REPUBLIC OF CABO VERDE

MINISTRY OF HEALTH

TERMS OF REFERENCE

1. **Hiring a consultant to support the Ministry of Health in the preparation of the National Strategy of Digital Health, of the operational plan and the monitoring and assessment plan.**

2. **FRAMEWORK**

The World Bank Group (WB) assists 54 client countries in the Africa Region. Clients range from sophisticated middle-income countries to small and fragile states that are IDA beneficiaries. The Bank's strategy in the region focuses on efforts to strengthen human capital and empower women, accelerate Africa's digital economy, promote regional integration, increase access to affordable renewable energy, build resilience to climate change and mobilise all sources of financing for development.

The WB has supported the COVID-19 response in Cabo Verde since April 2020, with the approval of the COVID-19 Emergency Response Project and its three additional financings (AF). The objectives of the additional financing were to enable safe, affordable and equitable access to COVID-19 vaccines, to ensure the deployment of vaccines in Cape Verde by strengthening the vaccination system, and to further strengthen preparedness and response activities under the main project.

As in all countries, the SARS-COV-2 pandemic has brought immense challenges to the health system. The health system's technological infrastructure was essential to the successful response of the vaccination programme. The COVID-19 vaccination module of the District Health Information Software (DHIS-2) platform was quickly implemented. Cabo Verde was one of the first countries in the world to adopt the solution and this has facilitated all vaccination management work.

In the context of the country's development, the health sector is increasingly called upon to guarantee the population the best possible level of physical, mental and social well-being, ensuring the protection and promotion of health, as well as the prevention, treatment and rehabilitation of disease.

Health policy must respect the principles that govern the National Health Service (SNS), namely: universal access to services at all levels of health care; solidarity among everyone in guaranteeing the right to health and contributing to the financing of health care; equity in the distribution of resources and the use of services; safeguarding human dignity and preserving the physical and moral integrity of users and providers; and professional deontology and ethics in the provision of services.

According to the priorities of the Ministry of Health (MH), as explained in the 10th Legislature's Government Programme, these include reorganising and upgrading the SNS, with a view to improving quality, responses, effective access to healthcare for all Cape Verdeans, reducing waiting times for consultations and access to diagnostic resources, and providing digital solutions as a top priority for Cabo Verde to achieve sustainable development in line with the Strategic Plan of Sustainable Development 2022-2026 (PEDS II) and the Sustainable Development Goals (SDGs).

The Health Information System (HIS) is defined by the World Health Organisation (WHO) as a mechanism for collecting, processing, analysing and transmitting the information necessary for planning, organising, operating and assessing health services, thus making it easier to monitor and control the activities carried out by service providers using local indicators, as well as formulating and assessing health policies, plans and programmes.

The government of Cabo Verde has prioritised the implementation of the Strategy for the Digital Governance of Cabo Verde (EGDCV) and the respective Action Plan (PAEGDCV), in which the area of health is one of the priorities, and integrates the SNS project, in which all information of public and private sector services is integrated into a single technological platform, the aim is essentially to provide transparency in the management of resources, improve the response to priority diseases and rationalise decisions based on concrete data, move to paperless processes, and integrate all public and private initiatives that contribute to improving the state of health of the citizen into a single digital platform.

In view of the need to implement solutions capable of providing the necessary answers for the country's sustainable development, it is important and urgent to improve conditions so that services, workers and the population in general can follow the rapid evolution of Information and Communication Technologies (ICT). In order to achieve this goal, the country must implement a set of measures and intervention policies in the area of ICT, presenting innovative and sustainable solutions for the Information Society with the concept of digital governance (e-Gov), so as to facilitate not only the daily lives of citizens and/or economic agents, but also to raise standards of competitiveness and improve the quality of life for all end users.

Considering the need to strengthen the digital transformation of health, the PAEGDCV has set out as fundamental the development and implementation of the National Digital Health Strategy (ENSD), in order to provide Cape Verde's Health System with an important guiding instrument for the initiatives that are necessary to improve responses in this area, integrating financial, organisational, human and technological resources.

Thus, in order to develop and monitor the implementation of the ENSD, the MoH created the Intersectoral Coordination and Monitoring Commission (CICA-ENSD), under the terms of Order no. 24/MS/2023, of 30 May, published in Official Gazette no. 107 II series of 14 June.

3. CURRENT SITUATION

The MoH is the body responsible for formulating proposals for the definition of national health policy and the corresponding legislative measures, as well as promoting and monitoring their implementation and assessing the respective results.

The computerisation process of the SNS began in 2004, due to a technical problem at the Hospital Agostinho Neto, where all patient data and statistical information was lost, which forced the implementation of an online system that guaranteed data security.

With the implementation of the online system, the process of developing and implementing a few more modules began as a way of better managing processes, with the inclusion/implementation of the Medicine Stock Management and Laboratory Management modules and then o Emergency Care Module (adults and pediatrics).

With the implementation of the modules and their use, the adoption and implementation of new modules continued, thus meeting the real needs of the NHS. This began with the process of surveying the development and implementation needs of the Centralised Management of Patient Records modules, with the scheduling of all outpatient services, and the introduction of the Outpatient Consultation and Emergency Care Management Module.

With a view to integration, from 2013 onwards, with the analysis of processes integrating production/provision and management financed by the National Institute of Social Security (INPS), the development of the Electronic Prescription Project began, which, among other added value, facilitated the implementation of clinical information management software by centralising clinical history in a single electronic

repository, which is robust and enables a rapid and efficient response, which is important in the patient's approach.

In order to implement the Electronic Prescription Project, the Medicine One solution was introduced and implemented in the healthcare units. Over time, it was realised that this was not the answer to the real needs of the structures, due to its complexity and limitations in terms of administration within the system itself, and the need and requirement of high availability in terms of bandwidth and connectivity.

The implementation of DHIS2 for routine epidemiological management began in November 2018.

2.1 Health Information System (HIS)

Currently, the MoH is implementing the Health Information System (HIS) project, integrating all the information from the country's health system services (public and private) into a single technological platform. The objective is: transparency in the management of resources; improving the response to priority diseases and speeding up evidence-based decisions, as well as dematerialising processes. In short, this project aims to integrate into a single digital platform all the public and private initiatives that contribute to improving citizens' state of health.

One of the MoH's priorities is the reorganisation and upgrading of the NHS, improving the quality of healthcare provision and effective access for all Cape Verdeans, as well as reducing waiting times for consultations and access to complementary means of diagnosis and therapy.

The HIS is being used in all NHS structures in its financial component through the Bankisation and DUC (Single Collection Document) modules. The Cadastre Management module has recently been updated and is being used by the NHS structures on the island of Santiago.

With the change in the service paradigm in Cabo Verde's public administration and taking into account the project in an advanced stage to improve service in central and regional hospitals, the implementation of the Service Management module has begun, which has already been developed and tested at the Santa Rita Vieira Regional Hospital (HRSRV). As for the Laboratory Management module, its development has been finalised.

It is also hoped to incorporate new functionalities into HIS, integrate the subsystems, and solve problems and functionalities that it is unable to offer in terms of providing public services to users, such as:

- Single clinical user file: the need to create a single clinical file containing all the user's information for the appropriate purposes, accessible also in private health structures;

- Waiting lists: Real knowledge of waiting lists for appointments and complementary tests in hospitals and health centres and their management, bringing greater efficiency and information for better decisions;

- Evacuation: There is a need for an integrated system for managing patient evacuations in order to improve travel planning and a more comprehensive knowledge of the phenomenon, the mobility of patients among national hospitals, which involves high costs and integrates technical, clinical and economic-financial information;

- Administrative Management:
  - Dematerialisation of processes in response to the need to reduce bureaucracy in administrative processes;
  - Integrated and disaggregated availability of clinical and administrative information at all levels;

The HIS is a system that encompasses the principles of intra-sectoral and inter-sectoral integration, transparency, efficiency, availability, cost reduction, reduction of waiting time, focusing on citizens throughout their entire life stage.

The implementation of the HIS will include an update of its modules and the development of a platform for managing the single electronic clinical process, on the IGRP Web, allowing the attendance and registration of all events in the NHS. The aim is to record the history and clinical evolution, patient follow-up, electronic prescription, among others, in the country's various health structures, which will allow:

- The restructuring of the existing Medicines and Equipment Stock Management module and the integration of solutions already used, namely by regulatory entities, medicine importers, health structures, pharmacies and the HM Office of Pharmaceutical Affairs.

- The development of the Decentralised Outpatient Management Module;

- The Live Births module;
- Analysis of other products that can be part of "Saúdi na Mon" and allow it to be used by all structures;
- - The possibility of introducing all the information of the single clinical process into the HIS, ensuring that it is possible to extract the statistics of these and also the other reports for the structures.

The objective of the SIS is to guarantee the services of the Cabo Verde Health System (public and private) the necessary clinical, epidemiological and administrative information, reliable, timely and pertinent, through a single platform, duly integrated and interoperable, through the implementation of technical and technological solutions, which will allow:

- Implement the patient's unique clinical process electronically;
- Integrate the user registration system with the National Identification Card;
- Integrate with contributory and non-contributory social protection systems;
- Integrate with the medicines registration system;
- Integrate with the medicines management system of both the importer/distributor/producer and the pharmacy solutions;
- Define a single citizen's register in the NHS;
- Desmaterialize medication prescriptions;
- Prescribe only by the International Common Denomination (ICD);

   Record diagnoses using the International Classification of Diseases ICD 11;

2.1 Information and Communication Technology infrastructure (ICT)

Currently, only part of the health units is supported by fiber optic connection, specifically WIMAX wireless technology, which has problems with availability and data transmission bandwidth, for the use of advanced solutions such as Telemedicine.

The MoH's priority is to strengthen the technological park and health services, especially in terms of improving connectivity, which will require the adoption and implementation of fibre optics in health structures and other points to improve connectivity, with the aim of improving and extending the use of the HIS and telemedicine in all health structures.

2.1. National Health Information Systems

Currently, the main information systems in use by the MoH are HIS, DHIS-2 and Medicine One.

The National Health Information System (SNIS) was designed to be a mechanism for collecting, processing, analysing and transmitting the information needed to plan, organise, operate and assess the health services, thus facilitating the monitoring and control of activities carried out by service providers through local indicators, and the formulation and assessment of health policies, plans and programmes.

DHIS-2 is an open system developed by the HISP Center at the University of Oslo, which allows the management of aggregated health information, mainly for epidemiological surveillance purposes. The system has an interface for interoperability with other information systems.

The Medicine One, a health management system with proprietary code, is a complex and robust solution. It requires a complex and effective communication network infrastructure to allow its operation, and requires the payment of a set of licenses per workstation and expansion, as well as its implementation and use in each period/year.

In terms of public establishments providing health care, the NHS is made up of, in addition to two central hospitals, four regional hospitals, 32 health centers, four reproductive health centers, 1 occupational therapy center, a mental health center, 34 health posts, 114 basic health units, three health stations with their own headquarters, some with greater technological complexity.

The Medicine One is currently only being used in Praia's health facilities (Health Centres and Central Hospital) for the reasons described above.

The DHIS2 is in operation in all the structures of the NHS.

4. OBJECTIVES

The purpose of this Terms of Reference is to hire an international consultant, whose mission will be to support the development of the National Digital Health Strategy (ENSD), as well as the respective operational and monitoring and assessment plans for the implementation of the ENSD.
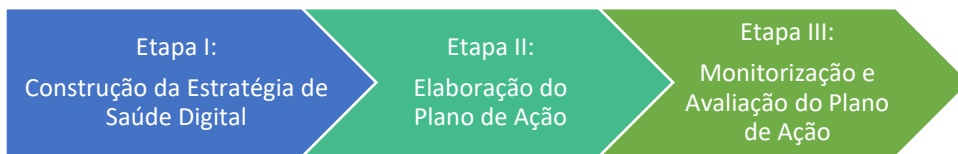
5. CONSULTANCY TASKS

a) Analyse the country's trajectory in terms of Digital Health;

b) Analysing reports and other documents already drawn up on activities related to Digital Health in Cabo Verde;

c) Align the ENSD with the EGDCV, incorporating the actions already defined in the EGDCV for the health sector.

d) Carry out a comparative analysis of international technical and strategic documents on Digital Health, to assist in the development of the ENSD;

e) Analyse the national legal framework with implications for the implementation of the ENSD, identifying gaps and possibilities for improvement;

f) Adapting the Digital Health Assessment Toolkit methodologies produced by the WB and the National e-Health Strategy Toolkit produced by the ITU-WHO consortium to the Cape Verdean context;

g) Draw up a ENSD proposal and the respective operational and monitoring and assessment plan, based on technical guidelines supported by scientific evidence, good practices and internationally recognised ethical and legal principles, so that people can benefit of the best digital solutions, in order to improve access to healthcare, with an emphasis on the most vulnerable populations and people who are not familiar with digital technologies in general, thus contributing to improving Universal Health Coverage;

h) **PLACE OF SERVICE PROVISION**

The work is to be carried out in a hybrid way, with at least two working missions in the city of Praia - Cabo Verde, as well as virtual meetings to prepare and follow up the work.

i) **METHODOLOGY**

To prepare the ENSD, the Digital Health Assessment Toolkit methodologies, developed by the WB, and the *National e-Health Strategy Toolkit* of ITU-WHO must be adopted.

The methodology for building the digital health strategy provides a framework and method for developing the national digital health vision and the respective action plans and monitoring framework. It is a resource that has been applied by several governments that are developing or revitalising to ENSD

Etapa I: Construção da Estratégia de Saúde Digital	Etapa II: Elaboração do Plano de Ação	Etapa III: Monitorização e Avaliação do Plano de Ação

Stage I: Construction of the Digital Health Strategy	Stage II Preparation of the Action Plan	Stage III: Monitoring and Assessment of the Action Plan

1.1 Stage I: Development of the Digital Health Strategy

In the first stage, a national digital health vision will be developed that responds to the country's health and digital governance goals. It explains why a national digital health approach is needed, what should be achieved with the strategy and how this will be done.

The basic questions that will be answered are:

1) Why: this is the strategic context for digital health, covering the health of the population, the state of the national health system, health priorities and digital governance.

2) What: this is the role that digital health will play in realising the goals of the health sector. It acts as a high-level message to policymakers, answering the question: what direction does our country want to take in terms of health, and how will digital health help us do it?

1.1. How: this gives us the various components, or basic elements, of digital health that must be implemented to achieve the national and Health vision.

1.2. Stage II: Operational plan

1.3. In the second stage, an operational plan for ENSD will be drawn up, which reflects the country's priorities and health context. The plan must structure activities in the short and medium term, identifying "Quick-Wins", while developing a basis for the long term. It must describe the set of activities to be carried out and the resources required to implement the ENSD, associated with evolutionary stages.

1.4. Stage III: Monitoring and Assessment Plan

In the third stage, a plan will be set up to monitor implementation and manage the associated risks. This is important to show the progress and results of implementation and helps ensure long-term support and investment. The monitoring plan will describe the activities necessary for the action plan to remain consistent and systematically adherent to the ENSD.

The technical work must be carried out in close coordination with CICA-ENSD and other relevant stakeholders indicated by the Health Technology, Communication and Information Office (GTCIS) of the MoH.

j) PROFILE AND QUALIFICATIONS OF THE CONSULTANT

The consultant must fulfil the following requirements:

- A minimum academic level of Master's degree in Public Health, in Health Policy, Planning and Financing, in Digital Health or in another area of Health, with solid and proven knowledge in the areas of policies, planning, monitoring and evaluation of international good practices in matters of Health and digital solutions in Health. Having a PhD in one of the areas mentioned above will be an added value;

- Evidence of significant experience of technical assistance in designing strategies in the area of Digital Health;

- Have at least five (05) years of technical assistance experience in designing strategies in the Digital Health area;

- Proven experience of three years in managing projects of similar complexity;

- Proficiency in portuguese (spoken and written) and ability to communicate professionally in English;

- Complete command of Microsoft applications (Word, Excel, PowerPoint) and common Internet applications that will be required; and

- Ability to work in a team, focusing on results and transmitting knowledge.

k) **DURATION**

The work can be done in a hybrid format, and the total duration of the consultancy should not exceed 120 (one hundred and twenty) days, including face-to-face activities in Cabo Verde (meetings with CICA, field visits, meetings with other stakeholders, among others) for a minimum period of 15 days.

GTCIS-MS will make available documents and information relevant to the work of this consultancy, as well as the contacts of the organisations to be consulted in this process, facilitating the obtaining of the expected results.

l) **EXPECTED RESULTS AND PAYMENT SCHEDULE:**

PRODUCT	DESCRIPTION	DELIVERY TIME	PAYMENT PERCENTAGE

P1 - METHODOLOGY ADOPTED FOR DRAWING UP THE STRATEGY	Methodology for drawing up the National Digital Health Strategy, based on the Toolkit ITU-WHO adapted to the Cape Verdean context, including a detailed work plan of activities.	**15** 15 days after signing the contract	15%
P2 NATIONAL DIGITAL HEALTH STRATEGY (ENSD)	Submission of the 1st draft of the National Digital Health Strategy proposal to CICA-ENSD for analysis/discussion.	**30** days after signing the contract	15%
P3 - ENSD OPERATIONAL PLAN	Submission of the 1st draft of the ENSD operational plan proposal to CICA-ENSD for analysis/discussion.	**60** days after signing the contract	30%
P4 - PLAN OF MONITORING AND ASSESSMENT OF THE ENSD	Submission of the 1st draft of the ENSD monitoring and assessment plan to CICA-ENSD for analysis/discussion.	**90** days after signing the contract	20%
P5 - FNAL PROPOSAL OF THE ENSD AND RESPECTIVE OPERATIONAL PLAN AND MONITORING AND ASSESSMENT PLAN	Submission of the final proposals of the ENSD and respective operational, monitoring and assessment plans to CICA-ENSD for review and validation.	up to 120 days after signing the contract	20%

SUPERVISION

The consultant will report to the director of the GTCIS for technical consultancy issues.
The consultant will report to the Special Projects Management Unit (UGPE) for contract administration issues.

GENERAL INFORMATION

A. The consultant must present and discuss the draft proposals for the documents under consideration in meetings with CICA-ENSD, to collect contributions.

B. Once the above-mentioned contributions have been incorporated, the consultant (or the consultancy team) submits the PROPOSAL OF THE ENSD

documents for validation, in digital format, Word, and 3 (three) paper copies, A4 format, in Portuguese.)

C. The consultant is responsible for paying all tax charges relating to the consultancy, in accordance with current legislation that governs the consultancy service.

D. The products developed at the request of the beneficiary within the scope of this consultancy will be considered the intellectual property of the MoH, as well as all its elements. In this regard, the consultant is prohibited to transfer or publish any information and/or documents that are the subject of this consultancy without prior authorisation of the MoH.

E. The consultant must carry out the activities set out in these Terms of Reference in accordance with the highest standards of professional competence, ethics and integrity and within the stipulated deadlines.