Case study
by enovacom

Interoperability developing the Health sector

Unilabs

Unilabs Switzerland interoperability figures

• 154 interfaces currently designed and deployed with over 100 different applications. On average, over 300,000 messages pass through the interoperability platform per day..

• Patient identity data: 6

• Reporting data: 90

• Request data: 11

• Financial data: 47

• The formats utilised in the project include: HL7, PDF, TXT, CSV, XML, Database and Proprietary formats

The Unilabs Switzerland Group on the cutting edge of health technology

Over a million reports are now sent automatically in a year concerning a number of newly integrated applications across 40 sites. The Unilabs Switzerland group have addressed their need to enhance their integration capabilities to exchange data between laboratories, hospitals and clinicians. Enovacom won the opportunity to enable interoperability for Unilabs with their comprehensive integration platform. Lets take a look at the progress thus far.

Unilabs Group - overview

Unilabs is a leading diagnostics service provider in Europe and in particular Switzerland with a turnover of 800 million euros. Established in 1987, the group now has over 200 laboratories worldwide with 6900 workers in 14 countries. In Switzerland alone (where it was founded), Unilabs has 40 facilities dedicated to daily patient care. Innovation is core to the Unilabs

groups values. In 2010, the electronic prescription service "e-Unilabs" was launched with many key benefits such as simplifying the prescription analysis process and relevant follow-ups, automatically transmitting information to doctors offices etc.

Broadly, the Unilabs Group focus is with patient data management and part of their service portfolio is organising and transmitting test results securely.

This document will mainly focus on how the Unilabs Group co-ordinates analysis requests and transmits analysis reports securely.

Interoperability, a value-added service for doctors

Interview with Thierry Müller, Unilabs IT Director

What is the driver to enhance the interoperability capability of Unilabs?

T.M : We wanted to overhaul the way we organise data transfer at Unilabs. We used several tools (EAIs or integration engines) to automate data exchange between our labs and doctors. Trying to achieve this made things difficult on a daily basis: monitoring everything was impossible due to how many tools we used. What made things worse was the inefficient complex technical architecture of new information flow developments.

We chose to audit our IT system which showed us how mismatched everything was. This led us to question the tools we had been using up until that point.

Why did you choose Enovacom?

T.M : Our main needs were quickly identified: we were looking for an easy-to-use interoperability platform with powerful monitoring functionality. As with every project, we turned to a list of software developers.

Enovacom very quickly came to our attention for two reasons: first, the feedback we'd had from Unilabs France – particularly something the IT director told us: "The Enovacom solution works so well that we have forgotten it exists", if I remember correctly.
Secondly, another important aspect

for us was that the solution had to be a finalised interoperability platform, not a toolbox that requires us to have a team of experienced developers on-hand. In this case, the Enovacom EAI lets us create new interfaces in plug & play mode, certain scenarios exist already, there is a library of integrated and managed standards and formats, etc.

How was the project organised?

T.M : We organised the project in stages to allow for real-time interface production. Altogether, over 150 flows were created in 8 separate stages. We started with 'less critical' flows to get to grips with the software and test our processes with each of the stakeholders. This gave the teams a better understanding of how it worked and enabled them to specify procedures between Enovacom and Unilabs. What really impressed us was how swiftly the project went and we were able to deal with certain emergencies ourselves depending on how serious they were.

How long did the project last?

T.M : Despite the scale of the project, it lasted only 6 months. We've been continuing to create new stages to meet new needs ever since; the team has now fully grasped the process.

What feedback did you get from the field teams once the project was finalised? How has the project benefited Unilabs?

T.M : The interoperability platform has now become more of a business tool for the team than a technical one. For instance, we are now able to look for specific information flow on an individual patient or doctor.

Aside from using it every day, what remains fundamental is the solutions simple infrastructure and very efficient automatic data exchange monitoring. We are able to detect if someone has not received a lab report before even they can.

From now on, interoperability is central to the service offered by Unilabs to its 4,000 doctors. We are able to get them the results they need on time every time and ensure the information is transferred securely.

More generally, how does interoperability fit into the eHealth sector these days?

T.M : It has a strategic role in developing the health sector. To me it's clear that the future will be much more based on automatically, securely and reliably exchanging sensitive data, ranging from prescribing analyses to transferring results to doctors and patients. Having an eHealth exchange platform is vital when handling over 25,000 laboratory results every week.

What is your impression of the support from the Enovacom team?

T.M : The team was there with us throughout the whole project. They clearly set out their commitments and made sure to uphold them with its rigorous level of professionalism, all the while remaining flexible enough to incorporate any new needs.

What's next for the project?

T.M : The main migration project is completed. However, the need for new data flow is still there. Having a platform that allows us to integrate this new flow in a simple, fast and secure way is an asset to our internal systems integration strategy, as well as our external partners.

The initial context: diverse technical solutions where monitoring health data is not possible

To manage communications between the different applications used by laboratories and clients (doctors, hospitals, or external service providers), the UNILABS group had utilised several EAI-type software applications as well as several 'custom' scripts. The initial aim was to automate the sending of data flows i.e. analysis requests, reports and financial information.

The drawbacks of the "old environment":

> There is no way to supervise or monitor the data exchange

> It is unsure how long the solutions will last as the interfaces have been created separately

> There is no event feature and no HL7 connector available

> Three solutions we had were unable to communicate with each other

> Support is often needed due to the amount of errors

> It is costly to maintain the platforms complex technical architecture

The integration tool used was therefore reconsidered as it was essential that we could effectively manage the data flow..

Project aim: to organise health-oriented data flows effectively

The aim of undertaking a new project was to enhance our capabilities in exchanging, sharing and monitoring information with the chosen and very unique - Enovacom interoperability platform. **Key driver**: ensuring patient information is shared effectively and helping healthcare professionals to make more informed decisions on a daily basis, improving patient-care.

3 different cities are involved in this new project with each city managing their own information flow – Zurich, Geneva and Ticino.

Providing and implementing the new interoperability platform should enable UNILABS Switzerland to achieve the following objectives:

> Consolidation of interfaces into a single tool

> Installing a new, industrial, ready-to-use ESB architecture

> Improving interface supervision (monitoring and incident alerting)

> Easy to use platform with the tools to resolve problems fast

> Quick and easy to integrate new interfaces (a new interface means sending biological test results to a new recipient)

Unilabs Switzerland: now interoperability enabled

The first project meeting took place in August 2016. The aim was to set out the schedule, the teams involved and their relevant roles, and the project's technical outline.

An 8 step project

The project to connect over 100 different software applications was divided up into several steps. Certain interfaces needed to be created first in order to make way for others.

Test phases varied in length depending on the interface with a general average of 1 month before being validated for production

THE PROJECT IN NUMBERS:

• 100 software applications to connect

• 154 interfaces to create

• 1 unique interoperability platform to install

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Enovacom project services

Document sharing made easier for Project Managers: the Enovacom project team used ENOVACOM Secure Web Login to provide a secure portal dedicated to document sharing throughout the project.

> Project monitoring made easier

> Information & documents readily available

> Real-time document updates

> Documentation maintenance (support procedures, software installation documents, training support, testing and production procedures)

Test stages successful thanks to an organised schedule: both the UNILABS and Enovacom project teams chose the Jira Cloud tool to organise their schedule and the test stages needed to create each interface.

> Macro and micro vision of the schedule and related tasks

> Messaging function which also enables users to add images or screen shots

> All tests shown on a single tool making feedback and validation easier

> Simplified dashboard

Who's involved in the project ?

Damien Mazoyer, Enovacom Project Manager
From 2001, Damien Mazoyer started his career as a developer for 'Digipharm' and then as an Interoperability Development Manager for 'Infologic Health' for 4 years. Damien's vast experience in the health sector has led to successful Enovacom's health IT systems interoperability projects for nearly 10 years.

Frédéric Nodot, Enovacom Interoperability Project Manager
After starting out as a Biomedical Engineer, Frédéric Nodot developed his expertise in healthcare IT at 'TeraRecon' as a Clinical Applications Specialist. Frederic has been with the Enovacom team for almost 2 years as an Interoperability Project Manager, with already over a hundred different projects complete.

Jacky Nataf, Interoperability Consultant
As a former interoperability project leader for Enovacom, and after developing his skills for nearly 8 years, Jacky Nataf created his own company 'Daploïd Consulting' and joined to help define the functional requirements, technical specifics and outline of the Unilabs EAI project.

Stéphane Grossrieder, Project Manager, Unilabs
After 5 years as a financial services Project Manager, Stéphane Grossrieder joined Unilabs in 2016 as a Project Manager to integrate new tools.

Alexandre Pace, ICT Applications Technician, Unilabs
Trained as a Biomedical Analysis Technician, Alexander Pace joined the Unilabs ICT Applications team in 2009. With 10 years of laboratory experience, he's now developing his expertise in computer science, specifically in managing data flow but also in setting up device connections. This multi-tasking role lets him keep a link between IT and the laboratory.

Youri Gladkov, , Applications Architect, Unilabs
Youri has been with Unilabs since 2011. With more than 10 years of experience in Java and .NET as a developer, Youri's main expertise centres on the architecture and management of data interfaces for Unilabs with many customers in Switzerland from the French and German-speaking parts. In addition, part of Youri's daily tasks is about controlling and maintaining data transfer and the support provided to internal and external clients.

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Project follow up: the Enovacom support service is available 24/7. Incidents handled within 10 minutes..

Enovacom is offering its 24/7 support service to the Unilabs Switzerland group for this project. As such, we strive to respect our commitments and do our utmost to provide an optimum service:

> We have created a web portal to track requests: information, improvements or glitches

> Any difficulties found must be handled within 1 hour and resolved based on how urgent they are: 4 hours for major or critical incidents, 24 hours for severe inconveniences and 72 working hours for minor problems. **Enovacom teams intervene within 10 minutes on average and resolve problems in under 1 hour** no matter what they are*.

> Certain workflow scenarios have been created to validate support request resolutions with both Unilabs and Enovacom's agreement.

> Workers from both Unilabs and Enovacom have created their own login details.

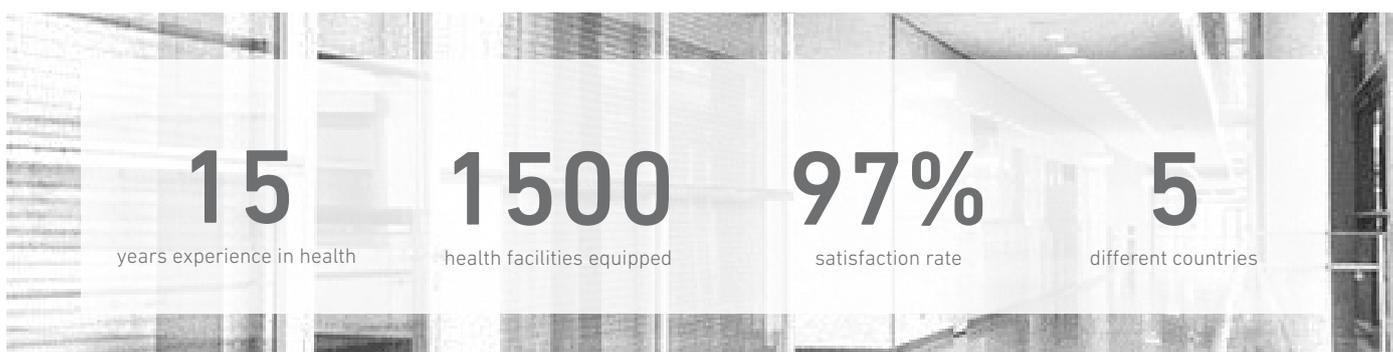** studies carried out over an average of 9 months since October 2016*
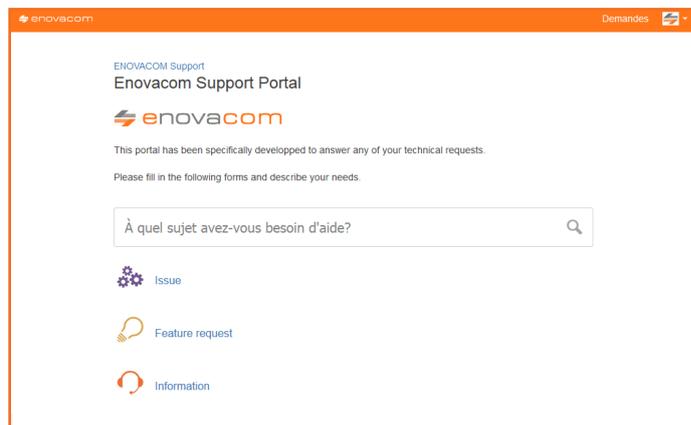
About Enovacom

Innovation developing the health sector

As a software editor dedicated to health IT systems, Enovacom was founded in 2002 to enable exchanging and sharing patient data easier and more reliable.

Enovacom has established and matured a unique software suite on interoperability and security dedicated to healthcare, with the focus to enable:

• Exchanging and sharing health data between establishments
• Medical information confidentiality
• Using Healthcare Big Data

15	**1500**	**97%**	**5**
years experience in health	health facilities equipped	satisfaction rate	different countries

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