionals, government employees, students, and business owners on how to use digital tools effectively, manage IT systems, and protect sensitive information.

E. **Digital Transformation and Business Automation**: ICT solutions providers assist businesses in adopting digital transformation strategies, which include automating business processes, improving customer experience, and using data-driven insights to drive growth.

19. ICT Infrastructure Providers

ICT infrastructures are companies focused on building and maintaining Liberia's ICT infrastructure, including fiber-optic networks and cell towers. These providers ensure that the foundational technology systems needed for modern digital connectivity are in place, facilitating the growth of the ICT ecosystem and enabling a wide range of services that drive economic development, education, healthcare, and governance.

Key roles of ICT infrastructure providers in Liberia's ICT sector include:

A. **Network Infrastructure Development**: ICT infrastructure providers are responsible for developing

and maintaining the telecommunications networks that enable internet and mobile connectivity across Liberia.

This includes the installation of fiber-optic cables**,** cell towers**,** and satellite links to create the backbone for high-speed internet, mobile services, and data transmission.

B. **Broadband Connectivity**: ICT infrastructure providers contribute significantly to expanding broadband internet access in Liberia. With the increasing demand for digital services, reliable and high-speed broadband is essential for both individuals and businesses. Infrastructure providers deliver the necessary hardware, connectivity solutions, and technical expertise to establish broadband networks, enabling improved communication, online education, e-commerce, and digital government services.

C. **Expansion into Rural Areas**: ICT infrastructure providers are integral to bridge the digital divide between urban and rural areas. This rural expansion is key to promoting digital inclusion, supporting economic opportunities, and enhancing education and healthcare services for remote populations.

20. Academia

Academia plays a crucial role in the ICT sector of Liberia by driving research, developing human capital, and fostering innovation that can contribute to the country's digital transformation. Universities, colleges, and research institutions serve as the foundation for building the ICT knowledge base and providing the necessary skills for the future workforce. Here's a detailed discussion of the role academia plays in Liberia's ICT sector.

A. Human Capacity Development: Academia in Liberia is central to developing the next generation of ICT professionals through training, education, and skill-building programs. Higher education institutions offer degree and certification programs in computer science, information technology, engineering, and related fields, equipping students with the technical expertise and critical thinking skills required in the ICT industry.

B. Additionally, academia contributes to adult education and re-skilling programs, helping individuals who are already in the workforce to acquire new ICT skills, thereby ensuring the continuous development of the workforce in a rapidly changing technological environment.

2.4 Infrastructure Development and Services

Infrastructure forms the backbone of ICT services and is critical for digital transformation. Liberia's ICT infrastructure has seen modest growth in recent years, with progress in several areas:

- **Broadband Connectivity:** Broadband connectivity in Liberia is evolving, but challenges such as limited infrastructure, high costs, and low internet penetration persist. The country is making efforts to improve access and affordability to support economic growth and digital transformation. Due to its pivotal role in Liberia's development process, there is a need for the development of a National Broadband Plan as well as partnerships with global technology providers. Below are the primary broadband connectivity types available in Liberia:
    - **Fiber-Optic Broadband:** Fiber-optic technology is the fastest and most reliable broadband option, with significant capacity for high-speed data transmission.
        - **Africa Coast to Europe submarine cable (ACE):** Liberia is connected to the Africa Coast to Europe (ACE) submarine cable, which provides international bandwidth for internet services. Fiber-optic network connections from the ACE cable are primarily available in urban areas, especially Monrovia, serving businesses, institutions, and some

residential users. Expansion of the ACE submarine cable has enhanced international connectivity. Unfortunately, it has a limited reach outside urban centers, and high deployment costs hinder nationwide coverage.

- **Amilcar Cabral submarine cable:** Even though Liberia is connected to the global internet through the ACE submarine cable, there is a need for second submarine cable. The advent of the Amilcar Cabral International Submarine Cable introduces a second undersea cable option, expected to further improve redundancy, lower costs, and increase international bandwidth capacity. This development could significantly boost Liberia's position as a regional connectivity hub if properly leveraged. The Government of Liberia has established a new Special Purpose Vehicle to manage the cable. The SPV, known as the Amilcar Cabral Cable Consortium of Liberia (AC3 Liberia), has been formed and will lead the deployment and management of the ACCS in Liberia.

- **Mobile Broadband**: Mobile broadband is the most widely used connectivity type, delivered through mobile networks (2G, 3G and 4G). Major mobile network operators (MNOs) include Lonestar Cell MTN and Orange Liberia. Mobile broadband coverage includes 2G and 3G services which are widely available in urban and peri-urban areas., and 4G LTE which is expanding but remains limited to major cities. Despite the progress made in mobile broadband, the country is still faced with unreliable service in rural areas and high data costs relative to income levels.

- **Fixed Wireless Broadband**: Fixed wireless internet is delivered via radio signals between a base station and a receiver. There are several providers of fixed wireless in Liberia. LTC Mobile, Connect, and others offer fixed wireless broadband. It is popular for businesses and high-demand users who require consistent speeds. Unfortunately, due to limited coverage and high equipment costs.

- **Satellite Broadband:** Satellite connectivity is used in areas where terrestrial infrastructure is lacking. There are a few ISPs in Liberia that partner with international satellite operators. In recent times, Starlink, a service by SpaceX, was introduced to Liberia on a trial basis under a provisional license from the Liberia Telecommunications Authority (LTA). Satellite broadband is essential for remote communities, especially areas that do not have access to other forms of connectivity including fiber. It is ideal for the underserved and unserved regions of Liberia. Mining operations, and NGOs in rural areas. Unfortunately, expensive hardware/setup and subscription costs could hinder its ability to reach those areas for which it was intended. Also, there is a major policy and regulatory vacuum to govern its use in Liberia.

- **Broadband over Power Lines (BPL)**: BPL uses electricity infrastructure to deliver the internet. It is not widely implemented in Liberia due to infrastructural challenges in the electricity sector. However, strides made in the Power sector projects have recommended the use of BPL as another medium for the delivery of high speed internet services.

- **Data Centers and Cloud Services:** In Liberia, the data centers and cloud services are still in their nascent stages, with limited infrastructure and reliance on international providers. The few local data centers, such as those operated by major telecom companies like Lonestar Cell MTN and Orange Liberia, primarily support business continuity, hosting, and enterprise solutions.

  However, these facilities are not Tier-certified and face challenges such as unreliable electricity and limited redundancy. Cloud services in Liberia are largely provided by global platforms like Microsoft

Azure, Google Cloud, and AWS, accessed over international bandwidth. The growth of this sector is constrained by high internet costs, low digital literacy, and limited government initiatives, but

opportunities exist through increased adoption of fiber-optic connectivity and potential public-private partnerships to develop local data infrastructure.

- **Power:** Liberia's electricity sector significantly impacts its ICT sector, as unreliable power supply remains a critical challenge for digital infrastructure and services. The country's electricity grid is limited, with only about 28% of the population **(CONFIRM with LEC or LERC)** having access, primarily in urban areas like Monrovia. Frequent power outages force ICT companies, internet service providers (ISPs), and data centers to rely on expensive diesel generators or alternative energy sources, increasing operational costs and limiting scalability. These challenges hinder the deployment and maintenance of critical ICT infrastructure such as fiber-optic networks, data centers, and mobile towers, particularly in rural areas. Despite efforts by the government and stakeholders to expand the grid and explore renewable energy solutions, the high cost of electricity and lack of stable power remain barriers to the growth and sustainability of Liberia's ICT sector.

- **Broadcasting:** Broadcasting plays a crucial role in Liberia by providing a platform for information dissemination, education, entertainment, and public engagement, making it an integral part of the ICT sector. The convergence of broadcasting and ICT is evident in the digitization of radio and television services, online streaming, and the integration of digital platforms for content distribution.

  Key players include state-owned entities like the Liberia Broadcasting System (LBS)**,** private radio and TV stations such as Spoon Network**,** KMTV, etc, and community broadcasters catering to rural areas. Telecom companies like Lonestar Cell MTN and Orange Liberia also facilitate the transmission of digital content via mobile networks.

  The regulatory body, the Liberia Telecommunications Authority (LTA**)**, oversees aspects of spectrum allocation and licensing, while the Ministry of Information, Cultural Affairs, and Tourism (MICAT) supervises content standards. Challenges such as limited infrastructure, high costs, and unreliable power affect the sector's reach, but digital transformation and increased internet penetration present opportunities for growth and collaboration with ICT initiatives.

- **Postal and Courier Services**: Postal and courier services in Liberia are essential for enabling communication, commerce, and logistics, especially in a country with limited infrastructure and digital access. The Ministry of Posts and Telecommunications postal services department oversees the national postal services which includes the regular mail services, and the Expedited Mail Services (EMS), playing a regulatory and operational role. However, it struggles with inefficiencies due to outdated processes, insufficient funding, and limited rural reach. ICT integration, such as tracking systems, e-payment solutions, and digital addressing, has gradually begun to modernize services, linking the postal sector with the broader ICT ecosystem.

  Private courier companies like DHL, FedEx, and others are leading the way with technology-driven solutions, but their high costs limit accessibility for many Liberians. To address systemic challenges, there is a pressing need to transform the postal department into an autonomous agency with the ability to attract investment, enhance operational efficiency, and expand its services through innovative ICT solutions. This autonomy would empower it to operate more competitively and align with global postal standards.

- **National Postal Addressing System (NAPAS)**: NAPAS at the Ministry of Posts and Telecommunications plays a critical role in developing a standardized addressing framework for Liberia, which is essential for effective service delivery, commerce, emergency response, and

governance. The Department assigns unique, verifiable addresses, that enhances accessibility to homes and businesses,

supports mail and parcel delivery, and facilitates e-commerce growth. However, its potential is limited by several challenges, particularly funding, which hinder seamless integration and operational efficiency.

There are discussions about merging NAPAS with the postal services department to form an autonomous agency to consolidate resources, unify operations, and create a modern postal system capable of leveraging digital tools like Geographic Information Systems (GIS) and ICT solutions. This structural reform would enable the agency to deliver efficient, technology-driven services aligned with global postal and addressing standards, thereby addressing Liberia's logistical challenges and driving socioeconomic development.

2.5 Policy and Regulatory Environment

Liberia's ICT sector operates within a framework led by the Ministry of Posts and Telecommunications (MoPT) and regulated by the Liberia Telecommunications Authority (LTA). Key policies include:

- National Telecommunications and ICT Policy (2019–2024) -EXPIRED
- Liberia Broadband Policy (where is it)
- E-Government Strategy (2010-2015?- where is it?)
- Cybersecurity Policy (What happened to this?)
- Universal Access Policy (What's the story?)
- The Dot.gov.lr Domain Name Policy (Expired)
- Others (???)

Key instruments within the legal and regulatory framework include:

- Telecommunications Act of 2007:
- Freedom of Information Act (2010):
- Data Protection and Privacy (Work in Progress)
- Spectrum Management (Where is it?)
- Others (????)

The above listed policy and regulatory instruments aim to enhance access, promote infrastructure sharing, and digitize services. However, challenges such as weak regulatory enforcement, high taxation, inadequate infrastructure, and a lack of comprehensive data protection laws have hindered progress. Opportunities exist through public-private partnerships, regional integration, improved cybersecurity frameworks, and capacity building. International support from the World Bank, USAID, AU, ECOWAS, and other programs are helping to address rural connectivity gaps and inform future policies. Sustained investment and stronger implementation are essential for the sector's growth

2.6 Human Capital and Skills

The success of the ICT sector hinges on a skilled workforce. Liberia's ICT sector is still in the early stages of development, and human capacity and skills remain one of its most critical challenges. Despite Liberia's young population and increasing interest in technology, the country faces significant barriers in education, skill development, and infrastructure that limit the potential of the ICT workforce. Below is the

current status of human capacity and skills in Liberia’s ICT sector.

1. Educational Framework and Access to ICT Training

- **Formal Education**:
    - While there are some institutions offering ICT-related programs in Liberia, the focus is mainly on basic digital literacy rather than specialized ICT fields. Universities like the University of Liberia (UL) and the United Methodist University (UMU), Starz University, and Bluecrest University**,** offer degree programs in information technology and related disciplines. For example, the University of Liberia has established a Department of Computing and Information Sciences (DCIS) baccalaureate (B.Sc) program which has four concentrations in the following areas: Software Engineering, Cybersecurity, Data Science and Networking Technology. The University has also piloted Artificial Intelligence (AI) initiatives pioneering the advent of AI in Liberia. Despite the progress made, much of these programs lack comprehensive curricula that align with international best practices. Specialized fields like cybersecurity, cloud computing, and artificial intelligence are underrepresented.
    - **Vocational and Technical Education**: There are few institutions providing vocational training specifically targeted at building skills for the ICT workforce. Programs aimed at training technicians, network administrators, and other technical personnel are available but are generally not widespread or adequately resourced. For example, the **NVTC and MVTC** have played a role in training personnel for the sector, but there's still a large gap in more advanced technical skills training.

2. Skills Gap

- **Basic and Intermediate Skills**:

  Basic ICT skills, such as familiarity with office software (word processing, spreadsheets) and internet navigation, are common in urban areas, particularly in institutions of higher learning and businesses. However, the overall skill level for more intermediate and advanced technology, such as artificial intelligence, IoT, blockchain, Cryptocurrency, digital marketing, etc.,is still low.

  Digital literacy remains a significant challenge in Liberia, with many people, particularly in rural areas, lacking basic computer skills. While there are some efforts to provide computer training through government and NGO programs, the reach and scope of these initiatives are limited. This lack of digital literacy acts as a barrier to both education and professional development in the ICT field.

    - **Advanced Skills**: Liberia faces a significant shortage of skilled professionals in advanced ICT areas like software development, artificial intelligence, data science, and cybersecurity. These fields require specialized training, and local universities and technical institutions are struggling to keep up with the rapid evolution of these technologies. As a result, many companies in Liberia, particularly in telecom and finance, often recruit foreign experts or train local staff in-house to meet these demands.

- **Lack of Technological Specializations**:
    - Though Liberia has some professionals with general ICT knowledge, the country lacks sufficient expertise in specialized areas that are critical for its development, such as software development, artificial intelligence, cloud computing, blockchain technology, artificial

intelligence and network

security. The lack of a skilled workforce in these areas limits the country's ability to leverage new technologies for innovation and development.

3. Capacity Building Programs

- **Government Initiatives**:
    - **National ICT Policy (2019-2024)**: The Liberian government has recognized the importance of building human capacity in ICT, which is reflected in policies such as the National ICT Policy (2019-2024). This policy aims to improve digital literacy, promote ICT education, and develop the skills of the workforce. However, these policies are often hindered by a lack of implementation capacity, limited funding, and inadequate infrastructure.
    - **The Liberia Digital Transformation Project (LDTP):** Launched by President Joseph N. Boakai on May 2, 2024, the LDTP aimed to build ICT capacity and enhance economic opportunities in Liberia. The project focuses on youth empowerment by training 10,000 young Liberians in digital skills, fostering local innovation by supporting over 45 startups, and driving economic growth through improved public services and quality of life. It also seeks to bridge the digital divide, expanding access to technology and the internet. With a long-term vision of positioning Liberia as a competitive player in the global digital economy, the initiative has been widely praised for its potential to transform the nation.
- **International Support and Partnerships**:
    - International organizations like USAID, the World Bank, UNDP, and the African Development Bank have been involved in funding capacity-building programs in Liberia. These initiatives often focus on areas such as digital literacy, e-government services, and ICT entrepreneurship.
- **Private Sector and Tech Hubs**:
    - Private sector companies like Lonestar Cell MTN and Orange Liberia have invested in training their staff and supporting ICT development in Liberia. Lonestar Cell MTN has launched programs for training young people in mobile technology and network administration.
    - Tech hubs such as University of Liberia Innovation Lab (UNIPOD), iLab Liberia, and Orange Data Center, play a significant role in nurturing young talent and providing practical skills training. These hubs often provide workshops, coding boot camps, and incubators for tech entrepreneurs, but their reach is limited, and they generally cater to those with basic digital skills, rather than developing advanced expertise.

Human capacity and skills in Liberia's ICT sector are essential for the country's economic development and digital transformation. While there is a growing interest in ICT, the sector faces significant challenges, including gaps in education, limited access to resources, and a shortage of specialized skills. Addressing these challenges will require a concerted effort from the government, private sector, and international partners to invest in education, expand digital literacy, and create opportunities for hands-on experience. With the right interventions, Liberia can develop a skilled workforce that supports the growth of its ICT sector and broader digital economy.

2.7 ICT Adoption and Usage

ICT adoption among individuals, businesses, and government agencies is expanding, but significant gaps persist. Some of these challenges are discussed below.

- **E-Government Services:** Government services are transitioning online, but implementation is slow, and awareness among citizens is low.
- **Business Adoption:** Small and medium enterprises (SMEs) are increasingly leveraging ICT tools, although digital literacy and financing remain barriers.
- **Citizen Engagement:** While mobile usage is high, internet penetration hovers around 25%, limiting access to digital opportunities.

2.8 Challenges Facing the Sector

Despite progress, several challenges hinder the full potential of ICT in Liberia:

- **Limited Rural Access:** A significant digital divide exists between urban and rural areas.
- **High Costs:** Internet and mobile services remain expensive compared to regional standards.
- **Power Supply Issues:** Dependence on unreliable energy infrastructure limits the scalability of ICT initiatives.
- **Regulatory Gaps:** Inconsistent enforcement of policies deters investor confidence.

2.9 Opportunities for Growth

The sector offers numerous opportunities to drive economic and social development:

- **Emerging Technologies:** Adoption of AI, blockchain, and IoT can create new markets and solutions for local challenges.
- **Public-Private Partnerships (PPPs):** Strengthening collaborations between the government and private sector can accelerate infrastructure projects.
- **International Support:** Donor funding and technical assistance from global organizations can help bridge resource gaps.

2.10 Impact on National Development

ICT has a growing influence on Liberia's socio-economic landscape:

- **Economic Growth:** The ICT sector contributes significantly to GDP, employment, and entrepreneurship.
- **Education:** Digital platforms are enhancing access to education, particularly in remote areas.
- **Healthcare:** Telemedicine and health information systems are gaining traction, improving healthcare delivery.

3 Chapter 3: The Policy

3.1 Policy Objectives and Strategies

The policy objectives of the National ICT Policy 2025-2030 are divided into two categories: Broad Policy Objectives and Specific Policy Objectives.

3.1.1 Broad Policy Objective

The broad objective of the National ICT Policy 2025–2030 to establish a comprehensive framework for Liberia's digital transformation.

3.1.2 Specific Objectives

The "Policy" includes eight (8) specific objectives. Each objective addresses critical areas necessary for building a resilient, inclusive, and forward-looking ICT ecosystem. These objectives provide actionable direction for achieving the policy's overarching vision of transforming Liberia into an inclusive and technology-driven society.

1. Expand and Modernize ICT Infrastructure to Bridge the Digital Divide

The expansion and modernization of ICT infrastructure will ensure affordable broadband connectivity for underserved urban and rural areas. Key initiatives include:

- Developing a robust national fiber-optic backbone and increasing international bandwidth through strategic submarine cable partnerships.
- Establishing internet exchange points to reduce costs and improve connectivity.
- Deploying mobile broadband networks to improve last-mile connectivity.
- Encouraging public-private partnerships to finance rural infrastructure development.

These efforts aim to reduce the urban-rural digital gap and enable all Liberians to participate in the digital economy.

2. Leverage ICT to Enhance Key Sectors Under the ARREST Agenda

ICT will drive innovation and efficiency across Liberia's key development sectors:

- **Agriculture**: Implement precision farming technologies and digital platforms to connect farmers with markets and resources.
- **Roads**: Use GIS and data analytics to optimize road construction and maintenance.
- **Rule of Law**: Digitize legal and judicial processes for improved transparency and efficiency.
- **Education**: Expand e-learning initiatives and provide students and teachers with digital tools including the use AI tools and resources.
- **Sanitation**: Leverage ICT for real-time waste management monitoring and reporting systems.
- **Tourism**: Utilize digital marketing, virtual reality (VR), and mobile apps to promote Liberia's cultural and natural attractions.

3. Strengthen Cybersecurity to Protect National Infrastructure, Data, and Citizen Privacy

With increasing reliance on digital systems, cybersecurity is vital for national resilience.
Key measures include:

- Enacting and enforcing data protection laws.
- Establishing a National Cybersecurity Operations Center (NCSOC).
- Building technical capacity through cybersecurity training programs.
- Promoting cybersecurity awareness campaigns targeting businesses and citizens.

This objective ensures Liberia's digital ecosystem remains secure and trusted by all stakeholders.

4. Promote Digital Inclusion by Addressing Gender Disparities and Empowering Marginalized Communities

Digital inclusion focuses on creating equal opportunities for all Liberians to access and benefit from ICT:

- Launching digital literacy campaigns targeting women, youth, and people with disabilities.
- Subsidizing affordable ICT devices and internet services for low-income households.
- Establishing community-based digital hubs in remote regions.
- Promoting diversity in the tech workforce through targeted scholarships and training.

5. Encourage Innovation by Integrating Emerging Technologies

Innovation is central to Liberia's competitiveness in a globalized digital economy.
Planned initiatives include:

- Establishing technology parks and incubators for startups.
- Incentivizing the private sector to adopt and invest in Artificial Intelligence (AI), Internet of Things (IoT), and blockchain solutions.
- Collaborating with academia to develop locally relevant applications of emerging technologies.
- Creating regulatory sandboxes to test and scale new technological solutions.

6. Align ICT Initiatives with Climate Change Adaptation and Environmental Sustainability Goals

ICT will support sustainable development and climate resilience by:

- Utilizing IoT and satellite technologies for disaster monitoring and early warning systems.
- Promoting e-waste recycling programs and responsible disposal.
- Deploying green ICT solutions such as energy-efficient servers and data centers.
- Supporting environmental monitoring systems for better resource management.

7. Enhance Governance, Transparency, and Accountability through E-Governance Platforms

E-governance will improve public service delivery and foster trust in the government by:

- Digitizing government records and processes to reduce inefficiencies.
- Launching secure digital identity systems to streamline access to public services.

- Implementing online portals for tax filing, licensing, and other services.
- Encouraging open data initiatives to promote citizen participation and accountability.

8. Enhance Job Creation and Entrepreneurship

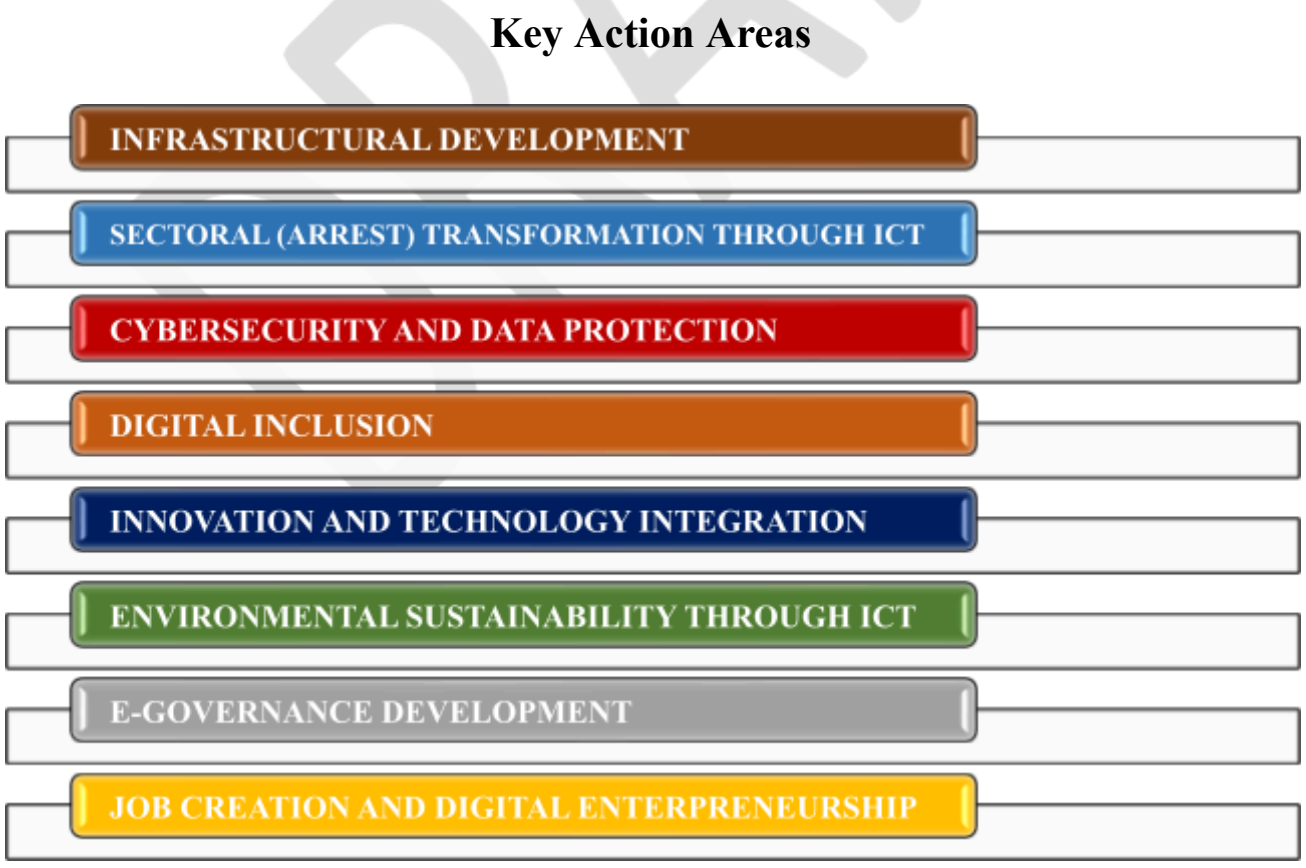
The ICT sector is poised to be a major driver of employment and innovation by:

- Supporting the growth of ICT-based micro, small, and medium enterprises (MSMEs).
- Offering ICT-related vocational training programs aligned with labor market demands.
- Encouraging freelancing and remote work opportunities through digital skills training.
- Providing financial and technical support for entrepreneurs to create innovative solutions.

In creating an environment that supports innovation and job creation, Liberia will position its workforce to thrive in the digital economy. The policy's comprehensive approach reflects a commitment to harnessing ICT for inclusive and sustainable development, contributing to improved quality of life for all Liberians.

3.1.3 Policy Key Action Areas

The National ICT Policy 2025-2030 outlines strategic action areas that aim to leverage technology to accelerate Liberia's development goals.



A critical focus is on Infrastructure Development**,** which emphasizes expanding broadband networks and modernizing ICT infrastructure to bridge the digital divide, especially in rural areas. The establishment of data centers is also prioritized to support digital storage and processing capabilities. The policy advocates for the integration of ICT into key sectors, including health, education, agriculture, and governance, aligning with Liberia's ARREST Agenda for Inclusive Development (AAID). These efforts aim to enhance service delivery, improve operational efficiency, and create new opportunities for innovation and collaboration across these critical areas.

Another vital area of action is Cybersecurity and Digital Inclusion. The policy seeks to implement robust cybersecurity measures to protect national ICT infrastructure, safeguard citizen data, and address emerging cyber threats. Digital inclusion initiatives focus on empowering marginalized groups, particularly women, youth, and rural populations, by providing affordable access to ICT tools and training programs.

Complementing this is the drive for Innovation and Technology Integration, fostering research and development in areas such as artificial intelligence, blockchain, and IoT, while supporting startups and entrepreneurs. The policy also aligns ICT initiatives with Environmental Sustainability Goals**,** promoting green technologies, efficient energy use, and responsible e-waste management.

Finally, it underscores the importance of E-Governance Development and Job Creation**,** aiming to digitize government services for greater transparency and create ICT-enabled employment opportunities to drive economic growth. These comprehensive action areas collectively aim to position Liberia as a digitally inclusive and competitive nation. These action areas serve as the foundation for operationalizing the National ICT Policy 2025-2030 and ensuring its alignment with Liberia’s development goals.

3.1.4 Summary of Targeted Areas

The table below is an illustration of Key Action Areas, Actionable Issues, Measurable Targets, and Timeline for each objective of the National ICT Policy (2025–2030):

Objective	Key Action Areas	Actionable Issues	Measurable Targets	Timeline
1. Expand and Modernize ICT Infrastructure	Deploy broadband and mobile networks	Build additional fiber-optic and wireless networks	Nationwide broadband coverage (95%)	By 2027

	Establish public Wi-Fi hotspots	Deploy public access points in rural and urban areas	1,000 new public Wi-Fi hotspots	By 2026
	Upgrade and secure existing infrastructure	Replace legacy systems and expand undersea cable capacity	50% of outdated systems upgraded	By 2028
2. Leverage ICT to Enhance ARREST Agenda Sectors	Digitize health, education, and agriculture, sanitation, tourism and transportation services	Develop e-health, e-learning, e-agriculture, e-tourism, and e-sanitation and/or smart city platforms Develop an AI in Education Platform	Launch six sector-specific platforms including AI Tutoring platforms	By 2026

	Integrate ICT into transportation and energy systems	Deploy smart traffic and energy monitoring systems	Smart systems in all major cities	By 2028
3. Strengthen Cybersecurity	Establish a national cybersecurity strategy or a REGIME?	Develop frameworks for critical infrastructure protection	Cybersecurity policy adopted	By 2025
	Set up a Cyber Emergency Response Team (CERT)	Operationalize national CERT	CERT fully operational	By 2026
	Train citizens and businesses on cybersecurity	Offer free cybersecurity awareness training programs	Train 100,000 individuals	By 2028
4. Promote Digital Inclusion	Develop gender-specific ICT programs	Provide training programs for women and girls	Train 50,000 women in digital skills	By 2027
	Expand access for rural and marginalized groups	Subsidize internet and devices for underprivileged areas	100,000 households equipped	By 2028
5. Encourage Innovation	Support local tech hubs and incubators	Establish government partnerships with tech incubators	Launch 10 incubators	By 2026
	Introduce funding for R&D in emerging technologies	Allocate grants for AI, IoT, and renewable tech projects	Fund 100 innovative projects	By 2030
6. Align ICT with Environmental Goals	Develop ICT-based climate monitoring tools	Partner with environmental organizations for tech solutions	Launch 5 environmental monitoring systems	By 2027
	Promote green ICT infrastructure	Transition to energy-efficient IT systems	50% reduction in ICT energy consumption	By 2030
7. Enhance Governance through E-Governance	Launch digital platforms for public services	Develop citizen portals for key government services	80% of services online	By 2027
	Implement transparent procurement systems	Transition procurement to fully digital platforms	100% e-procurement adoption	By 2026
	• Update existing policies and regulations,	Update all ICT policies		

	• Develop new policies and regulations to reflect changing times and changing demands	Develop a National AI Policy	

	• Establish an independent, efficient and effective postal and addressing system regime	Make Postal services and NAPAS autonomous, by establishing the Liberia Posts and Addressing Services/Agency		
8. Enhance Job Creation and Entrepreneurship	Launch digital skills training programs	Create ICT skill-building curricula	Train 500,000 youth in digital skills	By 2030
	Provide funding for ICT startups	Establish venture funds and incentives	Fund 500 new startups	By 2030
National Education and Research Network (NREN)				

This table provides clear action points, measurable outcomes, and timelines to ensure the objectives of the National ICT Policy 2025–2030 are actionable and achievable.

3.2 Policy Focus Areas

The focus areas of the National ICT Policy 2025-2030 provide a strategic framework for leveraging information and communication technologies to advance Liberia's socioeconomic development. Aligned with the ARREST Agenda for Inclusive Development, these focus areas address the critical challenges and opportunities within the ICT landscape to foster innovation, drive economic growth, and improve public service delivery.

These focus areas are designed to bridge the digital divide, empower marginalized communities, and enhance national resilience through robust infrastructure, cybersecurity, and digital inclusion strategies. The "Policy" places priority on human capital development, environmental sustainability, and entrepreneurship, to ensure that Liberia is well-positioned to harness the transformative power of ICT for inclusive and sustainable development. Each focus area identifies actionable strategies and involves key stakeholders across government, private sector, and academia to achieve the ambitious goals of a digitally empowered Liberia. The following section delineates the focus areas of this Policy.

3.2.1 ICT Infrastructure Development

- **Objective(s)**
  - Expand and modernize ICT infrastructure to bridge the digital divide and support economic growth.

- **Strategy**
  - Build and upgrade broadband networks, especially in rural and underserved areas.
  - Establish national data centers and cloud facilities.

- Collaborate with private sector players to develop ICT infrastructure.

- **Key Stakeholders**
    - Ministry of Posts and Telecommunications (MoPT), Liberia Telecommunications Authority (LTA), Liberia Telecommunications Corporation (LTC Mobile), Cable Consortium of Liberia (CCL), Amilcar Cabral Cable Consortium of Liberia (AC3 Liberia), the private sector which includes infrastructure companies, MNOs, ISPs, and others.

3.2.2 Digital Inclusion and Accessibility

- **Objective(s)**
    - Promote digital access and empower marginalized groups to ensure equitable participation in the digital economy.

- **Strategy**
    - Provide affordable access to internet and digital devices.
    - Establish community technology centers in rural areas.
    - Develop programs to train women, youth, and marginalized communities in digital skills.

- **Key Stakeholders**
    - Ministry of Gender, Children, and Social Protection, Ministry of Education, MoPT, and international development partners.

3.2.3 Cybersecurity and Data Protection

- **Objective(s)**
    - Strengthen the nation's cybersecurity framework and protect critical infrastructure and data.

- **Strategy**
    - Develop a national cybersecurity strategy.
    - Enact comprehensive data protection laws.
    - Establish a national Computer Emergency Response Team (CERT).

- **Key Stakeholders**
    - Ministry of Justice, Ministry of Posts and Telecommunications, Ministry of National Defense, Liberia Telecommunications Authority (LTA), LTC Mobile, Liberia National Police (Cybercrime Unit), and National Security Agency (NSA).

3.2.4 E-Governance and Public Service Delivery

- **Objective(s)**
    - Enhance transparency, efficiency, and accountability through e-governance platforms.

- **Strategy**
    - Digitize key government services such as tax filing, business registration, and education services.

- Provide capacity-building programs for public sector workers on ICT tools

.

- **Key Stakeholders**
  - MoPT, Ministry of Finance and Development Planning, General Services Agency, CIO Regime, PPCC, and Project Management Office (E-Liberia), LTC Mobile, and others.

3.2.5 Innovation and Technology Advancement

- **Objective(s)**
  - Foster innovation by supporting emerging technologies and entrepreneurship.

- **Strategy**
  - Promote research and development in AI, IoT, and blockchain technologies.
  - Provide funding and incubation support for startups and SMEs.
  - Strengthen academia-industry collaboration.

- **Key Stakeholders**
  - Ministry of Commerce and Industry, Liberia Research and Education Network (LRREN), universities, and private sector innovators.

3.2.6 ICT in Climate Change and Environmental Sustainability

- **Objective(s)**
  - Leverage ICT for environmental monitoring and sustainability initiatives.

- **Strategy(s)**
  - Promote green ICT solutions and renewable energy adoption for ICT infrastructure.
  - Implement e-waste management programs.

- **Key Stakeholders**
  - Environmental Protection Agency, MoPT, Ministry of Mines and Energy, and NGOs.

3.2.7 Human Capital Development in ICT

- **Objective(s)**
  - Build a skilled ICT workforce to support Liberia's digital transformation.

- **Strategy:**
  - Develop ICT training programs for youth and professionals.
  - Integrate ICT curriculum into schools and universities.

- **Key Stakeholders**
  - Ministry of Education, MoPT, universities, technical and vocational institutions.

3.2.8 Job Creation and Digital Entrepreneurship

- **Objective(s)**
  - Enhance employment opportunities through ICT and entrepreneurship.

- **Strategy**
  - Establish incubation hubs for startups.
  - Provide grants and mentorship programs for tech entrepreneurs.
  - Create incentives for ICT businesses to hire local talent.

- **Key Stakeholders**
  - Ministry of Commerce and Industry, Ministry of Labor, Ministry of Youth and Sports, MoPT, and private sector.

These policy focus areas, when effectively implemented, will create a robust ICT ecosystem that accelerates Liberia's digital transformation and aligns with the National ARREST Agenda.

4 Chapter 4: Policy Implementation Framework

The implementation and review framework for the National ICT Policy 2025-2030 is designed to ensure effective execution, monitoring, and periodic assessment of initiatives to achieve the policy's objectives. The framework consists of key elements that define governance structures, roles, timelines, and performance metrics to ensure accountability and alignment with national development priorities.

4.1 Governance Structure: Roles of Sector Players

Currently, the mandate for the ICT portfolio is within the Ministry of Posts and Telecommunication. However, this limits its mandate in carrying out the objectives set out in this policy. The Government will ensure MoPT's mandate is sufficient to see that ICT is aligned with its national development plan, the AAID. The following sections provide duties that clearly define the roles and responsibilities of stakeholders in Liberia to achieve the goals and objectives of the National ICT Policy 2025-2030.

1. National ICT Governing Council

The Council shall provide overarching leadership, coordination, and oversight for implementing the ICT policy. It shall set strategic priorities, ensure alignment with national development goals, and monitors progress toward achieving the policy's objectives. As the central body, it shall facilitate multi-stakeholder collaboration and resolve conflicts among actors.

The Council shall be headed by the President of the Republic of Liberia and Co-Chaired by the Minister of Posts and Telecommunications.

2. Ministry of Posts and Telecommunications (MoPT)

MoPT shall serve as the lead policymaker for ICT in Liberia. It shall develop ICT-related policies while coordinating with stakeholders to promote universal access to ICT services. It shall foster digital inclusion, enhances ICT infrastructure, and oversee the digital transformation agenda.

3. Liberia Telecommunications Authority (LTA)

The LTA shall regulate the telecommunications and ICT sectors, ensuring fair competition, licensing, and compliance with industry standards. The LTA shall promote affordable, reliable and universal access to ICT services while facilitating innovation and investment through sound regulatory practices.

4. Liberia Telecommunications Corporation (LTC Mobile)

LTC Mobile, as the state-owned telecom provider, shall play a key role in expanding the infrastructure and ensuring affordable connectivity across the country. It shall be instrumental in bridging the digital divide, particularly in underserved and rural areas.

5. Cable Consortium of Liberia (CCL)

CCL shall manage and maintain Liberia's access to the ACE international submarine cable, ensuring high-speed internet connectivity. It shall collaborate with stakeholders to upgrade capacity, reduce costs, and expand broadband availability to support the ICT ecosystem.

6. Amilcar Cabral Cable Consortium of Liberia (AC3 Liberia)

AC3 Liberia shall manage the Amilcar Cabral submarine cable to ensure regional connectivity. AC3 Liberia shall ensure Liberia benefits from its share of the Amilcar Cabral fiber-optic cable. Its role shall include enhancing cross-border ICT infrastructure and supporting regional integration through improved digital services.

7. The Private Sector (Infrastructure Companies, MNOs, ISPs, and Others)

Private-sector players such as MNos, ISPs, Solutions and Infrastructure provides shall drive investment in ICT infrastructure and services, including mobile networks, internet services, and data centers. They shall innovate, create employment opportunities, and collaborate with the government to expand access and improve service delivery.

8. Ministry of Justice (MoJ)

The MoJ shall ensure the legal framework supports the ICT policy, focusing on cybersecurity, data protection, and intellectual property rights. It shall also aid in drafting and enforcing laws related to digital governance and cybercrime.

9. Central Bank of Liberia (CBL)

CBL shall promote financial inclusion through digital financial services and supports innovations like mobile banking and e-commerce. It shall also ensure secure and efficient payment systems to foster digital economic growth.

10. Ministry of Internal Affairs (MIA)

MIA shall ensure ICT infrastructure and services reach rural areas, fostering inclusivity and addressing the urban-rural digital divide. It shall also coordinate with local governments to integrate ICT into regional development plans.

11. Ministry of National Defense

The Ministry of National Defense shall protect critical ICT infrastructure and ensures national cybersecurity readiness. It shall collaborate with stakeholders to address threats to national security in the digital space.

12. Liberia National Police (Cybercrime Unit)

This unit shall enforce cybercrime laws, investigate cyber threats, and build public awareness of online safety. It shall also work to improve technical capacity for combating digital crimes.

13. National Security Agency (NSA)

The NSA shall monitor and mitigate cybersecurity threats at the national level, ensuring the resilience of government systems and infrastructure against cyberattacks.

14. Ministry of Gender, Children, and Social Protection

The Ministry shall integrate gender inclusivity into ICT initiatives, ensuring women and marginalized groups have equal access to digital tools, education, and opportunities.

15. Ministry of Education (MoE)

The MoE shall integrate ICT into education by promoting digital literacy, e-learning, and infrastructure in schools. It shall foster capacity building and prepares students for a technology-driven world.

16. Environmental Protection Agency (EPA)

The EPA shall ensure ICT policies and practices align with environmental sustainability. It shall promote green ICT initiatives like e-waste management and energy-efficient technologies.

17. International Development Partners

These partners shall provide financial, technical, and advisory support to implement the ICT policy. They shall facilitate knowledge-sharing, infrastructure development, and capacity-building initiatives.

18. Ministry of Finance and Development Planning (MFDP)

MFDP shall ensure adequate budgeting and resource allocation for ICT policy implementation. It shall also integrate ICT goals into national economic development plans.

19. General Services Agency (GSA)

GSA shall lsupport the procurement and deployment of ICT equipment and services for government institutions, ensuring efficiency and cost-effectiveness.

20. Chief Information Officer (CIO) and the CIO Regime

The CIO-RL shall provide strategic leadership in implementing ICT projects across government ministries. The CIO shall be the head of the CIO Regime. The CIO-RL shall work with the CIO Regime to coordinate digital transformation efforts and ensure interoperability of systems in government. The CIO-RL shall be housed at the executive mansion/house of the government.

- **CIO-Regime:** The CIO Regime consists of CIOs assigned at various MACs and counties working collaboratively to enhance the Government's e-government program. The CIO Regime is headed by the CIO-RL who shall be housed at the executive mansion/house of the government.

21. Project Management Office (E-Liberia)

This office shall drive the execution of major government ICT projects identified by the CIO-RL, ensuring they are delivered on time, within scope, and meet quality standards. The office shall be a directorate within the MoPT and shall work collaboratively with the CIO-RL and the CIO Regime. It shall design, develop and maintain the E-Liberia portal which is a one stop shop for all government services.

22. Public Procurement and Concession Commission (PPCC)

PPCC shall oversee transparent and efficient procurement processes for ICT-related projects, ensuring value for money and adherence to national procurement laws.

23. Ministry of Commerce and Industry (MoCI)

MoCI shall provide a conducive environment for ICT businesses, support innovation in e-commerce, and ensure the growth of Liberia's digital economy.

24. Liberia Research and Education Network (LRREN)

LRREN shall advance ICT in education and research by improving connectivity for academic institutions and facilitating collaboration among researchers.

25. Universities and Private Sector Innovators

Universities shall train future ICT professionals and drive research and development. Private-sector innovators shall contribute through cutting-edge technologies, entrepreneurship, and digital solutions.

26. Technical and Vocational Institutions

These institutions shall build the technical workforce needed to support ICT infrastructure, operations, and maintenance.

27. Ministry of Labor

The Ministry shall ensure ICT initiatives create employment opportunities and that the workforce is prepared for jobs in the digital economy.

28. Ministry of Youth and Sports

This Ministry shall promote youth engagement in ICT through training programs, digital entrepreneurship, and sports technologies, fostering innovation among young people.

29. Ministry of Public Works (MPW)

The Ministry of Public Works shall support ICT development by facilitating the construction and maintenance of infrastructure required for digital connectivity. It shall ensure roads, bridges, and other public works projects incorporate provisions for laying fiber-optic cables, installing communication towers, and housing ICT facilities. MPW shall also enforces standards and safety regulations for ICT-related construction projects to ensure durability and efficiency.

31. Liberia Electricity Corporation (LEC)

The Liberia Electricity Corporation (LEC) shall provide the reliable and sustainable power supply essential for ICT operations nationwide. Its role shall include extending electricity to rural and underserved areas, thereby enabling the deployment of ICT infrastructure such as mobile towers, data centers, and public internet hubs. LEC also supports renewable energy initiatives to power ICT facilities in environmentally sustainable ways.

32. Liberia Posts and Addressing Services (LPAS)

Liberia Posts and Addressing Services (LPAS) shall be tasked with modernizing the country's postal and addressing systems to support digital commerce and communication. It shall play a critical role in creating a comprehensive national addressing framework, enabling efficient delivery of goods and services. LPAS shall integrate ICT solutions to enhance postal services, such as tracking systems and e-commerce support, fostering connectivity between urban and rural communities.

4.2 National Priority Programs for the ICT Sector (2025–2030)

National Priority Programs for the ICT Sector (2025–2030)

Priority Program	Actionable Goals	Key Actors	Timeline
1. National Broadband Expansion Program	Expand high-speed internet access to rural and underserved communities.	MoPT, Liberia Telecommunications Authority (LTA), Mobile Network Operators (MNOs), ISPs	2025–2027
2. Digital Literacy and Skills Program	Train 50,000 citizens, with a focus on youth and women, in basic and advanced digital skills.	Ministry of Education (MoE), MoPT, Academia, International Development Partners	2025–2029

3. E-Governance Implementation	Develop and deploy integrated e-governance platforms for public service delivery.	Ministry of Finance and Development Planning (MFDP), MoPT, National Elections Commission (NEC)	2025–2028
4. Cybersecurity Enhancement Initiative	Establish a National Cybersecurity Operations Center and implement national cybersecurity frameworks.	LTA, MoPT, Ministry of Justice (MoJ), Private Sector, International Cybersecurity Partners	2025–2030
5. Innovation and Start-Up Development	Establish innovation hubs and provide funding for 100 tech startups.	MoPT, Private Sector, Academia, Development Partners	2025–2030
6. Climate-Smart ICT Infrastructure	Deploy energy-efficient data Agency centers and promote ICT solutions for climate adaptation.	Environmental Protection (EPA), MoPT, Private Sector	2026–2030
7. Digital Financial Inclusion	Increase access to digital financial services in rural areas through partnerships with financial institutions.	Central Bank of Liberia (CBL), LTA, Mobile Money Operators	2025–2027

8. National Addressing and GIS Program	Complete the National Addressing System to enhance e-commerce and service delivery.	MoPT, Liberia Land Authority, Private Sector	2025–2028

This framework and priority program table ensure a structured approach to achieving the goals of the National ICT Policy 2025–2030 while fostering collaboration among stakeholders.

4.3 Actionable Issues and Potential Resources

Actionable Issue	Potential Resources to Support Implementation
1. Expand Broadband Infrastructure	• Government funds through national ICT budget allocations • Loans and grants from the World Bank, African Development Bank, and regional initiatives like Smart Africa. • Public-Private Partnerships (PPPs) with telecom operators and ICT infrastructure providers.

2. **Enhance ICT in Key Sectors (ARREST Agenda**	• Sector-specific funding from ministries (e.g., Health, Agriculture). • Technical support from global ICT initiatives like the FAO for agriculture or WHO for health ICT programs. • Contributions from development partners focused on sectoral development through ICT.
3. Strengthen Cybersecurity	• Funding from ITU, African Union Cybersecurity initiatives, and bilateral partnerships. • Technical expertise and in-kind support from global cybersecurity firms. • National budget allocations for developing a national cybersecurity framework and capacity-building programs.
4. **Promote Digital Inclusion**	• Grants from organizations like UNICEF, UNDP, and bilateral donors for digital literacy programs. • Private sector funding through CSR programs of major tech companies (e.g., Google, Microsoft). • Involvement of local NGOs in delivering training and outreach to marginalized communities.

5. **Encourage Innovation and Emerging Tech**	• Capital and other investor funding for local startups. • Grants from innovation-focused organizations (e.g., Bill & Melinda Gates Foundation). • Collaboration with global tech incubators and hubs for knowledge transfer.
Align ICT with Environmental Sustainability	• Funding from climate-focused organizations like the Green • Climate Fund and Global Environment Facility. • Private sector investment in green technology and sustainable ICT solutions. • Partnerships with environmental NGOs and research institutions for tech adaptation to climate goals

E-Governance Development	● Development grants from the World Bank, UNDP, and bilateral partners. ● Technical expertise from e-governance leaders like Rwanda, Ghana, and India. ● Domestic resources for capacity-building in government agencies.
Boost Digital Financial Inclusion	● Funding from development finance institutions like the IFC and AfDB. ● Support from mobile money operators and fintech firms. ● Collaboration with Central Bank of Liberia and financial institutions to implement digital payment systems.
Expand Digital Skills and Capacity Building	● Partnerships with global tech firms for digital skills programs. ● Funding and technical support from UNESCO and other education-focused organizations. ● Engagement of local universities and vocational training centers for program delivery
Develop National Addressing System (NAPAS)|	● Grants from logistics companies (e.g., DHL, FedEx) and e-commerce firms. ● Technical support from GIS organizations like ESRI. ● Government budget allocations for implementation and private sector investments. |

4.4 Monitoring and Evaluation (M&E)

A dedicated M&E Unit within the MoPT will develop a plan that ensures the successful implementation of the National ICT Policy 2025–2030 by tracking progress, identifying challenges, and providing actionable insights to adjust implementation strategies.

Goals of the M&E Plan

1. **Measure Progress**: Track milestones and achievements against defined targets.
2. **Ensure Accountability**: Provide transparency and accountability to stakeholders.
3. **Inform Decision-Making**: Offer data-driven insights to optimize resource allocation.
4. **Enable Adaptive Management**: Adjust strategies to overcome obstacles in real-time.

Key Components of the M&E Plan

1. **Baseline Assessments**: Conduct initial assessments of ICT infrastructure, digital literacy levels, and institutional capacity.
2. **Data Collection and Analysis**: Regularly gather qualitative and quantitative data to monitor progress.
3. **Stakeholder Engagement**: Ensure participation from key stakeholders, including government agencies, private sector actors, and civil society .
4. **Reporting Mechanisms**: Establish periodic reporting (quarterly and annually) to inform stakeholders.
5. **Performance Reviews**: Schedule mid-term and final evaluations to assess overall progress and outcomes.

Dimensions of Data Collection for Monitoring Progress

Dimension	Key Indicators	Data Collection Tools	Frequency	Responsible Stakeholders

Infrastructure Expansion	• Number of new ICT infrastructure projects completed. • Internet penetration rate (%) nationwide. • Access to broadband in rural and underserved areas	• Field surveys • Infrastructure project reports	Quarterly	Ministry of Posts and Telecommunications, ISPs, and MNOs.

Digital Literacy	• Number of individuals trained in digital skills. • Gender disaggregation of trained individuals. • Satisfaction levels of trainees with programs.	• Training attendance records. • Pre- and post- training surveys.	Bi-annually	Ministry of Education Local NGOs Training Centers.

Cybersecurity	• Number of cybersecurity incidents reported and resolved. • Adoption rate of national cybersecurity framework.	• Incident response logs. • Program training reports	Monthly	Liberia Telecommunications Authority, MoPT, CERT teams, ISPs.
E-Governance	• Number of e-Government platforms deployed • Usage rate of e-services by citizens and businesses • Reduction in administrative processing times	• System usage analytics • User satisfaction surveys	Quarterly	MoPT-E-Liberia PMO, Ministry of Finance, Service Providers
Digital Inclusion	• ICT access rates among marginalized communities. • Reduction in gender disparities in ICT usage.	• Household surveys. • Focus group discussions.	Annually	Ministry of Gender, Local NGOs, Community Organizations.
Innovation and Emerging Tech	• Number of startups supported through	• Innovation hub reports.	Bi-annually	Ministry of Commerce, Innovation Hubs, Universities.

	innovation hubs. ● Investment levels in emerging technologies. ● Number of patents or innovations produced locally	● Startup surveys and financial reports.		
Environment Sustainability	● Deployment of green ICT solutions. ● Reduction in ICT-related carbon footprint	● Environmental impact assessments. ● Reports from ICT companies.	Annually	|Ministry of Environment, Telecom Operators, ISPs
Job Creation	● Number of ICT-related jobs created. ● Growth of ICT entrepreneurship initiatives	● Employment surveys. ● Business registration data	Annually	Ministry of Labor, Chamber of Commerce, Private Sector

This comprehensive M&E plan will ensure that the National ICT Policy 2025–2030 achieves its goals, adapts to challenges, and delivers meaningful outcomes for Liberia's digital transformation

4.5 Resource Mobilization

Implementing the National ICT Policy 2025–2030 will require a robust resource mobilization strategy to ensure adequate funding, expertise, and partnerships. This plan outlines a comprehensive approach to secure financial and technical resources from diverse sources while fostering collaboration among stakeholders.

4.5.1 *Domestic Resource Allocation*

- **Government Budgetary Support**: Advocate for increased ICT budget allocations from the national treasury, particularly for flagship programs like broadband expansion and digital skills training.

- **Public-Private Partnerships (PPPs)**: Leverage partnerships with private sector entities to

co-fund infrastructure projects and innovation hubs.

- **Universal Access Funds**: Use contributions from telecom operators to finance rural connectivity projects.

4.5.2 ***International Development Partners***

- Collaborate with multilateral agencies such as the World Bank, African Development Bank, and UNDP for grants and loans.

- Engage international NGOs and foundations specializing in digital inclusion, education, and innovation for financial and technical assistance.

- Tap into global ICT-focused initiatives such as the Smart Africa Alliance for regional support and expertise.

4.5.3 ***Private Sector Engagement***

- Encourage private investments in data centers, cybersecurity infrastructure, and e-commerce platforms.

- Provide incentives such as tax breaks to attract tech companies and startups to invest in Liberia's ICT sector.

4.5.4 ***Alternative Funding Mechanisms***

- Explore crowdfunding campaigns for specific community-focused programs like digital literacy initiatives.
- Introduce revenue-generating mechanisms, such as licensing fees for telecom operators and ICT service providers, to sustain programs.

4.5.5 ***Capacity Building and Knowledge Transfer***

- Partner with international universities and tech firms for expertise-sharing programs and capacity- building initiatives.
- Foster local talent development by promoting internships and training programs in collaboration with academia and the private sector.

4.6 Policy Review and Updates

- A mid-term review will be conducted in 2028 to assess progress and adjust strategies as necessary.

- The policy will be updated at the end of the five-year period to align with emerging trends and priorities.

5 Chapter 5: Expected Outcomes

The National ICT Policy 2025–2030 sets forth a transformative vision to position Liberia as a leader in digital innovation, fostering inclusive growth and socio-economic development. This policy serves as a strategic blueprint to bridge the digital divide, enhance public services, and catalyze economic advancement through the adoption and integration of Information and Communication Technology (ICT) across all sectors.

To realize this vision, the policy outlines key expected outcomes that align with national priorities and global commitments, such as the United Nations Sustainable Development Goals (SDGs) and the African Union's Digital Transformation Strategy. These outcomes address critical challenges, leverage emerging opportunities, and ensure that no one is left behind in Liberia's digital journey.

The following are the primary outcomes envisioned under this policy:

5.1 Increased Internet Penetration: Achieve 70% Broadband Coverage Nationwide by 2030

This outcome focuses on expanding Liberia's internet infrastructure to bridge the digital divide between urban and rural areas. Achieving 70% broadband coverage by 2030 will improve access to digital services, foster inclusion, and enable underserved communities to participate in the digital economy. Enhanced internet penetration will support education, healthcare, and business activities, contributing to Liberia's broader socio-economic development. Partnerships with mobile network operators (MNOs), internet service providers (ISPs), and international donors will be critical in deploying affordable and reliable broadband services.

5.2 Enhanced Public Services: Launch at Least 10 E-Government Platforms

The launch of at least 10 e-government platforms is aimed at improving the efficiency, transparency, and accessibility of public services. These platforms will digitize key government functions, such as tax collection, business registration, healthcare management, and education services, ensuring better service delivery to citizens and businesses. This initiative aligns with efforts to enhance governance and reduce administrative bottlenecks, paving the way for more accountable and citizen-focused governance. The E-Liberia Project Management Office and ministries will play central roles in achieving this outcome.

5.3 Digital Inclusion: Train Over 60,000 Citizens in Digital Skills

The policy aims to empower over 60,000 citizens with essential digital skills, targeting youth, women, and marginalized communities. This initiative seeks to address disparities in ICT access and usage while fostering innovation and entrepreneurship. Training programs will be implemented through community ICT centers, universities, and vocational training institutes, ensuring equitable access to learning opportunities. By equipping citizens with digital literacy, Liberia will build a workforce prepared to compete in the global economy.

5.4 Economic Growth: Generate $200 million in Digital Economy Revenue by 2030

The policy envisions a thriving digital economy capable of generating $200 million in revenue by 2030. This outcome will be driven by innovation in fintech, e-commerce, and digital services, supported by an enabling

regulatory environment and robust ICT infrastructure. The government will encourage foreign and local

investment in the ICT sector, promote startups, and ensure the scalability of digital solutions. This growth will diversify Liberia's economy, reduce dependency on traditional sectors, and create wealth for the nation.

5.5 Job Creation: Create 50,000 ICT-Related Jobs Across Sectors by 2030

With a conducive environment for ICT-driven growth, the policy aims to create 50,000 ICT-related jobs by 2030. These jobs will span sectors such as telecommunications, software development, data analysis, AI development, and cybersecurity. Initiatives to support startups and innovation hubs, along with private sector partnerships, will be instrumental in meeting this target. The policy will contribute to poverty reduction and improved livelihoods, particularly for Liberia’s youth population through its ability to generate employment opportunities,

These outcomes collectively position Liberia as a digitally inclusive, economically robust, and globally competitive nation by 2030.

6 Conclusion

The National ICT Policy 2025–2030 represents a bold vision for harnessing the transformative power of information and communication technologies to drive Liberia's development agenda. It sets forth a comprehensive framework to address existing challenges while unlocking new opportunities in the digital economy. The Policy places focus on strategic priorities such as expanding and modernizing ICT infrastructure, enhancing digital skills, fostering innovation, and improving governance through digital platforms. This illustrates its aims to bridge the digital divide, stimulate economic growth, and position Liberia as a competitive player in the global digital landscape.

6.1 Summary of Strategic Priorities

- **Infrastructure Development:** Expand broadband access to achieve 70% internet penetration by 2030, ensuring equitable access across urban and rural areas.
- **Digital Transformation:** Promote e-government platforms to improve public service delivery and transparency.
- **Capacity Building:** Equip over 60,000 citizens with digital skills, emphasizing inclusion for women, youth, and marginalized communities.
- **Economic Growth:** Stimulate the digital economy to generate $200 million in revenue while creating 50,000 ICT-related jobs.
- **Cybersecurity and Sustainability:** Strengthen cybersecurity frameworks and align ICT initiatives with environmental sustainability goals.

6.2 The Road Ahead

Realizing the goals of the National ICT Policy requires a collective effort from all stakeholders, including government, private sector, academia, and development partners. The implementation will demand robust governance, sustainable financing, and continuous monitoring and evaluation to adapt to evolving needs. Investments in infrastructure, skills development, and policy reforms must be prioritized to ensure inclusivity and resilience.

The journey to 2030 offers a transformative opportunity to reimagine Liberia's socio-economic fabric through digital empowerment. Fostering partnerships and innovation, enable Liberia to overcome existing challenges and leapfrog into a technology-driven future. The successful implementation of this policy will not only enhance the quality of life for all Liberians but also contribute to regional and global advancements in the digital economy. Together, Liberia can build a resilient, inclusive, and sustainable digital society that leaves no one behind.

Stakeholder Engagement Summary

Legal and Regulatory References

List of Contributors and Reviewers

Glossary of Terms

ARREST Agenda for Inclusive Development (AAID): Liberia's strategic framework emphasizing agriculture, roads, rule of law, education, sanitation, and tourism for inclusive national development.

Blockchain: A decentralized digital ledger technology used for secure and transparent data management.

Broadband: High-speed internet access that is always on and faster than traditional dial-up access.

Cybersecurity: Measures and practices designed to protect digital systems, networks, and data from unauthorized access or attacks.

Climate Resilience: The ability to anticipate, prepare for, and adapt to climate-related shocks and stresses.

Community-Based Digital Hubs: Centers providing access to ICT tools, resources, and training in underserved communities.

Digital Divide: The gap between individuals or communities that have access to modern ICT and those that do not.

Digital Literacy: The ability to use digital devices, communication tools, and networks effectively for various purposes.

E-Governance: The use of ICT to improve government processes, service delivery, and citizen engagement.

E-Waste: Discarded electronic devices and components, often requiring specialized recycling methods.

Gender Disparities: Differences in access, participation, and opportunities between men and women, particularly in ICT.

Human Capital Development: Efforts to improve the knowledge, skills, and abilities of individuals, particularly in ICT.

ICT (Information and Communication Technology): A broad term encompassing all technologies used for communication, data processing, and storage.

ICT Infrastructure: The physical and organizational structures needed to operate ICT services, such as fiber-optic networks, data centers, and mobile networks.

Innovation Ecosystem: A network of stakeholders, including government, businesses, academia, and entrepreneurs, that supports innovation.

Internet of Things (IoT): A network of interconnected devices that can collect, exchange, and act on data.

Localization: Adapting ICT solutions to meet the cultural, linguistic, and societal needs of a specific region or community.

Marginalized Groups: Communities or populations excluded from mainstream socio-economic activities due to systemic barriers, including those in ICT.

Mobile Broadband: Wireless internet access delivered through mobile cellular networks.

Public-Private Partnerships (PPPs): Collaborative agreements between government and private sector entities to achieve public service objectives.

Regulatory Sandbox: A framework that allows businesses to test innovative products or services in a controlled environment under a regulator's supervision.

Resilience: The capacity to recover quickly from difficulties, particularly in ICT systems.

Submarine Cable: Undersea cables used for transmitting data across continents, essential for international connectivity.

Sustainability: Practices that ensure the development and use of ICT do not harm the environment and can be maintained over the long term.

Technology Parks: Facilities designed to promote research, development, and innovation in technology by providing shared resources and infrastructure.

Tourism ICT Solutions: Digital tools and platforms used to enhance tourism services and marketing.

Underserved Communities: Groups with limited or no access to essential services, including ICT infrastructure and resources.

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Appendices

Summary of Targets: FROM National ICT Policy 2019-2024

Actionable Issues	Measurable Targets	Timeline (after adoption of ICT policy)
Improving Policy/Regulatory Framework	• Complete review of existing policies and laws with a plan for harmonization where necessary • Enact harmonization of existing policies/laws • Update existing and draft new policies and laws as required (e.g., digital financial services, electronic transactions, protection of children etc. and others as needed) .	• **Year 1** • **Year 1** • **Year 2**
Cyber-security	• Establish a national cyber-security advisory committee • Draft cyber-security policy • Adopt cyber-security Legislation	• **Year 1** • **Year 2** • **Year 3**
Digital Financial Services	• Draft a national policy on interoperability of telecom networks for digital financial services.	• **Year 4**
Consumer Protection	• Draft consumer and child protection policy	• **Year 2**

Expanding and improving ICT infrastructure	• **Map existing and planned fiber and passive utility infrastructure – backbones, road, rail, towers, pipelines etc** • **Adopt a "dig once" regulation (i.e requirement for inclusion of ducts in all new and resurfaced roads, and mandatory provision for use by third parties of any telecom ducts laid by operators)** • **Adopt infrastructure sharing guidelines for all ISPs and mobile network operators to allow for colocation of equipment** • **Ensure rights of way access over public land infrastructure** • **Complete the implementation of key infrastructure programs (e.g., national terrestrial backbone network, metro-fiber ring, etc. as listed**	• **Year 1** • **Year 1** • **Year 2** • **Year 1** • **Year 5**

	in section 7.2) • Establish effective national management of the .lr ccTLD	• Year 1
Broadband access and use – Initial Targets	• Adopt affordability target of 1GB of mobile prepaid data priced at less than 2% of average monthly per capita income ("1 for 2" target) • Achieve "1 for 2" target for mobile broadband affordability • 15% of Liberians regularly access and use mobile broadband services (3G and higher) • 35% of Liberians regularly access and use mobile broadband services (3G and higher) • 10% of Liberians access and use fixed broadband services • Speed of fixed and mobile services to public institutions, the private sector and the public should be sufficient to meet their needs for efficient and timely data transfer	• Year 1 • Year 5 • Year 1 • Year 5 • Year 5 • Year 5
Spectrum Management	• Update 5 -year spectrum management plan	• Year 2

Universal Access and Universal Access Fund	• Implement the USF • All projects disbursements and financial reports published and easily accessible to the public • All Liberians have local access to affordable voice services	• Year 1 • Year 2 • Year 5

Gender and Women and ICT	• Baseline research on national access and use of ICT including among women, girls, and other marginalized groups • National plan to improve gender equity in access and use	• Year 1 • Year 2
Education	• Complete an inventory of Internet access (and type of access) of all schools and at all levels • Improve Internet access in schools by 20% over current level • Establish an information system to identify and list the skills (ICT) that are required for different jobs to be used by the Ministry of Education in the design of its training courses. • All secondary schools offer at least 1 ICT related course or program • Tertiary education institutes to offer ICT certification • Proportion of teachers trained to teach subjects	• Year 1 • Year 5 • Year 1 • Year 5 • Year 4

	using ICT increase by 50% over current level	• Year 4

Innovation and Research	Working with the Ministry of Education: • Complete map of key public, private and other sponsored activities that support innovation and research • Develop public+private investment and support plan for a National Research and Education Network (NREN), and support for targeted innovation activities and spaces.	• Year 1 • Year 2
Reform of ICT governance structure	• MoPT to review existing legislation and complete feasibility plan for implementation of revised governance structure for the ICT sector • Enact structural reforms • Enact and legislate a new postal law separating the posts from the Ministry	• Year 1 • Year 1 • Year 3

Health and ICT	• 50% of all clinics and hospitals have Internet access • 100% of all clinics and hospitals have Internet access • E- health strategy including a Health Information System	• Year 3 • Year 5 • Year 2
Local government	• All County Service Centers have Internet access • All Superintendent offices have Internet access • IFMIS platform expanded to all counties with reliable internet access (broadband)	• Year 2 • Year 5 • Year 5
Ministries, Agencies, and Commissions (MACs) - *Connectivity*	• All MACs in Monrovia have Internet Access • All other MACs in counties have Internet access	• Year 1 • Year 5
Ministries, Agencies, and Commissions (MACs) - *Online services*	• The CIO should put in place a common standard for website development for all MACS • Ensure ICT architecture systems design enforces consistency across MACs to help ensure interoperability • Establish a redundancy plan and maintenance policy in all MAC information systems to ensure reliability in Ministry connections and server/applications • All MACs should have enhanced web presence on all online platforms	• Year 1 • Year 1 • Year 1 • Year 4

Summary of Targets: FROM NICT 2019-2024

Actionable Issues	Measurable Targets	Timeline (after adoption of ICT policy)
Improving Policy/Regulatory Framework	• Complete review of existing policies and laws with a plan for harmonization where necessary • Enact harmonization of existing policies/laws • Update existing and draft new policies and laws as required (e.g., digital financial services, electronic transactions, protection of children etc. and others as needed) •	• Year 1 • Year 1 • Year 2
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Spectrum Management	• Update 5 -year spectrum management plan	• Year 2
Universal Access and Universal Access Fund	• Implement the USF • All projects disbursements and financial reports published and easily accessible to the public • All Liberians have local access to affordable voice services	• Year 1 • Year 2 • Year 5

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