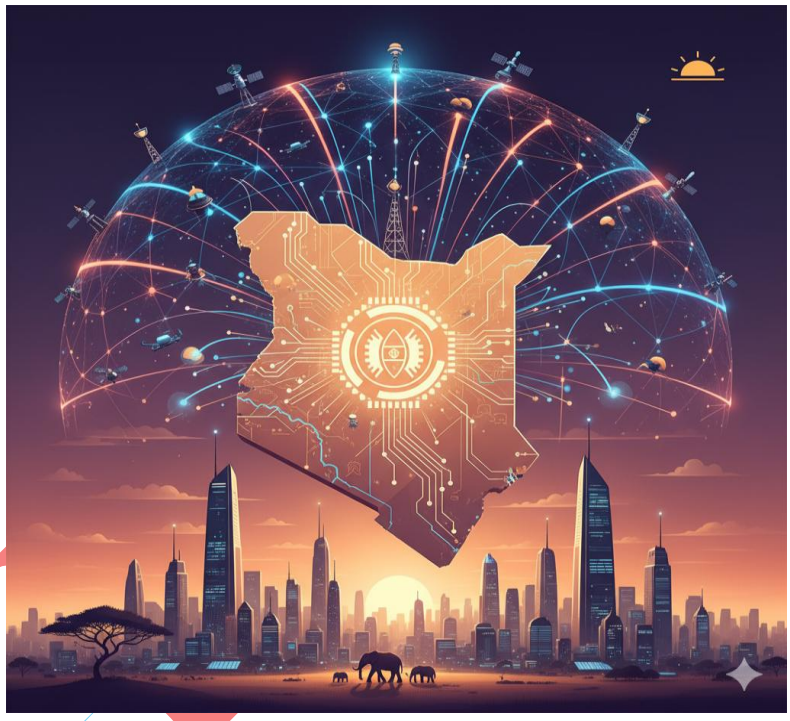
Kenya National Broadband Strategy 2025–2030

"Empowering Every Kenyan with Inclusive, Reliable, and Affordable Broadband Access"



Strategic Direction/Core

VISION

Universal, affordable, high-speed broadband for national prosperity

MISSION

To expand equitable access to broadband to drive innovation, inclusivity, and economic transformation.

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GUIDING PRINCIPLES

Universal and Inclusive Access

Affordability and Accessibility

Public, Private, People, Partnership

Infrastructure Sharing and Open Access

Sustainability and Environmental Stewardship

Security, Privacy and Trust

Resilience and Future Proofing

STRATEGIC PILLARS

Policy, Legal and Regulatory Environment

Infrastructure, Connectivity and Devices

Capacity Building, Innovation and Awareness Creation

Privacy, Security, Content and Application

FOREWORD

Broadband connectivity has become a foundational enabler of inclusive economic growth, social transformation, and global competitiveness in the digital age. As Kenya advances the implementation of Vision 2030, the Fourth Medium Term Plan (MTP IV), and the Bottom-Up Economic Transformation Agenda (BETA), access to affordable, reliable, and high-quality broadband is no longer a luxury but a national imperative.

The National Broadband Strategy (NBS) 2025–2030 provides a unified national framework to guide the expansion, adoption, and effective use of broadband infrastructure and services nationwide. Building on the achievements and lessons of the first and second National Broadband Strategies, this third Strategy responds to emerging technological trends, evolving market dynamics, and the growing demand for digital services across all sectors of the economy.

The Strategy articulates clear policy directions, strategic interventions, and investment priorities to achieve universal broadband access, reduce the digital divide, and foster innovation, productivity, and job creation. It places strong emphasis on inclusive connectivity for underserved and marginalized communities, the resilience and security of digital infrastructure, the affordability of devices and services, and the development of digital skills to support Kenya's transition to a knowledge-based, digitally enabled economy.

The successful implementation of this Strategy will require sustained collaboration between the National Government, County Governments, the private sector, development partners, academia, civil society, and citizens. I therefore call upon all stakeholders to play their respective roles in translating this Strategy into tangible outcomes that improve livelihoods and strengthen Kenya's position as a regional digital hub.

On behalf of the Government of the Republic of Kenya, I commend all stakeholders who contributed to the development of this Strategy and reaffirm the Ministry's commitment to providing leadership and policy support for its effective implementation.

H.E. Hon. William Kabogo Gitau, EGH
Cabinet Secretary
Ministry of Information, Communications and the Digital Economy

PREFACE

The Kenya National Broadband Strategy 2025–2030 is a comprehensive, forward-looking roadmap to guide broadband development over the next five years. The Strategy recognizes broadband as a critical enabler of digital government, private sector competitiveness, innovation, education, healthcare, financial inclusion, and overall socio-economic transformation.

The development of this Strategy was undertaken through a structured, inclusive, and consultative process involving a multi-stakeholder Steering Committee and Technical Working Groups drawn from Government, the private sector, academia, civil society, and development partners. This collaborative approach ensured that the Strategy reflects national priorities, global best practices, and stakeholder aspirations, while remaining responsive to Kenya's development context.

The Strategy is anchored in key thematic pillars covering the policy, legal, and regulatory environment; infrastructure, connectivity, and devices; capacity building, innovation, and awareness creation; and security, privacy, content, and applications. It further provides an implementation framework, monitoring and evaluation mechanisms, and clear institutional roles to ensure accountability and measurable impact.

As the State Department responsible for broadcasting, telecommunications, and broadband policy, we remain committed to coordinating the implementation of this Strategy in close collaboration with the Communications Authority of Kenya, other Government institutions, County Governments, and sector stakeholders. The Strategy will serve as a key reference document for public and private investment decisions, sector planning, and performance monitoring over the implementation period.

I wish to express my appreciation to all stakeholders who contributed their time, expertise, and resources to the development of this Strategy. The ministry promises to maintain close partnerships with all stakeholders throughout the implementation period to realize a digitally empowered and inclusive Kenya.

Stephen. M. Isaboke, EBS
Principal Secretary
State Department for Broadcasting and Telecommunications

ACKNOWLEDGEMENTS

The development of the National Broadband Strategy 2025–2030 was made possible through the collective effort and commitment of a wide range of stakeholders drawn from both the public and private sectors.

The Communications Authority of Kenya acknowledges the leadership and policy guidance provided by the Ministry of Information, Communications and the Digital Economy, particularly the State Department for Broadcasting and Telecommunications, throughout the Strategy development process. We further recognize the invaluable contributions of the Steering Committee and Technical Working Groups, whose expertise and insights shaped the strategic direction and priorities of this document.

Special appreciation is extended to Government Ministries, Departments and Agencies; County Governments; telecommunications operators; infrastructure providers; equipment manufacturers; financial institutions; academia and research institutions; civil society organizations; development partners; and industry associations who actively participated in consultations, provided data and technical inputs, and reviewed successive drafts of the Strategy.

The Authority also acknowledges the dedication of the Secretariat and technical teams who coordinated stakeholder engagements, conducted analysis, and ensured alignment with national, regional, and international broadband frameworks and targets.

As the sector regulator, the Communications Authority of Kenya remains committed to supporting the implementation of this Strategy through effective regulation, spectrum management, Universal Service Fund interventions, and continuous stakeholder engagement. We look forward to working with all partners to realize the shared vision of universal, affordable, and high-quality broadband connectivity for all Kenyans.

David Mugonyi, EBS
Director General/CEO
Communications Authority of Kenya

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EXECUTIVE SUMMARY

The National Broadband Strategy (NBS) 2025–2030 recognizes broadband connectivity as a foundational national infrastructure, comparable to water, electricity, and transport. It positions broadband as a critical enabler of economic growth, social inclusion, innovation, service delivery, and national resilience. Anchored in the Constitution of Kenya (2010), Kenya Vision 2030, and the Bottom-Up Economic Transformation Agenda (BETA), the Strategy provides a unified national roadmap for achieving universal, affordable, secure, and meaningful broadband connectivity as a catalyst for inclusive socio-economic transformation.

Overview and Vision

The Strategy envisions a future in which broadband is universally available, affordable, inclusive, secure, resilient, and future-ready, enabling the delivery of digital services across education, health, agriculture, justice, governance, commerce, and innovation. Broadband is defined as reliable, always-on internet connectivity capable of supporting simultaneous voice, video, and data services. For planning and implementation purposes, broadband is defined as a minimum of 10 Mbps download and 5 Mbps upload per user. This corresponds to indicative capacity requirements of at least 50 Mbps for an average household and 1 Gbps for high-demand institutions such as schools and other public service facilities.

Rationale

Kenya has recorded significant progress under the previous National Broadband Strategies (2012–2017 and 2018–2023), including expansion of fibre infrastructure, high mobile penetration, increased international bandwidth capacity, and the growth of a vibrant digital economy. Despite these gains, several challenges persist, including: affordability constraints, rural and last-mile connectivity gaps, low fixed broadband penetration, uneven institutional connectivity, fragmented wayleave and permitting regimes, infrastructure vandalism, high power and operational costs, digital skills deficits, and emerging cybersecurity and data protection risks.

The NBS 2025–2030 addresses these gaps by accelerating progress towards universal access and digital equity, reinforcing broadband as a driver for job creation and inclusive economic growth, enabling smart service delivery across priority sectors, and supporting innovation, local manufacturing, climate action, and digital trust.

Strategic Alignment and Development Process

The Strategy was developed through a transparent, inclusive, and evidence-based process led by a multi-stakeholder Steering Committee and supported by specialized Technical Working Groups. It is aligned with national development frameworks, including Kenya Vision 2030, BETA, the Digital Economy Blueprint, the National Digital Master Plan, the National ICT Policy, KICA, Data Protection, and Cybercrime laws. At the regional and global levels, the Strategy aligns with commitments and frameworks, including the EAC ICT Framework, the AU Digital Transformation Strategy, the

Sustainable Development Goals, and the ITU/UNESCO Broadband Commission targets on affordability and meaningful connectivity.

Strategic Goal and Priority Targets

The overarching goal of the Strategy is to enable a digitally empowered society and knowledge-based economy by expanding broadband coverage, reducing costs, strengthening skills, and building trust in the digital ecosystem. By 2030, the Strategy targets to:

i Expand the national fibre backbone by 100,000 km and achieve 99% 4G and 50% 5G population coverage;

ii Connect 50% of households (approximately 6 million) using technology-neutral solutions (fibre, fixed wireless, satellite);

iii Deploy broadband infrastructure to 379 unserved and underserved sub-locations and complete 25,000 public Wi-Fi hotspots;

iv Reduce the cost of fixed broadband to 2% of GNI per capita and promote affordable devices, including entry-level smartphones at KSh 5,000, through fiscal incentives and local assembly;

v Ensure 100% of education and health institutions have fixed broadband connectivity with a minimum speed of 1 Gbps;

vi Onboard 100% of public-facing government services onto digital platforms;

vii Train 20 million citizens, upskill 200,000 public servants and 300,000 private sector workers, and deploy Community Digital Ambassadors nationwide;

viii Strengthen cybersecurity, data protection, and digital trust through resilient infrastructure, national public key systems, and continuous cyber-hygiene monitoring.

Strategic Pillars

Implementation of the Strategy is anchored on four interdependent pillars:

1. Policy, Legal and Regulatory Environment – reforming laws, harmonizing wayleaves and licensing, strengthening infrastructure sharing, consumer protection, spectrum management, and governance coordination.

2. Infrastructure, Connectivity and Devices – expanding international and national backbone infrastructure, accelerating last-mile connectivity, strengthening hosting and data centre capacity, ensuring reliable energy supply, and promoting affordable devices through local manufacturing and assembly.

3. Capacity Building, Innovation and Awareness Creation – enhancing digital literacy and advanced skills, supporting research and innovation, scaling digital hubs, and driving nationwide awareness and adoption of broadband services.

4. Privacy, Security, Content and Applications – safeguarding data and networks, promoting cybersecurity resilience, supporting local digital content and applications, and ensuring inclusive, trusted digital services.

Finance, Investment and Delivery

The Strategy adopts a blended financing approach that leverages public investment, private-sector participation, public-private partnerships, Universal Service Fund support, development finance, infrastructure, green financing instruments, and community-based delivery models. County Governments are recognized as critical delivery partners, with roles spanning infrastructure planning, co-financing, facilitating wayleaves and permits, and developing local digital ecosystems, supported by the proposed County Digital Infrastructure Fund.

Governance, Monitoring and Accountability

Implementation will be coordinated through a Multi-Agency National Broadband Implementation Committee to ensure whole-of-government alignment, effective delivery, and accountability. A robust monitoring, evaluation, and reporting framework aligned with National Treasury guidelines will track progress through defined outcome and output indicators, supported by annual reports, a mid-term review, and an end-term evaluation.

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ACRONYMS AND ABBREVIATIONS

3G	Third Generation
4G	Fourth Generation
5G	Fifth Generation
AI	Artificial Intelligence
ASALs	Arid And Semi-Arid Lands
BETA	Bottom-Up Economic Transformation Agenda
CA	Communication Authority of Kenya
CMCA	Computer Misuse and Cybercrime Act
CSOs	Civil Society Organizations
DLP	Digital Learning Program
DPA	Data Protection Act
FTTH	Fibre To the Home
FWA	Fixed Wireless Access
GIS	Global Information System
GDP	Gross Domestic Product
GSO	Geo-Stationary Orbit
ICT	Information and Communication Technology
ICTA	Information And Communication Technology Authority
ISP	Internet Service Provider
ITU	International Telecommunication Union
IXPs	Internet Exchange Points
Ke-CIRT	Kenya Computer Incidence Response Team
KE-CIRT/CC	Kenya Computer Incidence Response Team Coordination Centre
KICA	Kenya Information and Communication Act
KPIs	Key Performance Indicators
KPLC	Kenya Power and Lighting Company
LEO	Low Earth Orbit
MCDA	Ministries, Counties, Departments and Agencies
M&E	Monitoring And Evaluation
MICDE	Ministry Of Information, Communication and the Digital Economy
MNOs	Mobile Network Operators
MSMEs	Micro, Small and Medium Enterprises
NBS	National Broadband Strategy
NC4	National Computer and Cybercrime Coordination Committee
NCA	National Construction Authority

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OGN	One Government Network
PPP	Public Private Partnership
PwDs	Persons With Disabilities
QoE	Quality of Experience
QoS	Quality of Service
ROI	Return on Investment
SDGs	Sustainable Development Goals
SLA	Service Level Agreement
SMEs	Small And Medium Enterprises
STEM	Science Technology Engineering and Mathematics
SWOT	Strengths Weakness Opportunities and Threats
TVET	Technical Vocational Education and Training
UNESCO	United Nations Educational Scientific and Cultural Organization
USF	Universal Service Funds
VAT	Value Added Tax
WISPs	Wireless Internet Service Provider

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1. INTRODUCTION AND BACKGROUND INFORMATION

1.1 Overview

Broadband connectivity is now widely recognized as foundational infrastructure comparable to water, electricity and roads, given its central role in driving economic growth, social development, and national resilience. As Kenya charts its digital transformation journey in line with Vision 2030, BETA and broader global digital economy aspirations, the expansion of affordable, high-speed internet access has become an urgent national imperative.

1.2 Definition of Broadband

Broadband is defined in various ways across international and national frameworks. The ITU broadly defines broadband as high-capacity transmission that enables advanced, interactive multimedia services using technologies such as fibre-optic, satellite, wireless, and mobile.

In practical terms, broadband is internet access that enables the reliable, simultaneous transmission of voice, video, and data. It provides continuous, 'always-on' connectivity at speeds sufficient to support modern digital applications, including e-learning, e-health, e-commerce, and cloud computing.

For the purpose of this Strategy, broadband is defined as an internet connection with a minimum download speed of 10 Mbps and an upload speed of 5 Mbps per user. This means that 50 Mbps is needed for a Kenyan Household with five (5) active users/persons/devices.

For institutions and enterprises, capacity requirements scale with demand. For example, a school with 100 concurrent users (i.e., 100 computers, even if pupil numbers are higher) from its learner and teacher population would require at least 1 Gbps (100 users x 10 Mbps) to ensure adequate performance.

The Strategy envisions a future where broadband is universally available, affordable, inclusive, secure, and resilient.

1.3 Rationale For the National Broadband Strategy 2025-2030

Kenya has made commendable progress in expanding broadband infrastructure and services over the past decade, through the implementation of the National Broadband Strategies 2012-2017 and 2018-2023. Mobile penetration has increased substantially, fibre-optic networks have been extended across most counties, and digital platforms are increasingly supporting service delivery in both the public and private sectors.

Despite these gains, universal, equitable, and transformative broadband access remains unfulfilled. Persistent gaps in affordability, coverage, quality of service, and meaningful usage continue to limit the full realization of Kenya's digital transformation objectives. These challenges underscore the need for a renewed, forward-looking strategy that provides a unified national vision and roadmap for broadband development.

The NBS 2025–2030 is therefore intended to consolidate earlier achievements and accelerate progress by:

1) Reducing the digital divide by targeting universal access, achievement, and equity.
2) Accelerating inclusive economic growth and job creation through digital infrastructure.
3) Enabling smart service delivery in sectors such as health, education, agriculture, justice, and governance.
4) Supporting national priorities in innovation, manufacturing, and climate action.

1.4 Evolution of Broadband in Kenya

Broadband connectivity in Kenya has undergone substantial transformation over the past two decades. The deployment of 3G, 4G, and, more recently, 5G mobile networks has been a primary driver of broadband expansion, as reflected in the steady growth of mobile broadband subscriptions. Additionally, fixed broadband development has been supported by significant increases in international bandwidth capacity following the landing of multiple submarine fibre-optic cables and the emergence of satellite-based internet services. Investments by both the private sector and the Government in national fibre backbone infrastructure have further strengthened connectivity, extending high-capacity networks to counties and previously underserved areas.

Policy and regulatory initiatives, including the National ICT Policy (2006, revised 2020), the National Broadband Strategy (2013–2017) and (2018-2023), and the establishment of the Universal Service Fund (2013), provided frameworks to accelerate access and bridge digital divides.

Table 1: Statistics on broadband development between June 2020 and June 2025

Indictor	Status as of June 2020	Status as of June 2025
Broadband subscriptions	22.08M	45.79M
4G mobile population coverage (%) *	77	97.3
5G mobile population coverage (%) *	0	30
Fixed Internet Subscriptions	609,611	2,144,713
Total available international bandwidth (Gbps)	7,392.26	22,311.445
Total utilized international bandwidth (Gbps)	2,002.11	10,735

Source: CA quarterly statistics report Q4 2019/20 and Q1 2025/26,
*Based on the population of 47.6M in June 2020 and 52.4M in June 2025

Kenya has emerged as a leading digital hub in Africa, with broadband enabling growth in mobile financial services, e-commerce, e-government, digital content, entertainment, digital learning, and the tech start-up ecosystem. However, persistent gaps in affordability, infrastructure, connectivity, digital skills, and inclusivity, particularly in unserved and underserved areas, continue to drive a digital divide, which the National Broadband Strategy 2025–2030 seeks to address.

1.5 Process for Developing National Broadband Strategy 2025-2030

The development of the NBS was guided by a transparent, inclusive, and evidence-driven approach. The process was led by a Multistakeholder Steering Committee, supported by four specialized Technical Working Groups (TWGs) aligned with the Strategy's thematic focus areas.

The Strategy is informed by a comprehensive assessment of Kenya's broadband landscape, international benchmarking, and a systematic review of lessons learned from the implementation of the National Broadband Strategy 2018–2023. This approach ensured alignment with national development priorities and policy frameworks, including the Constitution of Kenya (2010), Kenya Vision 2030, the Bottom-Up Economic Transformation Agenda (BETA), and relevant regional and global digital economy commitments.

Through this analytical and consultative process, the Strategy reflects broad stakeholder consensus, strengthens national ownership, and aligns Kenya's broadband development aspirations with global best practices.

1.6 Guiding Principles

The National Broadband Strategy (NBS) 2025–2030 is anchored in core principles that reflect the country's commitment to inclusive, sustainable, and transformative digital development. These guiding principles will shape broadband policy, investment, and implementation over the strategy period.

1) ***Universal and Inclusive Access:***
   At the heart of the NBS is the commitment to ensure that every Kenyan, regardless of geography, gender, age, ability, or income level, has access to reliable and high-speed broadband. The goal is to bridge the digital divide by extending quality broadband infrastructure and services to rural, remote, and underserved communities, leaving no one behind in the digital transformation.

2) ***Affordability and Accessibility***
   Access alone is not enough; broadband must be affordable. The NBS prioritizes measures to lower the cost of broadband services, devices, and data for users. By supporting policy and market-based mechanisms that reduce pricing barriers, the Strategy seeks to empower low-income households, small businesses, and vulnerable populations to fully participate in the digital economy.

3) ***Public-Private-People Partnerships***

Effective broadband deployment requires coordinated action and sustained collaboration among multiple stakeholders. This NBS emphasizes strong partnerships between the government, the private sector, development partners, civil society, and local communities. Such partnerships are essential for mobilizing investment, leveraging expertise, and ensuring that broadband development remains responsive to the diverse needs of citizens and the broader digital economy.

4) ***Infrastructure Sharing and Open Access***

To accelerate network deployment and reduce costs, the NBS advocates infrastructure sharing among service providers and the adoption of open-access frameworks. This principle encourages the use of existing infrastructure, such as roads, power lines, and public buildings, for broadband rollout and ensures that multiple players can access and use networks on fair and transparent terms.

5) ***Sustainability and Environmental Stewardship***

Recognizing the environmental impacts of infrastructure development, the NBS promotes the use of energy-efficient technologies, smart infrastructure planning, and climate-resilient systems. Broadband expansion must contribute to, rather than compromise, environmental sustainability and climate goals.

6) ***Security, Privacy, and Trust***

As digital connectivity expands, protecting users' data, privacy, and security becomes paramount. The NBS integrates cybersecurity and data protection considerations into the design and governance of broadband systems. Building trust in digital services is essential to promoting widespread adoption and safe participation in the digital economy.

7) ***Resilience and Futureproofing***

The broadband infrastructure deployed under this Strategy will be designed to be robust, scalable, and adaptable to emerging technologies, including 5G, artificial intelligence, and the Internet of Things (IoT). The NBS emphasizes resilience to cyber threats and physical disruptions, ensuring business continuity and reliable connectivity during crises.

1.7 Strategy Goals

This Strategy is anchored in the overarching mission to enable a digitally empowered society and a knowledge-based economy. It aims to harness the full potential of broadband connectivity to transform public service delivery, stimulate economic growth, enhance social inclusion, and position Kenya as a regional digital leader.

To achieve this vision, the Strategy pursues the following goals:

1) **To expand nationwide broadband coverage**
   The Strategy seeks to ensure every Kenyan has high-speed access by expanding the national fiber backbone by 100,000 km. This Strategy aims to achieve 99% 4G population coverage and 50% 5G coverage by 2030, while connecting 50% of households (approximately 6 million) and deploying infrastructure in 379 unserved sublocations. Public access will be enhanced by the deployment of 25,000 Wi-Fi hotspots in public spaces and institutions.

2) **To promote affordable and inclusive access**
   The Strategy aims to reduce the cost of fixed broadband from the current baseline of 13.4% of Gross National Income (GNI) per capita to 2%. It also targets a KSh 5,000 price point for entry-level smartphones, supported by VAT reviews and incentives for local assembly, with the objective of achieving 80% mobile broadband penetration.

3) **To accelerate digital infrastructure development**
   Focuses on modernizing the backbone and international links, including investing in two additional submarine cables and two additional landing stations. Domestically, the Strategy will establish two AI-ready data centers and ensure 100% of education and health institutions have fixed broadband subscriptions with a minimum speed of 1 Gbps.

4) **To catalyze digital transformation in key sectors**
   The Strategy mandates onboarding 100% of public-facing government services to online platforms. Physical infrastructure will be future-proofed by ensuring that all new road projects incorporate telecommunications ducts and that building codes are enforced to provide broadband infrastructure in all affordable housing and construction sites.

5) **To enhance digital skills and literacy**
   The Strategy will enhance digital literacy by conducting training for 20 million citizens, including farmers, youth, and persons with disabilities. It further aims to upskill 200,000 public servants and 300,000 private-sector workers in emerging technologies, while deploying 3,000 Community Digital Ambassadors.

6) **To stimulate innovation, entrepreneurship, and local content**
The Strategy will equip 1,450 digital hubs at the constituency level and provide specialized equipment to support the creative economy. These interventions aim to increase local broadcast content to 75% and train 100,000 MSMEs through a digitalization acceleration programme.

7) **To strengthen cybersecurity, data protection, and trust**
This includes maintaining 98% network uptime and implementing the National Public Key Infrastructure (NPKI 2.0). Trust will be assessed through annual national cyber hygiene surveys, behavioural analytics, and the appointment of County Cybersecurity and Digital Privacy Champions.

8) **To promote infrastructure sharing and investment efficiency**
The Strategy encourages the sharing of subsidized infrastructure and the outsourcing of One Government Network (OGN) operations to the private sector to ensure professional service levels.

Finally, the Strategy will monitor, evaluate, and enhance performance through a robust framework supported by quarterly and annual reporting, alongside formal mid-term evaluations in 2027 and end-term evaluations in 2031

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2. POLICY, CONTEXT AND STRATEGIC ALIGNMENT

2.1 Overview

This National Broadband Strategy (NBS) is designed as a foundational pillar to accelerate the country's digital transformation and socio-economic development. It aligns with Kenya's key development blueprints, national policy priorities, and regional and global commitments, ensuring coherence and complementarity in implementation. These include the following:

2.2 The Constitution of Kenya, 2010

This NBS aligns with the Constitution of Kenya (2010), which provides the legal and normative foundation for inclusive development, equity, national cohesion, accountable governance, and effective service delivery. In this context, broadband connectivity is recognized as an essential enabler of constitutional rights, including promoting equality and inclusion, strengthening public participation, enhancing good governance, strengthening security, and upholding national values and cultural identity. Broadband connectivity is therefore not merely an infrastructure investment, but a constitutional imperative central to advancing Kenya's democratic ideals, social cohesion, and sustainable development.

2.3 Acts of Parliament (Primary Legislation)

1) Kenya Information and Communications Act 1998 as amended

The Kenya Information and Communications Act (KICA) and its subsidiary Regulations govern spectrum management, infrastructure sharing, licensing, and competition within the ICT sector. These provisions enable an orderly, fair, and innovative broadband market. The NBS leverages KICA as its legislative anchor to promote spectrum efficiency, equitable access, effective regulation of digital infrastructure, while fostering an enabling environment for universal connectivity

2) Data Protection Act 2019

The Data Protection Act (DPA) safeguards citizens' personal data, ensuring privacy and trust in digital platforms. The NBS will be implemented in compliance with the DPA to uphold data subjects' privacy rights in the use of broadband infrastructure.

3) Computer Misuse and Cybercrimes Act 2018

The Computer Misuse and Cybercrime Act (CMCA) 2018 established the legislative framework for tackling cybercrimes and creating a safer digital ecosystem. The Strategy incorporates cyber resilience and supports effective enforcement of cybersecurity frameworks. The Cybercrime (Critical Information Infrastructure and Cybercrime Management) Regulations 2024 provide mechanisms to protect and enhance resilience. The NBS advocates protecting Critical Information

Infrastructure (CII) to promote national security, safeguard investments, and enhance service continuity.

2.4 National Development Frameworks / Planning Instruments

1) Kenya Vision 2030

This NBS is a critical enabler of Kenya Vision 2030, which aims to transform Kenya into a middle-income country, providing a high quality of life to all its citizens by 2030. The Vision is anchored on three key pillars, namely, Economic, Social, and Political, and recognizes ICTs as a cross-cutting foundation for national transformation. This Strategy therefore serves as a roadmap for ICT development to advance the economic, political and social objectives of Vision.

Kenya's Vision 2030 identifies ICT as a key driver of productivity, competitiveness, innovation, and job creation. The Strategy advances the social pillar by enabling e-health, e-learning, e-government services, and social inclusion. It also reinforces the political pillar by enhancing online access to justice and security services, supporting transparency and accountability and promoting online civic engagement. In addition, the Strategy supports Vision 2030's ICT Flagship initiatives, including Konza Technopolis, digital hubs, and the national fibre-optic backbone, while promoting public-private partnerships and strengthening trust in the digital economy.

2) The Fourth Medium Term Plan (Bottom-Up Economic Transformation Agenda)

This Strategy aligns with the BETA, which seeks to drive inclusive growth, job creation, and expanded access to services and opportunities for all Kenyans, particularly those historically left behind. Broadband connectivity is a key enabler of this transformation, providing the digital infrastructure and services necessary to support BETA's five priority pillars: Agriculture and Food Security; Micro, Small and Medium Enterprises (MSMEs); Housing and Settlement; Universal Health Coverage; and Enhancing the Digital Superhighway and Creative Economy.

The NBS can support digital agriculture by enabling farmer access to online markets, financial services, climate advisory tools, rural broadband expansion, and e-learning opportunities. It can facilitate MSME growth by improving access to affordable internet, enhancing digital skills, expanding e-commerce platforms, expanding cloud services, expanding digital finance, and providing affordable devices. The Strategy can also advance smart city initiatives, digitized housing services such as property registration and planning, and connectivity within affordable housing projects. In addition, it can enable digital health systems, including telemedicine, e-pharmacy, and online training for health workers, thereby improving healthcare access and efficiency. Further, the Strategy can support the expansion of digital infrastructure to promote content creation, digital entrepreneurship, online employment, and government digitization, particularly benefiting youth and women.

2.5 National Policies & Cross-Government Strategies

1) National ICT Policy 2020

The Policy prioritizes universal broadband access, innovation, digital skills, and cybersecurity. It establishes broadband as a public good and commits to leveraging public-private partnerships, infrastructure sharing, and investment incentives to drive national connectivity goals. This Strategy aligns with the National ICT Policy by setting sector-wide broadband standards, strengthening private-sector engagement, and embedding inclusivity targets to ensure no Kenyan is left behind in the digital economy.

2) The Kenya Cloud Policy 2024

The Kenya Cloud Policy establishes frameworks for transition to secure cloud adoption in Kenya. The NBS leverages policy objectives to promote cloud-based services, including e-government, e-commerce, e-health, e-learning, and to expand access to digital services through affordable broadband.

3) Kenya Digital Economy Blueprint (2019)

The Blueprint positions broadband connectivity as a critical enabler of Kenya's transition to a digital economy. It identifies five pillars, digital infrastructure, digital government, digital business, innovation-driven entrepreneurship, and digital skills, within which broadband plays a foundational role in supporting competitiveness, inclusivity, and economic transformation. This NBS operationalizes the Blueprint by ensuring that nationwide broadband deployment directly supports growth across these pillars.

4) Kenya National Digital Master Plan (2022–2032)

The Master Plan sets out a long-term roadmap for ICT development, focusing on universal broadband coverage, improved service quality, and enhanced digital inclusion. It links broadband expansion to key flagship initiatives, including the Digital Superhighway and smart government systems, reinforcing broadband as a central component of Kenya's digital future. This NBS builds on that roadmap by translating these priorities into measurable broadband penetration targets, a phased infrastructure deployment plan, and county-level implementation frameworks.

5) Kenya Artificial Intelligence Strategy 2025-2030

The Strategy integrates broadband as the foundation for adopting emerging technologies. Broadband connectivity enables AI-driven solutions in agriculture, health, finance, and education, positioning Kenya as a regional leader in ethical and inclusive AI adoption.

6) National Cybersecurity Strategy (2022–2027)

The NBS recognizes cybersecurity and resilience as critical national priorities, ensuring the protection of digital assets, networks, and users.

7) Universal Service Fund Strategy 2023-2027

The Universal Service Fund (USF) Strategy 2023-2027 allocates resources to unserved and underserved areas to help bridge the digital divide. The NBS leverages USF to support the rollout of rural broadband, community networks, and inclusive access programs.

2.6 Regulations, Standards, and Regulatory Frameworks

1) National Construction Authority Infrastructure Regulations

The National Construction Authority (NCA) Regulations guide civil works relevant to broadband deployment. The NBS emphasizes harmonization of ICT infrastructure development with NCA regulations to reduce costs, improve quality, and avoid duplication.

2) Community Network Licensing Framework

The Community Network Licensing Framework recognizes community networks as complementary solutions for last-mile broadband connectivity. This NBS promotes community-driven models to ensure digital inclusion in unserved and underserved areas.

3) Government ICT Standards for Infrastructure

The ICT Authority (ICTA) has developed minimum standards for fibre infrastructure for Ministries, Counties, Departments and Agencies (MCDAs). This NBS builds on these standards to ensure consistency, interoperability, and efficiency in public-sector fibre rollouts.

4) National and International Industry Standards

Industry standards govern the quality of ICT equipment and infrastructure. This NBS integrates these Standards to promote safety, interoperability, and reliability of broadband systems deployed nationwide.

2.7 Regional and International Frameworks and Commitments

1) East African Community Model ICT Regulatory Framework

Broadband connectivity is widely recognized as a strategic enabler of economic integration, regional competitiveness, and sustainable development. The Strategy aligns with the Framework, which prioritizes a unified digital market, harmonized ICT policies and regulatory frameworks, regional infrastructure integration, digital skills development, cybersecurity, data protection, and cross-border digital services. This alignment supports coordinated digital growth, minimizes duplication, and advances the development of a unified regional digital market.

2) Digital Transformation Strategy for Africa 2020–2030

The Strategy provides a continental framework for harnessing digital technologies to drive inclusive and sustainable development, improve service delivery, and strengthen regional integration. This NBS aligns with this vision by prioritizing universal broadband access, digital inclusion, digital skills development, digital governance, digital infrastructure, an enabling policy and regulatory environment, and the promotion of innovation and entrepreneurship. In this context, broadband connectivity is a key enabler of Kenya's digital transformation and a contributor to Africa's broader digital agenda.

3) Sustainable Development Goals 2030

The United Nations Sustainable Development Goals (SDGs) provide a universal blueprint for ending poverty, protecting the planet, and ensuring prosperity for all by 2030. As digital technologies become increasingly critical to achieving sustainable development, broadband connectivity has emerged as a key enabler of progress across all 17 SDGs. The Strategy is aligned with the SDGs and aims to transform Kenya into a digitally empowered society that leaves no one behind.

4) ITU/UNESCO Broadband Commission Targets

The Commission has set global targets to advance universal access, affordability, and meaningful connectivity by 2030. The Strategy aligns with these benchmarks, reinforcing Kenya's commitment to digital connectivity, inclusion, and leadership in the regional digital economy. This includes making broadband policy universal and affordable, getting MSMEs and everyone online, promoting digital skills development, increasing the use of e-finance, and bridging the gender digital divide.

The Commission established the "Global Goal of Universal Connectivity" in its 2020 Manifesto to support the UN Secretary-General's digital cooperation efforts. This was built on earlier targets, including the 2018 goal of 75% global user penetration (with specific targets for developing nations). The current 2030 targets, announced in 2022, refine the focus to include "meaningful connectivity," addressing not just access but the quality and impact of that access.
These targets build on earlier user penetration goals (e.g., 75% worldwide by 2025) and emphasize "meaningful connectivity" as essential for digital transformation and progress.

Key Global Targets & Goals for 2030:

Table 2. 1: ITU/UNESCO Broadband Commission Targets

Key Target	2030 Targets
Universal & Meaningful Connectivity	Enabling safe, satisfying, enriching, productive, and affordable online experiences for all.
Affordability	Broadband access (entry-level) should cost less than 2% of the monthly Gross National Income (GNI) per capita and less than 2% of the average income of the bottom 40% of the population.
Foundational for SDGs	Recognizing digital connectivity as crucial for meeting the UN's 2030 Agenda for Sustainable Development.

Table 2. 2: Universality targets

Universality targets	
100%	of population aged 15+ uses the Internet
	of households have Internet access
	of businesses use the Internet
	of schools are connected to the Internet
	The population is covered by a mobile network of the latest technology
	of population aged 15+ owns a mobile phone
>70%	of population aged 15+ has basic digital skills
>50%	of population aged 15+ has intermediate digital skills
Gender parity	is achieved for Internet use, mobile phone ownership and use, and digital skills
Technology targets	
100%	of fixed-broadband subscriptions are 10 Mb/s or faster
20Mb/s	Minimum download speed at every school
50kb/s	Minimum download speed available per student
200GB	Minimum data allowance for every school
Affordability targets	
2%	Entry-level broadband subscription costs less than 2% of gross national income per capita
	Entry-level broadband subscription costs less than 2% of average income of the bottom 40% of the population.

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3. SITUATIONAL ANALYSIS

3.1 Overview

This chapter evaluates the prevailing internal and external environments that bear strategic implications on the development and implementation of the National Broadband Strategy. It provides insights into the current context, identifies challenges, and outlines the interests, influence, and relationships of those affected or involved. The purpose is to inform decision-making, ensure effective strategic alignment, and guide the formulation of strategic choices that address the underlying issues and opportunities.

This chapter also looks at stakeholder analysis. The stakeholder analysis for this Strategy involves identifying the key stakeholders, their roles, interests, influence, and potential impact on the strategy's implementation.

This Strategy is structured around the following four thematic areas:

1. Policy, Legal and Regulatory Environment;
2. Infrastructure, Connectivity and Devices;
3. Capacity Building, Innovation and Awareness Creation; and
4. Security, Privacy, Content and Application.

This situational and Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis aligns with these themes, leveraging data from relevant research and lessons from past strategies to inform strategic planning.

3.2 Achievements of NBS 2018-2023

Table 3.1 presents the thematic areas, target initiative and achievements in the implementation of the second NBS (2018-2023)

Table 3. 1: Achievements in the NBS 2018-2023

S.no	Thematic Area	Target Initiative	Achievement
1.	Policy, legal, Regulatory and institutional frameworks	Development of Policy Frameworks to increase investments in the ICT Sector	a) National ICT Policy (2020), b) Digital Economy Blueprint (2019), c) Kenya National Digital Master Plan (2022-2032)
		Development of Legal and regulatory Frameworks to provide for privacy and cybersecurity	a) Data Protection Act (2019) b) Computer Misuse and Cybercrimes Act (2018). c) Review of KICA regulations ongoing

S.no	Thematic Area	Target Initiative	Achievement
2.	Development of Broadband Infrastructure	Expand Fibre Infrastructure	40,000 KM of Fibre deployed
		Enhance Mobile Broadband Coverage	National population Coverage is 97.3% for 4G and 30% for 5G.
		Additional Submarine Cables	Kenya is served by six submarine cables, with 22,300 Gbps of available capacity and 12,500 Gbps in use.
		Satellite Infrastructure	Satellite internet capacity of 0.445Gbps
		Internet Exchange Points at local Data Centres	Kenya Internet Exchange Point has 6 POPs,
		Local data centres for hosting internet traffic.	Ten (10) active data centres.
3.	Capacity Building, Innovation and Awareness Creation	Increase national digital Literacy to 50%	xxxxx
		Train Kenyans on digital skills at the National Government, County Governments, Schools, PPPs, TVETs, and Development Partners)	1,692,110 people trained
		Development of ICT innovation Digital Hubs (ICT hubs, Ajira Digital, and Jitume programs)	1,692,110 people are employed in digital jobs
		Awareness Creation	xxxxx
4.	Privacy and Security	Enhance Data Protection and Privacy	The enactment and implementation of the Data Protection Act (2019) have resulted in the registration of xxx data and xxx data controllers.

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S.no	Thematic Area	Target Initiative	Achievement
		Enhance Cybersecurity	a) The Computer Misuse and Cybercrime Act 2019 led to b) Development of Computer Misuse and Cybercrime Regulations, c) Development of the National Cyber Security Strategy 2022, d) Established the National Computer and Cybercrimes Coordination Committee (NC4) that coordinates its enforcement.
		Overall Cyber Threats Detected	Increased from approx. 52 M in FY 2018/19 to 4.6 B in FY 2024/25
		Overall Cyber Threat Advisories Disseminated	Increased from 48,000 in FY 2018/19 to approx.17.3M in FY 2024/25
	Services, Content and Application	Services	Digitized and digitalized 22,000 government services onboarded on Government online platform (e-Citizen).
		Content	40% local broadcast content achieved against a 75% target by 2023 including in agriculture, health, education among others.
		Applications	There has been increased uptake of applications in all sectors including Fintech, e-commerce, and manufacturing among others.

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3.3 SWOT Analysis

3.3.1 Strengths

1. Policy, Legal and Regulatory Environment:

Kenya's broadband ecosystem is supported by a robust legal, policy, and institutional framework that provides a strong foundation for sustained digital growth. The country benefits from comprehensive overarching policies, including Vision 2030, the National ICT Policy (2020), the Digital Master Plan (2022–2032), the Digital Economy Blueprint (2019), the previous National Broadband Strategy (2018–2023), as well as the Cloud Policy and AI Strategy, among others, which collectively prioritize universal, secure, and affordable broadband access. These are reinforced by key legislation, including the KICA, which anchors sector regulation; the CMCA, which strengthens cybersecurity and digital infrastructure resilience; and the DPA, which safeguards privacy and promotes user trust across broadband-enabled services.

Kenya has well-established institutions that operationalize these frameworks. The MICDE provides policy leadership; the CA enforces regulation and oversees the USF; ICTA drives national government infrastructure rollout and digital services; Konza Technopolis fosters innovation ecosystems; the National Computer and Cybercrime Coordination Committee (NC4) which comprises heads of key government ministries and agencies, all working together to secure Kenya's cyber space; the National KE-CIRT/CC, managed by CA and designated as the Cyber Security Operations Centre (CSOC) for the ICT and Telecommunications sector under the CMCA (Critical Information Infrastructure and Cybercrime Management) Regulations, provides 24/7 threat detection and response; the Office of the Data Protection Commissioner enforces data protection compliance; Media Council of Kenya that is responsible for setting media standards and ensuring compliance; Kenya Film Classification Board regulates film and content; and Competition Authority of Kenya that promotes fair competition across all sectors. Collaboration among these institutions, alongside active engagement with industry players and strong PPPs, enhances coordination and supports competitive broadband markets.

The country also benefits from regular policy, regulatory, and legal reviews, positioning Kenya strategically to implement an ambitious, future-ready broadband strategy.

2.Infrastructure, Connectivity and Devices:

Extensive public- and private-sector fibre and mobile wireless networks provide a robust backbone infrastructure and mobile penetration across both urban and rural areas. Population coverage of 4G (97.3%) and 5G (30%), together with the growth of Wireless Internet Service Providers, continues to facilitate rapid expansion of connectivity and access. Kenya also benefits from a vibrant Internet Service Provider industry, with more than 300 licensees and multiple local commercial data centre

service providers. The launch of LEO satellite connectivity further expands high-speed broadband options for remote areas, complementing terrestrial networks.

Multiple Internet Exchange Points, cross-border connectivity, and several submarine landing cables enhance international connectivity and redundancy. Local assembly of devices and fibre optic cables is contributing to industry growth while improving accessibility and affordability. Innovative financing models, such as pay-as-you-go for devices, have expanded device access to approximately two (2) million users.

Infrastructure sharing among network operators, the use of utility infrastructure such as power poles, pipelines, and railways, and the country's extensive electricity grid continue to support the expansion of broadband networks. Many homes, businesses, and government institutions are connected to the electrical grid.

3. Capacity Building, Innovation and Awareness Creation:

Programmes such as Tech hubs, Ajira Digital, and Jitume continue to drive fintech development and youth innovation, and the availability of devices for the Digital Learning Program (DLP) in schools. In addition, a wide range of tertiary institutions, including universities, colleges, and Technical and Vocational Education and Training (TVET) centers, offer ICT-related training and education. At the community level, various Non-Governmental Organizations (NGOs) and Civil Society Organizations (CSOs) also provide ICT training, further developing digital skills across the country. The presence of Community-Based Organizations (CBOs) similarly contributes to capacity-building at the last mile to reach citizens. Government digitalization efforts have also advanced, with more than 22,000 government services now available online.

4. Privacy and Security:

The Data Protection Act (2019) enhances privacy; CMCA and KICA, with NC4, provide a framework that builds trust, with NC4 coordinating cybercrime responses and enforcing cyber resilience.

5. Services, Content and Application:

Public-facing services onboarded to the government online platform (E-Citizen) and monetization of digital content. Flexible financing models, e.g., pay-as-you-go for devices, have promoted access to services and development of digital content.

3.3.2 Weaknesses

1. Policy, Legal and Regulatory Environment:

Delays in reviewing relevant policy, legal, and regulatory frameworks, such as KICA, limit the sector's ability to adequately address broadband access, digital convergence, and emerging technologies. The absence of a coordinated national framework for infrastructure planning and deployment, together with overlapping institutional mandates, has contributed to regulatory fragmentation, particularly in wayleave and rights-of-way regulations. This challenge is compounded by unharmonized requirements across national and county governments and multiple MCDAs, resulting in duplicative processes, unpredictable fees, and significant delays in broadband deployment.

Inadequate coordination in implementing the NBS (2023), coupled with the absence of structured monitoring and reporting mechanisms, further impedes effective execution. In addition, insufficient enforcement of laws to protect broadband infrastructure exposes networks to vandalism and damage. The absence of a policy or legal framework for differential power tariffs for the ICT industry also sustains high operational costs for broadband infrastructure.

2. Infrastructure, Connectivity and Devices:

Low fixed broadband penetration (<15%), rural coverage gaps (56.3% land coverage gap of mobile networks – CA 2021 Access Gap Study), and high device costs (47.5% feature phones) continue to constrain access, particularly for low-income earners. The high cost of deploying and maintaining infrastructure, including high and recurring wayleave payments and multiple taxes, further limits network expansion.

Limited budgetary resources for infrastructure deployment restrict efforts to reach unserved and underserved areas. In addition, the cost, availability, and reliability of electricity remain challenges for network infrastructure, households, and users. The lack of alternative landing locations for submarine cables also poses risks to broadband infrastructure.

3. Capacity Building, Innovation and Awareness Creation:

Low rural Return on Investment (ROI) continues to discourage private investment. Only 54% of schools are connected nationwide, falling short of high-speed connectivity targets (1 Gbps by 2022). Despite expanding connectivity, usage remains constrained by broader structural barriers, including affordability challenges, digital skills gaps, and the absence of supportive infrastructure, such as reliable electricity in rural areas.

4. Privacy and Security:

Low compliance with existing standards, low public awareness of cybersecurity and data privacy, and an unreliable power supply increase risks. Inadequate skill set and competencies in cybersecurity.

5. Services, Content and Application:

Limited local content (40% vs. 75% target) and school connectivity (54%) reduce the relevance of broadband. High device and internet access costs, frequent call drops, congestion, and inadequate redundancy.

3.3.3. Opportunities

1. Policy, Legal and Regulatory Environment:

Regular reviews of ICT laws and policies position broadband as a core enabler of the digital economy. Alignment with regional and global strategies supports regional integration and trade. Development partners have demonstrated interest in providing technical and financial support for policy reform, capacity building, and regulatory modernization. Recognition of broadband as a utility creates opportunities to integrate connectivity into national development planning, including the National Building Code and infrastructure standards.

Improved coordination between national and county governments, together with harmonized levies and licensing processes, can foster a more predictable investment environment. Kenya's vibrant private sector and the emergence of community networks present avenues to expand last-mile access and localize broadband deployment. Expanding the CA's regulatory sandbox and open-access rules can further empower communities and stimulate innovation, helping ensure that broadband growth delivers meaningful socio-economic impact.

Broadband expansion creates opportunities to integrate digital skilling into legal and policy frameworks, ensuring communities, youth, and SMEs can fully leverage broadband-enabled opportunities. Growing efforts to promote digital inclusion also create opportunities for reforms that prioritize gender, youth, disability, and connectivity in unserved and underserved areas. In addition, innovations in over-the-top (OTT) services present new opportunities to support economic growth.

The introduction of differential energy tariffs can help alleviate the operational and financial constraints faced by operators within the industry, thereby supporting the affordability and accessibility of broadband for end consumers. This should be considered alongside the accessibility and reliability of grid energy in unserved and underserved areas.

2. Infrastructure, Connectivity and Devices

1) Scaling 5G, leveraging Low Earth Orbit satellites, and expanding WISPs for Fixed Wireless Access can facilitate broadband access in unserved and underserved areas, while the active ISP market continues to expand into rural regions. Significant opportunities exist to leverage the Digital Superhighway (100,000 km of fibre, 1,450 digital hubs, and 25,000 Wi-Fi hotspots).

2) Provide last-mile connectivity to homes and businesses, targeting the remaining 8.5 million households already connected to electricity but not yet served by fixed broadband.

3) There is a strong opportunity to increase speeds for existing users. Expanded open-access and infrastructure sharing can reduce the cost of network deployment.

4) Opportunities exist to enhance connectivity for Kenya's business sector, strengthen links to neighboring landlocked countries, and develop green data centres serving Kenya and the wider region, building on strong international connectivity and renewable energy resources.

5) Expanding the local assembly of devices, components, fibre-optic cables, cabling, and related infrastructure can lower costs and support products tailored to the local market. The emerging manufacturing sector in semiconductors, PCBs, and USB cables can continue to grow to serve this demand.

6) Kenya stands to benefit from the rapidly growing AI industry, both as a hub for hosting AI services and through the development and application of AI solutions to enhance infrastructure, including network planning, energy optimization, edge computing, and new business models.

7) The development of other emerging technologies presents additional opportunities. Advances in cloud technologies, software-defined radio, and related innovations can lower network costs, simplify operations, accelerate rollout, improve quality of service, and reduce barriers to market entry.

8) An integrated infrastructure development approach can enable the provision of telecom utility ducts, lowering network rollout costs.

3. Capacity Building, Innovation and Awareness Creation:

Leverage on the targeted 25,000 public Wi-Fi hotspots and 1,450 digital hubs to create awareness using local languages, thereby boosting digital literacy and adoption. Existing capacity-building forums and emerging innovations in the broadband sector continue to support growth. A youthful, educated, and tech-savvy population provides a strong foundation for innovation. High level of broadband coverage and mobile usage, with 64.9% of the population using mobile phones, provides a solid platform for expanding digital services and connectivity. Cybersecurity awareness can be strengthened by sharing practical examples of past incidents and by educating/training the public to recognize potential threats and respond appropriately.

4. Privacy and Security:

Strengthening cybersecurity awareness can enhance trust and rural resilience.

5. Services, Content and Application:

Expanding e-government applications can drive GDP (1.38% per 10% penetration) and inclusion.

3.3.4 Threats

1. Policy, Legal and Regulatory Environment:

Global geopolitical shifts complicate the policy landscape. Delays in reviewing relevant policy, legal, and regulatory frameworks to adequately address broadband access, digital convergence, and emerging technologies. Policies may be misaligned and nonresponsive to the emerging digital market needs. Legal disputes could delay the implementation of the Broadband projects.

2.Infrastructure, Connectivity and Devices:

Increased vandalism of broadband infrastructure, coupled with unreliable and expensive power, continues to constrain network operations, while the rise of e-waste poses negative environmental consequences. The growth of counterfeit and grey-market devices, as well as other potentially unsafe products, further undermines legitimate providers.

Macroeconomic conditions, including currency fluctuations, interest rates, and supply chain disruptions, can adversely affect the investment climate, consumer purchasing power, hardware availability, pricing, and overall market stability. Climate change, particularly flooding, poses risks to infrastructure, both directly and indirectly, through its impact on power availability and costs.

Unresolved governance issues affecting the African Network Information Centre (AFRINIC), the regional internet registry, continue to hinder service providers' ability to secure critical connectivity resources.

3. Capacity Building, Innovation and Awareness Creation:

Gender disparities, accessibility barriers for persons living with disabilities, and low awareness of broadband's practical benefits limit uptake. A lack of learning materials in local languages poses challenges for capacity building; it is difficult to provide training materials and identify those who need training. In addition, insecurity in certain regions of the country poses a significant barrier to the development of digital skills.

4. Privacy and Security:

Rising cyber threats, for example, 4,586 billion detected between April and June 2025 compared to 1,131 billion during the same period in 2024, combined with low awareness, continue to undermine digital trust. Data privacy breaches, cyberbullying, identity theft, computer misuse, and other cybercrimes remain persistent risks.

5. Services, Content and Application:

Service providers are not willing to invest in commercially unviable areas. Exploitation of local content creators by social media and e-commerce mega platforms. Misinformation, disinformation and fake news.

3.4 Lessons from National Broadband Strategy 2018-2023

Key lessons from the implementation of the previous Broadband Strategy underscore the importance of a holistic ecosystem approach, anchored in a strong government vision, private-sector collaboration, and integrated strategies addressing infrastructure, affordability, and digital skills.

Key Lessons Learned

1) **Holistic national strategies are essential:** A national broadband plan linked to broader development agendas, balancing supply-side infrastructure development with demand-side stimulation, is critical for successful broadband development. A narrow focus on infrastructure alone is insufficient; policies must also consider the application of broadband across sectors such as education, health, and government services.

2) **Addressing the digital divide requires multi-faceted action:** The digital divide extends beyond infrastructure availability to include affordability and the capacity to use technology (digital literacy). These dimensions must be addressed concurrently to achieve inclusive access and maximize development outcomes.

3) **Mobile broadband drives initial growth:** In Kenya, mobile broadband has been the primary driver of connectivity, contributing positively to poverty reduction and economic growth. Infrastructure sharing among mobile network operators (MNOs) has proven to be a viable approach for reducing costs and expanding rural coverage.

4) **Monitoring and evaluation are important:** Continuous monitoring and evaluation of broadband investments are necessary to assess impact and inform the development of effective strategies.

3.5 Gap Analysis

Table 3.2 presents the gaps identified in the implementation of the NBS 2018-2023

Table 3. 2: Gap Analysis

Thematic area	Gaps identified	Recommendations
Policies, legal and **regulatory** environment	***Inadequate legislation on infrastructure sharing***	***Develop Comprehensive Infrastructure-Sharing Regulations: Establish clear guidelines and incentives for infrastructure sharing to reduce deployment costs and foster*** collaboration among service providers.
	Lack of spectrum policy	Develop and implement spectrum policy.
	Poor enforcement of laws to protect broadband infrastructure	Strengthen the enforcement of laws to protect the infrastructure
	a) Inadequate coordination of broadband infrastructure deployment **b)** Fragmented Wayleave and permitting laws	a) Facilitate Coordinated Infrastructure Deployment: Amend existing regulations to promote the integration of ICT infrastructure in public works projects, optimizing resource use and expanding broadband reach. ***b)*** Resolve multiple licensing by the national and County governments
Infrastructure and connectivity	***Urban-Rural Disparities:*** Urban areas have an internet penetration rate of 56.5%, while rural areas lag at 25.0%, resulting in a national average of 35.0%. Additionally, mobile phone ownership stands at 64.6% in urban regions compared to 48.6% in rural areas, with a national average of 53.7%	***Enhance Rural Infrastructure Investment:*** Allocate resources to develop broadband infrastructure in rural areas, potentially through public-private partnerships, to bridge the urban-rural connectivity gap.
	Gender Disparities: 39% of women in Kenya use mobile internet, whereas 59% of men in Kenya use mobile internet. This implies that women in Kenya are 20% less likely to access the internet than men, highlighting a significant gender gap in digital connectivity[2].	***Promote Digital Literacy Programs:*** Implement initiatives targeting women and rural populations to improve digital skills and encourage internet adoption. Initiate comprehensive digital literacy campaigns to equip citizens with the skills necessary to utilize broadband services effectively, thereby increasing adoption rates.

Thematic area	Gaps identified	Recommendations
	Currently, 2869 out of 74000 public institutions have been connected with broadband	***Fast-track the last-mile connectivity for the remaining institutions***
	High Cost of Broadband: Despite efforts to reduce costs, broadband services remain unaffordable for a significant portion of the population. The NBS aimed to meet the UN Broadband Commission's affordability target—1 GB of mobile data priced at 2% or less of gross national income per capita—by 2023. As of March 2023, this goal had not been fully achieved, limiting internet adoption among lower-income populations [2].	***Implement Affordable Pricing Models:*** Develop and promote pricing strategies aligned with the UN Broadband Commission's affordability targets to make broadband services accessible to a broader population.
Services, Content, and Applications	***Limited Development of Local Digital Content and Applications*** - The strategy emphasized the creation of relevant digital content and applications to drive broadband demand. However, the availability of local content has remained limited, hindering the perceived value of internet services among Kenyan users.	***Promote Local Content Creation:*** Encourage the development of local digital content and applications by providing incentives, capacity-building programs, and support for local developers and content creators.
	Slow onboarding of E-Government Services: The adoption and integration of some government services have been slower than anticipated, limiting citizen engagement and the efficiency of government operations.	***Enhance E-Government Initiatives:*** Accelerate the implementation of e-government services by investing in necessary infrastructure, streamlining processes, and conducting public awareness campaigns to increase citizen engagement.
	Digital Accessibility Challenges ***that*** Limit the Ability of Persons Living with Disabilities (PLWDs) to Benefit from Broadband Services.	***Improve Digital Accessibility:*** Implement policies and standards to ensure that digital platforms and services are accessible to persons with disabilities, including by adopting assistive technologies and inclusive design practices.

Thematic area	Gaps identified	Recommendations
Capacity Building and Innovations	***Insufficient Digital Literacy and Skills*** Development***:***	***Enhance Digital Literacy Programs:*** Implement nationwide digital literacy initiatives targeting diverse demographics to ensure that citizens can effectively use broadband services.
	Low investment in Research ***and Development (0.8% against 1% of GDP):***	***Increase R&D Funding*****:** Allocate more resources to R&D in the ICT sector to foster innovation and technological advancements.
	Limited Support for Local Innovations***:***	***Support Local Innovators:*** Establish incubation centers and provide funding opportunities to nurture local innovations and facilitate their market entry.
	Gaps in Technical Capacity ***for Broadband Deployment:***	***Build Technical Capacity:*** Develop programs to enhance technical skills among communities, enabling them to participate actively in broadband infrastructure deployment and maintenance
Privacy and Security	***Data Protection and Privacy Enforcement:*** Kenya enacted the Data Protection Act in 2019 to safeguard personal information. However, challenges persist in its enforcement.	***Strengthen Enforcement of Data*** Protection ***Regulations.***
	Inadequate Cybersecurity **Infrastructure and** ***Preparedness*****:** The rapid expansion of broadband services has heightened exposure to cyber threats.	***Enhance Cybersecurity Infrastructure:*** Invest in developing and implementing comprehensive cybersecurity frameworks, including establishing a national Computer Emergency Response Team (CERT) to coordinate responses to cyber incidents.
	Inadequate Public **Awareness and Digital** Literacy **on cybersecurity and privacy rights.**	***Promote Public Awareness and Education:*** Implement nationwide campaigns to educate citizens on privacy rights and **cybersecurity** best practices. Integrate digital literacy programs into educational curricula to foster a culture of security-conscious internet usage.
Broadband devices	***Affordability of Broadband Devices:*** A significant portion of the Kenyan population finds broadband-enabled devices, such as smartphones and computers, prohibitively expensive. This financial barrier limits many citizens' ability to access	***Promote Local Manufacturing and Assembly:*** The government should provide tax breaks, subsidies, and other incentives to encourage local and international companies to establish manufacturing and assembly plants for broadband devices in Kenya. This initiative could reduce import-related costs and make devices more affordable.

Thematic area	Gaps identified	Recommendations
	broadband services, thereby hindering the strategy's goal of widespread broadband adoption.	
	Limited Local Manufacturing and Assembly: Kenya relies heavily on imported broadband devices, which are subject to taxes and import duties, thereby further increasing their prices. The lack of a robust local manufacturing or assembly industry for these devices contributes to their high cost and limits accessibility.	a) ***Implement Subsidy Programs:*** Develop programs that offer financial assistance or subsidies to low-income households to purchase broadband-enabled devices. Such initiatives would enhance digital inclusion by making devices more affordable to a broader segment of the population. b) ***Tax incentives:*** The government should consider giving tax incentives on device assembling material, which would result in a significant reduction in the final device.

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4. STRATEGIC MODEL

4.1 Overview

To realize the vision and goals of the NBS, implementation will be guided by four interdependent strategic pillars, which represent the core focus areas through which broadband will be deployed, governed, and utilized to drive digital transformation and socio-economic development. The four pillars are as follows:

1. Policy, Legal and Regulatory Environment
2. Infrastructure, Connectivity and Devices
3. Capacity Building, Innovation and Awareness Creation
4. Privacy, Security, Content and Application

4.1Policy, Legal and Regulatory Environment

4.1.1 Strategic Objective 1

To provide an enabling environment that promotes access to quality, reliable and affordable broadband connectivity.

Strategies

Strategy 1: Review relevant and applicable policies, laws and regulations to address gaps related to multiple licensing by government agencies, broadband access, way leave licensing, promotion of fair competition, critical infrastructure protection, promotion of green technologies, embedded cybersecurity requirements (baseline security standards for ISPs, incident reporting, cooperation with CSIRTs) capacity building, awareness and Innovation; Services, Content and Application.

Initiatives

1) Legal and Policy Framework Review

a) Review the Computer Misuse and Cybercrime Act (CMCA) to expand the National Computer and Cybercrime Coordination Committee (NC4) to include the private sector, promoting collaboration and coordination between government and the private sector.

b) Finalize the comprehensive review of the Kenya Information and Communications Act (KICA) and its subsidiary regulations on licensing, consumer protection, Quality of Service (quality of service), and Universal Access and Service. In parallel, reform spectrum management by zero-rating fees in designated access gaps and updating pricing formulas to incentivize the rapid deployment of mobile broadband networks.

c) Review the National ICT Policy to address broadband by integrating and harmonizing existing ICT sector policies.

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d) Ratify the United Nations Convention against Cybercrime (Hanoi Convention) and the Malabo Convention on Cybersecurity and Data Protection.
e) Review laws and regulations to mandate the construction of shareable ducts along the road network and within buildings.
f) Resolve multiple licensing requirements imposed by national and county governments, including accreditations that increase the cost of deploying broadband infrastructure and services.

2) Fiscal Reform and Local Industry Incentives

a) Review the Value Added Tax (VAT) for entry-level/budget smartphones to bring down the cost of acquisition to KSh. 5,000 to facilitate access by first-time users and low-income households.
b) Review MCDAs' rules to incentivize broadband infrastructure investments.

3) Environmental, Energy, and Sustainability Standards

a) Consider the introduction of preferential tariffs through the Energy and Petroleum Regulatory Authority (EPRA) for the telecommunications industry that supports broadband connectivity, with the aim of enhancing accessibility and affordability for end users.
b) Review e-waste regulations in collaboration with the National Environment Management Authority (NEMA) to prevent dumping, keep pace with rapidly replaced equipment, and promote proper disposal.
c) Establish an environment and sustainability framework for broadband, specifically addressing carbon and climate change.

4) Governance and Coordination Mechanisms

a) Establish a Multi-Agency National Broadband Implementation Committee to oversee the implementation of the strategy.
b) Establish a County Digital Infrastructure Fund to provide matching grants and technical support to accelerate county-level projects.
c) Implement a stakeholder consultation framework and an implementation coordination mechanism for fiscal and procurement reforms to strengthen Kenya's local ICT device manufacturing ecosystem, including lowering taxes on components, incentivizing local device manufacturing, assembly and maintenance or repair services, and mandating preferential government procurement of locally assembled ICT devices across government.

5) **Spectrum and Infrastructure Management**
   a) Review KICA to zero-rate spectrum fees for areas designated as "true access gap".
   b) Review the spectrum pricing formula to promote and incentivize the deployment of mobile broadband networks.
   c) Enforce the Infrastructure Sharing Regulations to mandate the sharing of subsidized infrastructure, establish transparent pricing and access requirements, and outline robust dispute-resolution mechanisms.
   d) Create a national framework for wayleaves and permits levied by Ministries, Departments, Agencies and Counties.
   e) Review KICA to zero-rate spectrum fees for areas designated as “true access gaps.”

6) **Regulatory Oversight and Consumer Protection Activities**

   a) Implement a Quality of Service (QoS) framework, including minimum service standards for fixed and mobile broadband, automated monitoring and reporting systems, public reporting of QoS results, and consumer redress mechanisms.
   b) Enhance cybersecurity and data protection through critical infrastructure protection standards and data protection compliance tools for businesses.
   c) Develop spectrum management modernization measures and spectrum sharing models.
   d) Establish a cross-sector coordination mechanism, including an inter-ministerial committee on digital transformation and a county–national government coordination platform.
   e) Execute data mapping and insights by collecting detailed data on broadband infrastructure and users to assess penetration and coverage.
   f) Integrate ICT considerations into other ministerial and agency policies, including building and roads codes, as well as sectoral frameworks for education, healthcare, and security.

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4.2 Infrastructure, Connectivity and Devices

4.2.1 Strategic objective 2

To develop ubiquitous, quality, reliable and resilient broadband infrastructure for service delivery, job creation and economic growth

Strategies

Strategy 1: Expand universal access to high-quality broadband connectivity

This strategy will enhance submarine and cross-border connectivity, national backbone networks and last-mile connectivity.

Initiatives

1) **International and Cross-border Connectivity Enhancement**
   a) Investment in two (2) additional submarine cables and two (2) additional landing stations to enhance capacity, reduce latency, prepare for the eventual retirement of some cables, and enhance redundancy and distribute risk.
   b) Build additional fiber capacity at border crossing points for redundancy in Malaba, Busia, Moyale, Nadapal/Nakodok, Liboi, Mandera, Namanga, Isebania, Lunga Lunga and any other new border point. At least 2 crossings per country, where possible.
   c) Build fiber on top of the Electrical power infrastructure for additional terrestrial cross-border connectivity.
   d) Increase investment and enhance security at cross-border and submarine infrastructure sites.

2) **National Fiber Backbone Expansion and Maintenance**
   a) Expand the national fibre backbone infrastructure in line with the 100,000km target in the digital super highway.
   b) Map key backbone networks against coverage and redundancy gaps, assess the redundancy and capacity needs and develop a joint government and private sector roadmap to expand fiber coverage in the identified areas, aligned with the broadband coverage plans by 2030.
   c) Promote public-private partnerships to enhance capacity for existing backbone links and build missing backbone links.
   d) MICDE to outsource operations of One Government Network (OGN) to the private sector, which will be responsible for running, maintaining, and commercializing the entire network under an agreed Service Level Agreement (SLA), while the government retains ownership of the infrastructure.
   e) Develop a product and pricing strategy for OGN that reflects market dynamics, including supply and demand, usage patterns and operational costs.

3) **Last-Mile Connectivity**

a) Implement a national broadband last-mile GIS mapping initiative to collect granular data on rural broadband usage, availability, and gaps, to guide the expansion of 4G/5G, fixed wireless, LEO/satellite, and community networks in unserved and underserved areas.

b) Connect 50% of households to broadband using a technology-neutral approach, including fibre, fixed wireless, and satellite.

c) Leverage utility infrastructure (e.g., poles and towers) to expand last-mile connectivity through fixed networks, host Wi-Fi hotspots, and enable community network infrastructure.

d) Under the Affordable Housing Program, partner with ISPs to provide broadband infrastructure across all sites, leveraging economies of scale and shared infrastructure to reduce installation and maintenance costs.

e) MICDE to establish a working group with the NCA and Counties to enforce the Building Code, ensuring that all building construction projects make provision for broadband infrastructure.

f) Under the Digital Superhighway project, connect all government institutions by applying appropriate last-mile connectivity solutions, taking into account the five-year Total Cost of Ownership, reliability, and demographic considerations.

g) Deploy a minimum of 4G broadband infrastructure and services in 379 unserved and underserved sublocations.

h) Engage with the Ministry of Roads and Transport, its agencies and County Governments to establish a joint technical working group to ensure that all new road projects include provisions (ducts) for telecom infrastructure.

i) Finalize implementation of the 25,000 Wi-Fi hotspot plan as targeted in the digital superhighway to enhance internet access covering public spaces, educational institutions, and government facilities in collaboration with the private sector and other local stakeholders.

Strategy 2: Promote broadband services and support hosting infrastructure.

This strategy will support the growth of the broadband service hosting infrastructure and ensure its reliability and accessibility.

Initiatives - Support Hosting Infrastructure

1) Government to partner with the private sector to establish two (2) AI-ready data centers.
2) Promote the use of local domain name systems (*.KE* domain names).
3) Develop incentives for building local cloud solutions and investment in data centers and related infrastructure (power, data center networks, computer power carrying networks).
4) Implement the AI Strategy and Cloud Policy in order to grow demand for services and the hosting ecosystem.

Strategy 3: Expand the Energy Infrastructure for Broadband

This strategy will support the growth of energy infrastructure for broadband and ensure its reliability, whilst also protecting broadband infrastructure from the impacts of climate change.

Initiatives

1) Encourage the use of renewable energy in broadband infrastructure.
2) Conduct annual joint energy planning and review sessions for broadband to address ICT sector requirements, including emerging broadband technologies (AI, Data center, Cloud Computing, etc.).
3) Build fibre infrastructure alongside new grid infrastructure so that households newly connected to the electricity grid can be simultaneously connected to fibre.

Strategy 4: Ensure availability of affordable and quality broadband devices

This strategy will expand access and enhance the affordability of a range of devices for broadband access and use.

Initiatives

1) Enhance semiconductor manufacturing and the local assembly of affordable ICT devices.
2) Undertake a review of the semiconductor ecosystem and develop a strategy to grow the industry in Kenya, supporting the availability of affordable components for local manufacturing and assembly.
3) Expand device provisioning programmes across the education, healthcare, and public sectors, ensuring equitable distribution.
4) Equip the 1,450 digital hubs with ICT devices to meet user demand, including specialised equipment for the creative economy.

Strategy 5: Enhance Co-ordination, Monitoring and Protection of Broadband Infrastructure

This strategy will improve protection of broadband infrastructure, enhance understanding of the current situation of broadband connectivity, and help align broadband infrastructure expansion activities.

Initiatives

1) **Protection of Broadband Infrastructure**
   a) Harmonize existing Bills and enact legislation on the protection of critical infrastructure.
   b) Support capacity building for the Critical Infrastructure Protection Unit (CIPU) and Cyber Security Operations Centers (CSOCs) to strengthen the protection of critical information infrastructure.
   c) Establish an inter-agency committee to implement critical ICT infrastructure protection.
   d) Review disaster recovery and business continuity planning standards for ICT infrastructure.
   e) Collect and analyze data on fibre cuts and other service disruptions to support the identification and implementation of interventions to prevent recurrence.
   f) Establish an annual reporting mechanism on the connectivity status of government institutions.

2) **Establish Broadband Affordability Monitoring and Reporting Mechanism**
   a) Conduct and publish a broadband affordability study at least twice during the Strategy period.

4.3 Capacity Building, Innovation and Awareness Creation

Strategic Objective 3: To promote uptake of broadband services by enhancing digital skills and creating awareness on broadband.

Strategies

Strategy 1: Strengthen measures to improve foundational, basic and advanced digital skills to exploit opportunities in various industries/sectors and the digital ecosystem.

Initiatives

1) Strengthen and harmonize digital literacy and skilling within the national education curriculum from Grade 1 through Grade 12. This includes training and certifying all teachers (300,000) in digital pedagogy and expanding the Digital Literacy Program (DLP) to secondary and tertiary institutions.
2) Upskill 950,000 public servants in ICT and emerging technologies.
3) Conduct digital skills training for 20 million targeted citizens**,** with a specific focus on farmers, MSMEs, youth, children, senior citizens, and Persons with Disabilities (PwDs). This includes a digitalization acceleration program for 100,000 MSMEs**.**

4) Establish a National Professional ICT Certification Framework with international equivalency, alongside a Continuous Professional Development (CPD) framework for ICT workers.
5) Adopt the Recognition of Prior Learning (RPL) framework for ICT skills and competencies.
6) To support learning, provide digital resources such as Learning Management Systems (LMS), e-libraries, and content studios. This includes digital apprenticeship programmes with industry partners (e.g., Google, Microsoft, and AWS) and specialised training in emerging technologies such as AI, Big Data, Blockchain, and Robotics.
7) Pursue strategic bilateral partnerships and participate in global platforms to strengthen capacity building and policy formulation.

Strategy 2: Develop and implement programs to foster the development of local solutions, research, and the commercialization of new technologies.

Initiatives

1) Leverage the 1,450 digital hubs at the constituency level to deliver industry-certified skills training and support research and innovation incubation.

2) Implement a formal framework to support training, research, and development, with a specific focus on the commercialization of Minimum Viable Products (MVPs) and scalable innovations.

3) Promote STEM education as a foundation for innovation, including the use of bootcamps and national hackathons to address sector-specific needs such as cybersecurity. Efforts will include the development of R&D consortia focused on broadband, AI, cloud computing, and cybersecurity.

4) Leverage the 1,450 digital hubs at the constituency level to deliver industry-certified skills training and support research and innovation incubation.

5) Implement a formal framework to support training, research, and development, with a specific focus on the commercialization of Minimum Viable Products (MVPs) and scalable innovations.

6) Promote STEM education as a foundation for innovation, including the use of bootcamps and national hackathons to address sector-specific needs such as cybersecurity. Efforts will include the development of R&D consortia focused on broadband, AI, cloud computing, and cybersecurity.

Strategy 3: Focus on communication programs designed to enhance the use and impact of broadband services through localized and national campaigns.

Initiatives

1) Utilize publicity campaigns across mass media (Radio/TV), social media, and traditional outreach channels, including chiefs' barazas and influencers, to increase awareness.
2) To drive grassroots adoption, the government will establish the Community Digital Ambassadors Program, consisting of 3,000 youth champions.
3) To reach marginalized areas, 150 mobile digital training units will be deployed to rural and ASAL (Arid and Semi-Arid Lands) regions.
4) The Strategy leverages cross-sector partnerships to create enabled community spaces for e-services awareness.
5) Specific metrics will be applied to track awareness of public e-services among the adult population to ensure utilization of digitized government functions.

4.4 Privacy, Security, Content and Applications

Kenya's rapid digital transformation and nationwide broadband expansion demand strong safeguards for privacy and cybersecurity to sustain trust and resilience. With high internet penetration, a digitally skilled youthful population, and growing digital services, the country faces new risks from emerging technologies such as AI, cloud computing, blockchain, and quantum computing. These challenges, ranging from cyberattacks and identity theft to deepfakes and large-scale data privacy concerns, require continuous strengthening of legislative and institutional frameworks. To drive innovation, protect vulnerable groups, and secure digital infrastructure, the NBS will adopt a comprehensive, collaborative approach that promotes responsible technology use and safeguards citizens from cyber fraud, data breaches, and online harassment and cyberbullying.

Strategic Objective 4: To establish a trusted, secure, and inclusive digital ecosystem that safeguards user privacy, strengthens cybersecurity resilience, and promotes development and use of high-quality local digital content and innovative applications.

Strategy 1: Enhance cybersecurity across all digital services to safeguard and protect consumers from fraud, data breaches, and evolving cyber threats.

Initiatives

1) Promote Awareness on cyber hygiene and safe internet use, including Child Online Protection (COP)
2) Promote data encryption and secure authentication
3) Enhance collaboration of relevant agencies at local and international levels to further research and capacity building.
4) Develop and implement Cybersecurity sector codes of practice and guidelines.
5) Integrate privacy awareness and cybersecurity hygiene into national digital literacy programs.
6) Establish school cyber and Privacy clubs.
7) Establish County Cybersecurity and Digital Privacy Champions.
8) Implement National Public Key Infrastructure (NPKI 2.0)
9) Create awareness on the available cybersecurity incidents reporting platforms, including the KE-CIRT/CC
10) Carry out an annual national cyber hygiene survey, Behavior analytics,
11) Develop and enforce Privacy-by-Design and Security-by-Default guidelines for broadband-enabled platforms and applications
12) Define minimum cybersecurity baseline standards for ISPs and broadband operators
13) Enforce cyber-risk assessments for broadband infrastructure
14) Formulate and implement a National Cybersecurity Policy aligned to broadband expansion.

Strategy 2: Strengthen Kenya's data protection ecosystem to ensure citizens' personal information is safeguarded across all broadband-enabled services and applications.

Initiatives

1) Enforce robust safeguards, promoting responsible data practices, and ensuring that users maintain control over their personal information
2) Enforce compliance to Data Protection Act (2019) and Regulations
3) Conduct training, certification, and exchange programmes for Data Protection Officers
4) Conduct national data protection awareness campaigns
5) Conduct a data protection impact assessment.

6) Stimulate Innovation in trusted applications through the creation of content and platforms that are built with "Privacy-by-Design" principles.
7) Negotiate mutual recognition and data transfer frameworks

Strategy 3: Promote the development, distribution, and access to local digital content and applications to drive innovation, inclusion, and socio-economic growth.

Initiatives

1) Leverage broadband for service delivery and access to digital content and applications across e-agriculture, e-health, e-commerce, fintech, logistics, business management, land, housing, and urban services, including property registration, planning approvals, and citizen engagement. Enable MSMEs to access digital markets, online payments, and cloud-based tools through locally developed platforms. Support the development of locally hosted and secure health platforms.
2) Promote the production of relevant digital content in local languages and formats accessible to persons with disabilities.
3) Prioritize the digitization of agricultural, health, and educational content.
4) Incentivize the development of local content and applications to support Kenyan developers, startups, and creative industries, including the Studio Mashinani and Digital Hubs programs.
5) Promote the use of local content and applications within the Government.
6) Develop national standards and guidelines to ensure quality, accessibility, and ethical use of digital content, while curbing misinformation, harmful material, and online fraud.
7) Implement training programs and awareness campaigns for creators, educators, and businesses to strengthen digital skills, promote responsible use of applications, and enhance trust in digital platforms.
8) Promote local-language, inclusive, and culturally relevant digital content.
9) Introduce Government procurement preferences for locally developed digital applications.
10) Strengthen intellectual property protection, online safety, and sustainable monetization models.
11) Promote broadband services:
    a) Automate and digitalize all Government services to ensure efficient and effective service delivery.
    b) Onboard all automated public-facing Government services onto online platforms (e-Citizen).

5. FINANCE AND INVESTMENT

5.1 Overview

To realize universal, reliable, and affordable broadband access for all Kenyans, substantial investment will be required across infrastructure, capacity development, innovation, cybersecurity, content development and digital service delivery. This section identifies existing investment gaps, outlines emerging opportunities, presents cost estimates, and describes the financing and investment models that will support the implementation of this Strategy.

5.2 Investment Gaps and Challenges

Notable progress has been made in broadband expansion; however, several challenges continue to impede equitable access and digital transformation:

1) Low return on investment, especially on unserved and underserved areas
2) High cost associated with broadband infrastructure deployment
3) Limited access to affordable capital
4) Rising operational expenditure
5) Limited funding for research innovation and local manufacturing
6) Inadequate public-private investment models
7) Low prioritization of ICT investment programs
8) Taxation burden on ICT devices and services
9) Fragmented and ad hoc investment efforts across agencies and levels of government, reducing economies of scale and strategic alignment.

5.3 Investment and Funding Opportunities

The Strategy identifies several high-impact investment and funding opportunities aligned with national priorities and global trends. A critical analysis indicates that the following areas require immediate financing and investment to eliminate systemic barriers, reduce private-sector risk, and accelerate the deployment and adoption of universal broadband.

1) Policy, Legal and Regulatory Environment

a) Harmonization and simplification of infrastructure permits/rollout (Wayleaves)
b) Targeted fiscal reforms to promote affordability and device access
c) Strengthening enforcement of infrastructure sharing and open access

2) Infrastructure, Connectivity and Devices

a) Expand the national fibre backbone infrastructure in line with the 100,000 km target under the Digital Superhighway.

b) Connect 50% of households to broadband using a technology-neutral approach, including fibre, fixed wireless, and satellite.
c) Deploy a minimum of 4G broadband infrastructure and services in 379 unserved and underserved sub-locations.
d) Finalize implementation of the 25,000 Wi-Fi hotspot plan under the Digital Superhighway to enhance internet access, including deployment in public spaces, educational institutions, and Government facilities in collaboration with the private sector and local stakeholders.
e) Automate and digitalize all Government services to ensure efficient and effective service delivery.
f) Enhance the manufacturing of semiconductors and the local assembly of affordable ICT devices.
g) Expand device provisioning programs across education, healthcare, and the public sector, ensuring equitable distribution.
h) Equip 1,450 digital hubs with ICT devices to meet user demand, including specialized equipment for the creative economy.

3) Capacity Building, Innovation and Awareness Creation

a) Upskill digital literacy in the public workforce (950,000 targeted in the ICT masterplan) in ICT and emerging technologies.
b) Conduct digital skills for 20 million targeted and the ICT Master plan citizens, especially farmers, MSMEs, youth, children, senior citizens, and PwDs, through the ICT Master plan.
c) Provide digital learning resources and platforms
d) Establish and implement a National Professional ICT Certification Framework, including international equivalency arrangements.

4) Privacy, Security, Content and Applications

a) ***Secure Local Cloud and Data Hosting Infrastructure***: Investments in Data Centers with built-in robust security and privacy safeguards to host local content and applications, ensuring compliance with the Data Protection Act.
b) ***"Security and Privacy by Design" Incubators/Consultancies***: Firms that work with local app developers and content creators from the start to embed security and privacy features, creating a trusted digital ecosystem.
c) ***Digital ID and Secure Access Management:*** As a foundational service, secure digital identity solutions will enable safer access to content, applications, and services while protecting user privacy.

5.4 Estimated Project Costs (2025–2030)

Based on strategic priorities and projected infrastructure needs, the estimated financing requirement for NBS 2025–2030 is approximately **KShs. Xxx billion** over five years, as detailed in annex xxx:

5.5 Investment Models

The Strategy promotes diverse and adaptive investment models to maximize capital mobilization, efficiency, and scalability:

1) ***Public Investment:*** Strategic national infrastructure funded directly through the Exchequer.
2) ***Private Sector Investment:*** Market-driven rollout by Infrastructure Service Providers and Data Centre Providers.
3) ***Public-Private Partnerships:*** Co-investment models in areas such as rural broadband, data centres, and smart cities.
4) ***Community-Based and Cooperative Models***: Locally owned broadband networks and infrastructure cooperatives supported by technical assistance and targeted subsidies.
5) ***Build-Operate-Transfer and Build-Own-Operate***
6) Long-term infrastructure development by private entities with agreed service provision or eventual transfer to the government.

5.6 Financing Models

The financing strategy will be anchored on blended finance mechanisms that combine public, private, and concessional capital sources. Key models include:

1) *National Budget Allocations:* Annual funding from the Exchequer for backbone infrastructure, public sector connectivity, and subsidies
2) *Universal Service Fund:* Directed grants and incentives for operators to deploy infrastructure in unserved and underserved areas.
3) *Development Finance and Grants*: Blended finance from multilateral institutions (World Bank, AfDB, ITU, EU) to co-finance key components such as digital skills and infrastructure.
4) *Infrastructure and Green Bonds*: Long-term capital raised through Digital Infrastructure Bonds and Green Bonds to support sustainable broadband deployment.
5) *Investment Incentives*: Fiscal measures such as VAT exemptions, tax holidays, and duty waivers on broadband infrastructure and devices.
6) *Concessionary and Results-Based Financing:* Output-based financing models to de-risk investment in low-income or remote markets.
7) *Diaspora and Community Crowdfunding:* Mobilizing diaspora remittances and local capital for community broadband initiatives and innovation hubs

5.7 Role of County Governments

County Governments are critical actors in broadband investment planning and deployment. Their responsibilities include:

1) Integrating broadband priorities into County Integrated Development Plans and County budgets.
2) Providing land, wayleaves, and facilitation for infrastructure rollout.
3) Co-financing local last-mile connectivity and public Wi-Fi projects.
4) Hosting digital service hubs and innovation centres.
5) Building local digital ecosystems through training, incubation, and entrepreneurship support.

The National Government will establish a County Digital Infrastructure Fund to provide matching grants and technical support to fast-track county-level projects.

5.8 Risks and Risk Mitigation

The successful implementation of the NBS 2025–2030 hinges on the effective management of financial, operational, regulatory, and socio-political risks. Recognizing and proactively addressing these risks is critical for attracting investments, ensuring sustainability, and delivering inclusive broadband access. This section outlines key risk categories and corresponding mitigation strategies.

Table 5. 1: Risk and Mitigation measures

S/No.	RISKS	MITIGATION MEASURES
Financial and Economic Risks		
1.	Insufficient or delayed funding.	Establishing a Broadband Investment Guarantee Facility to de-risk private capital. Prioritizing projects based on cost-benefit analysis and socio-economic return metrics.
2.	Cost overrun due to inflation, foreign exchange fluctuations, or supply chain disruptions.	Encouraging local manufacturing and sourcing of ICT equipment to reduce forex exposure.
3.	Low return on investment (ROI) in rural and low-income areas, discouraging private participation.	Developing output-based and milestone-linked financing structures to increase efficiency.
Regulatory and Policy Risks		
4.	Unclear or inconsistent regulatory frameworks may delay investment decisions.	Timely Review of relevant Policies and public–private dialogues for regulatory predictability.

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S/No.	RISKS	MITIGATION MEASURES
5.	High fees or taxes may reduce investor interest.	Establishing a National Digital Infrastructure Code and investment guidelines. Harmonizing spectrum management and reducing costs through efficient allocation.
6.	Lengthy approvals and bureaucratic red tape can stall infrastructure roll-out.	Creating a one-stop digital investment facilitation platform. Timely Review of relevant Policies and public–private dialogues for regulatory predictability.
	Technical and Operational Risks	
7.	Technology obsolescence due to rapid innovation cycles.	Adopting technology-neutral, future-proof standards.
8.	Infrastructure failure	Mandating resilience, redundancy, and cybersecurity protocols Classifying broadband infrastructure as critical infrastructure
9.	Inadequate technical capacity to meet the expanding demand by large-scale projects.	Capacity building and professional development
	Social and Environmental Risks	
10.	Public resistance or community disputes.	Community engagement and social impact assessments.
11.	Digital exclusion of vulnerable groups.	Inclusive access policies and device subsidies.
12.	Environmental impacts from infrastructure deployment.	Compliance with Environmental and Social Safeguards. Investment in green ICT infrastructure. Community engagement and social impact assessments.
	Political and Governance Risks	
13.	Political instability or shifts in priorities.	Anchoring the Strategy in line with Vision 2030.
14.	Weak inter-agency coordination	Establishing a Multi-Agency National Broadband Implementation Committee.
15.	Corruption and mismanagement.	Enforcing compliance with anti-corruption and other relevant laws.

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6. GOVERNANCE AND DELIVERY STRUCTURE

6.1 National Broadband Strategy Coordination

The successful implementation of this Strategy requires a coordinated, whole-of-government, multi-stakeholder approach that brings together policymakers, legislators, regulators, implementing agencies, the private sector, financiers, academia, and end users. The NBS coordination body shall convene key stakeholders to ensure timely decision-making and project implementation, including operations and maintenance of broadband systems, and to ensure effective monitoring and evaluation. In this regard, and in line with best practice, a well-coordinated implementation framework is required to ensure the success of the NBS 2025 - 2030.

Rationale for Coordination Mechanisms:

1) For the provision of critical services such as power/electricity to schools, libraries, health facilities, digital hubs, etc., as well as the supply of ICT equipment to other public institutions.
2) To ensure that the implementation of NBS is aligned with the e-government and other government priorities/initiatives that require broadband deployment;
3) To ensure that all aspects (supply side and demand side) of broadband are considered in the framework of integrated broadband projects.
4) To Coordinate Monitoring and Evaluation for NBS implementation.
5) To be able to accomplish this mandate, a Multi-agency National Broadband Implementation Committee (MNBIC) will be formed, chaired by MICDE.
6) The purpose of this intervention is to provide strategic coordination for the effective implementation of NBS 2025-2030. The MNBIC will achieve this objective by coordinating all necessary inputs and resources for the effective delivery of broadband, as its membership will comprise key agencies implementing various aspects of the Strategy.

Under this governance and delivery structure, the functions of the MICDE will include: -

1) Coordination of broadband requirements of all government ministries/departments;
2) Reporting NBS activities, progress, and challenges to the Government;
3) Seeking funding, directly from the government, funding institutions and the private sector;
4) Negotiating and signing contracts with service providers and with other institutions on behalf of the Government, or ensuring that the same is done by other government ministries/institutions as the case may be; and
5) Assisting the National Broadband Implementation Committee (MNBIC) with whatever assistance they may require from the government.

6.2 Stakeholder Mapping

The successful implementation of this Strategy requires a coordinated, whole-of-government, multi-stakeholder approach that brings together policymakers, legislators, regulators, implementing agencies, the private sector, financiers, academia, and end users. Broadband development spans the entire value chain, from policy formulation and legal and regulatory frameworks to financing, construction, deployment, infrastructure protection, and adoption and productive use. It therefore requires clearly defined roles and responsibilities across institutions. The key stakeholders involved in the planning, financing, implementation, regulation, safeguarding, and utilization of broadband infrastructure and services are outlined in this Strategy, with their respective roles and responsibilities detailed in a table (Annex 1). This institutional framework is intended to promote effective coordination, accountability, and partnerships to achieve universal, affordable, high-quality broadband connectivity across Kenya during the Strategy period.

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7. MONITORING, EVALUATION AND REPORTING FRAMEWORK

7.1 Overview

The implementation of this National Broadband Strategy (NBS) will be monitored, evaluated, and reported using a defined set of Key Performance Indicators (KPIs). The NBS will be subject to mid-term and end-term evaluations and reporting in accordance with the National Treasury M&E guidelines.

The M&E framework will establish baseline values for the selected indicators to inform the proposed annual targets. The National Communications Secretariat will perform the monitoring and evaluation function for the Strategy's implementation.

The performance standards for tracking the implementation of this Strategy will align with the M&E Logic Model outlined below.

7.2 Outcomes Performance Indicators

The NBS seeks to realize the following outcomes: -

i. *Improved business environment for the ICT sector:* This will be measured by the annual percentage growth of the ICT sector and the share of ICT sector's contribution to Gross Domestic Product (GDP), the number of business parks, the value of ICT Products and Services exports, the number of Starter-Ups, the volume of online trade, and the number of jobs created.

ii. *Improved service delivery:* This will be measured by Quality of Experience (QoE) and Quality of Service (QoS)

iii. *Improved affordability of broadband:* This will be measured by affordability surveys of operator broadband pricing and public surveys.

iv. *Effective leadership and good governance:* This will be measured by the levels of accountability, participation, and equity.

7.3 Output Performance Indicators

The output performance indicators in this NBS are as follows: -

1) **Policy, Legal and Institutional Frameworks –** Measured by the number of policies, legal and institutional frameworks developed or reviewed.
2) **Infrastructure, Connectivity and Devices** – This will be measured by kilometers of fiber optic cable laid, the number of digital hubs established, the number of public institutions connected, the number of public Wi-Fi hotspots established, the number of households connected, broadband access levels, and the number of additional cross-border/international infrastructure links.
3) **Capacity Building, Innovation and Awareness Creation:** Basic digital literacy rate; awareness of public e-services among the adult population, and the number of Centres of Excellence established.
4) **Privacy, Security, Content and Application:** This will be measured by the No. of security incidents reported (including privacy breaches and security threats), the percentage increase in the number of e-services onboarded onto online platforms, the number of cybersecurity awareness campaigns conducted, and the number of sector-specific standards developed.

7.3 Reporting and Communication

The Ministry will assess the extent of achievement of the strategic objectives under the identified thematic areas, as summarized in Outcome Table 1 (Annexed), which lists the outcome indicators, baselines, and targets. This will involve conducting a mid-term evaluation in the 2nd quarter of FY.2028/29 and an end-term evaluation in Quarter 4 of FY.2032/33. The ministry will publish the Strategy's Annual Implementation Status Reports using the prescribed templates.

8. IMPLEMENTATION MATRIX

Table 8. 1: Thematic Area 1 Implementation Matrix

Strategy	**Key Activities**	**Expected Output**	**Output Indicators**	**Target for 5 Years**	**Target**					**Budget**						
					Y 1	Y 2	Y 3	Y 4	Y 5	2025/26	2026/27	2027/28	2028/29	2029/30	Lead	Support
Strategic Issue: Policy, Legal and Regulatory Environment																
Strategic Objective: To provide an enabling policy, legal and regulatory environment that promotes access to reliable, affordable, and affordable broadband connectivity.																
KRA 1: Policy, Legal and Regulatory frameworks																
Outcome: Improved access to reliable, affordable, and meaningful broadband connectivity																
SO1: To develop and review ICT Policy, Legal and Regulatory frameworks																
S1. Review and implementation of existing ICT policy, legal and regulatory frameworks	Review Policy Frameworks	Policy Frameworks	No. of Policy Documents reviewed and adopted	1		1									MICDE/NCS	Experts, MCDAs, ICT sector stakeholders
	Review Legal Frameworks	Draft Amendment bills	No. of draft Amendment bills	3	1	2				2	2				MICDE/NCS	Experts, MCDAs, ICT sector stakeholders
	Review Regulatory Frameworks	Draft Regulatory Frameworks	No. of draft regulations reviewed and adopted	15						2					MICDE/NCS	Experts, MCDAs, ICT sector stakeholders
	Review and implement	Standards	No. of draft standards reviewed	5 (TBC)						2					MICDE/NCS	Experts, MCDAs, ICT sector

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	ed standards		and implemented													stakeholders
S2. Develop new Policies and legal frameworks	Develop new legal frameworks	Draft Bills and regulations	No. of Bills and regulations developed	1						4					MICDE/NCS	Experts, MCDAs, ICT sector stakeholders
	Develop new standards	Standards developed	No of standards developed	2											MICDE/NCS	Experts, MCDAs, ICT sector stakeholders
	Develop new guidelines	Guidelines developed	No of guidelines developed	3											MICDE/NCS	Experts, MCDAs, ICT sector stakeholders
S3. Implement existing, policy, legal, regulatory, standards and frameworks	ICT policy, legal and regulations	Frameworks implemented	No of frameworks implemented	TBC											MICDE/NCS	Experts, MCDAs, ICT sector stakeholders
	Sectoral policy and legal frameworks (Building and construction, health, education, etc.	Sectoral frameworks implemented	No of sectoral frameworks implemented	TBC											MICDE/NCS	Experts, MCDAs, ICT sector stakeholders

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Table 8. 2: Thematic Area 2 Implementation Matrix

Strategy	**Key Activities**	**Expected Output**	**Output Indicators**	**Target for 5 Yrs**	**Target**					**Budget (m KES)**						
					Y1	Y2	Y3	Y4	Y5	2025/26	2026/27	2027/28	2028/29	2029/30	Lead	Support
Strategic Issue: Infrastructure, Connectivity and Devices																
Strategic Goal: Develop ubiquitous, quality, reliable and resilient broadband infrastructure for service delivery, job creation and economic growth																
KRA 1:																
Outcome:																
SO2:																
S.1 Expand universal access to high-quality broadband connectivity	Investment in additional submarine cables and additional landing stations	Additional submarine cables and landing stations	Number	2 submarine cables 2 landing stations			2		2						Private Sector	CA
	Build additional fiber capacity at border crossing points for redundancy	Additional fiber capacity at border crossings	Number													
	Build fiber on top of the Electrical power infrastructure for additional terrestrial cross-border connectivity.	Additional connectivity via high voltage transmission lines	No. of cross border OPGW connectivity via High voltage													

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Strategy	Key Activities	Expected Output	Output Indicators	Target for 5 Yrs	Target					Budget (m KES)							
			transmission lines														
	Increase investment and enhance security at cross-border and submarine infrastructure sites.	Enhanced security at cross-border and submarine infrastructure sites	No of Providers & Critical Network Infrastructure compliant with relevant Cyber security standards	100%													
	Expand the national fibre backbone infrastructure in line with the 100,000km target in the digital superhighway.	Enhanced Fiber infrastructure	No. of kilometers														
	Map key backbone networks against coverage and redundancy gaps, assess the redundancy and capacity needs and develop a roadmap between	Documented redundancy and capacity gaps and planned expansion map	Document and Map(s)	1	1					250							

Draft

Strategy	Key Activities	Expected Output	Output Indicators	Target for 5 Yrs	Target					Budget (m KES)							
	government and private sector to expand fiber coverage in the identified areas in line with the broadband coverage plans by 2030.																
	Promote public-private partnerships for enhancement of capacity for existing key backbone links and build the missing backbone links	% of missing backbone fiber deployed	%	100	20	20	20	20	20								
	MICDE to outsource operations of One Government Network (OGN) to the private sector who will be responsible for running, maintaining and commercializing the entire network to an agreed SLA but retain ownership of	Outsourced operations (SLA)	SLA (%)	99.99	99.99	99.99	99.99	99.99	99.99								

Draft

Strategy	Key Activities	Expected Output	Output Indicators	Target for 5 Yrs	Target					Budget (m KES)							
	the infrastructure																
	Develop a product and pricing strategy for OGN that takes into account market forces, supply and demand as well as usage and operational costs	Pricing models Document	Number	1	1					20							
	Implement a national broadband last-mile GIS mapping to collect granular data on rural broadband usage, availability and gaps to facilitate expansions (4G/5G, fixed wireless, LEO/Satelite, CNs) in unserved and underserved areas	1.National Broadband GIS Map / Dashboard 2.Detailed gap analysis reports	Number	1 2	1 1				1								

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Strategy	Key Activities	Expected Output	Output Indicators	Target for 5 Yrs	Target					Budget (m KES)							
	Connect households to broadband, using a technology-neutral approach encompassing fiber, fixed wireless, and satellite	50% of unconnected households connected	%	50	10	10	10	10	10								
	Leverage utility infrastructure (e.g. poles and towers) to expand last mile connectivity via fixed networks and to host Wi-Fi Hotspots as well as to enable and facilitate community network infrastructure	Development of utility intrastructure sharing framework	Number	1	1					20							
	Affordable Housing Program to partner with ISPs to make provision for broadband infrastructure in all sites, leveraging economies of scale and	Framework for privding connectivity in the affordable housing program through the private sector	Number	1	1					20							

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Strategy	Key Activities	Expected Output	Output Indicators	Target for 5 Yrs	Target					Budget (m KES)							
	provision of certain infrastructure to reduce installation and maintenance costs																
	MICDE to establish a working group with NCA and Counties to enforce the Building Code to ensure that all building construction projects make provision for broadband infrastructure.	Working Group for provision for broadband infrastructure in buildings	Number	1	1												
	Under the Digital Super Highway project connect all government institutions, considering the appropriate connectivity solution for last-mile connectivity taking into account the Total Cost of Ownership (TCO) over 5	All government institutions connected	%	100													

Draft

Strategy	Key Activities	Expected Output	Output Indicators	Target for 5 Yrs	Target					Budget (m KES)							
	years as well as reliability and the demographic situation																
	Deploy a minimum of 4G broadband infrastructure and services in 379 unserved and underserved sublocations.	Cellular broadband infrastructure deployed	Number	379													
	Engage with the Ministry of Roads and Transport and its agencies and County Governments to establish a joint technical working group to ensure all new road projects include provisions (ducts) to install telecom infrastructure.	Joint Technical Working Group for provision of Ducts on roads	Number	1	1												
	Finalize implementation of the 25,000 Wi-Fi hotspot plan as targeted in the digital	WIFI Hotspots installed	Number	25,000	5,000	5,000	5,000	5,000	5,000								

Draft

Strategy	Key Activities	Expected Output	Output Indicators	Target for 5 Yrs	Target					Budget (m KES)							
	super highway to enhance internet access. This will include public spaces, educational institutions, and government facilities in collaboration with the private sector and other local stakeholders																
S2: Promote broadband services and supporting hosting infrastructure	Automate/digitalize all government services to ensure efficient and effective service delivery	All government services automated/digitalized	%	100													
	Onboard all automated public facing government services to online platforms (e-citizen)	Services onboarded	%	100													
	Government to partner with the private sector to establish 2 AI-ready data centers	AI datacenters	Number	2		1		1			3,000		3,000				

Draft

Strategy	Key Activities	Expected Output	Output Indicators	Target for 5 Yrs	Target					Budget (m KES)							
	Promote the use of local domain name systems (.KE domain names)	Increased use of .KE	Number														
	Develop incentives for building local cloud solutions and investment in data centers and related infrastructure (power, data center networks, computer power carrying networks)	Incentives framework	Number	1	1					20							
	Implement the AI Strategy and Cloud Policy in order to grow demand for services and the hosting ecosystem																
S3: Expand the Energy Infrastructure for Broadband	Encourage use of renewable energy in broadband infrastructure	Evaluation report of renewable energy use in broadband infrastructure	Number	2	1				1	20				20			

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Strategy	Key Activities	Expected Output	Output Indicators	Target for 5 Yrs	Target					Budget (m KES)							
	Annual joint energy planning and review session for broadband to address ICT sector requirements (emerging broadband technologies (AI, Data center, Cloud Computing etc)	Annual meeting	Number	5	1	1	1	1	1	20	20	20	20	20			
	Build fibre infrastructure on new grid infrastructure so that households newly connected to the grid can be simultaneously connected to fibre	Fiber on power grid	Number of kilometers														
S4: Ensure availability of affordable and quality broadband devices	Enhance the manufacturing of semi-conductors and local assembly of affordable ICT Devices																
	Undertake a review of the semi-conductors	Review	Number	1	1					50							

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Strategy	Key Activities	Expected Output	Output Indicators	Target for 5 Yrs	Target					Budget (m KES)							
	ecosystem and develop a strategy to grow the industry in Kenya to provide affordable components for the local manufacture/assembly industry																
	Expand device provisioning programs in education, healthcare, and public sectors with equitable distribution (100 devices x 50,000 institutions)	Devices in education, healthcare and public sectors	Number	5m	1m	1m	1m	1m	1m	50,000	50,000	50,000	50,000	50,000			
	Equip 1,450 digital hubs with ICT devices for user demands, including specialist equipment for the creative economy (10m KES per hub)	Digital hubs equipped	Number	1,450	300	300	300	300	250	3,000	3,000	3,000	3,000	2,500			
S5: Enhance Co-ordination,	Harmonization of existing Bills and enactment of Law on protection of																

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Strategy	Key Activities	Expected Output	Output Indicators	Target for 5 Yrs	Target					Budget (m KES)							
Monitoring and Protection of Broadband Infrastructure	critical infrastructure.																
	Support capacity building for the Critical Infrastructure Protection Unit (CIPU) and Cyber Security Operations Centres (CSOCs) in order to strengthen the protection of critical information infrastructure.	Number of security personnel trained and actively involved in critical infrastructure protection	Number														
	Establish an inter-agency committee to implement critical ICT infrastructure protection	inter-agency committee established	Number	1	1												
	Review Disaster recovery and Business Continuity planning	Standards for business continuity of ICT infrastructure	Number	1	1					20							

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Strategy	Key Activities	Expected Output	Output Indicators	Target for 5 Yrs	Target					Budget (m KES)							
	standards for ICT Infrastructure																
	Collect and analyse data on fibre cuts and other service disruptions to enable identification and implementation of necessary intervention to prevent recurrence	Annual Report of fibre cuts and their causes	Number	5	1	1	1	1	1	0	0	0	0	0	CA		
	Establish an annual reporting mechanism for government institutions connectivity status.	Annual Report of government institutions connectivity status	Number	5	1	1	1	1	1	0	0	0	0	0	ICTA		
	Conduct and publish a broadband affordability study at least twice during the Strategy period.	Broadband affordability study	Number	2		1			1		50			50	CA		

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Table 8. 3: Thematic Area 3 Implementation Matrix

Strategy	**Key Activities**	**Expected Output**	**Output Indicators**	**Target for 5 Years**	**Target**					**Budget**						
					Y1	Y2	Y 3	Y 4	Y 5	2025 /26	2026 /27	2027 /28	2028 /29	2029 /30	Lead	Support
Strategic Issue: Capacity Building, Innovation and Awareness Creation																
Strategic Goal: To promote uptake of broadband services by enhancing digital skills and creating awareness on broadband																
KRA 1:																
Outcome:																
SO1:																
S1:Strengthen measures to improve foundational, basic and advanced digital skills to exploit opportunities in various industries/ sectors and the digital ecosystem.	Strengthen digital literacy and skilling into education curriculum	Completed systematic integration of digital skills into the Competency-Based Education (CBE) curriculum at all levels, expand the Digital Literacy Program (DLP) to secondary and tertiary institutions, and train 100% of teachers in digital pedagogy.	No. Completion Reports from the institutions	5 Annual Reports	1	1	1	1	1	45B	65B	70B	75B	555 B	MoE	

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Strategy	Key Activities	Expected Output	Output Indicators	Target for 5 Years	Target					Budget							
	Upskill digital literacy in the 2 million public workforce in ICT and emerging technologies - to amend	200,000 public servants and 300,000 private sector workers upskilled	Upskilled workforce (Public and private)	Foundation digital literacy	Intermediate /applied digital skills	Advanced/specialist skills											
	Promote STEM education to foster innovation.	Updated CBE Curriculum to include emerging technologies	No. of curricula updated														
	Conduct digital skills for 20 million targeted and the ICT Master plan citizens especially farmers, MSMEs, youth, children, senior citizens and PwDs.	Awareness of MSME digitalization acceleration program	No. of MSME undertaking digital acceleration programs	100,000 MSMEs trained													

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Strategy	Key Activities	Expected Output	Output Indicators	Target for 5 Years	Target					Budget							
	Establish Community Digital Ambassadors Programs (3,000 youth champions)	Digital Ambassador Program	No. of Ambassadors	3,000													
	Pursue Strategic Bilateral Partnerships and global platforms to enhance capacity building and policy formulation																
S2:Develop and implement programs to enhance awareness, use and impact on broadband services	Conduct publicity and communication awareness campaigns through mass media, social media, among others.	Enabled community spaces for e-services awareness	No. of community spaces for e-services awareness enabled														

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Strategy	Key Activities	Expected Output	Output Indicators	Target for 5 Years	Target					Budget							
	Leverage stakeholders and partners on awareness creation in various sectors.	Deploy 150 mobile digital training units to rural/ASAL areas	No. of units deployed														
		Upskilled workforce (Public and private)	200,000 public servants and 300,000 private sector workers upskilled														
		Implemented mass awareness through radio/TV,chiefs' barazas, influencers	No. of mass awareness campaigns														
	Conduct bootcamps and hackathons e.g. cyber security	Deployed County-level coding bootcamps	No. of bootcamps No. of National hackathons + innovation challenges														

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Strategy	Key Activities	Expected Output	Output Indicators	Target for 5 Years	Target					Budget							
	Undertake digital apprenticeship programs with industry partners	Digital apprenticeship programs	No. of programs implemented														
	Carry out specialized training in emerging technologies such as AI, Big Data, Block Chain	Trainings for emerging tech: AI, IoT, cloud, data science, cybersecurity, robotics	No. of trainings implemented														
		Digital apprenticeship programs with industry (Google, Microsoft, Safaricom, AWS, Huawei)	Digital apprenticeship programs														
S3: Education System Integration	Review and harmonise digital skilling curriculum and embed it in all	Revise school curriculum to embed digital literacy from Grade 1–12	Number of grade-level curricula revised														

Draft

Strategy	Key Activities	Expected Output	Output Indicators	Target for 5 Years	Target					Budget							
	levels of education system																
		Connect 20,000 learning institutions to broadband	No. of institutions Connected														
	Conduct teacher training in digital pedagogy	Teacher digital pedagogy certification (300,000 teachers)	No. of teachers certified														
		Complete the systematic integration of digital skills into the Competency-Based Education (CBE) curriculum at all levels, expand the Digital Literacy Program (DLP) to secondary and tertiary institutions, and train 100% of teachers in	Completion Reports from the institutions														

Draft

Strategy	Key Activities	Expected Output	Output Indicators	Target for 5 Years	Target					Budget							
		digital pedagogy.															
	Provide digital learning resources and platforms	Build or upgrade digital learning infrastructure (LMS, e-library, content studios)	No. LMS studios deployed														
	Leverage on digital hubs to provide industry certified digital skills training, support research and innovation incubation.	Establish 47 county digital hubs + 200 sub-county satellite centers	No. of county digital hubs + sub-county satellite centers established														
	Establish and implement an Industry-Academia Collaboration Framework to support training,	Develop R&D consortia for broadband, AI, cloud, cybersecurity	No. of R&D consortia for broadband, AI, cloud, cybersecurity														

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Strategy	Key Activities	Expected Output	Output Indicators	Target for 5 Years	Target					Budget							
	research and development for commercialization of minimum viable products and scalable innovations																
		Structured internship placements for university/TVET ICT students	No. of students placed														
	Establish and implement a National Professional ICT Certification Framework including international equivalency arrangements.	Established national ICT professional certification authority	No. of ICT professionals certified														

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Strategy	Key Activities	Expected Output	Output Indicators	Target for 5 Years	Target					Budget							
		Subsidize 50,000 international certification exams per year	No. of Subsidized international certification exams per year														
		Aligned local certifications with global benchmarks	No. of certifications aligned to global benchmarks														
		Create CPD (continuous professional development) framework for ICT workers	Operational CPD framework for ICT workers														

Draft

Table 8. 4: Thematic area 4 implementation matrix

Strategy	**Key Activities**	**Expected Output**	**Output Indicators**	**Target for 5 Yrs**	**Target**					**Budget**						
					Y 1	**Y 2**	**Y 3**	**Y 4**	**Y 5**	**2025/ 26**	**2026/ 27**	**2027/ 28**	**2028/ 29**	**2029/ 30**	**Lead**	**Support**
Strategic Issue: Privacy, Security, Content and Applications																
Strategic Goal: To establish a trusted, secure, and inclusive digital ecosystem that safeguards user privacy, strengthens cybersecurity resilience, and promotes development and use of high-quality local digital content and innovative applications.																
KRA 1: Privacy, Security, Content & Applications																
Outcome:																
SO1: Enhance cybersecurity across all digital services to safeguard and protect consumers from fraud, data breaches, and evolving cyber threats.																
S1: Enhance cybersecurity across all digital services to safeguard and protect consumers from fraud, data breaches, and evolving cyber threats.	Promote Awareness on Cyber Hygiene and Safe Internet Use including Child Online Protection (COP)	Awareness on cyber hygiene and safe internet use promoted			1	1	1	1	1	1	1	1	1	1	MICDE	MICDE/CA/MOE
	Promote data encryption and secure authentication	Data encryption and secure authentication promoted													MICDE	

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	Enhance collaboration of relevant agencies at local and international levels to further research and capacity building	Collaborations enhanced														
	Develop and implement Cybersecurity sector codes of practice and guidelines	Sector codes developed														
	Integrate privacy awareness and cybersecurity hygiene into national digital literacy programs.	Privacy awareness and cybersecurity hygiene integrated into national digital literacy programs														
	Establish school cyber and Privacy clubs.	School cyber and privacy														

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		clubs established														
	Establish County Cybersecurity and Digital Privacy Champions.	County Cybersecurity and Digital Privacy Champions established														
	Implement National Public Key Infrastructure (NPKI 2.0)	NPKI 2.0 implemented														
	Create awareness on the available cybersecurity incidents reporting platforms including the KE-CIRT/CC	Awareness created on incidents reporting														
	Carry out Annual national cyber hygiene survey,	Annual national cyber hygiene survey carried out														

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	Behavior analytics															
S1: Strengthen Kenya's data protection ecosystem to ensure citizens' personal information is safeguarded across all broadband-enabled services and applications	Enforce robust safeguards, promoting responsible data practices, and ensuring that users maintain control over their personal information	Responsible data practices promoted														
	Enforce compliance to data protection Act (2019) and Regulations	Compliance of DPA 2019 and regulations enforced													CA	CA
	Conduct training, certification, and exchange programmes for data protection officers	Training, certification and exchange programmes conducted													CA	CA

Draft

	Conduct national data protection Awareness Campaigns	National Data protection awareness campaigns conducted													ODPC	ODPC
	Conduct data protection impact assessment.														ODPC	ODPC
	Stimulate Innovation in Trusted Applications through the creation of content and platforms that are built with "Privacy-by-Design" principles.														MICDE	
	Negotiate mutual recognition and data transfer frameworks	Negotiated mutual recognition and data transfer frameworks													ODPC	ODPC

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S3: Promote the development, distribution, and access to local digital content and applications to drive innovation, inclusion, and socio-economic growth	Leverage broadband for the delivery of services and access to digital content and applications.															
	Promote the production of relevant digital content in local languages and formats accessible to persons with disabilities.	Production of relevant digital content in local languages and in formats accessible to PWDs promoted														
	Prioritize digitization of agricultural, health and educational content.															
	Incentivize development of Local content and applications including support to	Development of Local content and applications incentivized														

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	Studio Mashinani and Digital Hubs programs															
	Promote use of local content and applications within government	Promoted local content and applications within government														
	Develop national standards and guidelines to ensure quality, accessibility, and ethical use of digital content, while curbing misinformation, harmful material, and online fraud.	National standards and guidelines developed														

Draft

	Implement training programs and awareness campaigns for creators, educators, and businesses to strengthen digital skills, promote responsible use of applications, and enhance trust in digital platforms.	Training programs awareness campaign implemented														

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Outcome Performance						
			Baseline		Target	
KRAs	Outcome	Outcome Indicator	Value	Year	Mid-Term Period	End-Term Period
	Improved business environment for ICT sector	Annual % per growth of the ICT sector				
		share of ICT sector contribution to GDP				
		No of Business Parks				
		Value of Export for ICT Products and Services				
		No. of Starter-Ups				
		volume of online trade				
		No. of jobs created				
	Improved service delivery	% of QoE	x	2023		
		% of QoS experience				
	Improved affordability	FBB% of GNI/capita	13.4%	2024	5%	2%
	Effective leadership and good governance	Resource Utilization				
		Digital Divide	39% internet use vs. 59% for men			

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Table 8. 5: Output Performance Matrix

Key Result Area	Output	Output Indicator	Baseline		Target	
			Value	Year	Mid Term (2027)	End Term (2030)
Policy Legal and Institutional Frameworks	Policy Frameworks	Number				
	Legal and Institutional Frameworks	Number				
Infrastructure Connectivity and Devices	National Broadband Coverage	KM of Fiber Optic Cables			40,000	100,000
		Wireless Coverage	98% 4G 30% 5G	2025	98% 4G	99% 4G 50% 5G
		Fiber Broadband Coverage	13%	2025	30%	60%
		Fiber Broadband Coverage (urban)	45%	2025	60%	95%
		Connection to Fixed Broadband	12%	2025	30%	50%
		Connection to Fiber Broadband	7.6%	2025	20%	35%
		Access to Mobile Broadband	50%	2025		80%
		No. of Household connected	1.7m	2025		8m
		No. of Schools connected				100%
		No. of Health institutions connected				100%
	National Broadband Quality	Minimum FBB speed	15 Mbps	2025	50 or 100 Mbps	
	Digital Hubs Established	No. of Digital Hubs				1,450
Capacity Building and Awareness:	Literate Population	Basic digital literacy rate				

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	Centre of Excellence	No. of Centres established				
Privacy and Security	Secure Cyber Space	QoS				
		QoE				
Services, Content and Applications	Services					
	Content					
	Applications					
Digital Economy, Research and Innovation	Digital Economy	Value of Broadband Investments				
		No. of Business parks				
		Value of Export for ICT Products and Services				
		No. of Starter-ups				
		% implementation of NAS				
		Volume of Online Trade				
		No. of jobs created				
	Research and Innovations					

Assumptions:

- Current population: 56m. 2030 Population: 59m.
- Current Households: 14m. 2% growth rate. 2030 Households: 16m.

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ANNEX:

Stakeholders and their Roles in the National Broadband Strategy 2025–2030

Stakeholder Category	Key Institutions / Actors	Roles and Responsibilities
Policy Leadership & Coordination	Ministry of Information, Communications and the Digital Economy (MICDE);	Overall policy leadership and custodianship of the NBS; coordination across MCDAs; alignment with Vision 2030, MTP IV, and BETA; reporting to the Cabinet on implementation.
Legislative Oversight	Parliament of Kenya (National Assembly & Senate)	Enactment and amendment of broadband-related legislation; budget approval; oversight of NBS implementation.
Legal Drafting & Advisory	Office of the Attorney-General & Department of Justice; Kenya Law Reform Commission	Drafting, review and harmonization of broadband-related laws, regulations and subsidiary legislation.
Judicial Oversight & Enforcement	Judiciary of Kenya	Determination of vandalism, cable theft, and infrastructure interference cases; enforcement of penalties.
Regulation & Market Oversight	Communications Authority of Kenya (CA)	Licensing and regulation of broadband operators; spectrum management; USF administration; QoS monitoring.
Government ICT Implementation	ICT Authority (ICTA)	Planning and rollout of national and government broadband infrastructure; technical standards.
Construction & Built Environment Regulation	National Construction Authority (NCA)	Ensuring broadband-ready buildings through ducts, conduits and fibre pathways in construction.
Public Finance & Investment	National Treasury	Mobilization and allocation of public resources; PPP frameworks; coordination of development partner financing.
Financial Institutions	Commercial Banks; DFIs; Pension Funds; Infrastructure Funds	Debt, equity, and blended financing for broadband infrastructure, digital hubs, and last-mile projects.
County Governments	47 County Governments	Right-of-Way approvals; local infrastructure planning; co-financing and hosting of digital hubs.

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Constituency-Level Financing	National Government Constituencies Development Fund (NG-CDF)	Financing and construction of community digital infrastructure, including 1,450 Digital Hubs.
Digital Innovation & Smart Cities	Konza Technopolis Development Authority	Technical leadership, standards, and innovation ecosystems for digital hubs and advanced broadband use cases. Construction of Centre of Excellence Digital Hubs in Counties
Public Infrastructure Agencies & SOEs	KPLC; KeNHA; Kenya Railways; KBC; PCK; others	Provision of wayleaves and passive infrastructure; infrastructure sharing.
Private Sector – Network Operators	MNOs; Fibre Operators; Tower Companies	Investment in broadband infrastructure, last-mile connectivity, and network upgrades.
Private Sector – ISPs & Service Providers	ISPs; Data Centres; Cloud Providers	Provision of affordable broadband services to households, SMEs and institutions.
Manufacturers & Supply Chain	Device manufacturers, fibre and cable manufacturers, equipment suppliers	Manufacture and supply of devices, cables and network equipment; technology transfer.
Academia & Training Institutions	Universities; TVET institutions; Digital academies	Skills development, curriculum design, and training of the broadband and digital economy workforce.
Research Institutions & Think Tanks	Research institutes, policy think tanks, innovation hubs	Research, policy analysis, monitoring and evaluation, and pilots.
Civil Society & Consumer Groups	CSOs; digital rights organizations; consumer associations	Advocacy for affordability, inclusion, consumer protection and digital rights.
Development Partners & IFIs	World Bank; AfDB; Bilateral partners; UN agencies	Technical assistance, grants and concessional financing; global benchmarking.
Standards & International Bodies	ITU; ATU; Regional ICT bodies	Standards development, spectrum harmonization and regulatory best practices.
Communities & End Users	Citizens; SMEs; Community networks	Adoption and productive use of broadband and digital hubs; feedback on service quality.

Media & Public Communication	National and community media houses (print, radio, television, digital platforms), public broadcasters, and private media organizations	Publicity and awareness creation on broadband policies, programmes, and investments; dissemination of information on broadband rollout, Digital Hubs, and access opportunities; promotion of digital inclusion, innovation, and safe use of the internet; facilitation of public participation, transparency, and accountability through informed reporting; support for behaviour change and uptake of broadband-enabled services across communities

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