Case study

A silent revolution in health

The Ministry of Health's focus on computerisation and de-bureaucratisation is an ongoing process that aims at facilitating and improving the life of users and the performance of health professionals, thereby sparing the environment and reducing the use of resources while boosting the search for new treatments.

Digital transformation advancement in the health sector is a reality. Improved use of resources, access to services with increased quality, and the exchange of knowledge between providers of the same speciality are some of the advantages. These stimulate health system sustainability. Information security is vital to digital transformation. Important steps were taken in this sense, and the Serviços Partilhados do Ministério da Saúde, EPE (SPMS) has been reinforcing the implementation of multiple measures.

SPMS EPE

Many initiatives have been consolidated since 2017, namely throughprotocols established with other entities.

The National Strategy for the Health Information Ecosystem 2020 (ENESIS 2020), approved in the Council of Ministers in 2016, was a political and administrative milestone that accelerated the efforts made by the Ministry of Health (MH) in the sense of developing and deepening digital transformation, while providing it with logic and coverage.

AThe SPMS coordinates and supervises the implementation of ENESIS, ensuring its operationalization and promotion, and also the best-practices dissemination. Within the goals and principles of ENESIS 2020, telehealth is an example of other digital transformation requirements.

The National Centre for Telehealth (CNTS), created in 2016, is part of the SPMS and contributes to improving governance and efficiency in the National Health Service (SNS), by using solutions that allow for the modernisation and integration of information technologies in the scope of shared services. Other requirements that are essential to this digital change are the digital literacy of citizens, the mobile solutions, health professionals' eSkills and, of course, robust infrastructures, fast networks and proper hardware.

Meeting health challenges

Digital transformation plays a vital role in society and must be aligned with cross-border initiatives. The Electronic Health Record (RSE) is one of MH's most important initiatives, as it is a record that can be exchanged between the user, health professional, and health service providers, whether they are public or private entities. "*The goal of the Electronic Health Record is to dematerialise procedures and processes. One successful case is the Paperless Prescription, that stands out due to its innovative character, and that brings distinct advantages to physicians, pharmacists, citizens, and to the overall health system,*" says Henrique Martins, the President of the Board of Directors of SPMS. He further adds that "*the paperless prescription, that appeared first in the public health units and then in the private sector, came to replace the paper prescription gradually, resulting in significant cost reduction and procedure simplification."*

In this case, citizens receive their prescription via email, or SMS. In addition, they can buy their medicine in any pharmacy,

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regardless of its location, and check their treatment plan on their smartphones via the MySNS Carteira electrónica app, or Área do Cidadão in the SNS Portal.

Paperless Exams

The Paperless Exams initiative is another significant initiative of SPMS under the digital transformation process. This aims at bringing physicians and citizens closer, decreasing waste in the provision of Diagnostic and Therapeutic Modalities (DTM), reducing paperwork, and providing all parties involved with increased security.

By using several central service platforms, this initiative's goal is to dematerialise processes that pertain to requests, performance and billing of DTM, while ensuring the user has all information related to these tests in a digital format.

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>
> **Henrique Martins**
> Chairman of the Board of Directors
> **SPMS**

Key services:

- Digital Workplace
- Workplace Managed Services
- Collaboration
- Productivity
- MS Office 365

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SPMS is implementing a new corporate productivity suite

This decision aimed at ensuring the stability of applications provided to the National Health Service, Ministry of Health and other Portuguese and European entities, and at providing information security.

The Shared Services of the Ministry of Health (SPMS) is responsible for guaranteeing the quality, sustainability, reliability, and resilience of the services and products of information systems in the health sector.

We spoke with the President of the Board of Directors of SPMS, Henrique Martins, to learn more about which projects are being prepared to ensure the renewal and refreshment of tools and technological products that are the basis of the solutions and information systems provided by the SPMS.

What triggered the SPMS's need to implement a new productivity and collaboration solution?

Given the historical evolution of the SPMS and MH's technological ecosystem, Microsoft products and services are vital and extremely important to the solutions, systems and services provided by the SPMS to the Portuguese and European health system.

The MH uses a considerable number of Microsoft services and products to provide many important features within health care provision, especially the MS corporate productivity suite, i.e. the Office 365 Cloud.

Since 2016 this Ministry uses a central corporate suite, to manage its electronic mail, the sharing documents and files platforms, collaborative work, news, and other individual productivity tools used in a professional context. So, there are 126,683 employees who are qualified for corporate use of the single corporate electronic mail platform that serves the entire Ministry – i.e. a single unified and centralised electronic mail platform that can be used by all MH employees.

What was the role of information security in this decision? Did this decision try to discourage the use of the "shadow IT" (WhatsApp, Dropbox, Gmail, etc.) in any way?

Information security was extremely significant to this decision. We must consider cybersecurity and cybercrime events and incidents that took place in the health sector over the last years, both nationally and internationally. Highlights go to the ransomware attack (using the Wannacry virus), dated May 12, 2017, that severely affected a high number of public hospitals in the United Kingdom for several months.

Moreover, another cyber-attack of this type (but this time using the SamSam virus) affected operations in hospitals of a Portuguese private health group in August 2018. And lastly, the not least important clinical data theft that included more than 160,000 users of the Singapore's public health system, and that was confirmed by

the Ministry of Health of Singapore in July 2018.

Considering this scenario, what is the SPMS doing to mitigate cybersecurity risks?

It is necessary to ensure all conditions that allow to mitigate cybersecurity risks by decreasing the vulnerabilities that are most known. The most basic condition is to provide each MH employee with a centralised, secure electronic mail account with advanced cybersecurity control and monitoring features.

It is important to say that more than 90% of cybercrime incidents begin with a simple email. This way, the effective management of corporate electronic mail security is vital.

We make sure all professionals in the public health sector can rely on a cybersecure, high-performance corporate electronic mail service that is reliable and has strong control and central monitoring

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A MENTE QUE SE ABRE
A UMA NOVA IDEIA
JAMAIS VOLTARÁ
AO SEU TAMANHO
ORIGINAL

ALBERT EINSTEIN

Henrique Martins, Chairman of the SPMS Board of Directors

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abilities – at the level of cybersecurity, intrusion and loss of information.

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Is this measure enough?

It is essential that we keep on reinforcing these abilities that come with the corporate productivity suite provided to the employees of the Ministry of Health. Meaning, the reduction of the so-called "shadow IT", by offering alternatives to the many parallel productivity services – storage, collaboration, scheduling, sharing, messaging, etc. – that are effective, scalable, robust and, most of all, secure and well-governed.

The implementation of new productivity and collaboration tools in all health institutions has been a big challenge. What role did Claranet play in this implementation?

Claranet, as the external partner of SPMS in this corporate productivity project, played an essential role by providing the expertise, professionalism, and availability that this project required to be successful. Claranet's participation was vital to accomplishing the aspiration of providing the MH with a corporate productivity suite that can be used by all MH professionals.

In the field, what are the main challenges in terms of making health professionals use the collaboration technologies provided by the SPMS?

Because the number of employees in the MH has been increasing over the past years, particularly due to the increased hiring of physicians, it is necessary to reinforce the provision of services that are made available, therefore ensuring that they are in sufficient number to cover the 138,732 users that are now working with the MH (when compared to the 126

thousand professionals counted in the beginning of this project).

At the same time, there is the need to be in permanent contact with our professionals, by providing not only support, but also training, engagement and the activation of a wide range of corporate productivity and professional collaboration products.

In fact, we are aware that its not easy for a professional to know and make the most out of all tools available, so we have further initiatives in place that relate to this.

Did the SPMS make any study about the ROI for this project?

Yes, we did a feasibility and ROI analysis for this project. It is important to mention that the advantages arising from this centralised productivity suite are more than just the economic efficiency that comes from the economies of scale, or the increased effectiveness in central proactive management that allows for improved harmonisation and use of features that are provided to more than 62 entities in the MH. Most of all, this suite brings increased security and defence against cybersecurity risks.

What are the gains resulting from this economy of scale?

Other than the cybersecurity and governance concerns, it is important to mention the economic efficiency that arises from the economies of scale, as well as the effectiveness in central proactive management that allows for improved harmonisation and use of features that are provided to more than 62 entities in the MH.

We should mention that there is a significant cost reduction by adopting just one central solution that can be used by all entities in the MH, when compared to the costs that were previously borne by each one of these entities. For instance, each entity is estimated to save more than two million Euros annually (excluding licensing and product-related costs), as opposed to if they were to come up with their own infrastructure and human resources solution to support this type of corporate solutions.

What improvements did you see in the connection between different health institutions and professionals that came from these new productivity solutions?

As I said before, we think there were several improvements in the multiple activity sectors of the entities encompassed by the MH for the better - from the inevitable information security and cybersecurity matter, to governance and elimination of the "shadow IT", to the even higher degree of collaboration, effectiveness and economic sustainability of health care providers.

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How did the integration of these productivity tools in the SNS's technological infrastructure go? Did you feel Claranet has contributed to project success?

In global terms, adhesion to and integration of these tools was positive and highly successful. As said, the role played by Claranet, as our external commercial partner, was very positive and fundamental.

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