







National Standardisation Strategy (NSS)

Guyana

2026-2028









Executive Summary

The National Standardisation Strategy (NSS) of Guyana for the period 2026–2028 presents a strategic roadmap to strengthen the country's quality infrastructure and enhance its ability to participate competitively in regional and international markets. Developed under the guidance of the Guyana National Bureau of Standards (GNBS) with support from the United Nations Industrial Development Organization (UNIDO) and the CARICOM Regional Organisation for Standards and Quality (CROSQ), the NSS responds to Guyana's growing need for a coordinated and resilient standardisation system. It reflects national ambitions to promote economic diversification, support sustainable development, and ensure public safety and consumer protection through improved quality assurance.

The strategy is grounded in Guyana's broader development agenda, including its National Development Plan¹ and the Low Carbon Development Strategy 2030, and is designed to align with international obligations such as the World Trade Organization's TBT and SPS Agreements. It provides the structure needed to address existing institutional and legal gaps in standardisation and to ensure that the country's standards support trade facilitation, environmental stewardship, and technological advancement.

The NSS is guided by three key strategic objectives, which are to create a resilient and adaptive standardisation framework that enables economic growth and competitiveness, to advance sustainability and environmental resilience through the integration of climate-related and low-carbon standards, and to support digital transformation and innovation by establishing standards in cybersecurity, data governance, and emerging technologies. These objectives are implemented through a set of six strategic initiatives focused on improving standardisation systems, promoting stakeholder engagement, building awareness and capacity, updating and reviewing standards, supporting digital governance, and promoting sustainable practices.

The NSS identifies several priority sectors for standardisation based on their significance to national development and export potential. These include agriculture, oil and gas, manufacturing, tourism, transport and logistics, construction, information and communication technology, healthcare, education, and public administration. Each sector is addressed through specific standardisation projects that align with national priorities and international best practices. The strategy outlines 57 proposed national standardisation projects, many of which are grounded in existing international standards such as those developed by ISO, Codex Alimentarius, and other globally recognised bodies.

As a result of a broad-based stakeholder engagement process, the NSS reflects the collective input of government agencies, industry leaders, civil society, academia, and regional organisations. It establishes a clear framework for implementation, backed by defined roles and responsibilities, a phased timeline, and a performance-based monitoring and evaluation system. Funding for implementation will rely on coordinated national budget allocations, external support from development partners, and private sector collaboration.

In providing this clear and forward-looking framework, the NSS lays the foundation for Guyana to modernise its standardisation system and to build a more inclusive, sustainable, and competitive

https://finance.gov.gy/wp-content/uploads/2017/06/nds.pdf









economy. The successful implementation of this strategy will be critical to achieving the country's development goals and enhancing its standing in regional and international markets.











Contents

E>	ecutive	Summary	2
1	Intro	duction	5
2	Strate	egic Context	6
	2.1	Current state of the National Quality Infrastructure	6
	2.2	Economic, social, and environmental context	7
	2.3	International and regional commitments	7
	2.4	Stakeholder analysis and engagement	8
3	GNBS	S: Vision, Mission, and Role	10
4	Prior	ity Sectors and Objectives	11
	4.1	Priority Sectors	12
	4.2	Strategic Objectives	13
5	Imple	ementation Strategy	14
	5.1	Strategic initiatives and actions	14
	5.2	Roles and responsibilities	16
	5.3	Timeline and Milestones	17
	5.4	Resource allocation and funding	23
	5.5	Risk management and mitigation	24
6	Moni	toring and Evaluation	25
	6.1	Performance indicators and targets	25
	6.2	Monitoring and reporting mechanisms	27
	6.3	Evaluation and continuous improvement	27
7	Secto	or Specific Plans	27
8	Conc	lusion	30
	8.1	Summary of key points	30
	8.2	Call to action	30
	8.3	Future outlook	30
9	Anne	xes	32
	9.1	Glossary of terms	32
	9.2	List of stakeholders consulted	33
	9.3	References and further reading	34









1 Introduction

Background and Rationale for the National Standardisation Strategy

The development and implementation of a National Standardisation Strategy (NSS) is vital for Guyana as it navigates the pathway towards sustainable economic growth, regional integration, and global trade participation. In the modern era of interconnected economies, meeting international standards and regulatory requirements, it is critical for ensuring competitiveness and fostering a culture of quality, that underpins social and economic progress. This strategy will address critical gaps in standardisation, which are vital for enhancing competitiveness, facilitating trade, and ensuring consumer safety.

The NSS is being developed as part of a broader program implemented by the United Nations Industrial Development Organization (UNIDO) in partnership with the CARICOM Regional Organisation for Standards and Quality (CROSQ). The initiative reflects a concerted effort to integrate Guyana's national priorities with regional and global goals. The NSS provides the foundation necessary for products and services from Guyana to meet international standards, thereby creating opportunities for export-driven growth.

This strategy is particularly significant given Guyana's emphasis on aligning economic and social development with sustainability and global competitiveness. As outlined in the National Development Plan, the country's priorities include diversifying its economy, modernising infrastructure, and fostering inclusivity, all of which require a robust framework for quality assurance and standardisation. The NSS will serve as a foundational tool to address gaps in conformity assessment, facilitate access to international markets, and promote economic growth that aligns with environmental stewardship and social equity. By providing a clear roadmap for standardisation, the NSS will enable the country to achieve its development goals while supporting its transition to a resilient and diversified economy.

Importance of Standardisation

Standardisation is a cornerstone of economic and industrial development. It fosters quality, consistency, safety, and reliability in products, services, and processes, creating a foundation for trust and innovation. Standards are developed through consensus and implemented to harmonise practices across industries, ensuring quality, safety, and fairness in global trade.

For developing nations like Guyana, standardisation levels the playing field by facilitating equitable access to international markets. It promotes the adoption of best practices that enhance productivity and competitiveness while addressing challenges related to compliance with global technical requirements. Moreover, standardisation is a catalyst for progress, encouraging innovation and the dissemination of technology while safeguarding environmental and social priorities.

Alignment with National Development Goals and the Sustainable Development Goals (SDGs)

Guyana's national development goals align with the Sustainable Development Goals (SDGs) through a focus on reducing poverty, promoting education, advancing renewable energy, and fostering sustainable development. These goals prioritise inclusive economic growth, equitable resource distribution, and environmental stewardship, reflecting a commitment to both national progress and global sustainability objectives.









2 Strategic Context

2.1 Current state of the National Quality Infrastructure

The National Quality Infrastructure (NQI) of Guyana consists of several key components: standardisation, metrology, conformity assessment, and accreditation. This infrastructure supports quality assurance for goods and services and helps businesses and regulators ensure compliance with standards and technical regulations. While the existing NQI has strengths, such as established institutions and technical capacity, there are also gaps that need to be addressed to better support the growth of key economic sectors.

Standardisation

The Guyana National Bureau of Standards (GNBS) serves as the National Standards Body and is responsible for the development and promotion of standards. Over 500 national standards have been published across sectors such as agriculture, construction, food, engineering, tourism, and notably, the fast-growing oil and gas industry. In response to Guyana's expanding oil and gas sector, several standards have been developed to support its growth, safety, and sustainability. Additionally, numerous standards have been established to protect and empower consumers, reflecting GNBS's commitment to the consumer sector. While the standardisation process is well-structured, there are clear gaps in the legal and institutional framework, external recognition, service delivery, and technical capacity. These issues stem from the lack of a national standards strategy, the absence of a formal system for recognising Standards Development Organizations (SDOs) by GNBS.². However, it is important to note that GNBS actively engages stakeholders for their support and input throughout the standardisation process, demonstrating a commitment to inclusive and collaborative standards development.

Metrology

National metrology services fall under the responsibility of GNBS and cover both industrial and legal metrology. Legal metrology is well-developed and contributes to fair trade and consumer protection. GNBS provides calibration services for industry and laboratories and maintains national measurement standards for mass, temperature, pressure, and electrical measurements. Although some internationally recognised calibration capabilities exist, there is no national metrology strategy, and the legal framework is outdated.

Conformity Assessment

Conformity assessment covers product testing, inspection, and certification. Both government agencies and private organisations provide these services. GNBS manages a laboratory certification program, offering technical support and training to laboratories pursuing accreditation. A number of testing laboratories have achieved international accreditation, including the GNBS Industrial Metrology & Testing (IMT) Laboratory, the Guyana Rice Development Board (GRDB) Laboratory, and the Government Analyst–Food and Drug Department (GA-FDD) Laboratories, all accredited to ISO/IEC

² National Quality Policy REV 5 OCT 30









17025:2017. In the medical field, Woodlands Limited Medical and Pathology Laboratories, Dr. Balwant Singh's Hospital, and Eureka Medical Laboratories Inc. are accredited to ISO 15189:2022³..

Accreditation

Accreditation confirms the competence of conformity assessment bodies, but Guyana does not have a national accreditation body for laboratories, inspection units, or certification agencies. GNBS functions as the National Accreditation Focal Point (NAFP) and collaborates with regional initiatives to facilitate accreditation for Guyanese organisations. While efforts are being made to promote accreditation, the absence of a national accreditation system means businesses must rely on foreign accreditation bodies, which can be costly and time-consuming.

2.2 Economic, social, and environmental context

Guyana's economy is experiencing rapid transformation, fuelled by recent oil and gas developments. Historically reliant on agriculture and mining, the country is now witnessing accelerated economic growth, with oil revenues significantly contributing to infrastructure development and diversification of economic activities. Despite this progress, economic sustainability remains a priority, necessitating investment in key non-oil sectors such as agriculture, agro-processing, manufacturing, and tourism. Strengthening the national standardisation framework is critical to ensuring product quality, trade competitiveness, and economic resilience beyond oil-dependent revenues.

Guyana's diverse population of approximately 800,000 is concentrated along the narrow Atlantic coastal plain, creating disparities in access to services between coastal and hinterland communities. While education enrolment rates are high and poverty levels have declined over time, gaps persist in healthcare, employment opportunities, and infrastructure, particularly in rural areas. The standardisation strategy must support initiatives that promote social inclusion, public safety, and the quality of essential services, ensuring equitable development for all citizens.

Guyana's environmental landscape is defined by vast rainforests, rich biodiversity, and substantial freshwater resources. However, climate change presents a major challenge, with rising sea levels and extreme weather events posing risks to coastal infrastructure and agricultural productivity. The government's Low Carbon Development Strategy (LCDS 2030) outlines a pathway for sustainable growth, balancing economic development with environmental stewardship. Standards for climate resilience, sustainable resource management, and renewable energy integration are essential to maintaining ecological stability while fostering economic advancement. The interplay between economic growth, social well-being, and environmental sustainability underscores the need for a robust standardisation framework that aligns with national priorities and international best practices.

2.3 International and regional commitments

Guyana's national standardisation strategy is shaped by its commitments at both the international and regional levels. As a member of the World Trade Organization (WTO), Guyana adheres to the Agreements on Technical Barriers to Trade (TBT) and Sanitary and Phytosanitary Measures (SPS), ensuring that national standards facilitate trade without creating unnecessary barriers. The Guyana National Bureau of Standards (GNBS) serves as the national WTO TBT Enquiry Point, supporting

³ https://gnbsgy.org/recognising-accredited-laboratories-in-guyana-on-world-accreditation-day/









transparency in standards development and ensuring that technical regulations comply with global trade requirements. The adoption of international standards enhances market access and strengthens the competitiveness of Guyanese products and services.

At the regional level, Guyana operates within the CARICOM framework, which prioritises the harmonisation of standards and technical regulations, to facilitate trade and economic integration. The CARICOM Regional Standards Development Priority Plan (RSDPP) 2022–2027 serves as a guiding document for aligning national standardisation strategies with regional priorities. This alignment ensures that Guyana can leverage regional collaboration to overcome its domestic challenges, while contributing to broader economic and social goals. Engagement with the CARICOM Regional Organisation for Standards and Quality (CROSQ) allows Guyana to participate in the development and adoption of regional standards, ensuring consistency across member states and supporting enhanced trade within the region. Guyana also participates in the Pan American Standards Commission (COPANT), which promotes cooperation on standardisation across the Americas. This engagement strengthens regional technical alignment and supports Guyana's efforts to meet both regional and international quality benchmarks. Through these initiatives, Guyana supports its position in the CARICOM Single Market and Economy, strengthening its ability to meet regional market demands and regulatory requirements.

Internationally, Guyana engages with organisations such as the International Organization for Standardization (ISO), the International Electrotechnical Commission (IEC), American Petroleum Institute (API) and ASTM International to align national standards with global best practices. Membership in these bodies allows for the adoption of internationally recognised standards, facilitating export growth and improving product and service quality. Compliance with Codex Alimentarius food standards further reinforces Guyana's capacity to meet international food safety and quality benchmarks. These commitments ensure that Guyana remains competitive in global markets while adhering to internationally recognised quality infrastructure principles. A comprehensive list of international and regional bodies with which Guyana collaborates is provided in annex 9.3.3.

By integrating international and regional commitments into its standardisation strategy, Guyana strengthens its trade position, fosters economic growth, and upholds high standards for quality, safety, and sustainability. These efforts support national development objectives while enabling the country to engage effectively in the global economy.

2.4 Stakeholder analysis and engagement

The development of the National Standardisation Strategy (NSS) of Guyana has been a collaborative and strategic effort, ensuring that national priorities for standardisation align with economic growth, trade competitiveness, and sustainable development. A broad and inclusive stakeholder engagement process was implemented to gather diverse perspectives from key sectors, including government agencies, the private sector, academia, civil society (such as consumer bodies and non-governmental organisations), and regional organisations. This participatory approach ensured that the NSS reflects national needs while maintaining coherence with the regional standardisation framework.

Stakeholder Identification and Involvement









Stakeholders were identified through a structured process that examined relevance to the NSS development, influence on standardisation policies, and their role in the implementation of standards. This macro-level identification ensured the inclusion of all key interest groups, including:

- Government Ministries and Regulatory Bodies: Agencies responsible for trade, industry, agriculture, public health, and consumer protection provided guidance on aligning the NSS with national policy frameworks and international obligations.
- Private Sector Representatives: Business organisations, chambers of commerce, exporters, importers, and service providers contributed insights into market needs, regulatory barriers, and trade competitiveness.
- Civil Society and Academia: Consumer organisations, non-governmental organisations (NGOs), and academic institutions advocating for consumer rights, sustainability, and public health considerations.
- **Regional Organisation:** The CARICOM Regional Organisation for Standards and Quality (CROSQ) helped ensure harmonisation with regional standardisation efforts.

Stakeholder Engagement Methodology

To effectively engage stakeholders, the NSS development process incorporated a range of participatory methods designed to capture input, validate priorities, and facilitate ongoing collaboration. These included:

A. Needs Assessment

A National Stakeholder Survey was conducted between December 2024 and February 2025 to collect input from key public and private sector organisations. Online surveys were distributed via email and social media.

B. Stakeholder Consultations and Validation Workshops

Two stakeholder consultations and workshops were held in January 2025 to:

- Build awareness of the NSS objectives.
- Confirm research findings and sector-specific priorities.
- Facilitate structured discussions through participatory exercises to refine proposed standardisation areas.
 - C. Draft Review and Refinement

To ensure transparency and accuracy, validation sessions will be conducted with stakeholders who contributed earlier in the process, as well as with additional relevant parties. Online presentations, plenary discussions, and email-based feedback mechanisms will allow for broad participation in refining the draft NSS.

D. Awareness and Dissemination









To promote widespread adoption of the NSS, awareness campaigns will be launched targeting both stakeholders and the general public. Key initiatives will include:

- Webinars to explain the NSS framework and its benefits.
- Media outreach to ensure public visibility.
- Online and offline distribution of a summary document detailing key standardisation priorities.
 - E. Ongoing Communication and Monitoring

To maintain stakeholder engagement beyond the development phase, structured mechanisms for continuous collaboration will be established:

- Regular Updates and Feedback Loops: periodic email newsletters and stakeholder Q&A forums will ensure stakeholders remain informed and involved.
- Annual Evaluations: scheduled assessments will measure the effectiveness of stakeholder engagement and guide refinements as needed.
- Digital Tools: the integration of social media, webinars, and online consultations will modernise engagement and provide accessible platforms for dialogue.

By fostering sustained engagement, the NSS reflects the collective input of key sectors, reinforcing Guyana's commitment to quality infrastructure, trade competitiveness, and sustainable development. The participatory process ensures that the NSS remains a dynamic and responsive framework, capable of addressing evolving national and regional standardisation needs. Continuous collaboration among stakeholders will drive the successful implementation of the NSS, supporting economic growth and the well-being of Guyana.

3 GNBS: Vision, Mission, and Role

The Guyana National Bureau of Standards (GNBS), operating under the Ministry of Tourism, Industry, and Commerce, is a semi-autonomous governmental organisation responsible for standards and quality in Guyana. Established in March 1985 under Act No. 11 of 1984, GNBS functions as a statutory corporation governed by the National Standards Council (NSC), which is appointed by the Minister of Tourism, Industry, and Commerce.

As the national authority for standardisation, GNBS plays a crucial role in shaping the country's standards and quality landscape. It is committed to fostering a culture of quality, enhancing business competitiveness, and protecting consumers. Through its vision, mission, and strategic functions⁴, GNBS spearheads the development and implementation of a robust National Quality Infrastructure (NQI) that supports economic growth and sustainable development.

Vision statement

To be the premier National institution for Standards and Quality.

⁴ https://gnbsgy.org/about-us/overview/









Mission statement

To develop and implement the National Quality Infrastructure in partnership with key stakeholders, towards sustainable socioeconomic development and consumer protection.

Role

GNBS executes its mandate through several core functions aimed at enhancing business competitiveness, supporting trade, and safeguarding consumer interests:

- Supports trade and enhances business competitiveness through standards.
- Facilitates business growth and development standards are implemented to help industry enhance its efficiency and the quality of products offered for sale.
- Support the establishment of a National Quality Infrastructure-key services, such as verification, calibration, testing and certification are offered to the national framework to ensure quality products and services.
- Protects consumers- standards are enforced to protect Consumers from poor quality products and services.

Core Services

To fulfil its mission, GNBS offers a comprehensive range of services that support industry, trade, and consumer protection:

- Calibration and Testing
- Certification (GYS 901, Made in Guyana, Product, Laboratories & Auditing)
- Product Inspection
- Standards Development
- Training and Technical Assistance
- Verification

By executing these core services and strategic functions, GNBS strengthens Guyana's quality framework, fosters industrial competitiveness, and enhances consumer confidence in products and services available in the market.

4 Priority Sectors and Objectives

Standardisation plays a crucial role in enhancing competitiveness, ensuring regulatory compliance, and promoting sustainability. A well-structured approach supports economic diversification, trade facilitation, and technological advancement, aligning national development efforts with international best practices.

By focusing on priority sectors that drive growth and resilience, standardisation fosters innovation, efficiency, and market access, strengthening the foundation for a sustainable and dynamic economy.









4.1 Priority Sectors

Agriculture plays a critical role in food security, rural employment, and export revenue, making it essential to develop and implement standards that enhance productivity, sustainability, food safety, and quality assurance. The focus on rice, livestock, and forestry is particularly significant as these sectors contribute to Guyana's dual objectives of economic growth and environmental stewardship.

Oil and gas have emerged as the most critical sector due to their transformative impact on Guyana's economy. The development of standards in this sector must prioritise enhancing operational efficiency, strengthening environmental safeguards, and aligning practices with international market requirements and best practices.

Manufacturing, with its potential for value addition and export diversification, requires targeted standards to strengthen compliance with international trade requirements. Key industries, including sugar, rum and spirits, and prepared foods, stand to benefit from improved standardisation efforts that align with both national and regional goals.

Tourism is a growing priority sector with strong potential for inclusive and sustainable economic development. Green tourism, in particular, reflects Guyana's strategic focus on leveraging its biodiversity and natural landscapes through eco-tourism models that protect the environment and create opportunities for local communities, especially in the hinterland and Indigenous areas. Its success relies on investments in infrastructure, capacity building, and global marketing. Pursuing internationally recognised certifications—such as Green Globe, Rainforest Alliance, or Biosphere Responsible Tourism—and aligning national standards with these benchmarks will enhance Guyana's global credibility and support sustainable livelihoods and environmental conservation.

Transport and logistics play a fundamental role in facilitating trade and ensuring the efficient movement of goods and services across Guyana's air, land, and sea domains. Standardisation efforts in this area will prioritise the development of standards for motor vehicle safety, aviation and airport operations, maritime and port safety, environmental compliance, and operational efficiency. It will also be essential to establish standards for specialised transport equipment and infrastructure that supports trade and logistics across all modes. The maritime sector - including, but not limited to, Floating Production Storage and Offloading (FPSO) units in the oil and gas industry, will require comprehensive standardisation to ensure safe and effective operations.

The construction sector remains a key driver of economic growth and development, necessitating standards that address sustainable building practices, infrastructure resilience, and material quality. It is also imperative to integrate consumer safety and protection measures within the standardisation framework to enhance the safety of both residential and commercial infrastructure.

The information and communication technology sector serves as a catalyst for modernisation and innovation, highlighting the need for well-defined standards that address digital connectivity, cybersecurity, and data governance. Strengthening cybersecurity measures and ensuring interoperability in digital systems will be critical for fostering technological advancement and enabling a secure digital economy.









Standardisation is equally essential for wholesale and retail trade as it supports market efficiency, optimises supply chains, and facilitates commercial activities at both national and regional levels. Establishing standards will enhance market transparency and ensure that businesses adhere to best practices in trade facilitation and commerce.

In the education and healthcare sectors, the development and implementation of standards will be fundamental in improving service delivery and ensuring social equity. It will be important to define and enforce educational quality standards that enhance vocational training and technical education, as well as healthcare standards that improve patient safety, service efficiency, and medical infrastructure.

Public administration plays a key role in strengthening governance and institutional frameworks. Standardisation efforts will focus on promoting efficiency, transparency, and accountability in governance structures by introducing standardised processes for regulatory compliance, digital governance, and public service delivery. Consideration will also be given to standards that promote good governance principles such as Good Regulatory Practices, which ensure consistency and fairness in policymaking.

In the area of low carbon infrastructure, Guyana is already leading in the ART-TREES programme. It will be important to continue strengthening this initiative by developing and implementing standards that support carbon credit verification, sustainable infrastructure, and low-carbon economic activities. The expansion of these efforts will reinforce Guyana's commitment to climate resilience and environmental conservation.

4.2 Strategic Objectives

The National Standardisation Strategy of Guyana is designed to ensure a structured and effective approach to standardisation that supports the country's economic diversification, trade facilitation, environmental sustainability, and industrial transformation. The strategic objectives outlined below are aligned with national priorities and international best practices to foster the development of a resilient and competitive economy.

• Strategic Objective 1: Ensuring a Resilient and Adaptive Standardisation Framework for Trade and Economic Growth

A resilient and adaptive standardisation framework is essential for supporting trade, economic growth, and industrial competitiveness while responding to technological advancements and global market trends. Maintaining the relevance and effectiveness of standards requires regular review, stakeholder engagement, and integration of scientific and technological advancements to support product safety, quality assurance, and market access. A well-functioning standardisation system depends on strong collaboration between the National Standards Body, regulatory agencies, industry stakeholders, and international partners to enhance the adoption and implementation of standards in key economic sectors. Facilitating the integration of standardised practices within small and medium-sized enterprises (SMEs) enhances their competitiveness, enabling them to meet regulatory and market-driven requirements while contributing to sustainable economic development.









Strategic Objective 2: Advancing Sustainability and Environmental Resilience through Standardisation

Sustainable development is a key national priority, and standardisation plays a critical role in supporting environmental conservation, carbon credit verification, and the transition to a low-carbon economy. Establishing and adopting environmental management standards promote sustainable practices in key industries such as agriculture, forestry, and mining. Developing standards that support the verification of carbon credits and sustainable infrastructure projects ensures compliance with international environmental commitments. Enhancing resilience in the construction and manufacturing sectors through standards addresses energy efficiency, waste management, and sustainable resource utilisation. Integrating environmental, social, and governance (ESG) principles into standardisation efforts ensures long-term economic and environmental sustainability.

• Strategic Objective 3: Supporting Digital Transformation and Technological Innovation through Standardisation

As Guyana embraces digital transformation, the need for well-defined ICT standards becomes increasingly critical to ensure cybersecurity, data governance, and interoperability of digital systems. Developing and implementing ICT standards enhances digital connectivity and protects information systems from cyber threats. Establishing data protection and privacy standards ensures compliance with international regulatory frameworks. Promoting the use of digital standards in e-commerce, financial services, and government operations enhances efficiency and transparency. Encouraging innovation by facilitating the adoption of emerging technologies such as artificial intelligence (AI), blockchain, and the Internet of Things (IoT) within the standardisation framework strengthens technological advancement.

These strategic objectives provide a structured approach to addressing national priorities through standardisation, ensuring that Guyana's industries remain competitive, sustainable, and technologically advanced. By implementing these objectives, the National Standardisation Strategy will serve as a foundational pillar for economic development, environmental protection, and digital transformation.

5 Implementation Strategy

The successful implementation of the NSS requires a structured approach to ensure the development and application of standards in priority sectors. It encompasses strategic initiatives, roles and responsibilities, timeline, resource allocation, and risk management measures necessary to achieve the objectives set out in the NSS.

5.1 Strategic initiatives and actions

Strategic Initiative 1: Strengthening the National Standardisation Framework

Actions:

 Expand the continuous review mechanism —leveraging digital tools— to update national standards, ensuring harmonisation with CROSQ, ISO, Codex, and WTO SPS/TBT Agreements to facilitate trade and economic growth.









- Expand the standard development scope to include tailored standards for priority sectors (such as agriculture, manufacturing, ICT, energy, construction, and health) to drive sectoral transformation.
- Strengthen coordination between regulatory agencies and the National Standards Body to align standards with national policies and economic goals.

Strategic Initiative 2: Promoting Stakeholder Engagement

Actions:

- Establish regular forums with government agencies, industry representatives, academia, consumer organisations, and SMEs to ensure that national standards address market needs and support regulatory objectives.
- Foster Public-Private Partnership to leverage expertise, resources, and innovation for standardisation efforts, particularly in emerging industries such as digital trade, biotechnology, and renewable energy.
- Strengthen consumer engagement through public campaigns, digital outreach, and interactive workshops to enhance awareness of standards' benefits.

Strategic Initiative 3: Enhancing Awareness and Capacity-Building Programs

Actions:

- Expand and diversify the existing training portfolio on standardisation to address priority and emerging sectoral needs.
- Embed standards in formal curricula by working with educational institutions, curriculum developers, and teacher training institutions to integrate content on standards into STEM, business, and vocational training programmes⁵..
- Launch digital knowledge hubs with self-paced courses on national standards.

Strategic Initiative 4: Strengthening Mechanisms for Periodic Review and Update of Standards

Actions:

- Enhance the existing five-year rolling review system for national standards to maintain relevance and ensure adaptation to technological advancements.
- Develop an integrated database for tracking and managing standards, regulatory updates, and sector-specific compliance requirements, incorporating AI-powered capabilities following comprehensive consultation with policymakers and other key stakeholders.

⁵ This action builds on efforts already undertaken by the GNBS through its Standards in Academia programme, which promotes awareness of standards among students through activities such as quiz competitions, school visits, and educational materials, in collaboration with the Ministry of Education.









• Conduct regular ex-post evaluations to assess the effectiveness of standards in economic growth, environmental sustainability, and public health.

Strategic Initiative 5: Supporting Digital Standardisation Efforts

Actions:

- Establish robust cybersecurity, e-commerce, and data governance standards to safeguard the digital economy.
- Develop standards for cross-border digital trade, financial technology services, and government e-services to align with regional and global frameworks.
- Collaborate with regional and international organisations to establish artificial intelligence (AI) and blockchain governance standards that foster responsible innovation.

Strategic Initiative 6: Encouraging Sustainable and Climate-Resilient Practices

Actions:

- Support the implementation and continuous improvement of carbon footprint, energy efficiency, and waste management standards to advance sustainable industrialisation.
- Promote environmental, social, and governance integration into corporate governance, supply chain management, and financial reporting.

By implementing these strategic initiatives, Guyana's NSS will drive economic diversification, digital transformation, environmental sustainability, and trade facilitation, ensuring a resilient and competitive economy.

5.2 Roles and responsibilities

The successful implementation of the NSS requires the active participation of stakeholders in standard development. Each entity will contribute to ensuring that the standards developed are technically sound, relevant to industry needs, and aligned with national priorities.

The National Standards Body of Guyana will lead the development, adoption, and maintenance of national standards. The NSB will coordinate technical committees, engage stakeholders in the standardisation process, and facilitate the adoption of internationally recognised standards.

Government ministries and regulatory agencies will contribute technical expertise and policy insights into standard development. They will ensure that standards align with regulatory requirements and facilitate the harmonisation of national and regional policies.

Industry associations and the private sector will participate in technical committees, providing input on industry-specific standardisation needs. Their involvement will ensure that the standards developed support competitiveness, efficiency, and market access.

Academic and research institutions will contribute to the technical development of standards, providing research-based insights and fostering expertise in key standardisation areas.









Consumer protection organisations and civil society groups will participate in standard development discussions to ensure that national standards address consumer safety, public health, and environmental concerns.

Each stakeholder group will be involved in the development of standards, with their participation coordinated through technical committees and stakeholder consultations.

5.3 Timeline and Milestones

To ensure the effective implementation of the strategic initiatives outlined in this strategy, a clear timeline with phased milestones has been developed. The following table categorises each action under short-term (within 12 months), medium-term (within 1–2 years), and long-term (within 2–3 years) horizons. This phased approach supports prioritisation, resource allocation, and performance monitoring, while allowing for flexibility in response to evolving national needs, technological advancements, and global trends.

GNBS will serve as the lead agency for the implementation of these strategic initiatives. However, collaboration with a range of sectoral and technical partners will be critical to success. The key collaborators for each action are identified in Table 1, reflecting the multi-stakeholder nature of the standardisation process and the need for cross-sectoral coordination.









Table 1. Timeline and Milestones for the Implementation of Strategic Initiatives

Strategic Initiative	Action	Milestone – Short- Term (within 12 months)	Milestone – Medium- Term (within 1–2 years)	Milestone – Long-Term (within 2–3 years)	Key Collaborators
Strengthening the National Standardisation Framework	Expand the continuous review mechanism—leveraging digital tools— to update national standards	Initial mechanism designed and pilot initiated; launch of online standards consultation portal to collect stakeholder input.	Review cycle implemented and aligned with regional frameworks; rollout of standards lifecycle tracking dashboard for transparency and monitoring.	Full integration and regular updates across all sectors; automated alerts for revision cycles and stakeholder updates via notification system.	
	Expand the standard development scope to include tailored standards for priority sectors	Sector consultations initiated	Draft standards developed for at least 3 sectors	Initial adoption and piloting of standards in selected priority sectors; preparation for broader rollout.	Sectors, Government Ministries and
	Strengthen coordination between regulatory agencies and NSB	Coordination mechanism established with representatives from key regulatory agencies and the NSB; terms of reference defined and priority areas for alignment identified.	Harmonisation roadmap developed	Institutionalised coordination and regular policy alignment	Regulatory Authorities









Strategic Initiative	Action	Milestone – Short- Term (within 12 months)	Milestone – Medium- Term (within 1–2 years)	Milestone – Long-Term (within 2–3 years)	Key Collaborators
Promoting Stakeholder Engagement	Establish regular forums with stakeholders	First national forum organised	Bi-annual forums institutionalised	Stakeholder input mechanisms institutionalised across priority sectors.	Representatives Priority Sectors, Government Ministries and Regulatory Bodies, Civil Society and Academia
	Foster Public-Private Partnership (PPP) for emerging industries	Key PPP stakeholders identified and consulted.	Pilot PPP projects launched	PPP embedded in standardisation framework	Emerging Industry Representatives, Ministry of Finance/Economic Affairs, Development Banks, Investment Agencies,
	Strengthen consumer engagement	Public campaign launched	Feedback system and digital channels enhanced	Sustained national consumer involvement in standardisation	Department of Consumer Affairs at the Ministry of Tourism, Industry and Commerce, and key consumer related bodies such as Competition and Consumer Affairs Commission, Guyana Consumers Association, National Communications Network, Department









Strategic Initiative	Action	Milestone – Short- Term (within 12 months)	Milestone – Medium- Term (within 1–2 years)	Milestone – Long-Term (within 2–3 years)	Key Collaborators
					of Public Information (DPI) and the Environmental Protection Agency (EPA)
Enhancing Awareness and Capacity-Building Programs	Expand and diversify training programs to align with priorities and emerging sector needs	Training needs assessed across priority and emerging sectors; new sessions scoped and initiated	Sector-specific training modules developed and scaled; partnerships explored with sector bodies	Training programs fully aligned with priority and emerging sectoral needs	Government Officials, SMEs, Exporters, and Technical Committees
	Embed standards in formal curricula through collaboration with education stakeholders in STEM, business, and vocational fields. ⁶	Initial engagement with curriculum developers and teacher training institutions initiated; mapping of existing content and identification of entry points for standards-related topics completed.	Context-specific standardisation modules developed and piloted in select STEM, business, and vocational programmes; feedback gathered from education stakeholders.	Standardisation content formally integrated into curricula across STEM, business, and vocational fields.	Ministry of Education, University of Guyana, Colleges, Technical/Vocational Training Institutes
	Launch digital knowledge hubs	Portal design and content development	Launch of beta version	Fully functional and self-sustaining digital hub	ICT experts

⁶ Based on existing outreach efforts by GNBS through its Standards in Academia programme in collaboration with the Ministry of Education.









Strategic Initiative	Action	Milestone – Short- Term (within 12 months)	Milestone – Medium- Term (within 1–2 years)	Milestone – Long-Term (within 2–3 years)	Key Collaborators
Strengthening Mechanisms for Periodic Review and Update of Standards	Enhance the existing five-year rolling review system	Review schedule drafted	System piloted with selected standards	System institutionalised across all standards	Representatives Priority Sectors, Government Ministries and Regulatory Bodies, Civil Society and Academia
	Develop integrated Al- powered database	System requirements defined	Prototype developed and tested	Full rollout and integration with regulatory systems	Al Experts
	Conduct regular expost evaluations	Methodology defined and pilot evaluations started	Annual evaluations institutionalised	Evaluation outcomes integrated in policy cycle	Representatives Priority Sectors, Government Ministries and Regulatory Bodies, Civil Society and Academia
Supporting Digital Standardisation Efforts	Establish standards to safeguard the digital economy.	Draft standards on cybersecurity and data governance	Consultation and testing with digital sector	National adoption and international alignment	NDMA, Private ICT Sector, Cybersecurity Experts
	Develop cross-border digital trade and financial technology services standards	Stakeholder engagement initiated	Draft framework developed	Full integration into national digital trade policy	Bank of Guyana, , Ministry of Foreign Affairs, Financial technology services Firms, Trade Policy Experts
	Collaborate for AI and blockchain governance standards	Partner network established	Co-development of governance principles	Standards published	NDMA, University of Guyana, International Experts









Strategic Initiative	Action	Milestone – Short- Term (within 12 months)	Milestone – Medium- Term (within 1–2 years)	Milestone – Long-Term (within 2–3 years)	Key Collaborators
Encouraging Sustainable and Climate-Resilient Practices	Expand sustainability- related standards	Priority sectors identified and consultations started	Draft standards on carbon footprint, energy, and waste	National adoption and monitoring system in place	Environmental Protection Agency, Ministry of Natural Resources, Industry Associations
	Promote ESG integration	Awareness campaign and training started	ESG indicators included in corporate reporting guidelines	Widespread adoption across sectors	Representatives Priority Sectors, Government Ministries and Regulatory Bodies, Civil Society and Academia









5.4 Resource allocation and funding

The effective implementation of the strategic initiatives outlined in the National Standardisation Strategy requires a deliberate and well-coordinated approach to resource allocation and funding. This includes mobilising both domestic and international resources, ensuring alignment with national priorities and implementation milestones.

Line ministries are expected to incorporate relevant activities into their annual budgetary frameworks. This implies that ministries such as those responsible for trade, education, telecommunications, environment, agriculture/ food production and finance will need to allocate dedicated resources to support standardisation-related initiatives within their respective mandates and budgeted line items. For instance, the integration of standardisation into education programs, the development of sustainability standards, and the enhancement of digital infrastructure for standards dissemination all require specific budgetary commitments at the national level. A central coordination mechanism, possibly anchored within the national standards body or through an inter-ministerial platform, should be responsible for consolidating funding requirements and submitting a coordinated proposal for cabinet approval. This mechanism would ensure efficiency, avoid duplication, and foster coherence across all sectors.

In addition to domestic budget allocations, the Government of Guyana should actively pursue external funding opportunities. Several international and regional organisations currently support programmes in Guyana that align closely with the strategic initiatives outlined in this Strategy. These include the Caribbean Development Bank (CDB), the Inter-American Development Bank (IDB), the Global Environment Facility (GEF), and other development partners such as the European Union (EU), the United Nations Development Programme (UNDP), and the World Bank. Each of these agencies offers funding mechanisms that could support various elements of the Strategy, ranging from capacity-building and digital transformation to sustainability and trade facilitation. Targeted funding proposals should be developed to align with donor priorities, and collaborative arrangements should be pursued to maximise impact.

Where feasible, internal investment and public-private partnerships can provide an additional avenue for resource mobilisation. In particular, the private sector has an important role to play in co-financing specific actions such as training and outreach, pilot projects on new standards, and the development of digital platforms. Establishing strong value propositions for private sector involvement will be essential, especially in emerging sectors such as financial technology services, e-commerce, and sustainable production.









5.5 Risk management and mitigation

To ensure the success of the NSS, potential risks and their mitigation strategies are outlined below:

Risk Factor	Mitigation Strategy
Limited stakeholder participation	Regular consultations, capacity-building programs, and participation-enhancing mechanisms
Inadequate funding	Diversification of funding sources, advocacy for government support, and regional collaboration
Resistance to standard adoption	Awareness campaigns, technical assistance, and phased implementation approach
Lack of technical expertise	Collaboration with universities and knowledge-sharing platforms, assuming availability of voluntary technical experts

6 Monitoring and Evaluation

6.1 Performance indicators and targets

Each of the six strategic initiatives under the National Standardisation Strategy is linked to specific actions, performance indicators, and expected outcomes. These elements will enable systematic tracking of progress, measurement of results, and identification of areas for improvement throughout the implementation period.

The table below outlines the key indicators and targets that will guide implementation and performance monitoring over the 2026–2028 period.

Table 2. Key Performance Indicators and Targets for Strategic Initiatives (2026–2028)

Strategic Initiative	Performance Indicators	Targets
Strengthening the National Standardisation Framework	 Number of national standards revised and updated annually Number of new sector-specific standards developed and adopted Degree of alignment with regional/international frameworks (CROSQ, Codex, ISO) 	 10+ standards updated annually starting Year 1 At least 3 sectoral standards adopted by Year 2 Full alignment for at least 5 standards by Year 3
Promoting Stakeholder Engagement	 Number of stakeholder forums held per year Number of Public-Private Partnerships (PPP) launched Consumer engagement levels (measured via feedback mechanisms) 	 Minimum 2 national forums per year At least 2 PPPs initiated by Year 2 Sustained annual increase in consumer engagement levels, reaching at least 50% participation by Year 3
Enhancing Awareness and Capacity-Building	 Number of individuals trained across sectors Inclusion of standardisation in formal education curricula Utilisation rate of digital knowledge hub 	 100+ trained per year from Year 1 Curricula piloted in at least 2 institutions by Year 2 Knowledge hub fully operational and used by 200+ users by Year 3
Strengthening Review and Update Mechanisms	 Rolling review cycle developed and operational Al-powered standards database development and launch Number of ex-post evaluations conducted and applied 	 Review schedule implemented for pilot sectors by Year 2 Database launched by mid-Year 2 Annual evaluations conducted and policy adjusted accordingly

Strategic Initiative	Performance Indicators	Targets
Supporting Digital Standardisation Efforts	 Number of ICT-related standards published Digital sector participation in consultation processes Regional/international alignment of digital standards 	 At least 5 ICT standards published by Year 3 50+ stakeholders engaged in digital sector consultations 3+ standards aligned with international benchmarks by Year 3
Encouraging Sustainable and Climate-Resilient Practices	 Number of ESG and sustainability standards developed Sectoral adoption rate of environmental standards Monitoring data on environmental impact 	 Minimum 3 ESG-related standards piloted by Year 2 Adoption in at least 3 priority sectors by Year 3 Environmental benefits documented in annual reports

6.2 Monitoring and reporting mechanisms

The GNBS will lead the monitoring of the NSS implementation. A dedicated and training monitoring and evaluation officer will be responsible for coordinating with line ministries, private sector partners, and civil society organisations. The following mechanisms will be used:

- Biannual reports submitted by implementing entities;
- An annual NSS Progress Report shared with national stakeholders and decision-makers;

These tools will support data-driven assessments and enable timely identification of implementation bottlenecks.

6.3 Evaluation and continuous improvement

To ensure adaptive implementation, two formal evaluations will be conducted:

- A mid-term evaluation at the end of the first year to assess implementation progress and stakeholder engagement;
- A final evaluation at the end of the strategy cycle to assess long-term outcomes and overall strategy effectiveness.

Evaluations will include quantitative performance tracking and qualitative analysis such as interviews. Lessons learned will be used to update action plans and strengthen future standardisation initiatives. The GNBS will also facilitate post-evaluation learning sessions and share evaluation findings publicly through reports and stakeholder workshops.

7 Sector Specific Plans

The sector-specific plans outlined in this chapter translate the National Standardisation Strategy into a targeted standardisation plan tailored to Guyana's national development priorities. This plan is a direct result of the NSS process and brings together standardisation projects that stakeholders proposed during consultation sessions. Each proposed project responds to sectoral needs identified by public institutions, private sector actors, academia, and civil society.

The resulting list of projects has been classified by project type: Adoption (Ad), Evaluation for Adoption (Ev), Active Participation (Ac), Monitoring (Mo), and National Development (Na). This categorisation allows for a clearer estimation of implementation needs, timelines, and resource demands. As illustrated in Table 3, the Information and Communication Technology (ICT) sector leads in the number of standardisation projects, followed by Manufacturing, Health and Construction/Building materials. This mirrors Guyana's focus on innovation, infrastructure development, and public health reform.

Table 3. Final count of requested standards development projects

S	Total Number of National Projects	
	Type of Project Number	

Manufacturing	Ad	3
Mandracturing	Ev	2
	Ac	
	Mo	
	Na	4
Transport	Ad	2
παιισροίτ	Ev	
	Ac	
	Mo	
	Na	1
Agriculture & Liverteek Draduction	Ad	1
Agriculture & Livestock Production	Ev	1
		l l
	Ac	
	Mo	1
11 10	Na	1
Health	Ad	3
	Ev	3
	Ac	
	Mo	
	Na	2
Tourism	Ad	2
	Ev	1
	Ac	
	Мо	
	Na	
ICT	Ad	5
	Ev	6
	Ac	2
	Мо	
	Na	
Construction / Building Materials	Ad	
	Ev	5
	Ac	
	Мо	
	Na	1
Energy / Electronics	Ad	3
	Ev	
	Ac	
	Мо	
	Na	
Public Administration	Ad	2
	Ev	
	Ac	
	Мо	
	Na	
Management / Governance	Ad	3
· ·	Ev	
	Ac	
	Мо	

	Na	
Environmental Management	Ad	2
	Ev	
	Ac	5
	Мо	
	Na	
Oil & Gas	Ad	1
	Ev	
	Ac	
	Мо	
	Na	
Heavy Equipment & Machinery	Ad	3
	Ev	
	Ac	
	Mo	
T	Na	
Total No. of Projects		64
No. of Adoption Projects (Ad)		30
No. of Evaluation for Adoption Projects (Ev)		18
No. of Active Participation Projects (Ac)		7
No. of Monitoring Projects (Mo)		
No. of National Development Projects (Na)		9
Ad = Adoption Ev = Evaluation for adoption Ac = A National development	Active participation Mo = Mc	nitoring Na =

These national priorities were also assessed against internationally recognised standards to identify existing frameworks that could be adopted, adapted, or referenced to develop new national standards. As presented in Annex 9.3.1 (Calculation 2), this includes standards published or under development by ISO, Codex, and other recognised bodies. Examples include ISO 13485 and WHO guidance in Health; FSSC 22000, and BRCGS in Manufacturing; and ISO/IEC standards for cybersecurity, AI, and digital risk in the ICT sector. The alignment with such standards will enable Guyana to promote quality, safety, and competitiveness while advancing regulatory coherence and trade readiness.

To support execution, a detailed assessment of human resource needs was conducted, with results summarised in Annex 9.3.2 (Calculation 3). The analysis confirms that sufficient human resources are available to effectively support the implementation of the standardisation plan.

In addition to human resources, a financial estimate was prepared to support the implementation of the standardisation plan. As summarised in Annex 9.3.2 (Calculation 3), the funding requirements vary depending on the type of project, with an overall estimated need of approximately USD 78,350 to cover national and selected international meetings.

By implementing this standardisation plan as part of the NSS, Guyana can shift from strategy to action—executing clearly defined projects that support national transformation and reinforce the country's position in regional and global markets.

8 Conclusion

The National Standardisation Strategy of Guyana for the period 2026–2028 provides a comprehensive and forward-looking framework for the country's standardisation system. It reflects a strong national commitment to economic diversification, trade facilitation, technological advancement, and environmental sustainability. Rooted in stakeholder engagement, regional integration, and alignment with international good practices, the NSS positions Guyana to enhance its quality infrastructure and better participate in the global economy.

The NSS development process, coordinated by the Guyana National Bureau of Standards, mobilised inputs from over a dozen economic sectors and involved extensive consultations with stakeholders from government, industry, academia, and civil society. This process resulted in a prioritised list of standardisation projects across key sectors including ICT, Health, Manufacturing, Construction, and Agriculture. These projects were further aligned with relevant international and regional standards to promote harmonisation, competitiveness, and sustainability.

8.1 Summary of key points

- The NSS is an outcome of extensive national stakeholder engagement and reflects the development priorities of Guyana.
- Strategic objectives address the pillars of trade facilitation, sustainability, and digital transformation.
- A sector-specific standardisation plan has been developed, containing over 50 national projects classified by action type (adoption, evaluation, development, etc.).
- Human resource analysis confirms that sufficient human resources are available to effectively support the implementation of the National Standardisation Strategy.
- Implementation depends on multi-stakeholder coordination, strong monitoring systems, and proactive funding strategies.

8.2 Call to action

For Guyana to realise the benefits of this strategy, swift and collaborative action is required. GNBS must lead implementation by activating the mechanisms and partnerships outlined in the NSS. Line ministries and sectoral institutions must embed standardisation into their operational mandates and commit resources to support national projects. Private sector actors should engage in technical committees and co-invest in standardisation initiatives. Development partners and regional organisations are encouraged to align their technical assistance and financial support with the implementation roadmap.

Policymakers must also recognise the NSS as a living strategy—one that evolves through learning, monitoring, and feedback. Timely evaluations, policy alignment, and adaptive management will be essential for continued relevance and effectiveness.

8.3 Future outlook

As Guyana advances its economic and industrial transformation, standardisation will play an increasingly vital role. The NSS provides the structure needed to support this transformation, not only by addressing current regulatory and market needs but also by laying the groundwork for future innovation, resilience, and inclusion.

In the years ahead, the successful implementation of this strategy will contribute to stronger institutional capacity, enhanced quality and safety of goods and services, improved competitiveness

of local enterprises, and greater alignment with regional and international frameworks. Supported by sustained leadership and cooperation across all sectors, the NSS will become the cornerstone of Guyana's development agenda and its global integration.



9 Annexes

9.1 Glossary of terms

This glossary provides definitions for key terms used in the National Standardisation Strategy (NSS) of Guyana. The definitions reflect the language and context specific to the NSS document, as well as internationally recognised interpretations from ISO, WTO, and CROSQ frameworks.

Term	Definition
Accreditation	Third-party verification of a conformity assessment body conveying formal demonstration of its competence and impartiality to carry out specific quality assessment tasks.
Calibration	The determination, by comparison with a measurement standard, of the correct value of a reading on a measuring instrument
Certification	Third-party attestation that products, services, processes, management systems and persons conform to established standards.
Civil Society	Society considered as a community of citizens; linked by common interests and collective activity, legal or otherwise, and seen as a social sphere separate from both the state and the economic market
Conformity Assessment	Demonstration that specified requirements relating to a product, service, process, person or body are fulfilled; typically conducted through quality assessment services such as inspection (desk and field reviews, physical examination, and performance analysis), laboratory testing and certification.
Consumer Protection	Protection of the safety and interests of buyers of goods and services against low quality or dangerous products that are not fit for its end use and advertisements that deceive people
Enquiry Point	A focal point, established under the WTO Agreement on Technical Barriers to Trade, where other WTO Members can request and obtain information and documentation on a Member's technical regulations, standards and conformity assessment procedures, whether impending or adopted, as well as on participation in bilateral or plurilateral standards-related agreements, international or regional standardising bodies and conformity assessment systems.
Environmental	Any activity designed to maintain or restore the quality of environmental
Protection	media through preventing the emission of pollutants or reducing the presence of polluting substances; initiatives relating to energy efficiency, renewable energy and the sustainable use of natural resources also play a role in this regard
Goods	Commodities such as those that are the subject of trade or commerce and include services, processes, and practices
Inspection	Examination of a product, process etc, and determination of its conformity with specific requirements or, on the basis of professional judgement, with general requirements, e.g. supply chain assessments, market surveillance, etc.
Legal Metrology	That area of metrology that concerns the regulation of weighing and measuring instruments used in commercial transactions.
Metrology	Science of accurate, reliable and traceable measurement: scientific (artefact standards), industrial (calibration) and legal (verification) metrology.
Productivity	The effectiveness of productive effort, especially in industry, as measured in terms of the rate of output per unit of input.

Term	Definition
Quality	The totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs (i.e. fit for purpose). It is demonstrated by the degree of customer satisfaction.
Quality Infrastructure (QI)	The institutional framework, including its systems and people, involved in the development and implementation of standards and technical regulations, metrology, accreditation, conformity assessment services and the promotion of quality involved in strengthening the quality competitiveness of the goods and services produced or provided at the national and regional levels with the aim of: increasing and facilitating trade, boosting industrial and State efficiency and effectiveness, supporting the development of the CSME, promoting consumer welfare and safety and contributing to energy security and the preservation of the environment. The five components of quality infrastructure – Standards & Technical Regulations, Metrology, Accreditation, Conformity Assessment and Quality Pro-motion (marketing & communication, information & awareness, education, etc) – can be applied at the national level (National Quality Infrastructure) and complemented at the regional level – (Regional Quality Infrastructure).
Standard	Document approved by a recognised body, that provides, for common and repeated use, rules, guidelines and characteristics for products or related processes and production methods, with which compliance is voluntary. It may also include or deal exclusively with terminologies, symbols, packaging, marking or labelling requirements as they apply to a product, process or production method.
Standardisation	A framework or methodology to ensure that the process for formulation, publication and implementation of guidelines, rules and specifications for common and repeated use achieves uniformity in a given context, discipline or field. It includes transparency and consensus for the most efficient use of research, development and production resources.
Sustainable Development	Development that meets the needs of the present without compromising the ability of future generations to meet their own needs; includes economic, social, environmental and technological resilience as well as other factors
Technical Barriers to Trade (TBT)	A category of nontariff barriers to trade or measures that countries use to regulate markets, protect their consumers, or preserve their natural resources (among other legitimate objectives), but they also can be used unnecessarily to discriminate against imports in order to protect domestic industries or restrict regional or international trade.
Technical Regulation	Document which lays down product characteristics or their related processes and production methods, including the applicable administrative and conformity assessment provisions, with which compliance is mandatory, usually for consumer health and safety and environmental protection.
Testing	Determination of one or more characteristics of an object of conformity assessment, according to a procedure e.g. analytical, calibration, medical, etc.

9.2 List of stakeholders consulted

This section will be updated upon completion of the validation workshop.

9.3 References and further reading

9.3.1 Calc 2: International and other standards corresponding to national priority needs

NI	Description and them					
N	Proposed Item	Priority	Number &	standard (Published (P)/Under Development (D)) Title/ Description	Status	Recom- mendation
		rity	Date	Title, Description	Snj	Ad, Ev, Ac,
			Bato		P	Mo, Na
	Manufacturing					
1	Code of Practice for operations and	4.25				Na
	marketing, and sales					
2	Guidelines for slaughtering, meat	1.75		FAO Guidelines on Meat Processing and Hygiene	Р	Ev
	cutting and further processing					
3	Guidelines on smoking fish	1.75	CXS 311-2013	Codex Standard for Smoked Fish	Р	Ev
4	Honey Purity and Authenticity Testing	2.5				Na
	Protocols					
5	Cassareep Production Standards	2.3				Na
6	Guidelines for small roadside Coconut	1.75		Guidelines for Mobile Coconut Water Street	D	Na
	water vendors			Vendors - The Bahamas Bureau of Standards and		
				Quality (BBSQ)		
7	FSSC22000	2	Version 6.0 –	Food Safety System Certification – Certification	Р	Ad
			2023	Scheme for Food Safety Management Systems	_	
8	BRCGS	2	Issue 9 –2022	Global Standard for Food Safety (British Retail	Р	Ad
		-		Consortium Global Standards)		<u> </u>
9	HACCP	2	Codex	Hazard Analysis and Critical Control Points	Р	Ad
			CAC/RCP 1-			
			1969, Rev. 4-			
	Transport		2022			
1	Transport Specification for Assisting Fuel	2.5	ACTM D1/FF	Chandrad Constitution for Assisting T. March	D	Ad
	Specification for Aviation Fuel	3.5	ASTM D1655 / DEF STAN	Standard Specification for Aviation Turbine Fuels	Р	Ad
			91-091			
			71-071			

N	Proposed Item	P	Corresponding	standard (Published (P)/Under Development (D))	S	Recom-
		Priority	Number &	Title/ Description	Status	mendation
		ity	Date		sr (Ad, Ev, Ac,
					P	Mo, Na
2	Code of Practice for the Operation of	2	2012	RoSPA Code of Practice for Minibus Safety	Р	Na
	Minibuses					
3	Escalators and moving walks	1	ISO/TS	Safety requirements for escalators and moving	Р	Ad
			25740-1:2011	walks		
	Agriculture & Livestock Production					
1	Standard for animal feed production,	1.75	CODEX	Code of Practice on Good Animal Feeding	Р	Ev
	distribution, storage and quality		CAC/RCP 54-			
	monitoring		2004, Rev.			
			2008			
2	Vaccine Storage & Distribution	1.5	WHO	WHO Guidelines on the international packaging	Р	Ad
	Protocols		Technical	and shipping of vaccines		
	10041 045		Report Series	OLODALO A D		
3	LOCAL-GAP	2	Version 6.0 –	GLOBALG.A.P.	Р	Na
	1114-		GFS, 2022			
1	Health	1.05	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		_	F
l I	Construction guidelines for medical	1.25	WHO	Health facility infrastructure design guidelines	Р	Ev
_	facilities	1.05	Guidelines	Madian daying Overlity was a second as a second	<u> </u>	Λ -1
2	Technical specifications for medical	1.25	ISO 13485:	Medical devices – Quality management systems	Р	Ad
2	devices	2	2016 WHO GMP	Cond.Man. foot. dos Bondino C. Malino	D	F.,
3	Standards for pharmaceutical	2	WHO GIVIP	Good Manufacturing Practice Guidelines	Р	Ev
4	production facilities Quality requirements for syringes,	1.25	ISO 7886	Sterile hypodermic syringes for single use	Р	Ad
4	needles, catheters	1.25	series	Sterile hypoderflic syringes for single use	P	Au
5	Standard for various health wastes	1.25	WHO Blue	Safe management of wastes from health-care	Р	Ev
٥	Standard for various fleatiff wastes	1,20	Book	activities	「	LV
6	Service standard for medical facilities	1.25	DOOK	activities	-	Na
0	for tourists	1,20				iva
7	Health and safety standard for small	1			-	Na
'	scale miners	'				ING
	36016 111111613					

N	Proposed Item	Priority 2	Corresponding Number & Date		Status (P P	Recom- mendation Ad, Ev, Ac, Mo, Na
8	Dose record input for occupational radiation	2	24426:2023	Radiological protection—Content of input data for the statistical analysis of dose records of individuals monitored for occupational exposure to ionising radiation	Р	Ad
	Tourism					
1	Guidelines for luggage handling at entry points Specifications for vehicles and vessels used in tourism Guidelines for identification and historical accuracy of tourism products Minimum requirements for emergency evacuation at tourism sites Medical response and first aid preparedness	2	ISO 21902:2021	Tourism and related services — Accessible tourism for all — Requirements and recommendations	Р	Ad
2	Accessibility for differently abled and elderly visitors	3	ISO 21542:2021	Building construction – Accessibility and usability of the built environment	Р	Ad
3	Requirements for eco lodge operations	1	ISO 21401:2018	Tourism and related services — Sustainability management system for accommodation establishments — Requirements	Р	Ev
	ICT					
1	Update GYS IEC 20000–1:2005 and 20000–2:2005	2.25	ISO/IEC 20000:2018	IT Service Management	Р	Ad
2	Information security management	2	ISO/IEC 27001:2022	Information Security Management System	Р	Ad
3	Fibre Optic Networks	2.25	FOA-1 to FOA-6	Fiber Optic Association Standards	Р	Ev

N	Proposed Item	P	Corresponding	standard (Published (P)/Under Development (D))	S	Recom-
		Priority	Number &	Title/ Description	Status	mendation
		ity	Date			Ad, Ev, Ac,
					P	Mo, Na
4	Networking – Premises Cabling	2.25	TIA-568, TIA-	Structured Cabling Systems	Р	Ev
			606, TIA-607			
5	Artificial Intelligence Risk Management	2	ISO/IEC	Al Risk Framework	Р	Ad
			23894:2023			
6	Digital Signatures	1.5	ISO/IEC	Digital Signature Standard	Р	Ev
			14888			
7	Business Continuity	2	ISO	Business Continuity Management System	Р	Ad
			22301:2019		_	
8	Organisational Risk Management	2	ISO	Risk Management – Guidelines	Р	Ad
		4.75	31000:2018			
9	Cybersecurity – CIS Controls	1.75	v8.1	CIS Controls	P	Ev
10	Cybersecurity	1.75	NIST CSF v2.0	Cybersecurity Framework	Р	Ev
11	Cybersecurity	2	NIST SP 800-	Security and Privacy Controls	Р	Ev
			53 Rev. 5			
12	Protection of health information	2	ISO 27799	Health informatics — Information security	D	Ac
				management in health using ISO/IEC 27002		
13	Data protection and privacy	2	ISO/IEC FDIS		D	Ac
			27701	protection — Privacy information management		
				systems — Requirements and guidance		
	Construction / Building Materials					
1	Specification for Portland Cement	1	ASTM	Standard Specification for Portland Cement	Р	Ev
			C150/C150M-			
			24			
2	Rebound number testing for concrete	1	ASTM	Test Method for Rebound Number of Hardened	Р	Ev
			C805/C805M-	Concrete		
			18			
3	Force Verification of Testing Machines	1	ASTM E4-16	Standards Practices for Force Verification of	Р	Ev
				Testing Machines		

N	Proposed Item	P	Corresponding	, v	Recom-	
		Priority	Number &		Status	mendation
		ity	Date			Ad, Ev, Ac,
					(P	Mo, Na
4	Performance specification for hydraulic cement	1	ASTM C1157	Performance Specification for Hydraulic Cement	Р	Ev
5	Compressive strength test of concrete	1	EN 12390- 3:2019	Testing Hardened Concrete – Compressive Strength	Р	Ev
6	National Building Code	1				Na
	Energy / Electronics					
1	Battery safety in electric vehicles	2	ISO 12405-2	Lithium-ion Battery Packs – Safety Requirements	Р	Ad
2	Rechargeable batteries for computing	2	IEEE 1625	Rechargeable Batteries – Multi-Cell Mobile	Р	Ad
	devices			Computing		
3	Rechargeable batteries for mobile	2	IEEE 1725	Rechargeable Batteries – Mobile Phones	Р	Ad
	phones					
	Public Administration					
1	Public information symbols	2	ISO 7001	Graphical Symbols – Public Information	Р	Ad
2	Smart multigenerational	2	ISO	Smart Multigenerational Neighbourhoods –	Р	Ad
	neighbourhoods		25553:2023	Guidance		
	Management / Governance					
1	Risk management framework	1	ISO 31000:2018	Risk Management – Guidelines	Р	Ad
2	Social responsibility guidelines	1	ISO	Guidance on Social Responsibility	Р	Ad
			26000:2010			
3	Management consultancy services	3	ISO 20700:2017	Guidelines for Management Consultancy Services	Р	Ad
	Environmental Management					
1	Water footprint management	2	ISO	Environmental Management – Water Footprint	Р	Ad
			14046:2014	- -		
2	Guidelines for waste sorting, disposal	2	ASTM D5231-	Standard Test Method for Determination of the	Р	Ad
	and recycling		92(2016)	Composition of Unprocessed Municipal Solid Waste		

N	Proposed Item	Priority	Number & Date	, ,	Status (P	Recom- mendation Ad, Ev, Ac, Mo, Na
			ISO/CD 15270-1.3	Plastics — Guidelines for the recovery and recycling of plastics waste Part 1: General principles	D	Ac
			ISO/WD 15270-2	Plastics — Guidelines for the recovery and recycling of plastics waste Part 2: Mechanical recycling	D	Ac
			ISO/WD 15270-3	Plastics — Guidelines for the recovery and recycling of plastics waste Part 3: Physical recycling	D	Ac
			ISO/DIS 15270-4	Plastics — Guidelines for the recovery and recycling of plastics waste Part 4: Chemical recycling	D	Ac
			ISO/FDIS 15270-5	Plastics — Guidelines for the recovery and recycling of plastics waste Part 5: Organic/biological recycling	D	Ac
	Oil & Gas					
1	Gas measurement	1	API MSP, Chapter 14	Standard for gas measurement	Р	Ad
	Heavy Equipment & Machinery					
1	Designation and dimensions for industrial solid tyres and rims	2	ISO 3739- 1:2022	Industrial tyres and rims — Part 1: Pneumatic tyres (metric series) on 5 degrees tapered or flat base rims — Designation, dimensions and marking	Р	Ad
2	Load ratings for industrial solid tyres and rims	2	ISO 3739- 2:2021	Industrial tyres and rims — Part 2: Pneumatic tyres (metric series) on 5 degrees tapered or flat base rims — Load ratings	Р	Ad
3	Rubber solid tyres (metric series) for pneumatic tyre rims	2	ISO 10499- 1:2019	Industrial tyres and rims — Rubber solid tyres (metric series) for pneumatic tyre rims — Part 1: Designation, dimensions and marking	Р	Ad



9.3.2 Cal 3. Calculation sheet to determine the human and financial resource requirements

This sheet is intended to serve as a reference for calculating the human resource requirements for the standardisation plan. It reflects an ideal scenario and is recommended based on ISO guidelines, but its application should be adapted as appropriate by the NSB.

Table 1 - Reference time frames for the different national projects and roles

The following project types are distinguished:

Adoption (Ad), Evaluation for adoption (Ev), Active participation (Ac), Monitoring (Mo) and National development (Na)

Required working days per project type and role

Roles	Ad	Ev	Ac	Mo	Na	Annual working days per role	Overall duration of the plan (in years)
TO	17	24.25	49,5	17.5	45	210	the plan (in years)
ED/TR	10	10	10	0	10	210	3
Sec	6.25	8.25	14.25	1	13.75	210	
Total (per project type):	33.25	42.5	73.75	18.5	68.75		

Table 2 - Technical Officers: Available versus needed human resources

Number of national	al projects	for a thre	e-year pla	anning peri	iod		Technical Officers (TOs) - Resource planning							
		Types c	f nationa	l projects		Available	human resources	uman resources Needed human resources (TO) in workdays						
Sectors or Groups of TOs in the	# of	# of	# of											Differenc
NSB	Ad	Ev	Ac	# of Mo	# of Na	# of TOs	WorkDays	TO/Ad	TO/Ev	TO/Ac	TO/Mo	TO/Na	TOTAL	е
Manufacturing	3	2			4	0.2	126.9	51	48.5	0.0	0.0	180.0	279.5	-152.6
Transport	2				1	0.2	126.9	34	0.0	0.0	0.0	45.0	79.0	47.9
Agriculture & Livestock Production	1	1			1	0.2	126.9	17	24.3	0.0	0.0	45.0	86.3	40.7
Health	3	3			2	0.2	126.9	51	72.8	0.0	0.0	90.0	213.8	-86.8
Tourism	2	1				0.2	126.9	34	24.3	0.0	0.0	0.0	58.3	68.7
ICT	5	6	2			0.2	126.9	85	145.5	99.0	0.0	0.0	329.5	-202.6
Construction / Building Materials		5			1	0.2	126.9	0	121.3	0.0	0.0	45.0	166.3	-39.3
Energy / Electronics	3					0.2	126.9	51	0.0	0.0	0.0	0.0	51.0	75.9
Public Administration	2				· ·	0.2	126.9	34	0.0	0.0	0.0	0.0	34.0	92.9
Management / Governance	3					0.2	126.9	51	0.0	0.0	0.0	0.0	51.0	75.9
Environmental Management	2		5			0.2	126.9	34	0.0	247.5	0.0	0.0	281.5	-154.6
Oil & Gas	1					0.2	126.9	17	0.0	0.0	0.0	0.0	17.0	109.9
Heavy Equipment & Machinery	3		,			0.2	126.9	51	0.0	0.0	0.0	0.0	51.0	75.9
							0.0	0	0.0	0.0	0.0	0.0	0.0	0.0
							0.0	0	0.0	0.0	0.0	0.0	0.0	0.0
							0.0	0	0.0	0.0	0.0	0.0	0.0	0.0
							0.0	0	0.0	0.0	0.0	0.0	0.0	0.0
							0.0	0	0.0	0.0	0.0	0.0	0.0	0.0
							0.0	0	0.0	0.0	0.0	0.0	0.0	0.0
							0.0	0	0.0	0.0	0.0	0.0	0.0	0.0
Total:	30	18	7	0	9	2.6	1650.3	510	436.5	346.5	0.0	405.0	1698.0	-47.7

Difference over whole plan:

Difference per year:

-0.2 -0.1

Table 3 - Editors/Translators: Available versus needed human resources

Sectors or Groups of ED/TR in the NSB		nan resources /TR)	ľ	Needed human resources (ED/TR) in workdays					
	# of EDs	WorkDays	ED/Ad	ED/Ev	ED/Ac	ED/Mo	ED/Na	TOTAL	Difference
Manufacturing	0.2	145.5	30	20	0	0	40	90	55.5
Transport	0.2	145.5	20	0	0	0	10	30	115.5
Agriculture & Livestock Production	0.2	145.5	10	10	0	0	10	30	115.5
Health	0.2	145.5	30	30	0	0	20	80	65.5
Tourism	0.2	145.5	20	10	0	0	0	30	115.5
ICT	0.2	145.5	50	60	20	0	0	130	15.5
Construction / Building Materials	0.2	145.5	0	50	0	0	10	60	85.5
Energy / Electronics	0.2	145.5	30	0	0	0	0	30	115.5
Public Administration	0.2	145.5	20	0	0	0	0	20	125.5
Management / Governance	0.2	145.5	30	0	0	0	0	30	115.5
Environmental Management	0.2	145.5	20	0	50	0	0	70	75.5
Oil & Gas	0.2	145.5	10	0	0	0	0	10	135.5
Heavy Equipment & Machinery	0.2	145.5	30	0	0	0	0	30	115.5
		0.0	0	0	0	0	0	0	0.0
		0.0	0	0	0	0	0	0	0.0
		0.0	0	0	0	0	0	0	0.0
		0.0	0	0	0	0	0	0	0.0
		0.0	0	0	0	0	0	0	0.0
		0.0	0	0	0	0	0	0	0.0
		0.0	0	0	0	0	0	0	0.0
Total:	3.0	1891.9	300	180	70	0	90	640	1251.9
Difference over whole plan:									6.0
Difference per year:									2.0



 Table 4 - Secretariat support staff: Available versus needed human resources

Sectors or Groups of SECs in the NSB	Available hun (SE	nan resources Cs)		Needed human resources (SEC) in workdays					
	# of Secs	WorkDays	SEC/Ad	SEC/Ev	SEC/Ac	SEC/Mo	SEC/Na	TOTAL	Difference
Manufacturing	0.1	68.4	18.8	16.5	0.0	0.0	55.0	90.3	-21.9
Transport	0.1	68.4	12.5	0.0	0.0	0.0	13.8	26.3	42.1
Agriculture & Livestock Production	0.1	68.4	6.3	8.3	0.0	0.0	13.8	28.3	40.1
Health	0.1	68.4	18.8	24.8	0.0	0.0	27.5	71.0	-2.6
Tourism	0.1	68.4	12.5	8.3	0.0	0.0	0.0	20.8	47.6
ICT	0.1	68.4	31.3	49.5	28.5	0.0	0.0	109.3	-40.9
Construction / Building Materials	0.1	68.4	0.0	41.3	0.0	0.0	13.8	55.0	13.4
Energy / Electronics	0.1	68.4	18.8	0.0	0.0	0.0	0.0	18.8	49.6
Public Administration	0.1	68.4	12.5	0.0	0.0	0.0	0.0	12.5	55.9
Management / Governance	0.1	68.4	18.8	0.0	0.0	0.0	0.0	18.8	49.6
Environmental Management	0.1	68.4	12.5	0.0	71.3	0.0	0.0	83.8	-15.4
Oil & Gas	0.1	68.4	6.3	0.0	0.0	0.0	0.0	6.3	62.1
Heavy Equipment & Machinery	0.1	68.4	18.8	0.0	0.0	0.0	0.0	18.8	49.6
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total:	1.4	888.6	187.5	148.5	99.8	0.0	123.8	559.5	329.1
Difference over whole plan:									1.6

Difference per year: 0.5

Financial resources required by the NSB to implement the standardisation plan

Basis for this calculation: Number of national projects of the five types (Na, Ev, Ac, Mo and Na) and the costs to organise/attend meetings, except those projects that are fully externally funded and which can be deducted from the total numbers of projects identified in the plan.

Maximum number of international meetings with physical participation*:

2

Maximum number of international meetings with physical participation*:

Project type:	Ad	Ev	Ac	Mo	Na
Number of projects in plan:	30	18	7	0	9
Number of projects with full external funding:	0	0	0	0	0
Projects needing NSB funding:	30	18	7	0	9

	Ad	Ev	Ac**	Mo	Na
Projects needing NSB funding:	30	18	7	0	9
Costs per single project ⁷ :	300	300	8750	300	300
Costs for project types:	9,000	5,400	61,250	0	2,700

National meetings	1	7,100
International meetings	6	1,250
Total costs (in USD)	78	8,350

^{*}Maximum number of meetings:

Due to budget limitations, physical participation through experts appointed by the NSB may only be possible for a limited number of the international meetings on the selected projects, but not for all of them.

⁷ Such as reproduction of documents/mailing, food and beverages



9.3.3 International and Regional Affiliations of GNBS

No.	Organization Name	Acronym	Туре
1	International Organization for Standardization	ISO	International
2	International Electrotechnical Commission	IEC	International
3	Codex Alimentarius Commission	Codex	International
4	World Trade Organization	WTO	International
5	Pan American Standards Commission	COPANT	Regional (Americas)
6	CARICOM Regional Organisation for Standards and Quality	CROSQ	Regional (CARICOM)
7	Inter-American Metrology System	SIM	Regional (Americas)
8	International Bureau of Weights and Measures	BIPM	International
9	International Organization of Legal Metrology	OIML	International
10	International Accreditation Forum	IAF	International
11	International Laboratory Accreditation Cooperation	ILAC	International
12	Inter-American Accreditation Cooperation	IAAC	Regional (Americas)
13	Caribbean Agricultural Health and Food Safety Agency	CAHFSA	Regional (CARICOM)
14	American Petroleum Institute	API	Regional (Americas)
15	ASTM International	ASTM	International