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eGabon CI-SIS: Interoperability Framework for the national eHealth Information System in Gabon

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- ❑ 2 231 000 inhabitants
- ❑ Capital: Libreville
- ❑ Time zone: UTC +1
- ❑ Gabon is subdivided into 10 health regions and 52 health departments. The current Gabonese health system is based on three health sectors and traditional medicine which coexist without a formal complementary relationship. These sectors are :
 - **Civil and military public sector**
 - **Parapublic sector**
 - **Private sector**



□ **The civil public sector has a pyramid organization at three levels :**

- Central level : national institutions, central departments, programs, university hospital centers (CHU)
- Intermediate level : 10 regional health directions and regional hospitals centers (CHR)
- Peripheral level : 52 health departments, 450 health centers, 20 health huts, other health organisations.



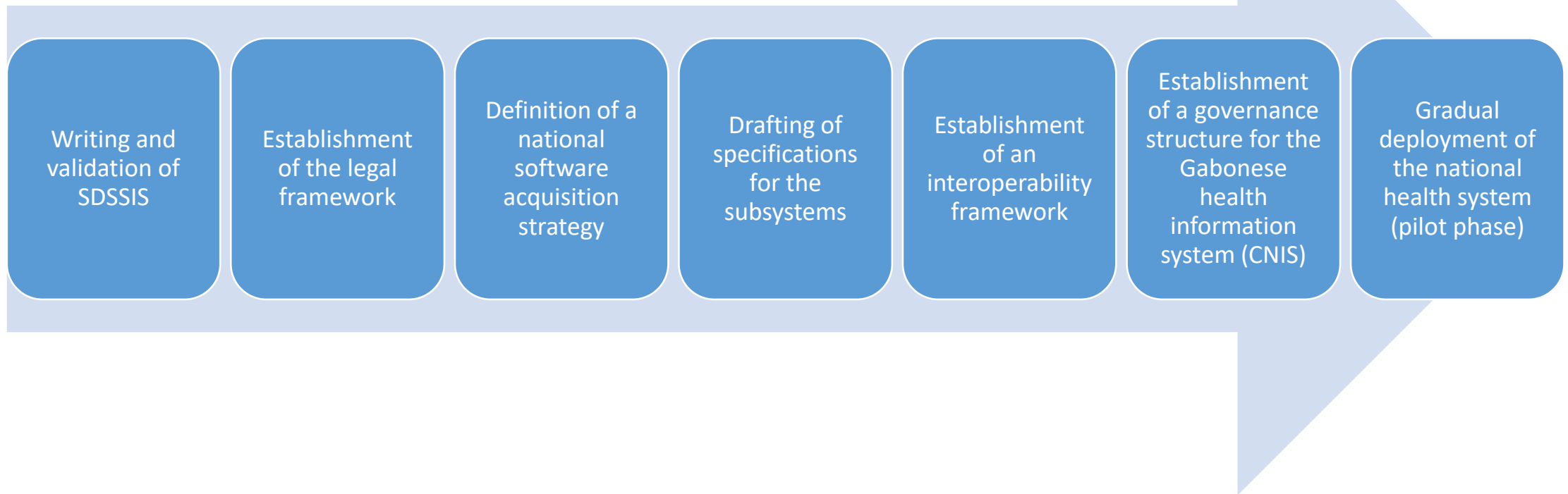
- ❑ **The military public sector reports directly to the Ministry of Defense**
 - Two large modern hospitals (HIAOBO, HIAA)
 - One Military Health Services Application School (EASSML)
 - Military health centers, vast network of infirmaries
- ❑ **National insurance called CNAMGS covers 1 500 000 insurees → National Patient Identifier**
- ❑ **National organisation CNSS for pensions and professional accidents**
- ❑ **Other private insurances**

The **Gabon Emergent Strategic Plan (PSGE)**, identifies the digital economy as a key sector for the diversification of sources of growth in Gabon, and the health sector as a priority sector for the use of ICT to improve the efficiency of the health care system.

On this basis, the eGabon-SIS project launched by the Gabonese government in the course of 2016 will make it possible, through the **Strategic Master Plan for the National Health Information System (SDSSIS)** drawn up in the course of 2017, to put in place :

- **Good health system planning**
- **Better management of resources and productivity**
- **Better quality of care and prevention of public health problems.**

Strategic implementation plan 2017 - 2022

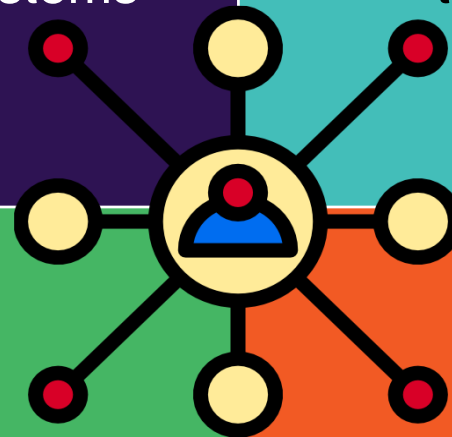


Clarify the interoperability requirements for open interfaces needed for exchanging medical data among different systems

Provide to implementers a clear context (use cases) and interoperability specifications for exchanging information for those use cases

Ensure the sustainability and integrity of the SIS alongside

Reduce risks of errors when exchanging clinical information

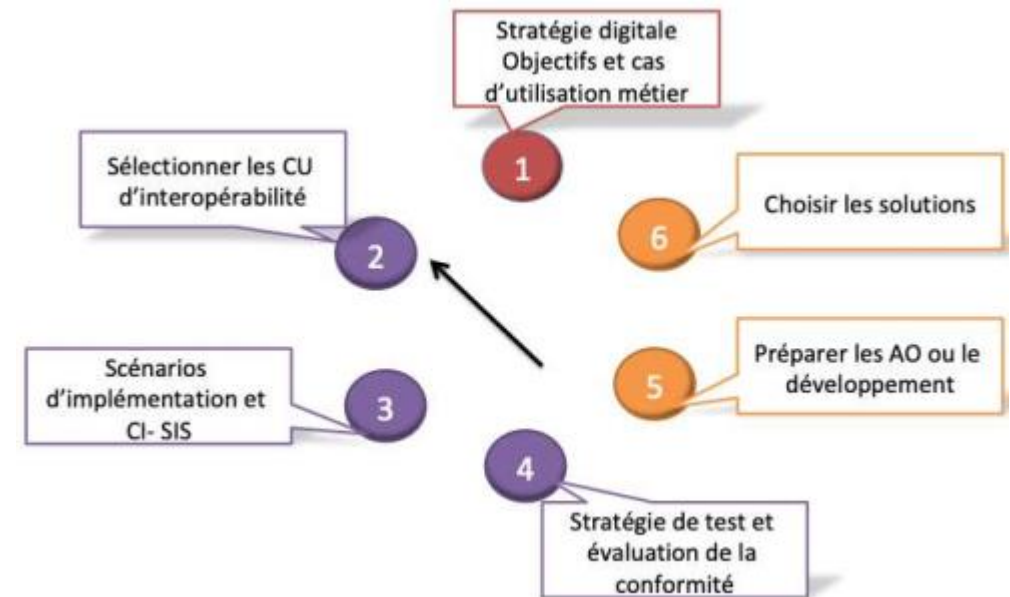


eGabon CI-SIS :

**the eHealth
interoperability
Framework**

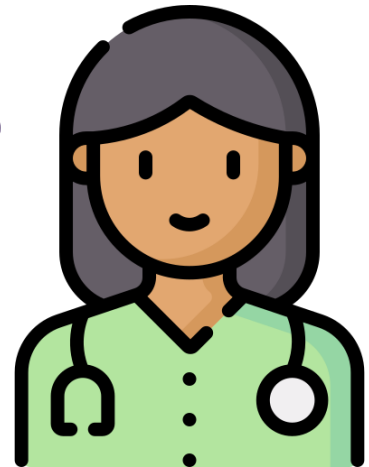
The methodology used for the development of the eGabon CI-SIS comprises six stages :

1. Identification of business cases and alignment with the national eHealth strategy
2. Selection of use cases and prioritization
3. Specifications of the CI-SIS
4. Test strategy and conformity assessment
5. Preparation of bidding documents
6. Choice of consortia and solutions



The business cases that have been selected for the Gabonese Health Information System (HIS) are :

1. Admission, movement and discharge of the patient from the hospital
2. Prescription of a request for a medical biology examination and its follow-up
3. Request for radiological examinations and follow-up
4. Electronic submission of the treatment sheet
5. Basic health watch
6. Patient: interrogation and integration of the ISG (Identifier of Gabonese Health)
7. Sharing the lab report
8. Remote ultrasound expertise
9. Remote ECG expertise
10. Sharing the exit letter



Domains	Use Cases
HIS	Patient admission in hospital
	Laboratory ordering of lab tests and results workflow
	Imaging ordering and report workflow
Management, administration and Health surveillance	Submission of the insurance reimbursement (FSE)
	Basic Health surveillance (VSB)
	Request and integration of the ISG (health patient identifier)
Clinical Information Sharing	Lab report sharing
	Tele-expertise échographie
	Tele-expertise ECG
	Discharge hospital report

L2r - Cadre d'interopérabilité du système d'information de santé (CI-SIS) du Gabon
Rapport de validation des trois premiers cas d'utilisation

Document final

IHE Services

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Example of the high level interoperability requirements of an interoperability function of a use case :

Cas d'Utilisation			Exigences d'interopérabilité correspondantes en termes de profil et standard, plus spécifications complémentaires			
Fonction d'Interopérabilité du cas d'utilisation	Service fourni (Numéro d'Exigence)	OPT	Acteur Technique	OPT	Profil/Standard	Références à des Spécifications Complémentaires
Source de l'Identification du Patient	Création, mise à jour et fusion	R	Patient Demographics Supplier	R	IHE - Patient Administration management (PAM)	
	Interrogation Identité patient localement	R	Patient Demographics Supplier	R	IHE- Patient Demographics Query (PDQ)	
	Commun à tous les services ci-dessus		Secure Node	R	IHE Audit Trail and Node Authentication (ATNA)	Spécification d'interopérabilité Transverse - Sécurité et confidentialité du SIH - Paragraphes 3.2 et 3.3
			Time Client	R	IHE Consistent Time (CT)	Spécification d'interopérabilité Transverse - Sécurité et confidentialité du SIH - Paragraphe 3.1

R=Obligatoire, O = Optionnel, C= Conditionnel

After the selection of the consortium



Refine of the interoperability framework

- Development of the interoperability specifications of the other use cases (Management and clinical information sharing domains)
- Maintenance of the existing CI-SIS and additional requirements (security, coding systems, OIDs, etc)

Continue to train the Gabonese experts and provide supports

Provide and install the Gazelle test bed for additional projectathons during the deploiement phases

Implement the interoperability governance



THANK YOU !