



Agence eSanté

About us

“Agence eSanté, Luxembourg’s national agency for the exchange and sharing of medical data”

Agence eSanté was founded in 2011 as an Economic Interest Group (G.I.E). Its roots go back to 2006, the year in which the Luxembourg government adopted the national Health Action Plan. The first projects launched further to this Action Plan revealed that healthcare professionals needed a platform allowing them to share medical data. Thus, Luxembourg Government decided in 2010 to create a national agency that would be in charge of implementing such digital platform. The Healthcare Reform Law voted in December 2010 laid the legal basis for the establishment of Agence eSanté, which became operational in 2012 and has since then been in charge of the development of a coherent national eHealth strategy.

The eSanté team currently consists of 14 professionals who drive and monitor the various projects that are required for the deployment of the eHealth platform and its services. The interdisciplinary team with its variety of profiles provides the necessary diversity in expertise and also reflects the technological, professional and cultural challenges of this ambitious national project.

When and where required additional advice and know-how is sought with external specialists. And to make sure that the services put in place by the agency respond to the requirements and practical needs of the different actors of Luxembourg’s healthcare sector, Agence eSanté involves the relevant stakeholders in work groups and thematic exchanges so as to integrate their input in its decision-taking-process.

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Our missions

In alignment with Luxembourg's "Social Security Code", the main missions of Agence eSanté include :

- the definition of a national eHealth strategic roadmap, the so called *Schéma Directeur des Systèmes d'Information de Santé* (SDSI), to enhance interoperability between healthcare IT management systems;
- the development and implementation of a digital healthcare services platform, in order to facilitate medical data sharing and exchange, including the implementation of the platform's main tool: the DSP (*Dossier de Soins Partagé*), the electronic health record.

The ultimate goal of the implementation of the national eHealth services platform is to facilitate a seamless communication between healthcare professionals so as to enhance a better coordinated healthcare and a more comprehensive and efficient healthcare system. Our overall aim is to put in place a user-friendly and technically optimised platform that complies with the relevant international standards, applies the highest possible data security measures and respects the data privacy laws.

Our management model :

The management model adopted by Agence eSanté includes an Executive Committee in which each member is represented, and whose task it is to define and validate the agency's objectives and actions, which have been set out in a 4-year strategic business plan.

« eHealth is the single-most important revolution in healthcare since the advent of modern medicine, vaccines, or even public health measures like sanitation and clean water. » D. Silber -The case for eHealth 2003

Some key facts about Luxembourg's healthcare system



Luxembourg's healthcare sector is special due to its unique circumstances: with a population of only 549.700 inhabitants it is one of the smallest sovereign nations in Europe. Yet, it is one of the nations with the highest immigration rate in Europe and the country with the highest percentage of commuters in the EU. These circumstances are crucial for its social system and thus also for its healthcare sector. Like many other countries, Luxembourg is facing the challenges of modern society, which need to be addressed in the near future : a decreasing fertility rate and an aging population, which lead to a shrinking workforce, higher pension costs and rising healthcare costs.

The healthcare sector in Luxembourg comprises currently 1544 practicing physicians (2.8/1000 population) 70% of whom are specialists and 30% generalists. About 900 of them are affiliated to a hospital. Currently there are 5 major hospitals for acute care, 4 Laboratories including 1 na-

tional laboratory and 3 private laboratory groups. These figures reflect the small scale of the national healthcare system and suggest the manageable scope of changes and adjustments.

Luxembourg's healthcare system is one of the best in Europe and its high standard of state-funded healthcare lays a good foundation for all kinds of healthcare innovations. Furthermore, the conditions for an advanced eHealth programme have been defined, and the country has a highly developed ITC infrastructure. All these factors, in addition to Luxembourg's small size, undoubtedly facilitate a nationwide implementation of eHealth programmes and system deployment.

Our members

- the Luxembourg State, represented by the Ministry of Health and the Ministry of Social Security
- the National Health Fund (*Caisse Nationale de Santé*)
- the Joint Social Security Centre (*Centre Commun de la Sécurité Sociale*)
- the Association of Doctors and Dentists (*Association des Médecins et Médecins-Dentistes*)
- the Luxembourg Hospital Federation (*Fédération des Hôpitaux Luxembourgeois*)
- the Association for the Defense of Patients' Interests (*Patientenvertretung*)
- the Luxembourg association of pharmacists (*Syndicat des Pharmaciens Luxembourgeois*)
- the Confederation of long term and home care providers (*Confédération COPAS*)
- the Luxembourg federation of laboratories (*Fédération Luxembourgeoise des Laboratoires d'Analyses Médicales*)

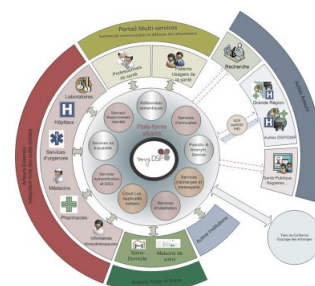


The eSanté Platform and its services

The national eHealth platform provides tools that **enable** the exchange and sharing of health information between health professionals known to the platform, while meeting the requirements in terms of security and privacy protection.

The platform's principal tool to facilitate this information sharing is the so-called "Dossier de Soins Partagé" (DSP), a patient's secure electronic health record allowing authorised healthcare providers, as well as the patient himself, to have access to the latter's relevant health related information.

The services offered by the eHealth platform **allow** a simplified and expeditious use of medical information, and thus support the improvement of prevention, diagnosis, treatment and medical monitoring. As such, they will undoubtedly have a positive impact on the quality of Luxembourg's healthcare, for the benefit of the patient.



« The advice is simple: do not postpone innovation, but equally, do not take a leap into the dark; take small steps, carefully, and be guided by evidence now available of the successes and failures of others. » Viviane Reding, European Commissioner- eHealth is Worth it -

Current state of Art:

Agence eSanté has already deployed a first range of services and applications; some others are in the pilot or testing phase, or about to be deployed.

Amongst the launched services we may count the national Healthcare Provider Directory, the application for Secure Messaging, the Document Database, the Collaborative Workspace and the Prevention Datasheet.

Ideomed and IdeoRCP are currently in the testing and alignment phase to prepare a seamless deployment, including training sessions for the concerned institutions and their staff. The DSP, the eHealth platform's key component for medical data sharing, will first be launched in a pilot phase (under the name *DSP de préfiguration*) to a limited group of patients before making it generally available.

Our services

"Secure Messaging" an application for the secure e-mail exchange between the healthcare professionals registered in the national Healthcare provider directory;

"Collaborative Space", a (virtual) application for project management and theme related exchange between healthcare professionals;

"Healthcare provider directory" (HPD), the national directory listing healthcare professionals – both individuals and institutions – who are authorised to provide healthcare services in Luxembourg;

"IdéoMed" and "Gecamed": two patient management IT support systems, put at the disposal of small institutions (who do not have a technical platform) and private professionals respectively;

"Document database" an on line database for sharing documents and publications, which are classified by theme. Documents stored in the "restricted" zone can only be accessed by healthcare professionals after due authentication;

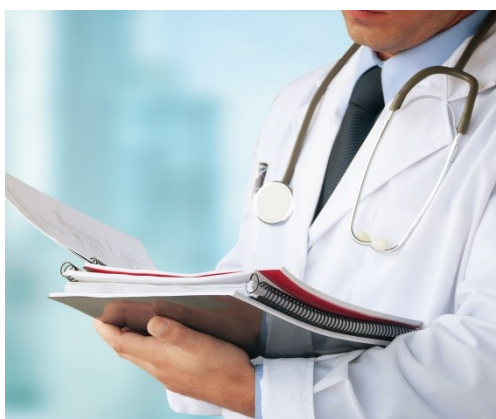
"IdeoRCP", an application that provides a tool for pluridisciplinary meetings and concertations, as well as an electronic record designed for medical teams in charge of cancer patients;

"Prevention Datasheet", a tool for the evaluation of a number of risk factors that will help the general practitioner determine and provide the patient with the required preventive measures;

NPS "National Pseudonymisation Service", a component that allows to communicate pseudonymised data without having to communicate the patient's true identity. It aims to prevent the unauthorised, unwanted disclosure of information about a person by reducing the probability of an individual being associated with the (medical) data.

"Dossier de Soins Partagé" (DSP), a patient's secure electronic health record—more detailed information overleaf.





« Electronic medical records are, in a lot of ways, I think the aspect of technology that is going to revolutionize the way we deliver care »

Risa Lavizzo-Mourey



Dossier de Soins Partagé (DSP)

The eHealth platform's main tool for health information sharing is the "Dossier de Soins Partagé" (DSP), a patient's personally controlled, secure electronic health record.

The DSP allows patients and healthcare professionals to view and share healthcare data that are relevant to an optimally coordinated treatment. It serves as a collaborative tool for healthcare professionals and as such facilitates a better communication between them.

Health professionals involved in a patient's care and who have been granted access to the latter's DSP, are able to access the information at any time, and thus have the last up-to-date information of the patient's health. This will help ensure appropriate and fast care.

One particular feature of the DSP is that it is under direct control of the patient himself, who controls what information goes into it and who is allowed to access it. At all times he can see who accessed his DSP, when and why (read, write). Furthermore he can comment on his information in a specifically dedicated virtual space. He can decide to close his DSP any time. The DSP shall encourage people to become active participants in their own (health-)care.

The DSP complies with the latest international norms and recommendations and applies multi-layer security measures so as to obtain an as high as possible data security and protection degree.





Interoperability

Interoperability can be defined as the capacity of two systems to communicate and understand each other. Applied to the health sector, interoperability ensures that information systems, and through them health professionals and patients, can communicate health-related data, trust the data and its consistency, understand it in the same way and finally use the data that have been exchanged. Interoperability can be seen at different levels in the systems, among them:

- Technical interoperability: capacity of systems to communicate data. This level is based on technical norms, standards and concepts such as those presented in the technical standards.

- Semantic interoperability: capacity of systems to share and ensure the meaning of the conveyed message. This level is based on data dictionaries, list of values, nomenclatures and terminologies such as LOINC, ICD-10, SNOMED-CT, etc.

While respecting the international norms, guidance, formats and profiles from HL7 and IHE (two of the most active non-profit organisations on healthcare interoperability), Agence eSanté developed Luxembourg-explicit specifications to ensure interoperability on the national level, while remaining compatible with European and international requirements.

The Healthcare Provider Directory (HPD)

The HPD is the national directory for Luxembourg's healthcare sector. Acting as a central building block to the eHealth platform, it contains valuable and consolidated information about each registered healthcare professional. Being able to authenticate a healthcare professional is a recurrent need for the services of the national eHealth platform, whether for technical, security, or functional reasons. It is an essential component for the secure use of the eHealth services.

By way of example, the HPD is used to auto-complete names and emails in the secure messaging service, or to identify a professional and his specialty, and check the latter's assigned access rights to a DSP's document types.

It is a directory available to the public on www.eSanté.lu, offering various selection criteria (name, profession/specialisation, place, ...) that will help users find and geolocalise the right healthcare professional.



The Master Patient Index (MPI)

The Master Patient Index (MPI) is a centralised resource for patient demographics. Conceived as a national patients' directory, the MPI delivers trustworthy information about a patient's identity. It will as such serve as referential directory for the identification and authentication of a patient, for all the eHealth services delivered by the eHealth platform.

Next to the "basic" identification and authentication function, the MPI also contains a powerful and customised (and customisable) matching algorithm to compare and match identities among different domains, and institutions. For indeed, exchanging and sharing patients' data between different healthcare structure networks requires a complete match of the patient identification data.

On top of that, the MPI serves as the operational tool used by Agence eSanté's identity vigilance team to reduce and manage the residual risk on patients' identity.

Our technical standards

The eHealth platform has been developed and built according to the latest and widely used international standards. This alignment simplifies the conception, validation, and delivery process, and therefore has two direct benefits: the services are readily available and the related costs, also the recurrent ones, are lower. Moreover, following international standards gives the benefit of developing and implementing services on the basis of worldwide user experience. Applying standards such as the CDA R2 format and the IHE XDS.b profile, allowed us to quickly connect and integrate external systems into the platform and run the necessary tests.

The platform makes use of standards and norms for different purposes. Here a selection of the ones applied : TLS, WS-Security, SSO (security); HTTP and SOAP (transport); SOA and EAI (architecture).

While being technically highly complex, the eHealth platform aims to provide user-friendly services by hiding this technical complexity, but at the same time offering more modern, safer



Our international activities

Since its establishment in 2012 Agence eSanté has also strived to work on an international scale, and therefore fosters international cooperation and partnerships. With Luxembourg forming part of the Greater Region - a cross-border multi-sectoral cooperation initiative between Luxembourg and its French, German and Belgian neighbouring regions - and counting some 100.000 commuters who fall under the Luxembourg social security system, it is but logical for Agence eSanté to be in close contact with its neighbouring national partners.

Knowing that Luxembourg is one of the leading nations in the area of ICT structures, and that its governmental programme has set priority on the development of eHealth technologies, Agence eSanté also has as overall mission to facilitate the exchange with other international actors. To foster this, the agency took part in the discussions about European standardisation processes, and became an active participant and contributor to the European projects epSOS and eHGI.

Today the agency is involved in follow-up initiatives and new emerging European projects, such as EXPAND and eSens. It is also participating in

the eHealth Network's Joint Action, whose work plan will be based on the eHealth Networks' Multi-Annual Work Programme 2015-2018.

Furthermore, the agency became a member of IHE- Europe in 2013 and has ever since been actively participating in IHE's events.

The participation in the IHE-Europe Connectathon 2014 was an important step for Agence eSanté, and was followed by an additional achievement: organising the IHE-Europe Connectathon in 2015 (from 20th to 24th April) in Luxembourg. This was a great milestone, not only for Agence eSanté but also for Luxembourg : during one week more than 300 experts from all over Europe gathered in Luxembourg to test their systems for IHE profiles.



International Events 2015

For further information

Please visit the websites of our partners:

www.medetel.eu

www.ihe-europe.net

Save the 2016 dates :

Medetel: Luxembourg , 6-8 April 2016

IHE-Europe Connectathon :

Bochum, Germany - 11-15 April 2016



From 20 until 24 April 2015 Luxembourg hosted two major annual international healthcare related events to which Agence eSanté is strongly committed and which are of great significance to anyone who takes interest in eHealth, telemedicine or related fields : the congress "Med-e-Tel", and the "IHE-Europe Connectathon".

Med-e-Tel is the annual eHealth, Telemedicine and Health ICT Forum organised by the *International Society for Telemedicine & eHealth (ISfTeH)* offering workshops, conferences and an exhibition area. Attended by numerous recognised experts in the field worldwide, it offers unprecedented opportunities for networking and the international dissemination of knowledge and experience in telemedicine and eHealth.

Annually held in Luxembourg since 2002, the 2015 edition again attracted over 400 visitors representing more than 50 different nationalities. Our eHealth exhibition pavilion hosted the following companies and institutions : Ido-In, Luxembourg institute of science and technology, Luxembourg Ministry of Health, EBRC, LuxITH, SIB, MiPiH, Ilex, SES, PWC, KPMG as well as the European project eSens.



Annually organised by the international consortium IHE, the "Connectathon" is a five-day long connectivity test marathon where the interoperability of health information systems is tested. It offers vendors a unique opportunity to test the interoperability of their products in a structured environment, against multiple vendors, using real world clinical scenarios following IHE Integration Profiles specifications, across a variety of domains (such as radiology, cardiology, laboratory, pharmacy, etc...). During one entire week 300 participants from 74 vendors performed altogether 2300 tests, which were verified by 50 monitors.

Both Luxembourg's Prime Minister Xavier Bettel and Minister of Health Lydia Mutsch visited the Connectathon floor as well as the Medetel exhibition, and addressed a welcome speech at the IHE-Symposium "Interoperability in Practice for eHealth and mHealth".

Our national activities

Constructive partnership and joint reflection are two core values forming an integral part of Agence eSanté's decision-taking process.

On a national level this has materialised into a multitude of work groups aiming to gather healthcare stakeholders' input and opinion, or seeking their validation. Accordingly, two advisory committees were created in alignment with the agency's articles of association: one focused on interoperability and the other one on ethical and deontological aspects. When required, dedicated thematic work groups are put in place to elaborate one specific topic. The interoperability committee, for instance, set up a dedicated CDA («Clinical Document Architecture») task force, composed of radiology and biological analysis experts, in order to define the implementation framework for the specifications of the CDA-header metadata, and for the structural specifications of the content of radiology reports and biological analysis reports. Likewise a dedicated LOINC committee was put in place bringing together 17 representatives of the Laboratory domain, with the objective to create a national «Lux-LOINC» register.

Another topic for which we sought the practical input from the healthcare professionals was the elaboration of the DSP access control matrix, which defines the access rights of a healthcare professional in function of his specialty and the kind of information he requires to perform his task in an optimal way. In order to assess the DSP access rights for the 23 officially recognised healthcare professions, Agence

eSanté held about 30 meetings with altogether more than 120 healthcare professionals.

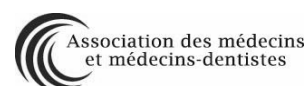


Our members



Our member institutions and associations represent the main Luxembourg healthcare stakeholders - from both public and private domain - as well as the defense of patients' rights and interests.

Agence eSanté currently counts the following members :



LE GOUVERNEMENT
DU GRAND-DUCHÉ DE LUXEMBOURG
Ministère de la Santé



Contact

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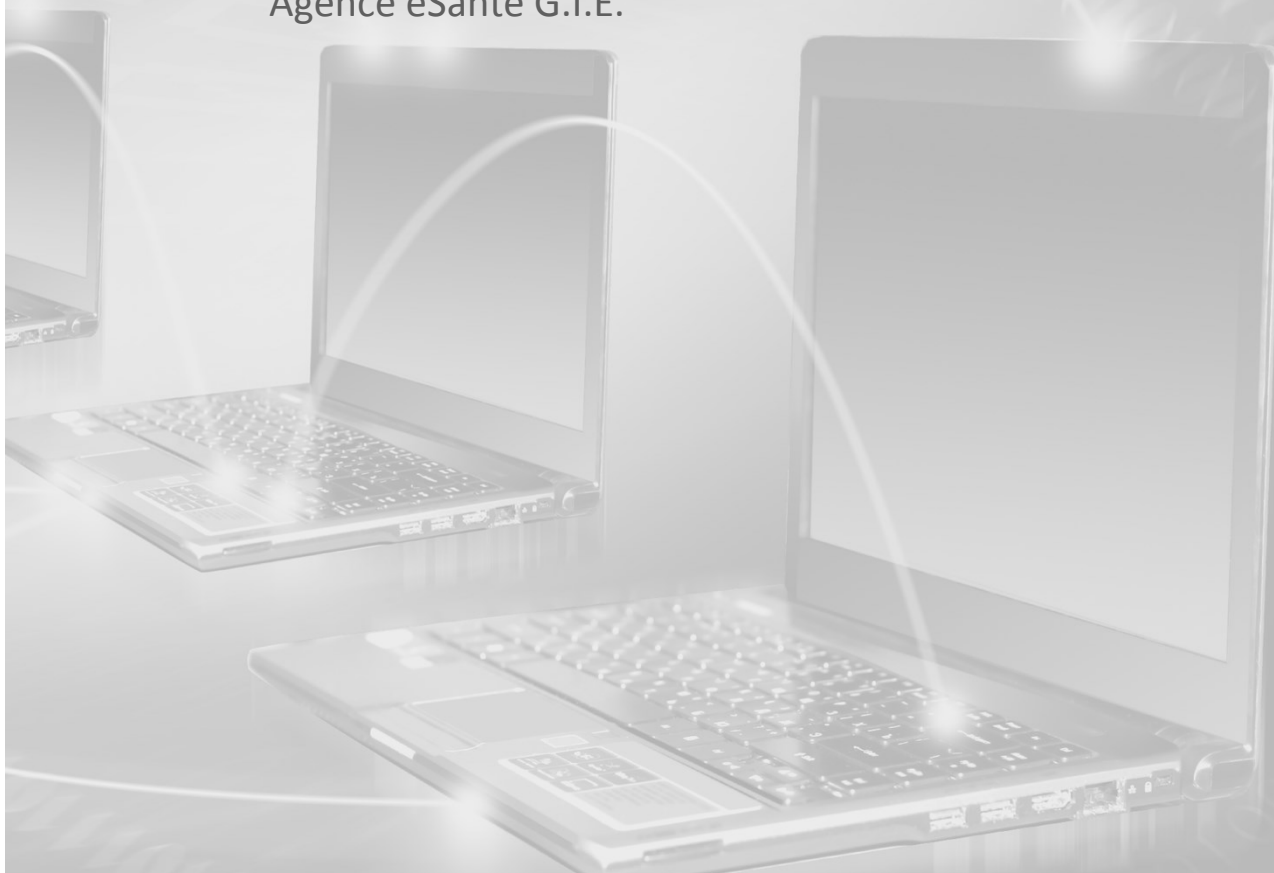
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