

TELUS TRANSFORMS HEALTHCARE IN CANADA USING THE WEBMETHODS PRODUCT SUITE

Challenge

As Canada's leading electronic healthcare solutions provider, TELUS wanted to create the nation's most comprehensive Electronic Health Records (EHR) system. The system would give clinicians immediate and secure Web-based access to patient e-health records at any time.

Solution

TELUS built on its many-year investment in the webMethods technology to deliver its first provincial Drug Information System (DIS) for Newfoundland and Labrador. The solution leverages the webMethods product suite for integration, Service-Oriented Architecture (SOA) governance, portals, Business Process Management (BPM) and Business Activity Monitoring (BAM).

Benefits

- Delivers complete patient data at the point of care
- Saves lives by reducing errors and keeping providers informed
- Reduces costs by automating processes and leveraging existing technologies
- Meets HL7v3 standards for electronic health information exchange
- Scales easily to meet the increased demand for EHRs
- Affirms TELUS as a market leader in helping to transform healthcare in Canada



TELUS Health Solutions is helping lead the change in Canadian healthcare through innovative and proven information communication technology. TELUS ranked #1 in Branham's Top 10 List of Healthcare IT Companies in Canada in 2007 and 2008, and was named 2008 Health Company of the Year by the Information Technology Association of Canada. The company handles millions of healthcare transactions each year and manages more than 4 million drug cards, covering 8.5 million Canadians. Many of its solutions are based on webMethods technology.

Get There Faster.™

“We made a strategic decision nine years ago to use webMethods as our integration platform, and we continue to reap the benefits today. Many of our products and solutions touch the webMethods technology in some way.”

Jane Goguen | Product Director, Assure EHR | TELUS Health Solutions

Transforming healthcare in Canada

Canada is investing billions of dollars to build an Electronic Health Records (EHR) system that will enable healthcare providers, coast to coast, to access and update any Canadian’s health record electronically and securely. By 2016, the plan is for every Canadian to have an e-health record, containing a variety of medical documents, from doctor’s notes and diagnostic images to prescriptions and test results.

TELUS Health Solutions is helping Canada “get there faster” by delivering a Health Information Access Layer (HIAL) solution that aligns with the Canada Health Infoway Blueprint and will enable every provider in the province of Newfoundland and Labrador to access DIS data. This is among the first provincial DIS systems in Canada.

The system built on the webMethods technology from Software AG:

- Gives healthcare providers immediate access to EHRs at the point of care
- Updates EHRs in real-time, 24/7, integrating data from many sources
- Improves collaboration between providers for the best possible patient care
- Facilitates new ways to share information that will lead to better business processes to improve patient care
- Helps healthcare providers work more efficiently, leading to lower costs and shorter wait times

The growing drive toward EHRs

The benefits of EHRs are well promoted. In 2009, President Obama said the U.S. will invest \$50 billion in the creation of EHRs as part of the economic stimulus package. In Canada, the federal government has invested more than \$2 billion in Canada Health Infoway, the agency dedicated to making EHRs a reality in Canada. Provinces and health regions in Canada have committed a similar investment.

One by one, Canadian provinces are adopting EHR systems. “The most viable of them will adhere closely to the Infoway HIAL model, a set of detailed technical specifications that assures interoperability, consistency and quality,” said Mike Schmidt, TELUS senior director solutions architecture.

Building a better HIAL

While some provinces are installing “partial” HIALs, Newfoundland and other provinces that adopt the TELUS solution will benefit from a “solution designed from the ground up to be a HIAL,” said Jane Goguen, TELUS product director.

“Our HIAL,” she said, “has the process control and routing functionality needed to bring everything together to assure timely and secure access to the information in a patient’s profile.”

At the core of the HIAL is the TELUS Health Integration Platform, the foundation of many TELUS offerings, which is based on the webMethods Enterprise Service Bus (ESB).

The Health Integration Platform brings together data from virtually any system, including care-provider registries, domain-specific clinical data repositories, hospital-based clinical information systems and pharmacy practice systems.

To access the DIS data, a healthcare provider can use a portal, such as the Care Provider Portal TELUS developed using webMethods technology. He or she can then update the EHR data in real-time, so that the next provider has the latest, most accurate patient record. Providers can also access the same data through their EMRs connected to the HIAL.

According to Schmidt and Senior Solutions Architect Christopher Ford, the TELUS HIAL offers these competitive advantages:

- Easy extensibility—a canonical approach to message handling versus point-to-point mapping is more efficient since domains and new versions of messaging standards can be added easily
- Faster integrations—before it would take eight hours to integrate a new HL7v3 message; with the TELUS HIAL this is done automatically in minutes
- Strenuous security—detailed logging facilities record which people looked at which records to improve security
- High reliability—with uptime of at least 99.99%
- High data quality and integrity—because every message is translated into a standard format for exchange between systems

Leveraging the webMethods product suite

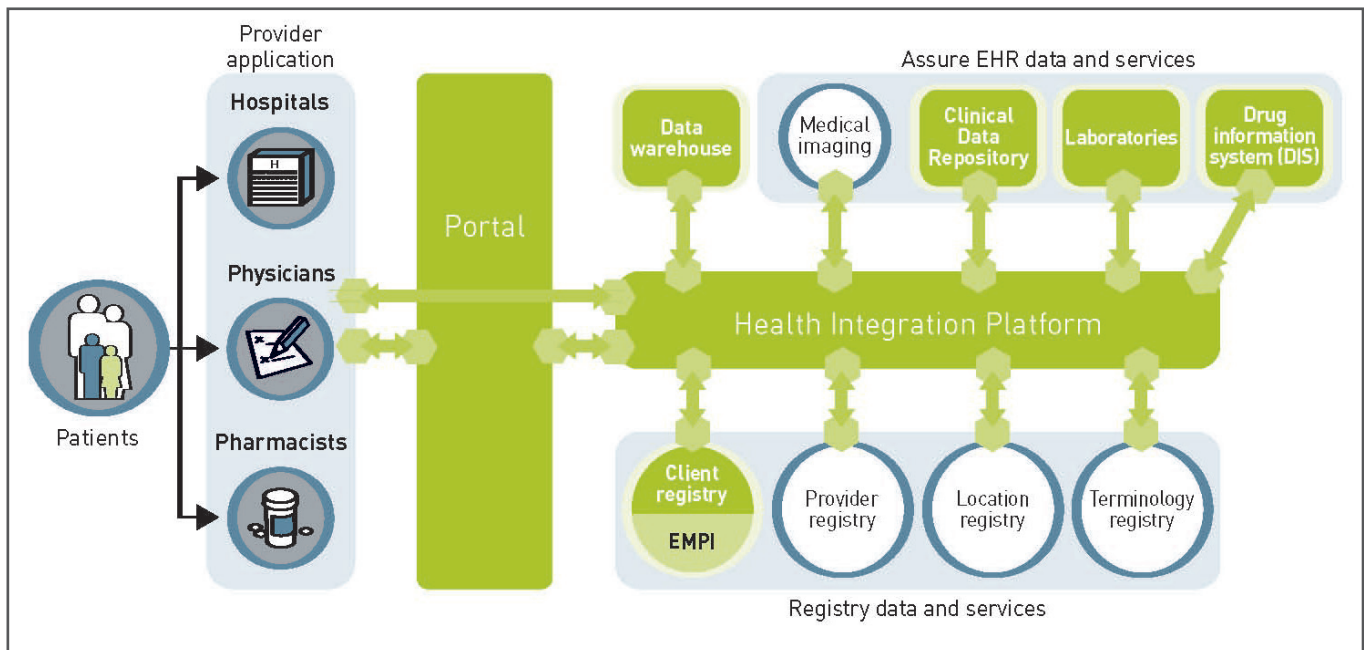
The TELUS HIAL utilizes almost the entire webMethods suite. For example, the webMethods ESB integrates all applications and systems as the key component of the TELUS Health Integration Platform. Healthcare providers can use systems they already have to access EHR data.

webMethods Broker provides the messaging backbone to assure fast response times as well as the secure, reliable information flow between systems.

Using webMethods Optimize for Infrastructure, TELUS has visibility into the HIAL infrastructure to proactively identify and resolve bottlenecks. TELUS measures Key Performance Indicators (KPIs), such as time to complete transactions end-to-end. This

helps TELUS optimize HIAL performance and assure it is meeting established Service Level Agreements (SLAs).

TELUS also uses CentraSite™ from Software AG to enforce and manage policies of all HIAL Web services in a central registry. Using the Software AG service mediation layer, TELUS was able to build strenuous logging facilities to improve HIAL security.



The Health Integration Platform, based on the webMethods ESB, connects a wide range of systems so healthcare providers have a single view of a patient's complete e-health record—or EHR—for timely, accurate decision-making.

Growing on a webMethods foundation

"Nine years ago, we recognized the need for a solid integration platform that would tie all our systems together," Goguen said. "We made a strategic decision then to use webMethods, because the platform was cost effective and also offered much more than just integration."

TELUS has been using it to continue to transform healthcare in Canada ever since.

"Integration is so key to us—being able to bring together disparate systems," Goguen said. "webMethods is the glue that helps us tie it all together."

Using webMethods technology, TELUS Health Solutions also operates a market-leading multi-benefit claims submission and switching platform that processes millions of claims a year. More than 60% of all pharmacies in Canada are connected to the system. The solution handles several integration processes, such as:

- Claims adjudications between pharmacies and claims payors
- Dental claims transport and adjudication
- Workers' compensation claims in Ontario

TELUS was the first to use the HL7v3 messaging standards for the electronic exchange of invoicing, adjudication and payment documents for healthcare invoices in North America.

KEY COMPONENTS

webMethods Product Suite

The **webMethods Enterprise Service Bus (ESB)** is the backbone of the TELUS Health Integration Platform and is used in almost every TELUS offering.

webMethods Broker manages the secure flow of information between systems.

webMethods Optimize for Infrastructure gives real-time visibility into the HIAL and enables TELUS to monitor KPIs to improve performance.

webMethods Trading Networks populates data from diverse systems linked to the HIAL.

The **webMethods Business Process Management Suite (BPMS)** offers easy-to-use tools to streamline and automate business processes.

webMethods X-Broker provides a run-time environment, ensuring secure and reliable Web services delivery.

CentraSite™ provides SOA governance and lifecycle management.

TELUS also uses **webMethods portal** capabilities to build a single user interface to multiple Web applications for its claims process management solution.

ABOUT SOFTWARE AG

Software AG's 4,000 global customers use our software to improve business processes and drive an agile IT infrastructure. Our customers' goals are to reduce costs and increase flexibility and efficiency. We help them do this by optimizing and governing their operations and aligning IT with the business goals.

Our leading Business Infrastructure Software portfolio is used for data and system integration and modernization. It fosters new levels of IT agility through SOA and allows the rapid creation of new business processes with BPM.

Our 40-year history of success ensures our customers have a reliable platform for driving future business results – faster.

Software AG – Get There Faster

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