enesis 20²²

ESTRATÉGIA NACIONAL PARA O ECOSSISTEMA DE INFORMAÇÃO DE SAÚDE

Summary of Preliminary Version for Public Consultation

FRAMEWORK

The National Strategy for the Health Information Ecosystem (ENESIS 2022), designed for the three-year period from 2020 to 2022, was elaborated by SPMS, E.P.E., in collaboration with a range of internal and external institutional and individual partners to the Ministry of Health. This Strategy intends to continue the current ENESIS, ending on December 2019, building upon and evolving the good that has been built over the past three years and correcting what should be changed.

ENESIS 2022 aims to promote the digital transformation of the health sector in Portugal, creating indispensable conditions for the evolution of the Health Information Ecosystem (eSIS). This should be thought far beyond the National Health Service, guiding and articulating the different strategies and initiatives of the multiple Health System stakeholders towards common goals. Thus, ENESIS 2022 represents a common vision for Information and Communication Systems of Health, designed by taking into account the Ministry of Health Sectorial Plan, and should be underpinned by clear and participatory governance and management.

ENESIS 2022 integrates a set of principles, strategic streams and dimensions, described throughout this document, organized and structured to facilitate the explanation, implementation and monitoring of the national strategy.

This document, as presented in this preliminary version, should be improved based on the gathering of ideas, criticisms and suggestions, during the public consultation period. The document does not include two important components for the success of ENESIS, such as the governance model and the macro financial plan, as these are considered work in progress elements during and after the public consultation period. In this regard, we appeal to everyone for maximum input through the instructions available at:

https://www.spms.min-saude.pt/2019/10/consulta-publica-i-estrategia-na-cional-para-o-ecossistema-de-informacao-de-saude/
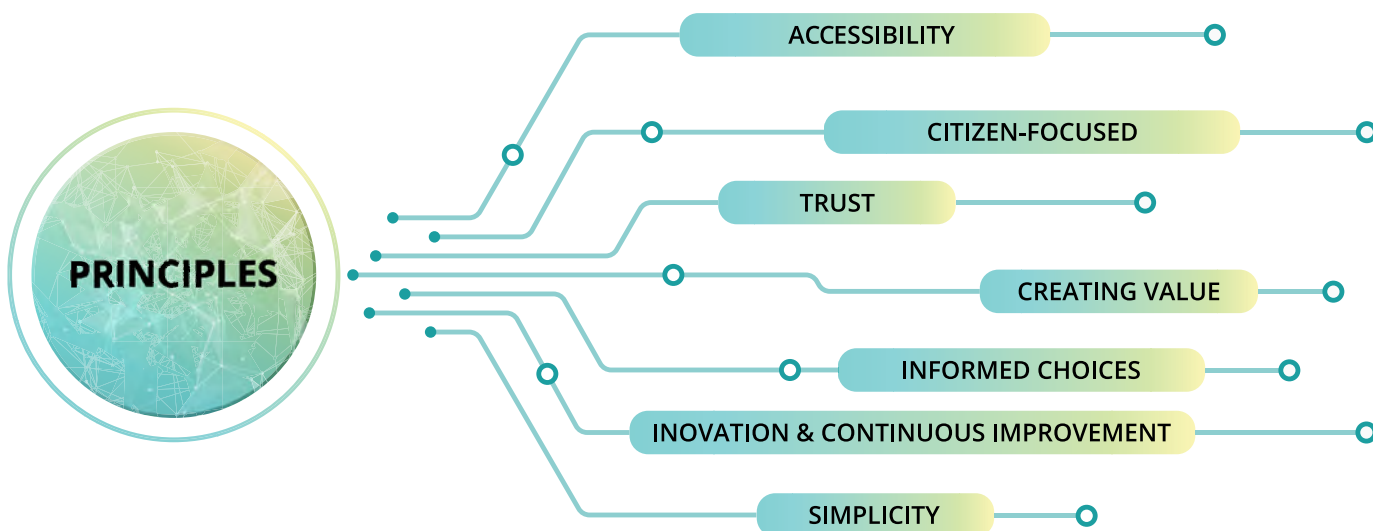
VISION

A Health Information Ecosystem as a best practice example for a more digital, integrated, sustainable and citizen-focused Health System, contributing to the delivery of benefits and the optimization of risks and resources.
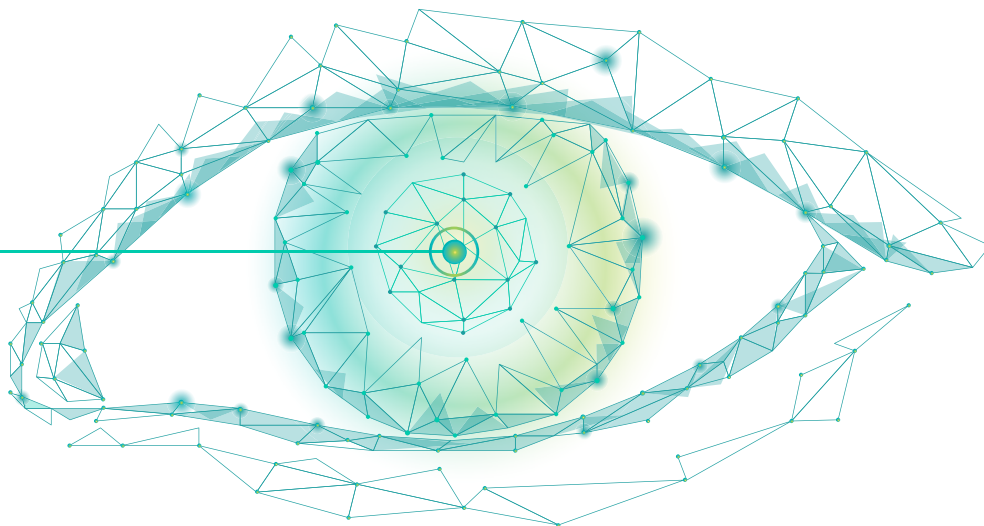
PRINCIPLES

A set of core principles was defined, which guided the creation of the different strategic streams, and the respective measures and guidelines. These represent transversal values that must be known, understood and applied by all entities of the eSIS in the implementation of the strategy

PRINCIPLES

- ACCESSIBILITY
- CITIZEN-FOCUSED
- TRUST
- CREATING VALUE
- INFORMED CHOICES
- INOVATION & CONTINUOUS IMPROVEMENT
- SIMPLICITY

OBJECTIVES

ENESIS $_{20}{}^{22}$ presents a set of transversal objectives that aim the integration of three distinct perspectives: Citizens, Professionals and Health Organizations, the main actors and beneficiaries of this national strategy.

01 To provide the improvement of the management of heatlh services, facilitate acess to heath information and services and the integration of care, reducing geographic and socioeconomic disparities.

02 To provide the improvement quality of care, patient safety and simplicity, ease and convenience in contact with the health system.

03 To contribute to improve and innovate the work processes of professionals, improve their satisfaction and, consequently, the quality of services delivery.

04 To optimize existing resources, avoiding unncessary spending and innovating in Health System, particulary in the NHS.

01 Supporting the Heralth System and the healthcare to improve citizens health

02 Improving the experience of citizen in his/her life and in the contact with Health System

03 Stimulating the work conditions of health professionals

04 Increasing the efficiency of health organizations and safeguarding access to quality health services and effective resource management
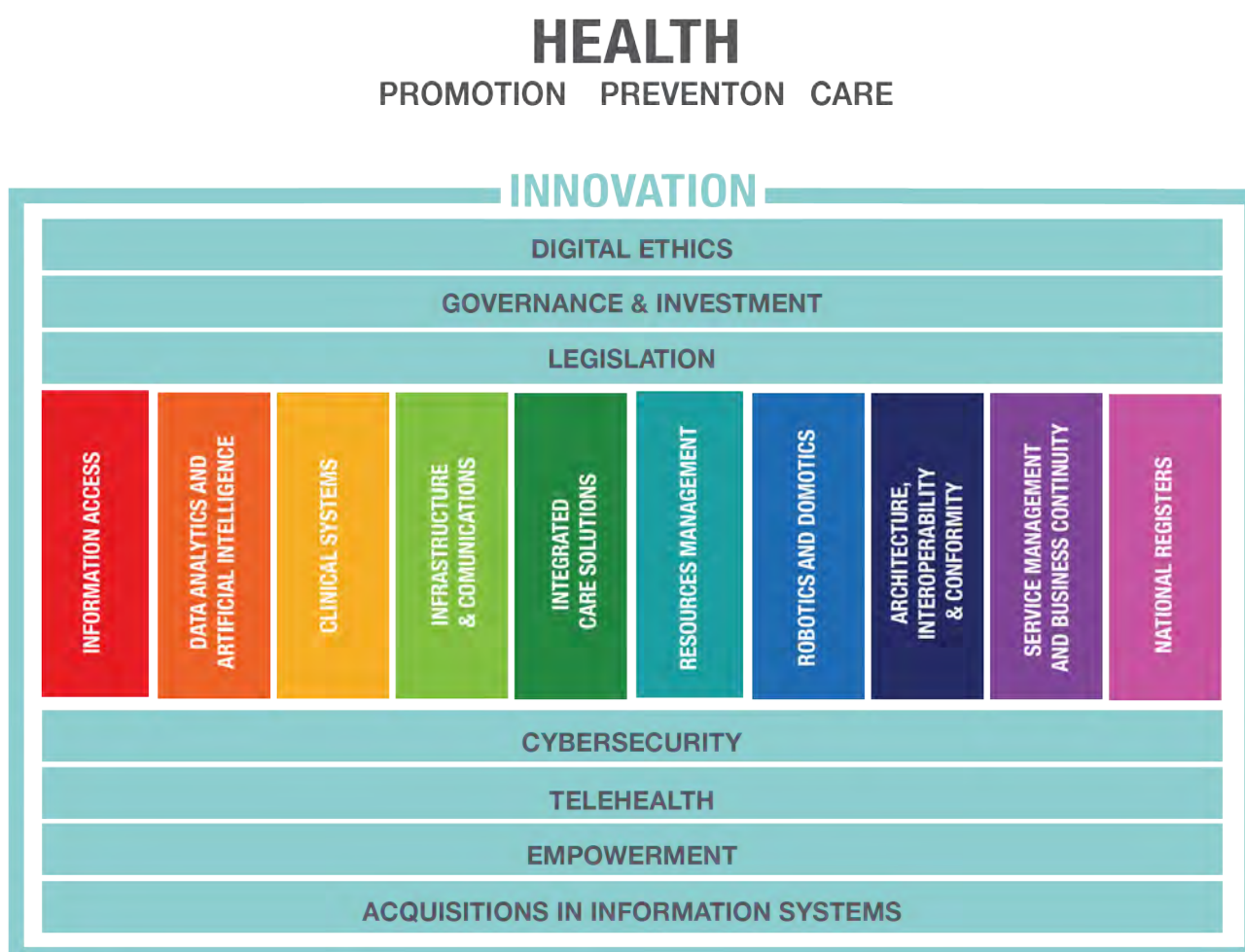
STRATEGIC DIMENSIONS ENESIS 20²²

In order to organize the set of needs and objectives that Health Information Systems must support, some facilitators were identified in the area of Information and Communication Technologies, aggregated in technological dimensions, which relate to other transversal dimensions. All these dimensions are essential for the successful implementation of this Strategy, ensuring respect for the defined principles and supporting a set of strategic streams, measures and guidelines, to be implemented by entities of the eSIS. These dimensions are aggregated into a Strategic Framework that helps to organize and guide the Strategy and its implementation.

The Transversal Dimensions correspond to strategic national references, which support the ICT components in a transversal way. ICT components have a more organizational or procedural nature, called Vertical Dimensions.

ENESIS 2022 Framework:

HEALTH
PROMOTION   PREVENTON   CARE

INNOVATION

DIGITAL ETHICS

GOVERNANCE & INVESTMENT

LEGISLATION

| INFORMATION ACCESS | DATA ANALYTICS AND ARTIFICIAL INTELLIGENCE | CLINICAL SYSTEMS | INFRASTRUCTURE & COMUNICATIONS | INTEGRATED CARE SOLUTIONS | RESOURCES MANAGEMENT | ROBOTICS AND DOMOTICS | ARCHITECTURE, INTEROPERABILITY & CONFORMITY | SERVICE MANAGEMENT AND BUSINESS CONTINUITY | NATIONAL REGISTERS |

CYBERSECURITY

TELEHEALTH

EMPOWERMENT

ACQUISITIONS IN INFORMATION SYSTEMS

VERTICAL DIMENSIONS

Information Access - Provision of data properly organized, worked and structured to the citizens and health professionals, ensuring the its quality and correct integration.

Data, Knowledge and Artificial Intelligence - Evolution of health information systems, using big data, advanced analytical techniques and artificial intelligence, to add value to the health planning process, population health surveillance and diagnostic and therapeutic process.

Clinical Systems - Information systems that enhance the sharing of information and knowledge, among the different actors of the system, and support the work processes of health professionals, to improve the effectiveness, quality and safety of health care provision.

Infrastructure and Communications - Support and communications infrastructures that are robust, resilient, highly available and secure, able to meet the needs of professionals and citizens, allowing multiple eSIS digital solutions.

Care Integration Solutions - Solutions that enable access to quality health care from a continuity perspective, taking into account the health objectives of each citizen, facilitating accessibility, mobility and transfer of patients in the health care network, allowing the citizen interaction with the Health System.

Resources Management - Resources management covers several areas that are directly related to financial, human and clinical resources, with the mission of optimizing the various resources available, supporting the achievement of Health System objectives and thus ensuring a greater set of benefits achieved.

Robotics and Domotics - Aim to increase the autonomy, support and convenience of health professionals and citizens. Automation of supporting processes for clinical and administrative practice, improves the patient communication, satisfaction and well-being.

Architecture, Interoperability and Conformity - Promotion of system standards and their interaction. eSIS reference architecture definition. It ensures

the alignment between business strategy, informational entities, business processes, application systems and technological infrastructure.

Service Management and Business Continuity - This dimension covers two areas, Service Management, which incorporates the definition and implementation of an ICT services operating methodology, and Business Continuity, which presupposes the establishment of prevention and recovery systems, that respond to a disaster in organizations.

National Registries - Unifying the digital presence of the citizen throughout eSIS. Provide reference data for different national health registries, standardizing and disseminating their use in eSIS. Standardization and generalization of critical data for the rapid and correct identification of the structural entities of the information system.

HORIZONTAL DIMENSIONS

Digital Ethics - Principles for Digital Ethics must be established, taking into account the ethical and social challenges of new the ICT, and the dissemination of technologies.

Governance and Investment - Adoption of a sustainable governance and an investment plan based on concrete organic structures, that ensure an extended and clear participation by the several eSIS actors.

Legislation - Legislative needs that are required for the proper functioning of the health sector, given the new challenges of ICT.

Cybersecurity - Ensuring resilient and secure healthcare providing, leading to a reduction of confidentiality risks, integrity and availability of information and services, and contributing to the increase of confidence in digital technologies by the users.

Telehealth - Supporting health from a distance, through the use of ICT, in the aspects of health care, service organization and training of health professionals and citizens.
Overcoming geographical and time barriers in the access to health.

Empowerment - Empowering citizens and health professionals with the necessary tools to improve their knowledge and skills, enabling the achievement of the objectives defined in the national strategy.

Acquisitions in Information Systems - Suggesting actions for rationalization and aggregation of public procurement, allowing savings and acting with parsimony in the use of public money.

STRATEGIC STREAMS

The implementation of the strategy is based on a set of six axes, which are guided by a set of health objectives, thus ensuring the alignment of the health sector with the information system that supports it. To this end, these axes integrate various dimensions defined in the strategic framework, ensuring that information technologies respond to the needs of organizations and their professionals, in accordance with current health policies, and lead to the creation of improvements and benefits for citizens. , professionals and organizations.

The Strategic Axes are aggregators of a set of measures with their orientations for their implementation, thus integrating the Health Information Ecosystem Strategy and its Vision for 2022.

Throughout this chapter, in the description of each strategic axis, a diagram is presented with the dimensions involved. Different dimensions are associated with each strategic axis, making it clear that the objectives to be achieved in each axis will only be achievable if synergies are created between the different areas.

Access to Health Services and Care throughout the Citizen's Lifecycle

Promote and facilitate greater mobility and equity in access to health care, where and when needed, throughout the citizen's life cycle in a simple and integrated way.

Citizen Empowerment

Promote citizen involvement and active participation in the health information system through digital training and the provision of mechanisms and tools that support conscious and informed decision making and promote self-management of health care.

Efficiency and Sustainability of Health System

Promote the rationalization of resources and the sustainability of the health system, through savings of time and money, thus enhancing productivity. Ensure more rational and savings-generating public procurement, ICT services and products for the NHS.

Quality and Safety of Health Care

Promote mechanisms and tools to increase the quality and safety of health care, as well as auxiliary means of diagnostic and therapeutic.

Health Prevention, Protection and Promotion

Preventing public health and disease phenomena, citizen awareness of behaviors that improve his/her well-being and increase his/her quality of life.

Organizations and Professionals Empowerment

To adequately train organizations and their professionals to maximize the optimal use of information systems, as well as their correct development and implementation.

SUMMARY TABLE | STREAMS AND MEASURES

Access to Health Services and Care throughout the Citizen's Lifecycle	Citizen Empowerment	Efficiency and Sustainability of Health System	Quality and Safety of Health Care	Health Prevention, Protection and Promotion	Organizations and Professionals Empowerment
1.1 Information Systens Accessibility	2.1 Health literacy development through the creation of shared solutions	3.1 Evolution of Clinical and Administrative Information Systems	4.1 Confidentiality, integrity and availability protection of the health information	5.1 Gamification concept application	6.1 Stakeholders involvement for continuous improvement of Information Systems
1.2 Health Access in Mobility	2.2 Introduction of citizen experience as a mean of Health Services improvement	3.2 Optimization of clinical and administrative processes	4.2 Promotion of cybersecurity practices in Information Systems	5.2 Prevention in public health through data analysis and Artificial Intelligence	6.2 Improvement of digital skills of non-technological health professionals
1.3 Communications between Information Systems within and among Organizations	2.3 Promotion of improved usability of Information Systems through citizen engagement mechanisms	3.3 Optimization of network infrastructure and servers	4.3 Guarantee of Business Continuity		6.3 Improvement of digital skills of health technology professionals
1.4 Provision of platforms that promote the provision of distance care	2.4 Promotion of a 360º view of health conditions	3.4 Centralized Information Systems purchasing process optimization	4.4 Assurance of Information Systems Conformity		6.4 Improvement of information and communication technology skills for top management
		3.5 Optimization and dissemination of business intelligence to support management decision making	4.5 Implementation of clinical decision support mechanisms and patient safety		6.5 Boosting Innovation in Information Systems
		3.6 Definition of Data Governance model			6.6 Promoting a culture of knowledge sharing
		3.7 Shared management services and health resources			
		3.8 Use of technological tools to support health professional practice			
		3.9 Value management model			

ENESIS 20²² IMPLEMENTATION

The different measures consolidated in the six strategic streams have a different impact on the several health stakeholders, thus having distinct visibility and value in eSIS. In order to structure the future implementation plan, the proposed measures were distributed over the next three years, according to the priority, duration and estimated resources for their implementation. This distribution is presented according to the following execution horizons:

HORIZON 1

Measures of high visibility, but of less complexity in their execution, which allows them to be implemented faster (Quick Wins).
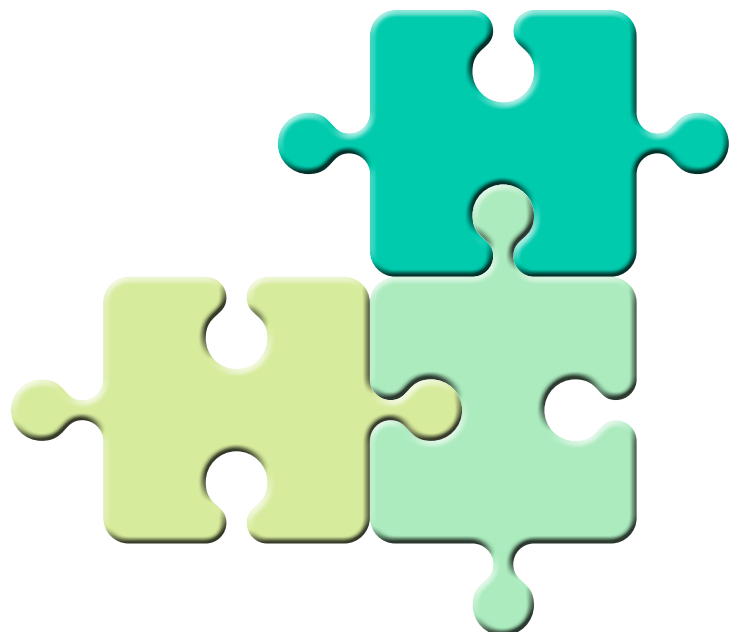
HORIZONT 2

Measures of high visibility, but which represent greater complexity in its execution, which requires more time for its implementation, with greater use of resources.

HORIZON 3

Measures that are structural in the ecosystem and represent a great complexity in its implementation, requiring a long period of time for its implementation.

HORIZON 1 — 1 year

HORIZON 2 — 2 years

HORIZON 3 — 3 years

HORIZON 1	HORIZON 2	HORIZON 3
1.4 Provision of platforms that promote the provision of distance care	1.1 Information Systens Accessibility	1.2 Health Access in Mobility
2.1 Health literacy development through the creation of shared solutions	1.3 Communications between Information Systems within and among Organizations	3.1 Evolution of Clinical and Administrative Information Systems
2.3 Promotion of improved usability of Information Systems through citizen engagement mechanisms	2.2 Introduction of citizen experience as a mean of Health Services improvement	3.2 Optimization of clinical and administrative processes
3.4 Centralized Information Systems purchasing process optimization	2.4 Promotion of a 360º view of health conditions	3.3 Optimization of network infrastructure and servers
3.7 Shared management services and health resources	3.2 Optimization of clinical and administrative processes	3.6 DDefinition of Data Governance model
4.1 Confidentiality, integrity and availability protection of the health information	3.5 Optimization and dissemination of business intelligence to support management decision making	4.2 Promotion of cybersecurity practices in Information Systems
6.1 Stakeholders involvement for continuous improvement of Information Systems	3.8 Use of technological tools to support health professional practice	4.3 Guarantee of Business Continuity
6.4 Improvement of information and communication technology skills for top management	3.9 Value management model	4.4 Assurance of Information Systems Conformity
6.6 Promoting a culture of knowledge sharing	4.5 Implementation of clinical decision support mechanisms and patient safety	5.2 Prevention in public health through data analysis and Artificial Intelligence
	5.1 Gamification concept application	
	6.2 Improvement of digital skills of non-technological health professionals	
	6.3 Improvement of digital skills of health technology professionals	
	6.5 Boosting Innovation in Information Systems	