CAPACITY BUILDING FOR STRENGTHENING QUALITY INFRASTRUCTURE IN HAITI TERMS OF REFERENCE

<u>CONSULTANCY SERVICES TO ASSESS AND RECOMMEND IMPROVEMENTS TO THE</u> <u>ONLINE COMMUNICATION AND COLLABORATION INFRASTRUCTURE</u> <u>AT THE HAITIAN BUREAU OF STANDARDS</u>

1. BACKGROUND

1.01 Haiti has a long history of political and social crises, persistent fiscal imbalances, and extreme vulnerability to natural disasters. Haiti also faces intersecting crises, including famine, cholera, fuel shortages, and economic collapse.^{1/}.

1.02 Demographically, Haiti has a youthful and increasingly urban population, with a median age of 22.7years.Whileinfantmortalityremainshigh(59deathsper1,000live births), the population has grown steadily at 1.5% annually. More than half of the population is under 25, and a significant portion of youth (19%) are not in employment, education, or training (NEET), with urban areas and women disproportionately affected.

1.03 Poverty remains widespread, particularly in rural areas, with 58.5% of Haitians living in poverty. The Multi-Dimensional Poverty Index reports 41.3% of the population as multi-dimensionally poor, with significant contributors including inadequate living standards, health, and education deprivations. Women and persons with disabilities are especially vulnerable.

1.04 Gender-based inequality remains a major development challenge. Haiti ranks163rdontheGender Inequality Index (GII), with low female political representation (2.7% of parliamentary seats) and lower educational attainment among women. Female labor market participation (60.7%) lags behind men (68.9%), and women dominate the informal sector, earning lower wages. Gender disparities exacerbate vulnerabilities, particularly in post-disaster situations, where women and girls face heightened risks of exploitation and violence.

1.05 Over the past five years, Haiti has endured multiple natural disasters, including cyclones and earthquakes. In 2023, severe flooding and a 4.9 magnitude earthquake further compounded economic hardships. These recurring disasters strain fiscal resources, limiting the government's ability to balance social programs with critical development needs.

1.06 Over the past five years Haiti was impacted by tropical cyclone Irma in 2017, tropical cyclone Laurain 2021anda devastatingmagnitude7.2earthquakeinAugust 2021.Thusfarfor2023, on June2– 3, heavy rains caused destructive flooding across the country, and this was followed by a 4.9 magnitude earthquake just days after on June 6. These natural disasters continue to compound the adverse effects to human life and livelihood and thrust the economy into deeper economic hardships. These events make it difficult to create the fiscal space necessary to balance social intervention programmes while catering to critical developmental needs to improve economic infrastructure.

Quality Infrastructure in Haiti

One of the major thrusts to improve the business facilitation environment and to improve the National Quality Infrastructure (NQI) of Haiti was the establishment of the Bureau Haitien de Normalisation (BHN) (i.e. the Haiti Bureau of Standards), in December 2012. Quality infrastructure (QI) refers to the standards and conformance infrastructure necessary to facilitate, *inter alia* trade and business development particularly for the protection and reassurance of the consuming public.

^{1/}The Guardian (AccessedNovember2023) -Haiti crisis: how did it get so bad, what is the role of gangs, and is there a way out? <u>https://www.theguardian.com/world/2023</u>

1.07 The BHN is a public entity and is a technical department of the Ministry of Commerce and Industry under the supervision of the Minister. The BHN is financed from the budget of the Ministry of Commerce and Industry. BHN's mandate is to provide assistance on the standardisation of quality goods and services, and the promotion of quality and conformity assessment services to the Government, the private sector and civil society. At the launch of BHN, a metrology^{2/} laboratory was also established for the verification, calibration and/or adjustment of measuring instruments used in trade and industry. To this end the organisation is headed by a Director who is supported by 17 staff members in the technical areas of standardisation, industrial metrology, certification and information.

1.08 BHN's responsibilities include:

- a) producing, publishing and disseminating standards and reference standards;
- b) providing training on standards and their technical implementation;
- c) certifying conformity to standards and reference standards;
- d) creating and managing quality signs (such as trademarks and labels);
- e) representing Haiti in national, regional and international bodies of standardisation; and
- f) organising/coordinating certification and metrology activities.

1.09 In 2013, the United Nations Industrial Development Organisation (UNIDO) hosted training courses for a number of stakeholders including BHN staff, private sector representatives, companies, consumer organisations and university personnel. Courses such as "Principles and Procedures for Establishing Standards," "Management of Certification Systems – International Organisation for Standardisation (ISO) 17065," and the Quality Management System ISO 9001:2008 standard were among the training provided to stakeholders. The ISO 9001:2008 course in particular, given its importance to enterprises, and the fact that it provides the basis for other certifications such as the ISO 14000 (environmental) and ISO 22000 (food safety management standards), serves as a critical building block towards strengthening the country's quality management system (QMS).

1.10 A QMS is defined as a formalised system that documents processes, procedures and responsibilities for achieving quality policies and objectives. A QMS helps coordinate and direct an organisation's activities to meet customer and regulatory requirements and improve its effectiveness and efficiency on a continuous basis.

1.11 The UNIDO training was conducted at a basic level due to Haiti's limited QI and low level of stakeholder awareness on quality. However, many participants found the training to be largely theoretical and lacking a local context in which to identify the issues being presented. In general, quality management is a complex body of knowledge and developing competence in this area takes time. Both the Director of BHN and UNIDO's consultants have highlighted the need for BHN staff, local consultants and enterprises to obtain more advanced training and practical experience in quality management and attendant systems.

^{2/}Metrology is the science of measurement, the study of how to define and compare different physical and chemical quantities. In all documents, values must be accurate and traceable, and measurements, of course, influence, drive, and underpin industry and trade and everyday life.

1.12 In 2015 an assessment was conducted in the metrology laboratories of BHN. This activity was executed by the Technical Officer for Metrology at CROSQ. The main recommendations of the report were to procure additional equipment to advance the development of the mass metrology and volume metrology capabilities within the Industrial Metrology laboratory to support the verification activities carried out by the Directorate of Quality Control and Consumer Protection, the Legal Metrology arm within Haiti, and the Haitian industry. In 2021, the need for this equipment was reconfirmed along with demand driven requests by clientele for support in building capacity in additional areas as temperature and Liquid Petroleum Gas (LPG). To date therefore, the recommendations which were highlighted in the 2015 assessment of the metrology laboratories, at BHN, remain valid along with additional capacity requirements in the areas of verification aforesaid.

1.13 Given the above challenges (and influenced directly by demands from industry), BHN has expressed a need for QMS training, as well as mentoring in market surveillance. This support would enhance the services which BHN has articulated are important to meet the needs of its clientele.

CROSQ and its support to QI

1.14 CROSQ was established in 2002 by Article 67 of the Revised Treaty of Chaguaramas (RTC), to facilitate the development of a harmonised Regional Quality Infrastructure (RQI). CROSQ is a network of the 15 national standards bureaus of CARICOM Member Countries (which includes Haiti). CROSQ is an inter-governmental agency and is the successor to the Caribbean Common Market Standards Council which was created in 1976. The key functions of CROSQ as outlined in the Treaty include:

a) Facilitation of standards infrastructure development at the national and regional levels.

b) Assisting with metrology infrastructure development at the national level.

c) Encouraging the development and mutual recognition of conformity assessment procedures in and between Member States.

d) Promotion of a quality-competitive culture in CARICOM via demand-pull information and awareness-raising publications, events, etc., and supply-push marketing and communication strategies.

1.15 In an effort to assist Haiti in achieving its objectives under the RTC, CROSQ will provide project management support, technical expertise and facilitation to BHN, will serve as the Grantee, and will also implement this initiative. The BHN, as the prime beneficiary, is the champion of the project and will provide support to CROSQ, ensuring the quality of the project's deliverables as well as monitoring the day-to-day activities of the various consultancies. It is anticipated that this support will assist the BHN in bridging the capacity gaps related to management of a project of this nature.

OBJECTIVE OF THE CONSULTANCY

The objective of the consultancy is to conduct a comprehensive assessment of the information and communication technology (ICT) infrastructure of the Haiti Bureau of Standards (BHN) as it relates to online communication and collaboration. This includes identifying gaps and opportunities within the current system and proposing recommendations for improving the network infrastructure and access throughout the bureau. The aim is to identify how to strengthen online communication and collaboration capabilities to enhance overall efficiency and effectiveness.

SCOPE OF SERVICES

The consultant shall undertake the following activities:

- a) Assess the organisation's current ICT infrastructure, including network systems, hardware, and software, with a specific focus on their adequacy for supporting online communication, data management, and information exchange and access. The selected consultant will coordinate with BHN regarding the IT strategy for software procurement regarding on-premise infrastructure vs cloud IaaS vs SaaS.
- b) Evaluate the security, robustness and efficiency of the organisation's existing physical and virtual network and network services; including the online communication tools, such as email, instant messaging, and video conferencing.
- c) Assess the organisation's current collaboration platforms and tools to determine their suitability for facilitating online communication and collaboration activities with its internal and external stakeholders.
- d) Evaluate the security measures in place to protect online communication and collaboration activities, ensuring compliance with data privacy regulations and industry best practices.
- e) Assess the organisation's ICT infrastructure's capacity and scalability to handle increased usage demands for online communication and collaboration, both in the short term and as the organisation grows.
- f) Gather feedback from users regarding their experience with existing ICT tools and systems, identifying pain points and areas for improvement.
- g) Propose actionable recommendations for improving the network infrastructure and access throughout the bureau, with a focus on strengthening online communication and collaboration capabilities.
- h) Provide detailed recommendations for hardware and software improvements related to communication and collaboration, including network infrastructure diagrams to illustrate proposed changes and enhancements.
- i) Identify and recommend software solutions that can enhance the organization's online communication, data management, and collaboration capabilities, ensuring they are compatible with existing systems and scalable for future growth.

- j) Assess the organisation's current cybersecurity posture supporting online communication and collaboration and, where applicable, recommend the establishment of a Security Operations Center (SOC) or equivalent monitoring capability. This should include a highlevel conceptual roadmap outlining functions, tools, and phased implementation options suitable to the organisation's scale and resources.
- k) Design of a security framework and security function that aligns with international best practices and addresses risks related to online collaboration and information exchange.

DURATION

The duration of the assignment is expected to be for a period of ten person-days over a period of one calendar month.

DELIVERABLES AND REPORTINGREOUIREMENTS

The consultant will liaise with the Project Officer (PO) who is appointed to lead and monitor the project and will be required to:

- a) Deliver an **Inception Report** within 3 days of signing the contract. This report should follow a meeting with CROSQ and BHN officers and detail the proposed content, methodology, work plan, and timelines for all deliverables.
- b) Final Assessment and Action Plan Report Due within twenty (25) calendar days of contract commencement. This consolidated report shall include:
 - A comprehensive assessment of the existing ICT infrastructure as it relates to online communication and collaboration.
 - Identification of gaps and areas for improvement.
 - Strategic and technical recommendations (hardware/software, security, collaboration tools).
 - Network diagrams to support proposed improvements.
 - An actionable implementation roadmap, including: short- and long-term steps, estimated costs, resource requirements.

The official working language for the project shall be English; however, where applicable, French and/or French creole can be utilised in undertaking the assignment. At minimum, all deliverables and reports must be submitted in English.

OUALIFICATIONSAND EXPERIENCE

The consultancy requires the services of a key expert. The appointed consultant must meet the following minimum requirements:

General Qualifications and Experience

- a) At least an undergraduate degree in computer science, information technology, or a closely related degree with a strong computing or IT component.
- b) Professional certifications in relevant systems such as CISCO (e.g., CCNA, CCNP), CompTIA Network+ or equivalent industry-recognised credentials.
- c) Demonstrated ability to conduct ICT assessments. Applicants must provide details of at least two previous ICT infrastructure assessments completed, preferably focused on online communication, remote collaboration platforms, or cloud-based environments.
- d) At least five years' experience with implementing and maintaining ICT infrastructure, with demonstrable focus on supporting online communication, collaboration tools, or hybrid environments. Please provide specific details.
- e) At least one year of hands-on experience in cybersecurity best practices credentials (e.g., SOC experience, risk management).
- f) At least two years' experience with productivity and collaboration tools (e.g. Microsoft 365, Zoom platform, or open-source equivalents) including their configuration and integration.
- g) Demonstrated knowledge of data privacy compliance requirements (e.g., GDPR, HIPAA, or regional equivalents), particularly as they relate to online communication, data exchange, and user access controls. Please provide specific details.
- h) Demonstrated experience with cloud-based environments (Iaas/SaaS). Please provide examples.
- i) Experience working in multilingual or multicultural contexts, preferably within the Caribbean or Francophone region, would be an asset. Please provide specific details.

Skills

- Strong analytical, problem-solving, and diagnostic skills.
- Excellent interpersonal and written communication skills.
- Proficiency in written and oral French and/or Haitian Creole and English.

BASELINE INFRASTRUCTURE AND COMMUNICATION REQUIREMENTS

To guide the assessment and design process, the consultant(s) must take into account the following baseline requirements:

- a) **Availability:** Services must be reliable with minimal downtime, ideally with a defined uptime target (e.g., 99.9%).
- b) **Network Segregation:** Infrastructure should support logical separation of services to enhance security and manageability.

SUPERVISION OF THE CONSULTANT

CROSQ will facilitate the work of the consultant and work with the beneficiary country to make available all studies, reports, and data relevant to the Project. The PO will serve as the liaison between CROSQ, the country and the consultant.

LOGISTICS AND RISK CONSIDERATIONS

Ground Truthing and Travel: On-the-ground assessments or site visits ("ground truthing") are deemed necessary to inform the consultancy. If needed, the Consultant shall be responsible for making their own travel arrangements. Travel to or within Haiti will be undertaken at the Consultant's own risk. Neither CROSQ nor BHN shall be liable for any personal injury, loss, or damage incurred during such travel.