Customer Case Study

# ATIH
## Streamlined and Automated French Healthcare Environment

**Solution:**
Process Automation

**Product:**
BEA WebLogic Server® 8.1

**Industry:**
Healthcare

**Country:**
France

### Business challenge
Overcome slow, inefficient manual processes used to exchange and process data between hospitals and regional healthcare agencies. Meet the demand for increased frequency of administrative data filing on areas like pathology, patient treatment, and diagnosis.

### Solution
A J2EE architecture underpinned by BEA WebLogic Server 8.1 manages data exchanges across secure connections, automates the generation of healthcare activity metrics, and accelerates healthcare budget evaluation and allocation.

### Results
Reduced data collection and processing time from one week to one minute. Moreover, statistics that used to take months to calculate are now available in real-time using a scalable, secure, and high performance environment. It also enabled the organization to increase the frequency of data exchanges and processing.

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### Customer brief
Founded in 2000, L'Agence Technique de l'Information sur l'Hospitalisation, or ATIH, is the French public authority responsible for the technical coordination of the country's main hospital information system. This system, which is called Programme de Médicalisation des Systèmes D'information (PMSI), is used to collect and process information concerning patient visits and treatment in both public and private hospitals in France. Among many processes, PMSI measures patient and hospital activities, helps determine budget allocation, and gathers pathology data. ATIH was founded in 2000.

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*Dr. Alireza Banaei, Architect and Platform Designer, ePMSI Manager and Project Manager, ATIH*

## Business process challenge

Until recently, hospitals in France mainly relied on manual processes to exchange critical information with regional healthcare agencies, the Agences Régionales D'hospitalisation (ARHs). "The hospitals entered data in home-grown applications developed by ATIH and mailed the data stored on disks to ARH," explained Dr. Alireza Banaei, Architect and Platform Designer, ePMSI Manager and Project Manager, ATIH. "We were dispatching up to 15,000 discs every year to the regional ARHs. This spanned more than 150 million records and up to seven gigabytes of data."

Once each ARH received the disks, they then had to process the information through other ATIH proprietary applications. Moreover, they had to consolidate data in a regional database and generate more than 40-detailed activity tables for each hospital, covering such aspects as pathology, patient treatment, and diagnosis. The entire process could take up to nine months. These metrics were of immense value and were later be used by the French Ministry of Health to calculate individual budget allocations.

Two crucial factors mobilized ATIH into considering a migration of the PMSI system. The first was a switch to activity-based pricing; the second was an increase in the frequency of filing data from biannually to quarterly. Quite simply, the ARHs could not cope with the multiplied volume of disk exchanges from the nationwide network of 3,000 healthcare organizations.

## Solution

ATIH was confident that a Web-based solution would allow the hospitals to submit their data to central servers across secured connections. This move required the rewriting of all existing applications used by ARHs in Java. According to Dr. Alireza Banaei, only one application infrastructure company had the product depth, experience, and vision to help ATIH achieve this migration—and that was BEA.

"BEA WebLogic Server is the world's leading application server with proven capacities," he said. "This reliable, secure infrastructure allows us to develop a scalable, platform-independent system in a J2EE environment. Furthermore, BEA has an unbeatable reputation for high quality support."

ATIH's new 'ePMSI' system is underpinned by BEA WebLogic Server 8.1 and Sun servers. The application server plays a major role in the company's architecture and it demanded a reliable and proven technology. "The application server is the core component of our healthcare management system," Dr. Alireza Banaei continued.

The application server uses front-end EJBs to manage user interactions as well as to handle exchanges with the underlying servers, which process the statistical data. ATIH performed the ePMSI development and deployment within 18 months.

BEA Support and BEA Education Services provided support and training to enable the in-house team to redevelop the legacy applications quickly. A tailored on-site training course was delivered to the team, coaching them on advanced EJB development

skills. And BEA Support provided a high standard of front and backline support throughout. "Thanks to Java, we were able to redevelop our legacy applications really quickly. BEA Support Services were invaluable here and their involvement was much greater than mere technical support," he added.

At the end of the implementation phase, the workload was increased from a handful of users to 5,000 within only four months. The performance of BEA WebLogic Server was never questioned. "Today, we have 8,000 users and this figure is expected to double. We are confident that BEA WebLogic Server will be able to manage this level of scalability."

## Results

Following the migration of the PMSI system to the new browser-based environment, ATIH has experienced significant improvements in performance, manageability, and cost savings. Since ePMSI went live, for example, more than 32,300 uploads have been automatically processed by ePMSI, thereby eliminating 32,300 manual disk uploads. The ePMSI system now also generates reliable real-time metrics, which are helping to streamline and accelerate healthcare budget evaluation and allocation. Numerous controls, such as data formats, have also been automated, all of which has resulted in substantial increases in efficiency. The moment files are forwarded, each hospital can began data processing and obtain accurate information on specific activities in less than one minute. National Inspectors can also now focus more closely on their core business: data analysis and validation. Previously, it took up to one week to submit, process, and return the data using floppy disks and traditional mail. Using the new system, this entire operation can be completed in one minute—which is equivalent to a 10,000-fold increase in performance.

"The project has transformed our organization," said Dr. Alireza Banaei. "Data collection and processing comply with formal frameworks based on clear roles and responsibilities. We now have a single contact in each ARH who is in charge of account generation. This individual is connected in turn to one person in each hospital, who is responsible for the management of their own organization."

The switch to filing data quarterly as opposed to biannually is no longer a challenge either. In fact, there are ongoing discussions about this filing being changed to a monthly process. Either way, ATIH knows that this will not hinder the performance of ePMSI.

"With BEA WebLogic Server, we were able to meet the requirements of our evolving business. Following the move from biannual to quarterly management, we are now ready to further accelerate our management pace," Dr. Alireza Banaei concluded. "Now we have an open, high performance environment, we are considering sharing our data with other departments. For instance, the identity management system of the ePMSI project will soon list 15,000 French healthcare professionals."

## About BEA

BEA Systems, Inc. (NASDAQ: BEAS) is a world leader in enterprise infrastructure software, providing standards-based platforms to accelerate the secure flow of information and services. BEA product lines—WebLogic®, Tuxedo®, JRockit®, and the new AquaLogic™ family of Service Infrastructure—help customers reduce IT complexity and successfully deploy Service-Oriented Architectures to improve business agility and efficiency. For more information please visit *bea.com*.

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