



**Customer:** Hospital District of Helsinki and Uusimaa (HUS)

**Web Site:** [www.hus.fi/](http://www.hus.fi/)

**Number of Employees:** 21,000+

**Country or Region:** Finland

**Industry:** Healthcare

#### Customer Profile

The Hospital District of Helsinki and Uusimaa is the largest collection of hospitals in Finland. More than 445,000 people use the services every year.

#### Software and Services

- Microsoft Server Product Portfolio
  - Microsoft BizTalk Server 2006 R2 Enterprise Edition
  - Microsoft BizTalk Accelerator for HL7
  - Microsoft Operations Manager 2005
  - Microsoft SQL Server 2005 Enterprise Edition

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[www.microsoft.com/resources/casestudies](http://www.microsoft.com/resources/casestudies)

## Hospital District Connects Systems, Improves Communications

“The efficiency of how we deal with patients has improved remarkably and the scalability of the solution means we can continue to grow for the foreseeable future—and this at a low cost.”

Mikko Rotonen, Development Director, HUS ICT and Medical Engineering

*The Hospital District of Helsinki and Uusimaa (HUS) is Finland's largest healthcare organisation. With over 445,000 people using its services annually, it needs an outstanding information system to ensure the wellbeing of patients. In 2007, HUS upgraded its IT environment from a host of disparate software to Microsoft® BizTalk® Server 2006 R2 Enterprise Edition. HUS hospitals can now collaborate efficiently in an environment that integrates different critical applications.*

#### Business Needs

The use of IT in the healthcare industry continues to grow rapidly every year. Reliable and streamlined messaging environments are becoming a necessity when dealing with the challenges modern hospitals face. They use a wide range of third-party applications tailored to different industry-specific needs. A constant exchange of information across hospitals, both internally and externally, is also vital to provide comprehensive medical care to patients. But hospitals deal with strict budgets, so their IT solutions need to be cost effective.

HUS knew the limitations of an unstructured

IT environment. As the largest hospital district in Finland, the organisation exchanges an estimated 72 million messages a year and needs to support different healthcare software applications and systems throughout its 24 hospitals. Processes ran on a complex information and communications technology (ICT) system, which offered limited scalability and inefficient collaboration.

HUS realised it needed a consolidated messaging infrastructure to improve the circulation of information. The system also needed to integrate with existing third-party applications, such as Health Level 7-based

healthcare industry software. As such, the solution needed to incorporate service oriented architecture (SOA) functionality for effective communication within the organisation and with partners. Mikko Rotonen, Development Director, HUS ICT and Medical Engineering, says: "We wanted an information environment that could streamline internal and external messaging and support our existing critical third-party applications. We also needed SOA functionality to integrate with various regional and national healthcare services."

With a constantly growing HUS patient base, the solution had to be fully scalable to meet expanding demands. And, to guarantee the safety of patient information and third-party applications, the organisation needed a reliable backup system. Cost efficiency and ensuring critical systems did not suffer downtime were also significant factors for HUS.

## Solution

HUS has always sought to use the latest ICT innovations, and, in 2006, it approached Microsoft to find an affordable solution to fit its requirements. After an evaluation of the organisation's existing system, Microsoft suggested BizTalk Server 2006 R2 Enterprise Edition. The product provides the standardised environment HUS needs and easily integrates with a variety of essential applications and software, critical to the operation of its hospitals. Furthermore, Microsoft Services consultants provided the expertise to make integration of the product as efficient and fast as possible.

The team carried out rigorous preliminary testing for two months at the end of 2006. The proof of concept explored the possibilities offered by BizTalk Server and Microsoft BizTalk Accelerator for HL7. HUS was

impressed with the results and full implementation began in 2007. "We examined the new system carefully and made sure that it was reliable. There were neither errors in message relay nor loss of messages," says Rotonen.

HUS implemented the information environment in just nine months, with no disruption to activities. Microsoft trained a small team, which then communicated the training to all remaining IT employees and vendors.

Because users are located across a range of different sites and hospitals, administration of the system would be impossible without a centralised management product. Microsoft recommended Microsoft Operations Manager 2005. The software provides the IT team with tools to monitor and control the environment and associated applications. With Operations Manager 2005 the organisation can centrally collect and analyse all systems data through a simple and easy-to-use interface. With this data they can maintain the hospitals' IT environment, preventing major issues from occurring and spend more time on strategic tasks within the organisation.

## Benefits

With the technology, HUS has established a consolidated, reliable messaging infrastructure. "With BizTalk Server 2006 R2 Enterprise Edition, we can integrate all our resources and applications across one environment—communication has never been better. The efficiency of how we deal with patients has improved remarkably and the scalability of the solution means we can continue to grow for the foreseeable future—and this at a low cost," says Rotonen. The safety of applications and information exchanged has been assured with the

addition of a backup system that can be activated within minutes of a system fault. Since the implementation of BizTalk Server, HUS can now:

- Collaborate faster and easier across the district between departments, hospitals and external healthcare services, resulting in thorough patient care
- Orchestrate all its third-party applications, due to the advanced interoperability BizTalk Server offers
- Process the exchange of information more quickly and with increased capacity. Throughput is currently 28 per cent higher than the previous system and still growing
- Take advantage of a cost-effective IT infrastructure—the potential for full scalability means HUS will not need to spend more money replacing the environment when the organisation grows
- Have a reliable system—highly available, and with automatic failover in case the server malfunctions, securing all data and software.
- Monitor the entire system using Operations Manager, helping the IT team be more proactive—so far, no major faults have occurred since implementation
- Reinvest the money saved with the new IT environment in other areas of the business