





## Supporting health through digital technology in France

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#### **Editorials**

geing of the population, chronic diseases, medical professionals under pressure, emergency departments sometimes overwhelmed, false information...these are just some of the major challenges currently facing our healthcare system. We have to confront these major challenges with a strong and enthusiastic will: we are going to overcome them! We are going to face them together, with pragmatism, ingenuity and innovation.



François BRAUN
Minister of Health
and Prevention

This embodies the spirit of the French National Council for Refoundation in Health (CNR Santé) and the projects it is undertaking. In these projects, digital technology is regularly mentioned as a key lever for transforming our healthcare system.

After 3 years of incredible acceleration in this field and the COVID-19 crisis in which digital played a major role, we must continue to make use of all the current and future possibilities of digital technology, for the benefit of our collective health.

This new 2023–2027 roadmap focuses on prevention, for which Mon espace santé, our new electronic health record, will be a crucial asset.

It is also committed to saving time for healthcare professionals. I see digital technology as a partner that should both support the work of healthcare professionals and relieve them of repetitive and administrative tasks, so they have less to worry about and can focus on their core work with patients.

I wanted this roadmap to draw a decisive path towards better access to healthcare for all. Developments in e-health, particularly telemedicine and telemonitoring, are major levers for equality in health, especially in more isolated areas. Distance is irrelevant with digital technology, and is therefore a real solution to meeting the needs of our fellow citizens, for example those who may have difficulty travelling that prevents them from accessing healthcare.

Lastly, this roadmap is being implemented in a supportive environment, with healthcare establishments significantly improving their defences and resources against cyber threats. It is being implemented by a government that is both an accelerator and a regulator, with strong ambitions to improve the appeal of our country, and to attract and retain all talents in the digital health sector.

This roadmap sets out a clear path. We are committed to achieving its objectives with collective dedication, in support of our values and our ethics, which form a European "third way" between the United States and China, capable of fostering the trust that is essential to the development of digital solutions and the improvement of our health.

inked to an ageing population, our country is facing a demographic emergency that will change the nature of our society. By 2030, a third of the French population will be over 60 years old, and those over 65 will outnumber those under 15. We need to prepare for this demographic transition so that by 2030 we can achieve a significant transformation that guarantees high-quality support for our elderly, taking into account their various expectations. Health plays a key role in the challenge of maintaining autonomy. For an inclusive society and in view of our demographic transition, we need to review how care and treatment are structured.

These required transformations are impossible without large-scale digital solutions and an ecosystem of public and private stakeholders committed to inclusion, autonomy and ageing well. In recent years, the first digital investment plan for the medico-social sector, "ESMS Numérique", has been a determinant programme in the transformation of the sector. Establishments and services for the elderly and people with disabilities have benefited from adopting digital user files or updating their hardware and software equipment. The engagement from stakeholders in the medical-social sector has been overwhelming.

These initial stages were conducted with stakeholders on the field, such as the ESMS in-

formation system groups and federations of establishments. This positive momentum will inspire us for the years ahead: it must continue and will be guided by this new digital health roadmap. In particular, I would like to see progress on:

- data exchange between stakeholders in the health, social and medico-social sectors to facilitate healthcare provision and the coordination of healthcare trajectories;
- carers and all the resources needed to give people more autonomy in managing their health;
- better monitoring of paediatric healthcare, which can contribute to early detection and better care for children with disabilities;
- further improvement of software solutions at the heart of ESMS professions for the benefit of people in care and professionals;
- expediting the deployment of digital solutions that demonstrate their impact in terms of preventing the loss of autonomy, in particular through one of the France 2030 major challenges.

These are the challenges at the centre of our priorities for the next 5 years so we can mobilise the power of digital technology for health, autonomy and inclusion.



Jean-Christophe COMBE
Minister of Solidarity,
Autonomy and People with
Disabilities

## Supporting health through digital technology



#### Over the last four years (2019-2022), France has caught up with the times in digital health.

ong-standing challenges such as the national health identity have finally been implemented. France's electronic health record, Mon espace santé, represents a fundamental pillar of our sovereignty and is now available to over 90% of the population. Thanks to the Ségur Numérique programme, patients and those in care systematically receive a copy of their health documents: 20 times more documents were sent to citizens in 2022 than in 2021. The introduction of telemonitoring into into the legal framework and the early access to reimbursement for digital medical devices (DMDs) are major steps forward, which are being scrutinised internationally. Driven by the previous roadmap, there is now a collective and ambitious energy.

These collective efforts and the initial results achieved were published in the "FACT(S)" (English version available) report in August 2022.

The platform state approach has worked: the government plays the role of the regulator and the operator of specifications and core services, while private sector stakeholders deploy services that are useful for performing the everyday tasks of healthcare professionals and patients and develop the innovations that our healthcare system needs.

After all this progress, we need to consolidate our achievements and ensure that digital solutions continue to develop in practice to meet the needs of citizens and healthcare professionals in the medico-social, social and health sectors. Now that core foundations are in place, we can rely more heavily on digital technology to tackle the major challenges facing our healthcare system. We need to support health through digital technology, by playing a humble role in meeting the priority aspects of the French national health strategy and regional health plans, in particular prevention, improving the quality of care and access to healthcare.

To achieve this, this new roadmap is rooted in three established and cardinal values.

#### Ethics.

Digital health must be sufficiently inclusive and based



Hela Ghariani and Raphaël Beaufret, jointly responsible for digital health

on solidarity. Everyone must be able to use digital tools and services to play an active role in their healthcare and future, access their data and manage access to it. Digital health must be based on solidarity and ensure no one is left behind. Digital should not widen inequalities in healthcare, but rather improve access to care for all. Innovations should not be reserved for certain parts of the population, but should be accessible to those who need it most. Ethics are not a barrier to deployment of digital technology, but a guarantee of its quality and benevolence in its solutions.

#### Sovereignty.

It is imperative that we make the technological choices that will let us decide on outcomes over the long term. By defining a regulatory framework, in France and in Europe, that is consistent with our values, we will be able to ensure our independence from particular and foreign interests.

#### Sustainability.

In light of the immense climate and ecological challenges facing humanity, the environmental impact of digital services and devices must be assessed, both in terms of production and maintenance costs and the practices they affect (e.g. teleconsultation, etc.).

France must also embody these values at European level. In the future, Europe will be the relevant level for exchanges, regulation and the digital health market. This is why France will continue to invest in European projects (French Presidency of the Council of the European Union in 2022, co-presidency of the e-Health Network in 2023, etc.) to make an impact and shape the future, particularly in terms of sovereignty of data hosting and the future regulation on the European Health Data Space (EHDS).

In terms of method, the approach that has led to success over the last four years has been kept:

- Systematic co-construction with citizens, professionals and establishments, digital health companies and their representatives, through a process of listening and regular discussions, with total transparency on difficulties and progress, just as it has been done done for the development of this roadmap.
- Small but quick steps to avoid attempts to perfect everything and demoralising effects, and to move forward with pragmatic solutions that are regularly adapted in line with feedback from those practising in the field.

As we did in 2022, we will evaluate the impact of our actions and this digital health roadmap before the end of 2027.

In terms of governance, public policy on digital health is implemented under the guidance of the Delegation for Digital Health (DNS), which is a permanent part of the Ministry of Health and Solidarity. It works closely with representatives of digital health stakeholders, in particular representatives of users, professionals and establishments working in the health, social and medicosocial sectors, and representatives of digital health companies that supply them with software solutions and digital medical devices. The ministries have an active involvement (DGOS - DGS - DGCS in particular) with the partner organisations that play a key role in e-health (ANS, Assurance

Maladie, CNSA, HAS, GIE SESAM-Vitale, CNDA, AIS, ANAP, ATIH, PariSanté Campus, Santé publique France, etc.) and in practice with the network of Regional Health Agencies (ARS), each of which oversees its own Regional Support Groups for the Development of eHealth (GRADeS), and the health insurance network (DCGDR and CPAM), working closely with regional authorities (mayors, departmental councils, etc.). This positive momentum is continuing and governance is being improving as part of the new roadmap.

Digital technology has started sustainable transformation of the French healthcare system. If we fail to create suitable digital technology for our healthcare system, it could just as easily derail it and compound the challenges it faces today. This is our collective challenge for the next five years, as we continue our efforts. This is the challenge of this roadmap, which is not just the responsibility of the government, which cannot do it alone — it is also that of the regions, professionals and establishments, businesses and citizens.

This roadmap describes our priorities for the next five years. It is split into **4 focus areas, 18 priorities and 65 objectives** with milestones and a body identified as the project leader that is responsible for its successful implementation.

PATIENT CARE



**PREVENTION** 

**5** priorities

20 objectives

5 priorities
16 objectives

**ACCESS TO HEALTHCARE** 

4 priorities
11 objectives



SUPPORTIVE FRAMEWORK

4 priorities

18 objectives

DIGITAL HOALTH ROADMAP 2023-2027

## The digital health doctrine

As a result of the previous roadmap, France now has a digital health doctrine.

#### esante.gouv.fr/strategie-nationale/doctrine

It sets out the framework for digital urbanisation in health in France. The doctrine is updated annually. The digital health house model (on page 9) is a simplified representation of this.

It explains, for all those who create, develop and maintain digital health services, the framework to comply with, in terms of core principles (interoperability, ethics, security), core ID services (INS, Pro Santé Connect, etc.) and core exchange services (MSS, etc.).

It also defines the role of the Mon espace santé and Services Package for Professionals platforms in the digital health services ecosystem.













# Developing prevention and giving everyone an active role in their own healthcare



Digital health must enable everyone to play an active role in their own healthcare and life. To achieve this, the first step is to have control over their health data and, in particular, to systematically retrieve their health and care pathway documents after a period of care.

The aim is to make Mon espace santé the updated electronic health record of the French citizens, from an early age, with all the necessary support, particularly for those who are not as familiar with digital technology.

Mon espace santé is designed to meet individuals' everyday needs: find out when a vaccine booster is due, securely send a prescription to your pharmacist, get the results of a lab test before a check-up, access your personalised support plan, etc. Mon espace santé will help everyone keep better track of their health **and benefit from personalised prevention.** 

Mon espace santé has become an essential public tool and promising new innovations are constantly emerging in the field of digital health. It is essential to support digital health companies to ensure that the French population has rapid access to solutions that have proven effective for each individual's health.

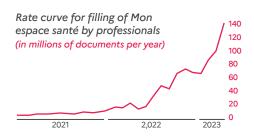


## 1. Using Mon espace santé in everyday life to manage your health



1-1. CONTINUATION Healthcare professionals can now assume that almost all their patients have an electronic health record. Systematically sending prescriptions, lab results, imaging reports and patient follow-up letters is finally possible. The Ségur du numérique removes most of the technical barriers to the smooth

and secure sharing of healthcare data. The priority over the coming months will be to ensure that "it actually works in practice" and that users are able to retrieve their health documents from Mon espace santé.



→ Hit a rate of 250 million healthcare documents registered per year in Mon espace santé by healthcare professionals by the end of 2026

**DNS** - CNAM - ANS

**1-2. DEVELOPMENT** In further efforts to make the everyday

lives of French people easier, the secure messaging system will offer an effective alternative to sending prescriptions to pharmacy Gmail addresses or any other non-secure messaging system. Users will be able to send their prescriptions to their pharmacist via the Mon espace santé messaging system while maintaining complete confidentiality. By using this feature, the patient can proactively write to a healthcare professional. In addition, a messaging API for citizens based on Mon espace santé will enable third-party services to offer a way for healthcare professionals and patients to communicate while respecting medical confidentiality and guaranteeing the same level of security and confidentiality.

→ Launch the first versions of the Mon espace santé messaging system for sending prescriptions to pharmacists from May 2023 and design a messaging API for citizens in 2024

**CNAM** - DNS



1-3. **DEVELOPMENT** From as early as the first days after birth, Mon espace santé will include the child's health record (growth curves, health certificates, etc.).

The arrangements for sending information for **monitoring** paediatric health from the health professionals' software (general practitioners, paediatricians and, in time, school doctors and protection services for mothers and children) will be developed in conjunction with software publishers in the sector. Families will be able to access their children's full health history in one place, which will prove useful throughout their lives.



→ Introduce reminders of compulsory check-ups and advice on children's health in Mon espace santé by the end of 2023 and health reports and certificates by 2025

**CNAM** - DNS

1-4. DEVELOPMENT Lastly, to simplify the experience of citizens, we will improve the links between the various public portals in the field of health. In particular, we will develop Mon espace santé as a personal digital health record, Santé.fr as a reliable information site on health and healthcare provision, the ameli.fr account for managing health insurance rights and the other compulsory health insurance portals.

→ Develop the first pathways linking Mon espace santé, Santé. fr and the ameli account (key ages, women's health, etc.) from 2024 CNAM - DNS - DSS



## 2. Developing personalised prevention



2-1. DEVELOPMENT Firstly, Mon espace santé offers us a new source of information within reach for everyone. We are already sharing primary prevention campaigns via this channel. However, we need to take things further and personalise prevention messages (vaccinations, check-ups, etc.) to encourage people to take appropriate action. This is a question of defining which message can be sent to the person according to which criteria (age, sex, reported condition, etc.), by which means (notification, messaging, etc.) and how frequently. To ensure that this is done effectively, pragmatically and ethically, a citizens' committee has submitted conclusions that will be used to supplement the introduction of personalised prevention in Mon espace santé.

→ Send out the first personalised prevention notifications in Mon espace santé in 2024

**CNAM** - DNS



**2-2.** DEVELOPMENT Furthermore, Mon espace santé will let you prepare for and keep track of preventive appointments at key ages. The preparation self-questionnaires can be added to the patient's medical record, which can be accessed by the healthcare professional at the appointment. Once the consultation has been performed, the professional can share their prevention recommendations with patients via the secure Mon espace santé messaging system. In addition to these new medical appointments, Mon espace santé will also be used in organised screening programmes, in occupational therapy and in school healthcare, to better equip citizens to take preventive action.

→ Enable 1 million patients to draft a preventive assessment in Mon espace santé by 2027

**DNS** - CNAM



**2-3. DEVELOPMENT** There is also a need to equip healthcare professionals to improve their prevention practices. Alongside the future economic models to be developed for prevention, similar to what has been done for telemonitoring, we will support the integration of prevention, good practice and reporting solutions into their professional software, possibly based on artificial intelligence, to help healthcare professionals target patients, raise awareness and support them using a population-based approach.

→ Promote the development of prevention and population management features in healthcare professionals' software by 2027

DNS - ANS

DNS



→ From 2024, launch a working group within the framework of the Digital Health Council to troubleshoot and define specific guidelines and measures

**2-4.** DEVELOPMENT Lastly, we know that more and more environmental factors are going to have an impact on human health. Digital technology should make it possible to anticipate risk and measure it more accurately. It should also better inform people about their exposure to risk and the preventive behaviour they should adopt. There are many avenues to explore in this area: to identify priorities and make progress in a pragmatic way, a working group will be set up as part of the Conseil du Numérique en Santé (CNS – Digital Health Council). This work will be based on the groundwork of some stakeholders and will be based on the four priorities of the French national environmental health plan.



## 3. Giving everyone an active role in their healthcare and control of their health data



- **3-1.** Continuation Giving citizens control over their health data is a strong ethical pillar of all our actions. In the future, users will also be able to retrieve their health data from digital services in Mon espace santé from among those listed in the catalogue. This data exchange will be possible in both directions from 2023 (from the listed service to Mon espace santé and from Mon espace santé to the listed service). However, it will always be at the discretion of citizens, who will decide which application they want to share their data with depending on the purpose of the service.
- → Establish a list of over
  50 applications offering
  exchanges with Mon espace santé
  by the end of 2026
  GIE SESAM-Vitale

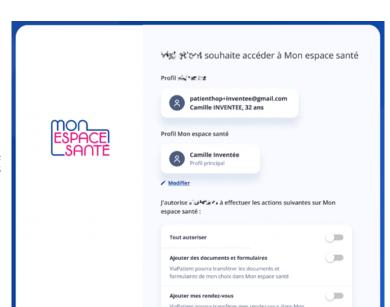
ANS - CNAM - DNS

- 3-2. CONTINUATION In addition, users must be able, as specified by law, to decide to share temporary access at their discretion in the course of receiving care or support, with the professional of their choice. This option will be particularly useful for certain professionals (occupational therapists, secretaries, foreign doctors, etc.) who are not included in the permissions matrix, or for users who prefer to hide all documents by default. Giving this control option to citizens is essential in the relationship between the patient and the carer.
- → From 2024, define the different ways citizens can share access depending on the care situation CNAM DNS
- **3-3.** DEVELOPMENT Lastly, in addition to the options for temporary access, hiding documents or blocking access for professionals, citizens will have even more options for defining their data access preferences in their Mon espace santé profile. For example, this includes the option to declare their preferences for the reuse of their data for research purposes, or the ability to authorise a professional to grant access rights to other professionals (other members of the care team, medical assistants, secretaries, etc.). Eventually, to avoid users having to specify their preferences again in multiple places, they could be viewed via certain other digital services (e.g. an electronic health record, a regional e-programme tool, etc.). This will help Mon espace santé become the main hub for citizens in terms of configuring access settings for their health data.
- → From 2024, publish a framework document for enhanced management of access preferences to Mon espace santé (define preferences on secondary use of health data, authorise one professional to grant rights to another, etc.)

CNAM - DNS - ANS



Setting access preferences in Mon espace santé





## 4. Helping all citizens to make use of digital health, especially those in the most vulnerable situations



- 4-1. CONTINUATION To support citizens with digital technology for healthcare, we need to nurture and develop the partnerships that have been set up in practice and at national level with those involved in digital inclusion (departmental councils, France services offices, France services digital advisors, charities, the civic service agency, etc.) and in relation to solidarity and health. By forging relationships between these different stakeholders, we will be able to increase the number of awareness-raising measures in a variety of places (medico-social establishments, town halls, hospitals, shopping centres, etc.) to make the message more effective. The budding network of regional coordinators, responsible for implementing local digital solidarity partnerships, will be significantly strengthened.
- → Ensure 80% of health and medico-social establishments implement awareness-raising measures by the end of 2027

**DNS** - ANCT - ARS/GRADeS

**4-2.** CONTINUATION Digital healthcare must never widen inequalities in access to healthcare. There are currently more than 13 million people (French or foreigners living in France) who are not accustomed to using digital technology. We must also continue **training for all digital mediation stakeholders** in the most important digital health issues for citizens (Mon espace santé, using your account and booking an appointment online, teleconsultations from your computer or telephone, etc.). In addition, the issues of security and confidentiality of health data are generally very useful examples to raise people's awareness of using digital health in their everyday lives. As such, training modules for digital mediators and the people they support will be made available.

→ Train 10,000 digital health mediators by June 2026

DNS - ANCT - GIP PIX

**4-3.** DEVELOPMENT Following the recommendations of the citizens' committee for digital health and feedback from numerous professional and family carers' associations, we will be making it possible for people to **conveniently and securely grant access to Mon espace santé to a family member or carer** who supports them with their healthcare. In addition, there will be further efforts to improve the accessibility of Mon espace santé in order to enhance the usability of the service for people living with a disability.

→ Make the required legislative changes to enable granting access to a carer by the end of 2023 and integrate the feature into Mon espace santé during 2024 DNS - CNAM

Stand promoting Mon espace santé in a shopping centre on Réunion





## 5. Ensuring everyone benefits from digital health innovations



5-1. CONTINUATION Following the introduction of these innovations, we will promote co-design by involving healthcare and medico-social professionals and end users in the design of these solutions from an early stage, in particular through the network of third place trial centres. The aim will mainly be to develop and roll out innovative and useful solutions in response to priority health issues such as mental health and ageing well.

Launch of the third-place community, 26 January 2023 in Lille



→ Co-finance 30 third places and 100 trials by 2026 by identifying ways to ensure funding continuity for innovation in healthcare organisations

DNS - BDT

- **5-2. DEVELOPMENT** There will be a strong focus on two innovation areas of major interest: **preventing loss of autonomy, and mental health**. Responses designed to tackle these priority social issues will be launched as part of France 2030 in an effort to accelerate the deployment of useful digital innovations.
- → Launch from the 1st quarter of 2024
  two major challenge responses (to mental
  health and preventing loss of autonomy)
  and publish the associated roadmaps
  DNS DMSMP AIS DGE DGRI CNSA
- 5-3. CONTINUATION It is essential that we demonstrate the added value (clinical, organisational, quality of life for the individual) of digital health innovations if they are to be rolled out and, in some cases, reimbursed. We will continue to increase our efforts to support the clinical and medico-economic evaluation of digital medical devices. We will make it a priority to support the implementation of robust clinical investigations alongside the HAS and to facilitate access to the European market by merging the evaluation methodologies of the Member States.
- → From 2024, publish an evaluation matrix for digital medical devices that aligns with our European counterparts and co-fund more than 75 clinical evaluations of digital medical devices by 2026
- **5-4.** CONTINUATION In addition, we will **speed up the CE marking process** for digital medical devices by increasing the number of notified bodies and their processing capacity, and also by supporting companies in the process.

**DNS** - HAS - DGE - DGRI - BpiFrance

- 5-5. DEVELOPMENT We will develop an open national database of clinical trials in France to promote the conduct of clinical trials in France and improve the inclusion of participants in these trials. It will be accessible via APIs to the public and private ecosystems.
- → Reduce the time taken to issue medical CE marking by 6 months by 2026

**DGE** - DNS - AIS

→ Launch an API for viewing the database of clinical trials in France in the first quarter of 2024

DNS - DGS - DNUM

- **5-6.** CONTINUATION Lastly, early access to reimbursement for digital devices (PECAN), a new method to accelerate reimbursement for digital medical devices, will be developed through ensuring that prescribers are aware of the digital medical devices eligible for this advance reimbursement.
- → Hit the target of 50 digital medical devices having applied for early access to reimbursement by the end of 2026 DNS DSS HAS ANS CNAM













# Saving time for healthcare professionals and improving patient care thanks to digital technology



If we want digital technology to improve healthcare and support for the population, it must first and foremost **make life easier for professionals and improve their working conditions.** 

Professionals find themselves switching from one tool to another several times a day. We need to simplify switching from one to the other by facilitating access to relevant health data and improving the clarity of the new range of services.

We have a huge amount of work ahead of us to ensure that **healthcare professionals can access their patients' health history,** wherever they practise.

Lastly, as with any major transformation, the development of digital health must be supported by an **ambitious plan for the initial and ongoing training of professionals**, to suitably address the challenges.



## 6. Enabling professionals to access the health history of the patients they treat



6-1. DEVELOPMENT A crucial factor in the quality of care is efficient access for professionals to their patients' medical records. This is the challenge for Wave 2 of the Ségur numérique programme: there must be continued efforts until professionals and establishments have fluid, user-friendly access, wherever they practise, while ensuring the confidentiality of the data they are viewing. In addition to access via the electronic health record (DMP) web portal, professionals will be able to simply access partially structured data from Mon espace santé (report, prescriptions, follow-up letters, lab results, medical profiles, personalised support plans, etc.) integrated directly into their business software, both in community care and in hospitals. This access is essential, particularly in the event of an emergency.

→ Ensure more than 50% of practising doctors consult the content of their patients' Mon espace santé profile during the year by the end of 2026 DNS - CNAM - ANS



**6-2. DEVELOPMENT** The DRIM-M project (Data, Radiology, Medical Imaging & Nuclear Medicine) will simplify access to imaging resources, which is currently particularly complex. Through innovative digital solutions, it will let healthcare

professionals view an examination performed anywhere in the country and find out about the patient's previous examinations. Patients will also be able to access their own scans online, which will mean the phasing out of CD-ROMs given out when leaving the imaging centre, and will reduce the number of unnecessary examinations.



→ Enable access for professionals to their patients' scans via a link in the imaging report by 2025 DNS - ANS

6-3. DEVELOPMENT To create a practical European vision of digital health, we need to be able to offer the same type of service to professionals for all European citizens (tourists, residents, etc.) they provide care to. At the same time as deploying the MyHealth@EU – SESALI platform solutions, particularly in cross-border regions, France must develop tailored access for foreign professionals. This will improve the quality of care that French citizens receive when they travel or migrate in Europe, with consent required each time they access the platform.



→ Enable access for European healthcare professionals to French patients' health documents by the end of 2026

ANS - CNAM



#### 7. Improving the integration and ergonomics of core services in the tools that healthcare professionals use on a daily basis



7-1. DEVELOPMENT To make the lives of professionals easier, we need to improve their experience as users of their business software (electronic health record, laboratory management system, etc.) and integrated core services (card ordering, digital prescriptions, secure messaging system, etc.). To keep this promise, we need to examine and measure the sources of dissatisfaction among carers with the tools they use in practice and work with industry software publishers to find ways of resolving them. We will improve the systems for reporting flaws in tools and will develop mechanisms for monitoring the expected resolutions, as part of local support programmes run by Assurance Maladie, GRADeS

and medico-social IS groups, in order to promote the adoption and transformation of associated practices for health, social and medico-social professionals and

establishments.

7-2. CONTINUATION In hospitals, following on the Hospital Standard-

isation Programme (HOP'EN) and and the Ségur Digital Usage in Health Care Institutions (SUN-ES), a new programme to fund the development of solutions will be implemented. Priority will be given to sharing and exchanging information externally, internal interoperability, convergence of territorial hospital group information systems, tools to make the lives of carers easier, and catching up with the most lagging establishments because they were not always able to take part in previous programmes. Furthermore, in the medico-social sector, we will continue to support investment in digital technology following the ESMS Digital programme. The preparatory work will begin in 2024 by addressing 3 major challenges: helping the most poorly equipped to modernise hardware, continuous improvement of software, particularly for complex programme coordination functions, and support for usage of core services.

7-3. CONTINUATION We must also continue the simplification and digitisation of administrative procedures in hospitals driven by the SIMPHONIE programme in order to meet the needs of patients, their carers and hospital teams. This hinges on optimising the admissions, billing, debt collection and cash management processes, as well as going paperless for all information exchanges with external parties involved in these processes. This will include the introduction of new online services (appointment booking, pre-admission, payment, patient portals) for patients and hospital teams, and their connection to patient administrative management tools, alongside integrated services in this field (carte Vitale application, INSi, CDRi, ROC, Diapason).

→ From 2023, trial an assessment method for the satisfaction of healthcare professionals, particularly private professionals, in relation to their business software

**DNS** - ANS - CNAM

→ Launch a new programme to support intra-hospital digital solutions in 2024

**DGOS - CNSA - DNS** 

Discussions with a patient in her room at the Saint-Hélier centre in Rennes



→ Hit 1,200 healthcare establishments using CDRi and 650 healthcare establishments using the additional reimbursement for organisations scheme by the end of 2024

**DGOS** - ANS - CNAM GIE SESAM-Vitale



## 8. Rolling out the services package for professionals, the e-prescription and secure identification means for healthcare professionals



8-1. CONTINUATION The digital services package for healthcare professionals will enable them to save time as well as easily access various existing services (amelipro, Web PS DMP, ordering a CPS card, amending data on health services in the ROR, etc.) that are not directly integrated into professionals' software or that require very fast development cycles. Professionals will also be able to find a range of trusted solutions in the services package, listed by public authorities (business software, regional solutions, telemonitoring solutions, reimbursements for digital devices, etc.).

**8-2. DEVELOPMENT** Furthermore, **new interfaces will be available for listed professional software to access the data in <b>Mon espace santé**, whether in document format or other structured resources.

8-3. CONTINUATION In addition, we need to offer all professionals, as well as their administrative teams and assistants, easy access to all their digital services, particularly Assurance Maladie teleservices. This will involve the widespread roll out of Pro Santé Connect, to provide a mobile connection without the need for re-authentication from professional software, while also giving contextual information about the patient to save time and open the right file at the right time.



**8-4.** CONTINUATION Starting with prescribers and pharmacies, the introduction of digital prescriptions will significantly improve the security and speed of prescription processing.

**8-5.** DEVELOPMENT Lastly, it is imperative to standardise user-friendly two-factor authentication for all healthcare professionals in order to improve the security of personal data, particularly in health, social and medico-social establishments and services. This will be facilitated by orchestrating the gradual transition to modern digital identification methods (mobile application, FIDO key, etc.), specific to each healthcare professional and linked to their RPPS identity.

→ Launch the portal for the digital services package for professionals (BSP) in the second quarter of 2024

**CNAM** - DNS - ANS -GIE SESAM-Vitale - DGOS - HAS



→ Introduce new access interfaces to Mon espace santé for professional tools from 2025

CNAM - DNS - ANS - GIE SESAM-Vitale

- → From mid-2024, enable access via Pro Santé Connect to the electronic health record, the national health identity and the digital prescription, and after 2024 to electronic medical forms. Make Pro Santé Connect elDAS-compliant with 1 million users per day by 2027 CNAM - ANS
- → By the end of 2024, ensure 75% of the market for practice management software has successfully passed the pre-series and 40,000 doctors have issued their first prescription

CNAM - DNS - DSS

→ Implement two-factor authentication to applications with sensitive data for professionals in health and medico-social establishments by 2027

ANS - DNS



#### 9. Simplifying the tools for local coordination of healthcare trajectories



9-1. CONTINUATION In view of the proliferation of tools, it is essential to simplify, develop and improve the clarity of public regional digital services offered and supported by ARS, GRADeS and departmental councils for professionals. This process involves identifying the solutions that need to be maintained and promoted, those that can be pooled and shared with other regions, and those that can be phased out due to the national solutions that are currently in place, because they are either not being used enough, or in favour of market solutions purchased directly by professionals and establishments.

→ By the first quarter of 2024, publish a map of regional digital services implemented by the ARS and GRADeS with maturity levels in terms of doctrine, synergies and the initial possibilities for planned decommissioning

ANS - ARS/GRADeS - DNS

→ By mid-2024, achieve the

technical integration of the

national health identity, Pro Santé

**Connect and population of Mon** 

espace santé into all e-parcours

solutions, with majority use in

relation to professions listed in

the RPPS+ directory from 2025

**DGOS** - ARS/GRADeS - DNS

- 9-2. CONTINUATION These include regional coordination solutions (e-parcours), which constitute a supporting element of the roll out of coordinated systems and priority healthcare programmes (diabetes, stroke monitoring, etc.). They must be maintained and improved based on better integration with Mon espace santé (nutrition and consultation) through Pro Santé Connect. A set of requirements applicable to programme coordination solutions will standardise the rules for the interoperability of these solutions with the other core services and software used by healthcare professionals in the region (DPI, DUI, etc.). These compliant regional coordination solutions will be listed in the digital services package for professionals.
- → Enable secure instant communications between healthcare professionals using different messaging system solutions on the market from 2026 ANS - DNS

9-3. DEVELOPMENT Lastly, to promote collaboration between professionals and save them time, a decentralised, secure and interoperable framework for instant healthcare messaging systems will be trialled to enable healthcare, medico-social and social professionals to exchange information quickly and securely, to other individuals or in groups, from their telephone or computer, whatever messaging system they choose. Alongside this, improvements will be made to secure healthcare messaging systems and their directories to make them easier to use for professionals.







## 10. Strengthening digital training and support for healthcare professionals, and medico-social care workers



**10-1.** CONTINUATION To develop the use of digital technology in healthcare, it is essential to support and **train all professionals.** Firstly, all medical, paramedical and social work students will have training time dedicated to the challenges of digital health (GDPR, security, patients' rights, e-health, etc.).



One year of the Digital Health Acceleration Strategy in Lyon – 21 November 2022

10-2. CONTINUATION And secondly, throughout their careers, life-long training will include sections dedicated to digital health for every professional working in the health, social and medico-social sectors, in conjunction with the relevant skills operators and bodies (French National Association for In-Service Training of Hospital Staff, French National CPD Agency, Health Skills Operator).







Winners of the Skills and Professions of the Future call for expressions of interest (AMI CMA) Sylvie Retailleau, Minister for Higher Education and Research



→ By 2027, include digital health training in all initial training courses in the health, social and medico-social sectors and train 500,000 students

**DNS** - DGESIP - DGOS

First skills reference framework for post-baccalaureate health professionals

5 key areas



→ By 2027, include digital training in the training catalogue of all skills operators and CPD organisations for healthcare professionals, and provide training to at least 10% of working professionals DNS













# Improving access to healthcare for citizens and referring healthcare professionals



Digital health must provide practical solutions to healthcare access issues across France.

This primarily means improving access to information on health and health services, for each care speciality throughout France, and byhelping people to find a GP.

The development of telehealth in areas with a low medical density and with priority healthcare programmes will also play a crucial role in improving access to healthcare.

We will also continue to make efforts to extend and develop the use of the access to treatment service (SAS) and tools for emergency medical assistance service (SAMU) in order to help people access urgent or unscheduled care, and to ensure that admissions to emergency departments occur in the best possible conditions.

Lastly, the introduction of the carte Vitale app will ensure you get direct reimbursements for care, even if the physical carte Vitale is lost or forgotten, and will further support the widespread roll out of the national health identity (INS).



#### 11. Strengthening information for patients and professionals about health and healthcare provision across the territory



11-1. CONTINUATION Right after their practitioner, the French population are increasingly turning to the Internet for information when they have a health-re-

lated question. To tackle misinformation in the health sector, the Santé.fr website will demystify health topics and, like ameli.fr, will help share reliable public health information. This information will be produced in conjunction with the public (patient groups, academic societies, etc.). It must be tailored to the rapid evolution of online practices, and be accessible, customisable and reusable (APIs, iframes, etc.) by other online services in the field of health.



→ Pass the milestone of 30 million unique visitors per year on Santé. fr by 2027 **DNS** - ANS

11-2. CONTINUATION In addition, information on accessing healthcare should be supplemented on Santé.fr, with topic maps, improved data quality, ensuring data is up to date, displaying quality and satisfaction indicators (mainly from QualiScope, e-Satis, Eval-Santé), links to online appointment booking platforms used by practitioners and information on the accessibility of practices, etc. This information on accessing healthcare is based on improved reference identity directories:

- > The French healthcare professionals shared directory (RPPS), which is being extended to all professionals working in the health, medico-social and social sectors who need it, following the end of the ADELI directory;
- > The French National Directory of Health and Social Establishments (FINESS) will be overhauled in 2024, enabling the integration of new structures;
- > The Operational Resources Directory (ROR), which is currently in use across France, is improving its content and the data it processes with professionals now able to directly enter certain personal details in the directory.

→ From 2024, provide more information about healthcare services on Santé.fr, particularly on where to make an appointment with healthcare professionals **DNS** - ANS



11-3. DEVELOPMENT To facilitate access to a GP to the more than 6 million patients who do not have one, in addition to the actions taken by the Assurance Maladie in practice, GPs who are accepting new patients will be offered the opportunity to be listed on Santé.fr. In addition, the services listed in the Mon espace santé and digital services package for healthcare professionals catalogues will be able to easily find the identity of a person's GP, for example to routinely send them a report via secure messaging system.

→ From 2024, include in the operational health resources directory (ROR) information on professionals accepting new patients as their GP and make this visible on Santé.fr. Beyond 2024, make primary care physician identities accessible to applications in the services catalogue in Mon espace santé according to the use cases identified.

**DGOS** - CNAM - DNS



## 12. Developing the use of telehealth within a regulated and ethical framework



**12-1.** Telehealth will facilitate access to healthcare, particularly in areas with low medical density, through the cooperation of all professionals, in particular pharmacists, nurses and digital mediation professionals.

- → Achieve a 35% adoption rate for teleconsultations by private doctors by the end of 2025 DGOS - CNAM - DNS
- **12-2. DEVELOPMENT** The role of telehealth will be supported and evaluated in priority healthcare programmes, for example by:
- > Developing the gradual use of tele-expertise (for example, in community care with the referring specialist, in local hospitals with the support establishment of the regional hospital group or the university hospital, etc.) in structured programmes, particularly for rare diseases and cancer;
- > Extending telemonitoring to chronic conditions other than those covered by the ETAPES programme (Telemedicine Trials for the Improvement of Healthcare Programmes);
- > Developing the use of telehealth for patients with chronic diseases;
- > Promoting telecare, particularly for rehabilitation.
- 12-3. DEVELOPMENT Lastly, telehealth will have to be developed so it can function with more interoperable tools (with Mon espace santé, with professional business software, etc.) and comply with safety and ethical requirements, by continuing to reflect on the development of remote medical and care practices. In particular, an initial framework for teleconsultation tools will be enforceable from 2023. It will include important elements on teleconsultation ethics and will be accompanied by a best practice framework created by the HAS.

- → Ensure more than 1 million patients suffering from a chronic condition benefit from at least one telehealth procedure as part of their care by 2025
- **DGOS** DNS HAS

→ Publish a set of requirements for teleconsultation solutions by the end of 2023 and list more than 15 telemonitoring services with a view to their reimbursement ANS - HAS - CNAM - DNS





## 13. Promoting and interlinking digital platforms for medical regulation and emergency care



13-1. CONTINUATION At the same time, stakeholders in the medical regulation chain of healthcare access services (SAS) will be able to get real-time access via the SAS digital platform to available slots in the diaries of the majority of the region's professionals, and immediately book an appointment for a patient in need.

→ Roll out the SAS platform to at least 90% of departments by the end of 2023

DGOS - ANS - DNS



13-2. CONTINUATION In addition, public authorities will continue to support the modernisation of the digital tools needed by the SAMU (dashboard, portal, etc.) through an interface with their medical regulation software, which will improve interoperability and the resilience of their telephone infrastructures.

→ Funding of medical regulation software (15-15, 15-18) interoperability by the end of 2024 and roll out of the national dashboard (call display and prioritisation tool) in 75% of SAMUs before the end of 2027

**DGOS** - ANS - DNS

**13-3. DEVELOPMENT** Lastly, in response to strong demand in this area, a working group will be launched through the CNS to examine the digital challenges facing healthcare transport services.

→ Launch a working group in 2026 on the digital challenges facing healthcare transport services through the CNS to troubleshoot and define specific guidelines and measures



Roll out of the SI-SAMU national dashboard in Troyes in early 2023





## 14. Extensively promoting the Carte Vitale application and the national health identity (INS)

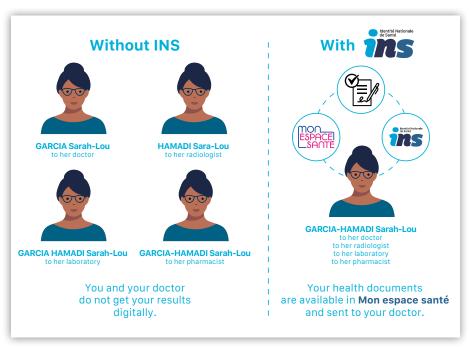


14-1. CONTINUATION As part of our efforts to improve access to healthcare, widespread diffusion of the carte Vitale app will enable physical reimbursement of healthcare costs even if the carte Vitale is lost, forgotten or inaccessible (telehealth, etc.). The carte Vitale app can already be used in several online services and will also be very useful for streamlining the billing of healthcare costs in telehealth practices. Lastly, it will offer people a secure and compliant connec-

tion, possibly via France Connect+, (high-level assurance eIDAS certification of the carte Vitale application expected by 2025) for accessing their health data.



14-2. CONTINUATION We will also continue our efforts to secure the widespread use of patient identity verification based on improvements to the INSi teleservice to improve patient identification vigilance. In addition, the carte Vitale app will also be used to improve patient identification vigilance around the national health identity (INS).



Poster promoting national health identity for private practitioners

→ High-level assurance eIDAS certification of the carte Vitale app and introduction of the app to the whole of France by the end of 2025, with the aim of having 20 million users by 2027 GIE SESAM-Vitale - CNAM



DSS - DNS

→ Hit 90% verified in 2024 for national health identitys in the active patient records of establishments, in particular through better synchronisation of the SNGI and RFI databases

**DNS** - DGOS - CNAM -GIE SESAM-Vitale - ANS - DGS





# Developing a framework that supports the use of digital health solutions and innovations



Given the international geopolitical context and the intrinsic value of healthcare data, we must significantly boost cyber vigilance with resources commensurate with what is at stake. In particular, this applies to health and medico-social establishments, which are still lagging far behind, by prioritising key organisations without forgetting small establishments, and by securing ongoing digital resources amounting to at least 2% of the budget of the stakeholders involved.

The Platform State model allows **private stakeholders to roll out use- ful and innovative digital services and that the State is regulating,** with co-developed frameworks, support for businesses, compliance checks, while also ensuring effective compliance with incentive schemes and possible penalties.

Without digital skills and talents to work in healthcare, our ambitions will be vain. We need to identify the gaps, improve conditions and promote these exciting, meaningful and technically challenging professions that sit at the crossroads of healthcare and digital technology.

As we progress through this journey, **health data must remain our common guideline.** It plays a key role throughout the chain, with its initial collection, its quality, its structuring, its secure sharing and its re-use for research, innovation and the improvement of public policies. That is why it is essential to develop an ambitious strategy for reusing data and providing open access to it.



#### 15. Considerably improving cybersecurity in establishments, our sovereignty on hosting and our resilience to future health crises



15-1. DEVELOPMENT Faced with this situation, we need to quickly take major collective action in order to achieve a sufficient level of preparedness and resilience. This is the ambition of the Cyber Acceleration and Resilience of Establishments (CARE) programme, which will be implemented over 5 years, with substantial

and unprecedented investment in this area, aimed at achieving major milestones, such as the cyber surveillance and Active Directory audit scores.



→ Launch the cyber acceleration and resilience of establishments (CARE) programme in mid-2023 DNS - HFDS - DGOS - ARS/GRADeS

ANSSI - ANS



- 15-2. DEVELOPMENT It aims to support the implementation of national governance of cybersecurity in healthcare at national (ANSSI, ANS, DGOS, companies), regional (ARS, GRADeS and regional authorities) and local level (professionals and establishments), with clear, unified oversight, while also improving governance in establishments on this subject. This is one of the points that will be included in the HAS certification of healthcare establishments.
- **15-3.** CONTINUATION Training and raising awareness of cybersecurity and IT hygiene

among all stakeholders in healthcare, medical-social care and social services will be the focus of our policies, whatever their role and the way in which they work. There is also a need to improve crisis preparations by conducting regular exercises, to ensure that we are able to react quickly, with the correct response, and to organise continuity of care and the gradual return to normal activity levels.



- → Improve digital and cyber criteria in HAS certification of healthcare establishments by Q1 2024, with dedicated visitors
- HAS DNS DGOS ANS
- → Ensure all establishments conduct an annual or biannual cyber crisis exercise by 2027 at the latest

**DNS** - ARS/GRADeS - DGOS ANS - DGCS - CNSA

Digital hygiene awareness-raising campaign





Network technician at a hospital site

**15-4.** DEVELOPMENT Ensuring the sustainability of human resources involved in digital technology and cybersecurity will be a core challenge. This includes work on scaling of resources, the appeal and retention of skills, but also support for pooling initiatives to create economies of scale and achieve the resources required (regional hospital groups, pooled services, etc.).

15-5. CONTINUATION In addition, the regulatory framework for hosting will need to be improved in order to strengthen our data sovereignty. Initially, the new "health data hosting" (HDS) certification will change in 2023 to include systematic hosting of health data in the European Economic Area, with legal or technical measures to reduce the risk of data being transferred to another territorial jurisdiction. By 2027, once we have reached a European consensus on the requirements of level 3 of the future European Cybersecurity Certification Scheme for Cloud Services (EUCS), and a sufficiently broad data sovereignty offering is available, HDS certification will set new requirements in terms of sovereignty. We encourage stakeholders to plan ahead, starting as early as possible with their new projects.

15-6. CONTINUATION In response to the COVID-19 crisis, information systems were built for specific needs and sometimes in a rush. However, these systems played a key role in fighting the pandemic (measuring incidence, monitoring vaccination coverage, providing information and booking appointments, etc.). To prepare for future crises, it is essential to be proactive and build the necessary ser-

vices in all areas (monitoring tests and vaccines, alerting and informing patients and professionals, logistics, data re-use and open data, etc.), based wherever possible on the information systems used on a daily basis by professionals and patients.

- → By 2027 at the latest, ensure healthcare establishments devote an average of at least 2% of their budget to digital services, including 10% for cybersecurity and infrastructure, with the introduction of a permanent digital rate in the expense structure DGOS - DNS
- → Make initial improvements to health data hosting sovereignty in 2023 (location and transparency), before making further improvements planned for 2027 DNS - ANS

→ Create a master plan for health crisis information systems in 2024

DNS - CNAM - DGS - SPF



Screenshot of the TousAntiCovid application in May 2023, showing COVID-19 epidemic indicators from the SI-DEP screening system



#### 16. Generalising the co-construction of specifications framework, sector by sector, by ensuring the compliance of the solutions used by healthcare stakeholders



**16-1.** DEVELOPMENT Building on the experience of recent years and the success of the Ségur Numérique programme, the public authorities plan, under the guidance of sector managers, to co-develop packaged requirements frameworks with health professionals and digital health companies (ENS), sector by sector (LGC, DPI, RI, TLC, TLS, TLE, DUI, LGO, SGL, RIS, etc.), to make the policies easier to understand.

→ Publication of implementing provisions on the regulation of digital health by the end of 2023

**DNS** - ANS - CNAM



**16-2.** DEVELOPMENT The various public stakeholders involved (ANS, GIE SESAM-Vitale, CNDA and ATIH) will work together as a unit to support ENSs to ensure compliance with these frameworks, by creating a single directory of ENSs and their solutions, and by offering them a standardised support package (project days, projectathons, shared monitoring tools, shared publication platforms, test areas, etc.) mainly based on the French National Portal for eHealth Innovation(G\_NIUS).

→ Have a single directory of digital health companies and their solutions to simplify their dealings with public authorities and provide them with better support by the end of 2024

ANS - GIE SESAM-Vitale



→ Implementation in 2025 of a penalties system applicable to digital health companies that have been outside the scope of enforceable frameworks for a long

ANS - CNAM - DNS



**16-3.** DEVELOPMENT Public authorities will encourage effective compliance with these sectoral frameworks by introducing specific procedures for verifying compliance by the ANS alongside its partners and certifying bodies. Funding will also remain conditional on such compliance and conducting audits prior to any possible penalties according to multi-year schedules defined with the stakeholders.

> Listing specifications file by type of software on the ANS website





Videoconference 7 of the Ségur Numérique programme monitoring committee on 5 April 2023 with 450 participants

16-4. CONTINUATION In particular, building on the initial work of the Ségur Numérique programme, the plan is to continue and extend to new sectors the dedicated funding initiatives that aim to accelerate the adoption of core services and sector frameworks by healthcare professionals and digital health companies. This mainly corresponds to wave 2 of the Ségur Numérique programme, to be implemented in 2024-2025, with priorities including integrated consultation in Mon espace santé, enhanced software security, access to scans, and opening up to new professions (dental surgeons, midwives, nurses, chiropodists, physiotherapists, orthoptists and speech and language therapists, etc.).

16-5. DEVELOPMENT Lastly, to support compliance with frameworks by stakeholders and increase transparency, a cross-disciplinary e-health monitoring body will be set up, indicating the maturity level of health, social and medico-social establishments and private professionals. It will be supported by a single publishing platform for digital health companies, sector by sector, with their various solutions, indicating the certifications and compliance procedures obtained, as well as an open data platform on usage metrics for the core digital health services. In addition, to facilitate comparisons between European countries on digital health, France will encourage the creation of a platform to access this data.

→ Launch of wave 2 of the Ségur Numérique programme (new professions, DMP consultation, DRIM-M, etc.) at the end of 2023

DNS - ANS





→ Launch at the end of 2023 of the digital maturity framework (MaturiN) for medico-social establishments and hospitals and reporting in the e-health monitoring body, with the aim of bringing 100% of establishments on board in 2026

**ANS** - DGOS - DNS - CNAM - GIE SESAM-Vitale - ATIH





# 17. Attracting talents to the digital sector



**17-1.** DEVELOPMENT To lay the foundation, we will map out digital health professions, by evaluating priority requirements in partnership with stakeholders (federations of establishments and companies, training bodies, etc.).

17-2. DEVELOPMENT There is also a need for continued support for establishments to recruit and retain this talent, with appropriate, shared pay scales and frameworks, for example, for hospital engineers and senior technicians, as part of the collective agreements applicable to contract staff, as well as for the remuneration of trainees and apprentices.

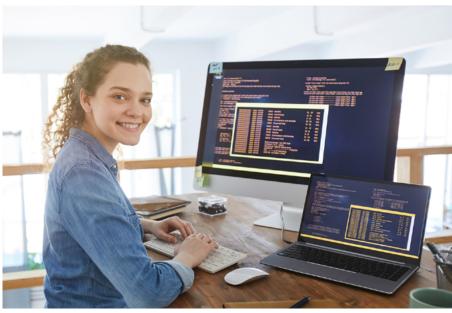
**17-3. DEVELOPMENT** In addition, we must work on initiatives in close collaboration with healthcare professionals, digital health companies and their representatives to **make the sector more attractive to digital professionals and schools,** by presenting the right job opportunities to them.

- → By the end of 2024, publish an evaluation report on digital professions in the healthcare sector, at least within the initial scope of health establishments DNS - DGOS
- → Align the hospital engineers' pay scale with the State civil service equivalent before the end of 2023 to make digital jobs more attractive

**DGOS** - DNS

→ Launch initiatives
with employers to promote
digital health jobs in 2026
DNS





IT developer



# 18. Developing digital health research and the secondary use of health data



**18-1.** DEVELOPMENT A strategic roadmap for health data overseen by the DREES and created in consultation with stakeholders (healthcare professionals, healthcare organisations, users, researchers, national research bodies, public authorities, etc.), will be implemented and will help facilitate access to data for research and innovation.

**18-2.** CONTINUATION In particular, this strategy has strong ambitions in terms of developing and structuring our capacity to collect, ensure the quality of and share health data, in a coordinated way between the Health Data Hub and a **network of health data warehouses,** based on relevant data sources and sustainable business models.

**18-3.** DEVELOPMENT This must also be firmly rooted at European level, by successfully implementing the project to interconnect national platforms for secondary re-use of data, for uses that require access to a wider range of data.

**18-4.** CONTINUATION Lastly, to prepare for the future, we will conduct ambitious research and development initiatives to **develop new breakthrough digital health technologies over the next 10 years**, particularly in the field of imaging, by working closely with the relevant ministries and national research bodies.



3 April 2023 Ceremony for the winners of the first call for health data warehouse projects

→ Publish a national strategy on the re-use of and open access to health data by Q1 2024

**DREES** - DNS - DGRI - DGE PDS - CNAM

→ Fund 50 federated hospital data warehouses at regional level and/ or connected at national level by 2027

**DGOS** - DREES - DNS - DGRI DGE - PDS - ATIH

→ Successfully pilot a network of European data warehouses in 2025 based on five use cases PDS

→ Fund more than 300 digital health research and development projects by 2026

**DNS** - DGRI - DGE - AIS - DGOS DGS - DREES - DMSMP



## **Summary table**



Developing prevention and giving everyone an active role in their own healthcare



Priorities	Objectives	Bodies	Objective, indicator and/or timeline
1 - Using Mon espace	1-1. Populate Mon espace santé	DNS	Hit a population rate of 250 million healthcare documents per year in
santé in everyday		CNAM	Mon espace santé by professionals by the end of 2023
life to manage your		ANS	and 400 million by the end of 2026
health	1-2. Send prescriptions through a	CNAM	Launch the first versions of the Mon espace santé messaging system
	messaging system for citizens	DNS	for sending prescriptions to pharmacists from May 2023 and design a
			messaging API for citizens in 2024
	1-3. Child health record	CNAM	Introduce reminders of compulsory check-ups and advice on children's
		DNS	health in Mon espace santé by the end of 2023 and health reports and
			certificates by 2025
	1-4. Connect healthcare portals for	CNAM	Develop the first pathways linking Mon espace santé, Santé.fr and the
	individuals	DNS - DSS	ameli account (key ages, women's health, etc.) from 2024
2 - Developing	2-1. Personalised prevention in Mon		Send out the first personalised prevention notifications in Mon espace
personalised	espace santé	DNS	santé in 2024
prevention	2-2. Check-ups at key ages	DNS	Enable 1 million patients to draft a preventive assessment in Mon espace
prevention	2-2. Oneck-ops at key ages		
	2-3. Prevention software features	CNAM	santé by 2027
		DNS	Promote the development of prevention
	for healthcare professionals	ANS	and population management features in healthcare professionals' software by 2027
	2-4. Environmental health	DNS	From 2024, launch a working group within the framework of the Digital
			Health Council to troubleshoot and define specific guidelines and
			measures
3 - Giving everyone	3-1. Catalogue of applications with	GIE SESAM-Vitale	List as approved more than 50 applications offering data exchanges with
an active role in	data exchanges	ANS - CNAM - DNS	Mon espace santé by the end of 2026
their healthcare	3-2. Temporary access to Mon	CNAM	From 2024, define the different ways citizens can share access dependin
and control of their	espace santé	DNS	on the care situation
health data	3-3. Data access control	CNAM	From 2024, publish a framework document for enhanced management
		DNS - ANS	of access preferences to Mon espace santé (define preferences on
			secondary use, authorise one professional to grant rights to another, etc
4 - Helping all	4-1. Support for digital health and	DNS	Ensure 80% of health and medico-social establishments
citizens to make use	digital inclusion	ANCT - ARS/GRADeS	implement awareness-raising measures by the end of 2027
of digital health,	4-2. Training of digital mediators	DNS	Train 10,000 digital health mediators by June 2026
especially those in		ANCT - GIP PIX	
the most vulnerable	4-3. Granting rights to a carer	DNS	Make the required legislative changes to enable granting access to
situations		CNAM	a carer by the end of 2023 and integrate the feature into Mon espace
			santé during 2024
5 - Ensuring everyone	5-1. Co-design	DNS	Co-finance 30 third places and 100 trials by 2026 by identifying ways to
benefits from digital	-	BDT	ensure funding continuity for innovation in healthcare organisations
health innovations	5-2. Major challenges	DNS	Launch from the first quarter of 2024 two major challenge responses
		DMSMP - AIS - DGE -	(to mental health and preventing loss of independence) and publish the
		DGRI - CNSA	associated roadmaps
	5-3. Clinical and economic	DNS	From 2024, publish an evaluation matrix for digital medical devices that
	evaluation	HAS - DGE - DGRI -	aligns with our European counterparts
		BpiFrance	and co-fund more than 75 clinical evaluations of digital medical devices
			by 2026
	5-4. CE marking	DGE	Reduce the time taken to issue
	0	DNS - AIS	medical CE marking by 6 months by 2026
	5-5. Clinical trials	DNS	Launch an API for viewing the database of clinical trials in France in the
		DGS - DNUM	first quarter of 2024
	5-6. Early access to	DNS	Hit the target of 50 digital medical devices having applied
	Early 400033 to	P143	The the target of oo digital medical devices having applied
	reimbursement	DSS - HAS - ANS -	for early access to reimbursement by the end of 2026



#### Saving time for healthcare professionals and improving patient care thanks to digital technology

Priorities	Objectives	Bodies	Objective, indicator and/or timeline
6 - Enabling	6-1. Professionals consulting Mon	DNS	Ensure more than 50% of practising doctors consult the content of their
professionals to	espace santé	CNAM	patients' Mon espace santé profile during the year by the end of 2026
access the health		ANS	
history of the	6-2. Access to imaging resources	DNS	Enable access for professionals to their patients' scans via a link in the
patients they treat		ANS	imaging report by 2025
-	6-3. MyHealth@EU	ANS	Enable access for European healthcare professionals to French patients'
		CNAM	health documents by the end of 2026
7 - Improving the	7-1. Resolve digital flaws	DNS	From 2023, trial an assessment method for the satisfaction of healthcare
integration and	experienced by professionals	ANS - CNAM	professionals, particularly private professionals, in relation to their
ergonomics of core			business software
services in the tools	7-2. HOP'SUN	DGOS	Launch a new programme to support intra-hospital digital solutions in
that healthcare		DNS	2024
professionals use	7-3. Simplify and digitise	DGOS - ANS - CNAM	Hit 1,200 healthcare establishments using CDRi and
on a daily basis	administrative processes in	- GIE	650 healthcare establishments using the reimbursement scheme for
•	hospitals	SESAM-Vitale	supplementary healthcare insurers by the end of 2024
8 - Rolling out the	8-1. Launch portal for	CNAM	Launch the portal for the digital services package for professionals (BSP)
services package	digital services package for	DNS - ANS	in the second guarter of 2024
for professionals,	professionals	GIE SESAM-Vitale	'
the e-prescription		DGOS - HAS	
and secure	8-2. Introduce new interfaces	CNAM	Introduce new access interfaces to Mon espace santé for professional
dentification	for accessing Mon espace santé	DNS - ANS	tools from 2025
means for	for professional tools	GIE SESAM-Vitale	
healthcare	8-3. Integrate Pro Santé	CNAM	From mid-2024, enable access via Pro Santé Connect to the electronic
professionals	Connect, an established core	ANS	health record, the national health identity, the digital prescription and
proressionals	service, into Assurance Maladie	71110	then to electronic medical forms. Make Pro Santé Connect elDAS-
	services		compliant with 1 million users per day by 2027
	8-4. Digital prescription	CNAM	By the end of 2024, ensure 75% of the market for practice management
	O-1. Digital prescription	DNS - DSS	software has successfully passed the pre-series and 40,000 doctors have
		2110 200	issued their first prescription
	8-5. Roll out of 2-factor	ANS	Implement two-factor authentication to applications with sensitive data
	authentication in establishments	DNS	
9 - Simplifying	9-1. Optimise the regional digital	ANS	for professionals in health and medico-social establishments by 2027  By the first quarter of 2024, publish a map of regional digital services
the tools for local	services offering	ARS/GRADeS	implemented by the ARS and GRADeS with maturity levels in
coordination	services of ferring	DNS	
of healthcare		DNS	terms of doctrine, synergies and the initial possibilities for planned
	0.2 E porcours	DGOS	decommissioning
programmes	9-2. E-parcours		By mid-2024, achieve the technical integration of Pro Santé Connect
		ARS/GRADeS	and population of Mon espace santé into all e-parcours solutions, with
		DNS	majority use in relation to professions listed in the RPPS+ directory from 2025
	9-3. Instant secure health	ANS	Enable secure instant communications between healthcare professional
	messaging systems	DNS	using different messaging system solutions on the market from 2026
10 - Improving	10-1. Initial digital training for	DNS	By 2027, include digital health training in all initial training courses in the
digital training and	healthcare professionals	DGESIP - DGOS	health, social and medico-social sectors and train 500,000 students
support for	10-2. Ongoing digital training for	DNS	By 2027, include digital training in the training catalogue of all skills
healthcare	healthcare professionals	-	operators and CPD organisations for healthcare professionals, and
professionals, and	F. 2. 300.01.00		provide training to at least 10% of working professionals
medico-social care			processionals
Juico Joeiai Care			

## **Summary table**



#### **ACCESS TO HEALTHCARE**



Priorities	Objectives	Bodies	Objective, indicator and/or timeline				
11 - Strengthening	11-1. Reliable health	DNS	Pass the milestone of 30 million unique visitors				
information for patients and	information, coordinated by Santé.fr	ANS	per year on Santé.fr by 2027				
professionals	11-2. A clear healthcare	DNS	From 2024, provide more information about healthcare services on				
about health	offering	ANS	Santé.fr, particularly on where to make an appointment with				
and healthcare			healthcare professionals				
provision across	11-3. Facilitate access to GPs	DGOS	From 2024, include in the operational health resources directory				
the territory		CNAM	(ROR) information on professionals accepting new patients as their				
		DNS	GP and make this visible on Santé.fr. Beyond 2024, make primary				
			care physician identities accessible to applications in the services				
			catalogue in Mon espace santé according to the use cases identified				
	12-1. Telehealth in low medical	DGOS	Achieve a 35% adoption rate for teleconsultations by private				
12 - Developing the	density areas	CNAM - DNS	doctors by the end of 2025				
use of telehealth	12-2. Telehealth to support	DGOS	Ensure more than 1 million patients suffering from a chronic				
within a regulated	priority healthcare	DNS - HAS	condition benefit from at least one telehealth procedure as part of				
and ethical	programmes		their care by 2025				
framework	12-3. Reliable telehealth tools	ANS	Publish a set of requirements for teleconsultation solutions by the				
		HAS - CNAM	end of 2023 and list more than 15 telemonitoring services with a				
		DNS	view to their reimbursement				
	13-1. Healthcare access service	DGOS	Roll out the SAS platform to at least 90% of departments by the				
13 - Promoting and	(SAS)	ANS	end of 2023				
interlinking digital		DNS					
platforms for	13-2. SI-SAMU programme	DGOS	Funding of medical regulation software (15-15, 15-18) interoperability				
medical regulation		ANS	by the end of 2024 and roll out of the national dashboard (call				
and emergency care		DNS	display and prioritisation tool) in 75% of SAMUs before the end of 2027				
	13-3. Launch of a CNS working	DNS	Launch a working group in 2026 through the CNS to troubleshoot				
	group on medical transport		and define specific guidelines and measures				
	14-1. Carte Vitale app	GIE SESAM-Vitale	High-level assurance eIDAS certification of the carte Vitale app and				
14 - Extensively		CNAM	introduction of the app to the whole of France by the end of 2025,				
promoting the		DSS	with the aim of having 20 million users by 2027				
Carte Vitale		DNS					
application and	14-2. Identification vigilance	DNS	Hit 90% verified in 2024 for national health identitys in the active				
the national health	and national health identity	DGOS - CNAM	patient records of establishments, in particular through better				
identity (INS)		GIE SESAM-Vitale	synchronisation of the SNGI and RFI databases				
		ANS - DGS					



#### Developing a framework that supports the use of digital health solutions and innovations

#### SUPPORTIVE FRAMEWORK

Objectives	Bodies	Objective, indicator and/or timeline
15-1. CARE programme	DNS	Launch the cyber acceleration and resilience
	HFDS - DGOS	of establishments (CARE) programme in mid-2023
	ARS/GRADeS	
	ANSSI - ANS	
15-2. Improve cyber	HAS	Improve digital and cyber criteria in HAS certification of healthcare
governance	DNS - DGOS	establishments by Q1 2024, with dedicated visitors
	ANS	
	DNS	Ensure all establishments conduct an annual or biannual cyber
15-3. Raise awareness about	ARS/GRADeS - DGOS -	crisis exercise by 2027 at the latest
cyber and perform exercises	ANS - DGCS CNSA	•
15-4. Improve and ensure	DGOS	By 2027 at the latest, ensure healthcare establishments devote an
the sustainability of digital	DNS	average of at least 2% of their budget to digital services, including 10% fo
		cybersecurity and infrastructure, with the introduction of a permanent
•		digital rate in the fee structure
•	DNS	Make initial improvements to health data hosting sovereignty in 2023
•		(location and transparency), before making further improvements
nosting sovereignty	71145	planned for 2027
15-6 Prepare for future crises	DNS	Create a master plan for health crisis information systems in 2024
13-0. Trepare for fotore erises		create a master plantor reach crisis information systems in 2024
16-1 Co-develop frameworks		Publication of implementing provisions on the regulation of digital health
io ii oo develop mamenonis		by the end of 2023
16-2 Support digital health		Have a single directory of digital health companies and their solutions
		to simplify their dealings with public authorities and provide them with
companies	GIE SESAM-VILAIE	
16.2 Enguro compliance with	ANIC	better support by the end of 2024
· ·		Implementation in 2025 of a penalties system applicable to digital health
Trameworks		companies that have been outside the scope of enforceable frameworks
40.4.0		for a long time
		Launch of wave 2 of the Ségur Numérique programme (new professions,
	ANS	DMP consultation, DRIM-M, etc.) at the end of 2023
•		Launch at the end of 2023 of the digital maturity framework (MaturiN)
		for medico-social establishments and hospitals and reporting in
companies and stakeholders		the e-health monitoring body, with the aim of bringing 100% of
		establishments on board in 2026
	DGOS	By the end of 2024, publish an evaluation report on digital professions
requirements		in the healthcare sector, at least within the initial scope of health
		establishments
17-2. Digital health pay scale		Align the hospital engineers' pay scale with the State civil service
		equivalent before the end of 2023 to make digital jobs more attractive
		Launch initiatives with employers to promote digital health jobs in 2026
18-1. Strategy for secondary	DREES	Publish a national strategy on the re-use of and open access to health
use of data	DNS - DGRI	data by Q1 2024
	DGE - PDS - CNAM	
18-2. Data warehouses	DGOS	Fund 50 federated hospital data warehouses at regional level and/or
	DREES - DNS - DGRI	connected at national level by 2027
	DGE - PDS - ATIH	
18-3. MyHealth@EU data	PDS	Successfully pilot a network of European data warehouses in 2025 based
		on five use cases
18-4. Research and	DNS	Fund more than 300 digital health research and development projects
development in digital health	DGRI - DGE	by 2026
	AIS - DGOS DGS - DREES	
	15-1. CARE programme  15-2. Improve cyber governance  15-3. Raise awareness about cyber and perform exercises 15-4. Improve and ensure the sustainability of digital and cyber resources in establishments 15-5. Improve healthcare data hosting sovereignty  15-6. Prepare for future crises  16-1. Co-develop frameworks  16-2. Support digital health companies  16-3. Ensure compliance with frameworks  16-4. Continue the Ségur Numérique programme with wave 2  16-5. Monitoring body for maturity of digital health companies and stakeholders  17-1. Map out professions and requirements  17-2. Digital health pay scale  17-3. Digital talent: make a difference in French healthcare 18-1. Strategy for secondary use of data  18-2. Data warehouses	15-1. CARE programme    HFDS - DGOS

# Reflecting on the development of the roadmap

Following the Ma santé 2022 report, a draft roadmap for 2023-2027 was shared with the Digital Health Council on 14 December 2022, thus initiating an **online consultation** and regional tour.

During the three-month online consultation, more than 330 contributions and responses were submitted. The DNS also received more than a hundred individual contributions (from associations, companies, etc.) with specific meetings organised with numerous stakeholders (company representatives, patients, etc.).

In addition to this online work, over January and February 2023, discussions on the draft roadmap were held in eighteen towns in France with **more than 5,000 participants** in total meeting in person or remotely.

At each stop in the tour, the Delegation for Digital Health, the French National Health Insurance Fund, the Digital Health Agency and the Directorate General for Healthcare Provision were able to talk with the stakeholders working in the field (ARS, GRADeS, CPAM, patient representatives, local health professionals and establishments, as well as a number of digital health companies).

The fruitful discussions, meetings, feedback from the field and the specific problems faced by those in the ecosystem have helped to strengthen and improve the 2023–2027 roadmap "Supporting health through digital technology", with a focus on prevention, quality and access to healthcare.

In particular, the discussions on software usability, ethical regulation of e-health, improving digital inclusion and the importance of long-term investment in cybersecurity provided real food for thought.

Guadeloupe



Centre-Val de Loire



French Guiana



Provence-Alpes-Côte d'Azur



## Thank you

to the ARS, the GRADeS
and Assurance maladie and its network
of Primary Health Insurance Funds for
organising the discussions, thank you
to all participants for their questions
and comments, thank you to the
committed citizens and stakeholders
in the ecosystem, to the unions and
associations for their contributions online
or in person!

It is thanks to these important contributions and to this involvement, that together we will be able to make progress on the huge projects discussed in this roadmap and support health through digital technology.



Hauts-de-France



Corsica





Occitania



Bourgogne-Franche-Comté



Normandy



Réunion



Brittany

## Glossary



ADELL	Automotionian Dealistee (Automotion of Lists Discotors)	DNC	Assurance Maladia Digital Health Delegates
ADELI	Automatisation Des Listes (Automation of Lists Directory)	DNS	Assurance Maladie Digital Health Delegates
AIS	Agence de l'innovation en santé (French National Agency in Health Innovation)	CDD	(former IT services correspondents)  Continuing Professional Development
ANAP	Agence Nationale d'Appui à la Performance (French National	CPD DPI	Dossier Patient Informatisé (Electronic Health Record)
ANAF	Performance Support Agency)	DREES	Direction de la Recherche, des Études, de l'Évaluation et des
ANFH	Association Nationale pour la Formation permanente du	DKLLS	Statistiques (Directorate for Research, Studies, Evaluation and
ANTH	personnel Hospitalier (French National Association for the		Statistics)
	Continuing Education of Hospital Staff)	DUI	Dossier usager informatisé (Digital user file)
ANS	Agence du Numérique en Santé (Digital Health Agency)	EHDS	European Health Data Space
ANSSI	Agence nationale de la sécurité des systèmes d'information	eIDAS	Electronic Identification and Trust Services Regulation
7	(French Network and Information Security Agency)	ENS	Digital health companies
ARS	Agence régionale de santé (Regional Health Agency)	ETAPES	Expérimentations de télémédecine pour l'amélioration des
ATIH	Agence technique de l'information sur l'hospitalisation (Technical		parcours en santé (Telemedicine Trials for the Improvement of
	Agency for Information on Hospitalisation)		Healthcare Programmes)
BDT	Banque des Territoires	FINESS	Fichier national des établissements sanitaires et sociaux (French
CERT	Computer Emergency Response Team		National Directory of Health and Social Establishments)
CHU	Centre hospitalier universitaire (University hospital)	GHT	Groupement Hospitalier de territoire (Territorial Hospital Group)
CNDA	Centre National de Dépôt et d'Agrément (French National	<b>GRADeS</b>	Groupement Régional d'Appui au Développement de la e-Santé
	Centre for Filing and Accreditation)		(Regional Support Groups for the Development of eHealth)
CNIL	Commission Nationale de l'Informatique et des Libertés (French	HAS	Haute Autorité de Santé (French National Authority for Health)
	National Commission Data Protection Authority)	HDS	Hébergement de données de santé (Health data hosting)
CNS	Conseil du Numérique en Santé (Digital Health Council)	HFDS	Haut fonctionnaire de défense et de sécurité (Senior Defence
CNAM	Caisse Nationale de l'Assurance Maladie (French National Health		and Security Officer)
	Insurance Fund)	HOP'EN	Hôpital numérique ouvert sur son environnement (Hospital
CNSA	Caisse Nationale de solidarité pour l'autonomie (French National		Digital Standardisation Programme)
	Fund for Autonomy)	INS	Identité nationale de santé (National health identity)
CPAM	Caisse Primaire d'Assurance Maladie	LGC	Logiciel de gestion de cabinet (Practice management software)
	(Departmental Health Insurance Agency)	LGO	Logiciel de gestion d'officine (Pharmacy management software)
CPS	Carte de Professionnels de Santé (Healthcare Professionals Card)	LRM	Logiciel de régulation médicale (Medical regulation software)
DCGDR	Direction de la coordination de la gestion du risque (Directorate	MES	Mon espace santé (My health space)
DOF	for Coordinating Risk Management)	OPCO	Opérateur de compétences (Skills operator)
DGE	Direction Générale des Entreprises (Directorate General for	PDS	Plateforme des Données de Santé (Health data hub)
DOECID	Enterprise)	PSC PSC	PariSanté Campus Pro Santé Connect
DGESIP	Direction Générale de l'Enseignement Supérieur et de l'Insertion		General Data Protection Regulation
	Professionnelle (Directorate General for Higher Education and Professional Integration)	GDPR RI	Référentiel d'Identité (Identity Repository)
DGCS	Direction Générale de la Cohésion Sociale (Directorate General	RIS	Radiology Information System
DGC3	for Social Cohesion)	ROC	Remboursement des organismes complémentaires (Scheme for
DGOS	Direction Générale de l'Offre de Soin (Directorate General for	ROC	reimbursement of supplementary healthcare insurers)
5005	Healthcare Provision)	ROR	Répertoire Opérationnel des Ressources (Operational health
DGRI	Direction Générale de la Recherche et de l'Innovation	KOK	resources directory)
	(Directorate General for Research & Innovation)	RPPS	Répertoire partagé des professionnels de santé (French
DGS	Direction Générale de la Santé (Directorate General for Health)		healthcare professionals shared directory)
DMP	Dossier Médical Partagé (Electronic Health Record, core technical	SAS	Service d'accès aux soins (Healthcare access service)
	component of the "Documents de santé" section of Mon espace	SESALI	Service européen de santé en ligne (European e-Health Service)
	santé)	SGL	Système de Gestion de Laboratoire (Lab management system)
DMSMP	Délégué Ministériel à la santé mentale et à la psychiatrie	TLC	Teleconsultation
	(Ministerial Delegation for Mental Health and Psychiatry)	TLE	Tele-expertise
DNS	Délégation Ministérielle au numérique en santé (Delegation for	TLS	Telehealth
	Digital Health)		

