Assistance Publique, Hôpitaux de Paris (AP-HP), Paris, France

Assistance Publique, Hôpitaux de Paris: Towards **greater sharing of information**

GLIMS lab management system provides a pooled, evolutive solution that supports all the specialities of AP-HP's 121 laboratories

INTERVIEWEE » **Professor Eric Lepage**, Director of the Patient Information System Competence and Service Centre (CCS), AP-HP
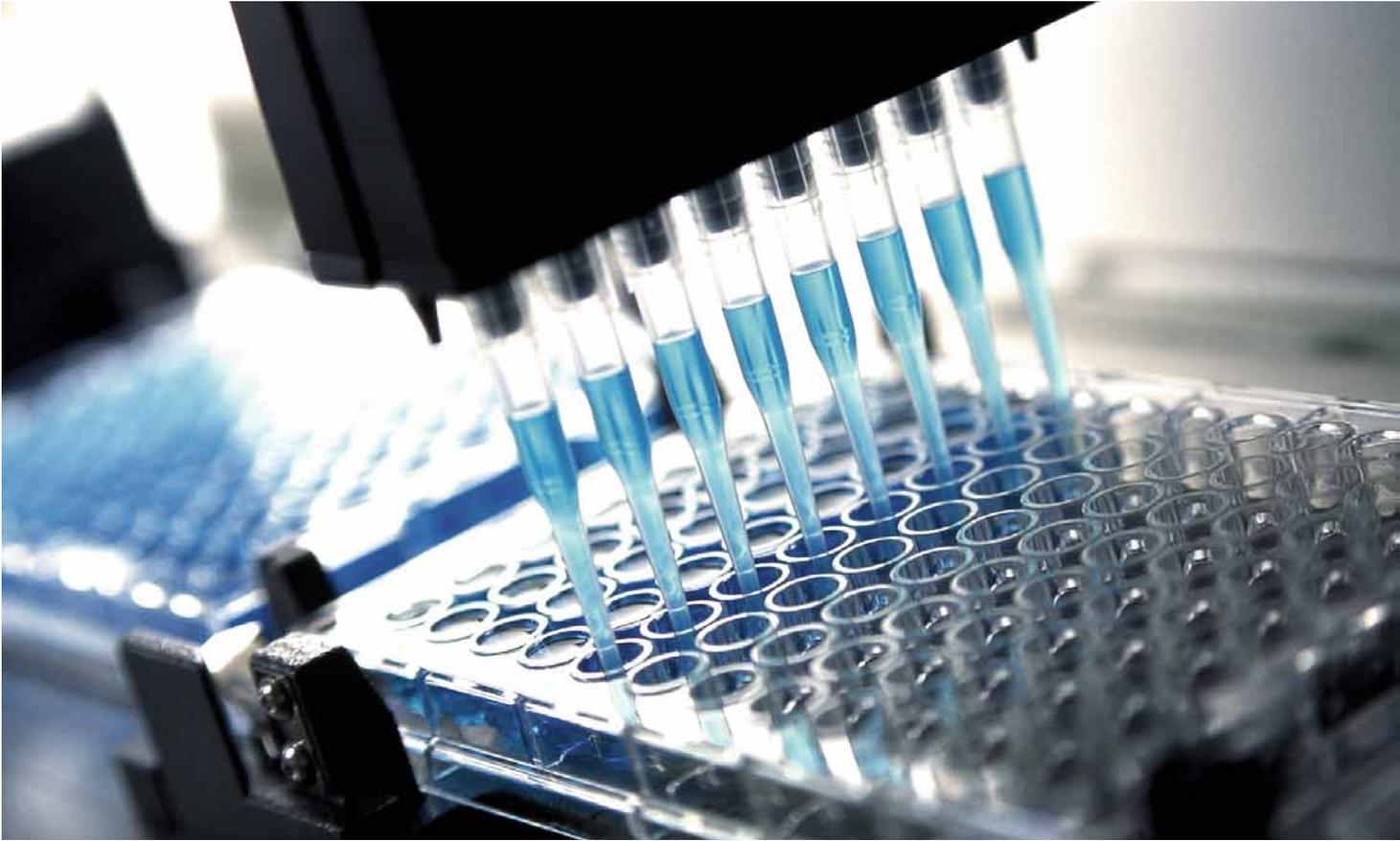
"Without a laboratory management system, we can't carry out an exam," jokes Professor Eric Lepage, Director of the Patient Information System Competence and Service Centre (CCS) for AP-HP. "But while automating the exams can save a lot of time, it must also be part of an overall productivity process. This means pooling resources and information. The GLIMS solution must meet this requirement, supporting our restructuring and playing an important role in AP-HP's overall modernisation goals. IT must serve this strategy!"

THE LARGEST HOSPITAL GROUP IN EUROPE

Assistance Publique – Hôpitaux de Paris (AP-HP) is the university hospital (CHU) for the Ile de France region, and the number one CHU in France. Serving an urban area with more than 11.5 million inhabitants, it is also a unique healthcare enterprise. In what way? "The volumes we deal with, as we are also the number one medical facility in Europe," explains Professor Lepage: in terms of the number of hospitals (currently 37, including 3 provincial hospitals and a homecare agency), the number of

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"A context like this requires homogenisation and standardisation to achieve efficiency," continues Professor Lepage. "It would be impossible to go case by case."

MULTI-FUNCTIONAL, MULTI-SITE COVERAGE

Yet that was indeed the situation historically, with 37 hospitals, many different applications and suppliers, and configuration handled hospital by hospital. "Until the first decade of the century, there could be several Laboratory Information Management Systems (LIMS) per hospital, one for each of the hospital's laboratories. Furthermore, each system was physically located in the laboratory," explains Professor Lepage. This resulted in a situation that was complicated, costly and, above all, difficult to maintain, at a time when a new governance was emerging, aimed at restructuring, modernising and developing the institution's performance.

MIPS first became involved with AP-HP before 2005, when it responded to a call for tender for three hospitals, with the GLIMS solution.

beds (more than 22,000) and the number of patients. "AP-HP handles around 1 million hospitalisations and 4 million consultations each year. 50% of the French public passes at least once through the AP-HP!" Nearly 90,000 people work there. To address the geographical demands, and to offer patients coherent and homogenous care, 12 hospital groups were created, which additionally allowed the pooling of administrative and logistic activities.

AP-HP also has 121 laboratories spread throughout the hospital groups, covering all specialities: biology, genetics, biochemistry, parasitology, toxicology, pharmacology, etc. These carry out 'routine' exams, but also very sophisticated activities –within the same laboratory, notably in the domain of research.

> " GLIMS perfectly responded to the needs of the laboratories for information sharing and openness, supporting the restructuring and thereby contributing greatly to the overall objectives of modernizing the AP-HP. " Professor Eric Lepage

GLIMS's functionalities differentiated it from the competition, especially in terms of the configuration possibilities (with an internal programming language) which allowed it to cover all the specialisations of the laboratories (45,000 different analyses), and its integration capabilities, both with laboratory equipment and with the patient files. "GLIMS's versatility definitely played a role," adds Professor Lepage. "The decision was clearly made based on the functional aspects; GLIMS was better than the others." In 2006, two new calls for tender were won, this time for three hospital groups (with a total of seven hospitals). This was followed in 2007 by an additional eight hospitals, then

another five through a contract amendment, bringing the total number of AP-HP facilities using GLIMS up to 23.

But what fundamentally differentiates GLIMS, as well as constituting one of the foundations of its integration within AP-HP's modernisation policy, is its ability to support the global sharing of infrastructure and resources, especially during the creation of hospital groups. Natively multi-site, GLIMS allows each hospital group in which it is installed (12 in total) to share information and use a single database, eliminating duplication and multiplication of resources.
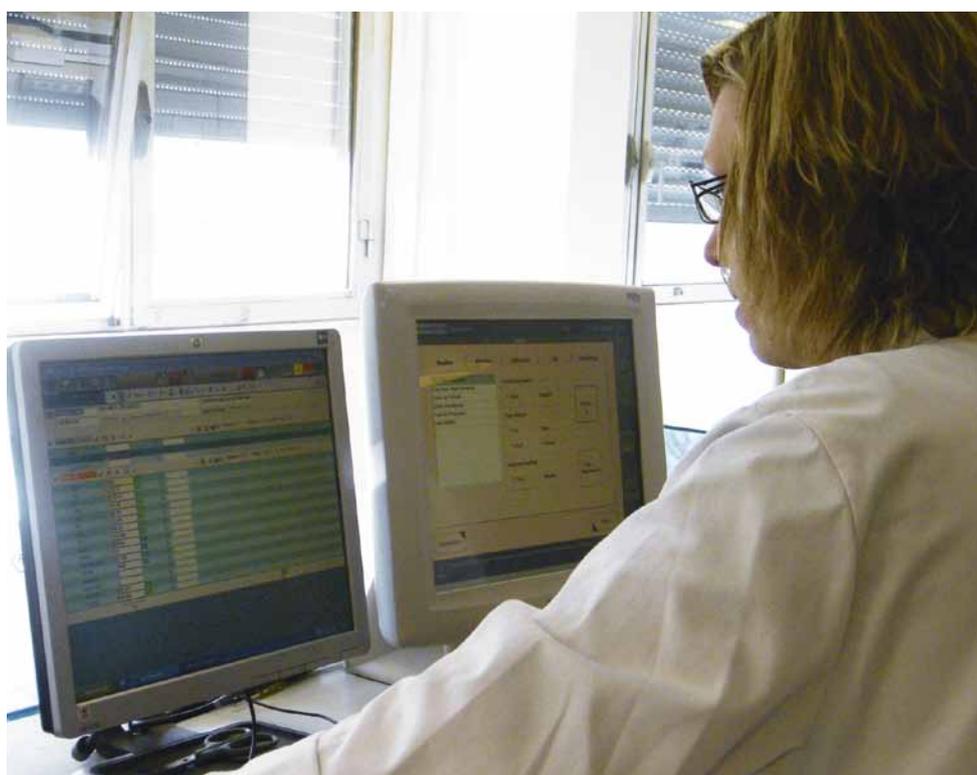
GLIMS lab information management system

- Functional coverage for all types of laboratory exams: biochemistry, haematology, immunology, pharmacology, toxicology, etc

- Feature-rich functionality: speed, performance, flexibility of configuration and architecture, scalability, automation, etc

- Evolutive and natively multi-site solution that uses a single database

- Can be integrated with information systems using industry standards

- Complete traceability, which is a significant advantage for achieving accreditation

This evolution was not originally planned, but is made possible by the solution's own architecture.

FROM FRAMEWORK TO DEPLOYMENT

Today, nearly 80 of the 121 laboratories are already equipped with GLIMS, following a methodical process project plan run by the AP-HP's Patient Information System CCS, managed by Professor Lepage. In accordance with this plan, following the initial framework stage, the design phase was carried out, including the construction of a common core for each discipline, and a catalogue of biological analyses common to all the AP-HP laboratories. This common core (covering approximately 80% of all analyses) can be extended as necessary for some specific laboratories, such as genetics. The GLIMS serving the hospital groups is centralised and installed on a shared server on the AP-HP's IT production site. Currently, all of the GLIMS results are transferred to the AP-HP patient file, as well as to the Electronic Patient Record

(EPR). The final work is now being carried out to allow electronic requests from the patient file to be integrated into GLIMS.

The first deployments were carried out by MIPS, and then competencies were transferred to Professor Lepage's 15-person team, made up of both experts in the field and IT professionals. "AP-HP decided to manage its IT system using internal resources, with the necessary core competencies. This is indispensable in the medical field," Professor Lepage highlights.

The French public health code requires that, as of November 1 2016, all laboratories must be accredited in order to continue to carry out their activities. "The accreditation requires laboratories to be able to show their ability to conduct analyses in complete security for the patients," concludes Professor Lepage. "Within this process, it is obvious that the laboratory management solution, in this case GLIMS, strongly contributes to the security and quality of the exams." •

Benefits of GLIMS

- Improves the quality of work of laboratory personnel, by providing a modern, secure system with rich functionality

- Allows sharing of resources and data by the laboratories for cost-effectiveness in line with AP-HP's goal of restructuring and modernising

- Removes obstacles, and smoothes the coordination and sharing of best practices that contribute to performance and patient care quality

- Provides a single access point to the patient's diagnostics record

- Supports the standardisation of exchanges within the information system applications

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