

MOBILITY ENHANCES PATIENT CARE

Patient care enhanced and medical staff increase productivity with flexible mobile solution



The medical industry has to meet legal requirements to retain patient information for several years. Managing the volume of paper amounting from medical records is a significant challenge. Records include doctors' handwritten notes, copies of scans or x-rays and test results. For some innovative hospitals, technology is transforming the way in which patient information is managed and eradicating the need for inefficient and unmanageable paper trails.

SOLUTIONS

- MOBILITY
- DATA CONSOLIDATION AND MANAGEMENT



CUSTOMER PROFILE

COMPANY: Spaarne Ziekenhuis hospital

INDUSTRY: Healthcare

COUNTRY: Netherlands

EMPLOYEES: 2,000

WEBSITE: www.spaarneziekenhuis.nl

CHALLENGE

When Spaarne Ziekenhuis hospital in the Netherlands opened a new building in 2004, it wanted to eradicate paper-based medical records. The hospital needed to overcome the storage issues caused by the retention of 15 years' worth of data, as well as other inefficiencies, such as delays caused by waiting for files to be delivered to the right ward.

SOLUTION

The hospital chose an IT infrastructure based on industry standard technology from Dell and Microsoft®. High performance Dell™ PowerEdge™ servers were implemented to act as terminal services to the UNIX-based hospital system. To ensure information access throughout the hospital, standardised Dell OptiPlex™ were deployed and flexible Dell Latitude™ notebooks used on mobile trolleys in wards.

BENEFITS

Get IT Faster

- Fast and reliable access to data improves staff productivity

Grow IT Smarter

- Mobile working helps doctors focus on patient care
- Centralised data improves service to patients

The Dell logo, consisting of the word 'DELL' in a stylized, white, sans-serif font inside a black circle with a white border.

Spaarne Ziekenhuis hospital in the Netherlands is a full-service hospital with 455 beds, 120 physicians and 600 nurses who are responsible for looking after 18,000 patients with an estimated 300,000 visits every year. When a new hospital building was opened at the end of 2004, this was seen as an opportunity to consider new ways to store patient information. With the government requiring that all medical data be retained for 15 years, physicians were keen to store data electronically. This would overcome other challenges they faced with paper-based records, such as understanding handwriting and misplacing records. Following various trials, a hospital information system based on UNIX was chosen.

The IT department reviewed processes for distributing patient information throughout the hospital, with the primary goal of minimising the complexity of IT operations. Although the hospital system was UNIX-based, the department wanted to build an IT infrastructure that used industry standard technology from Dell and Microsoft®.



“A SYSTEM LIKE OURS WOULD NORMALLY REQUIRE TWICE THE NUMBER OF STAFF. BY KEEPING IT SIMPLE WITH INDUSTRY STANDARD TECHNOLOGY FROM DELL AND MICROSOFT, WE HAVE LOWERED THE COST OF OWNERSHIP WHILE ENHANCING OUR UP-TIME AND SERVICE”

Michel Bouquet, ICT manager, Spaarne Ziekenhuis hospital

HOW IT WORKS

HARDWARE

- Dell™ PowerEdge™ 2950 servers
- Dell OptiPlex™ 745 desktops
- Dell Latitude™ D830 notebooks

SOFTWARE

- Windows® Server 2003
- Windows Server 2008
- Microsoft Systems Centre Operations Manager

SERVICES

- Dell Infrastructure Consulting
 - Assessment, design and implementation
 - Mobility
 - Data consolidation and management
- ProSupport

The hospital chose a solution consisting of high performing Dell™ PowerEdge™ 2950 servers which operate as terminal services connecting to the UNIX system. Dell computers were implemented throughout the hospital, with Dell™ Latitude™ D830 notebooks for office-based work carried out by doctors. To ensure medical staff could access patient information electronically while on the move – as well as on hospital wards – the hospital selected flexible Dell OptiPlex™ 745 desktops, which are used on mobile trolleys.

MOBILE SOLUTION IMPROVES MEDICAL STAFF PRODUCTIVITY AND ENHANCES PATIENT CARE

Spaarne Ziekenhuis hospital has become the first hospital in the Netherlands to provide patient information electronically with the new solution from Dell. All data is held centrally

on the Dell PowerEdge servers and accessed via the Dell computers available throughout the hospital. This operates in real-time, providing medical professionals with access to up-to-date information. This has helped drive efficiencies, freeing up doctors to spend more time on patient care rather than waiting for medical records to be delivered to the right department or trying to read difficult handwritten notes. Patients receive a better service thanks to records being standardised, centrally held and easily accessible.

Michel Bouquet, ICT manager, Spaarne Ziekenhuis hospital, says: “Having fast and reliable access to information is helping us introduce patient-oriented processes. Dell technology is empowering doctors with the information to prove the best possible care.”



“RELIABILITY IS ESSENTIAL TO US. WE SIMPLY CAN’T TAKE RISKS WHEN IT COMES TO PATIENT CARE. WE CHOSE DELL POWEREDGE SERVERS FOR THEIR PERFORMANCE AND STABILITY. THESE SUPPORT OUR INNOVATIONS EVERY TIME”

Michel Bouquet, ICT manager, Spaarne Ziekenhuis hospital

It also offers increased flexibility to help us improve our service. If doctors need to be contacted when off-duty, they can easily log on to the system following our security processes to access the latest information before providing medical advice. We have transformed the way we work.”

STANDARDISED INFRASTRUCTURE SIMPLIFIES IT PROVIDING SAVINGS OF 50 PER CENT ON IT STAFF COSTS

By implementing a standardised infrastructure based on Dell and Microsoft® technologies, the hospital has a system that is more efficient and easier to manage. Calls to the helpdesk have been reduced despite the fact that the number of applications used by medical staff has doubled.

IT managers are benefiting from tools such as Microsoft Systems Centre Operations Manager. This automates the management of the system to provide greater control by giving early warnings of potential issues.

Bouquet says: “We have been able to avoid the usual explosion in costs for IT employees and IT knowledge by using standardised technology that is more flexible and efficient. A system like ours would normally require twice the number of staff. By keeping it simple with industry standard technology from Dell and Microsoft, we have lowered the cost of ownership while enhancing our up-time and service.”

RELIABLE SERVER PLATFORM REDUCES RISK AND SUPPORTS INNOVATION

High performing Dell™ PowerEdge™ servers offer a backbone to the pioneering electronic patient system, and provide the stable and secure platform that the hospital needs. Their proven track record was one of the key reasons for choosing the Dell servers.

Bouquet says: “Reliability is essential to us. We simply can’t take risks when it comes to care. We chose Dell PowerEdge servers for their performance and stability. These support our innovations every time.”

In 2007, the hospital was able to introduce electronic dossiers for all data recording by nurses. The data recording takes place on Dell Latitude™ notebooks. All information is stored on Dell PowerEdge servers via a wireless network, eradicating the need for any paper during a patient’s stay in the hospital and also simplifies the shift transfers. Following tests on various notebooks, the Dell Latitudes were chosen for their flexibility. With 17” screens, these could stand easily on the trolleys and be read clearly whilst standing next to the patient, offering nurses the most possible mobility.

Bouquet says: “Not only have we overcome our problem with having to physically storing volumes of patient data, we can confidently introduce new ways of working which is enhancing patient-oriented care within the hospital. A paperless hospital fully understands the value of documenting information on core processes; the ‘I’ in ICT drives improvements in our business environment.”

LEADING-EDGE WINDOWS SERVER 2008 TECHNOLOGY TO DRIVE FORWARD PATIENT CARE

In 2007, the hospital became one of the early adopters of Windows Server® 2008. As the most advanced Windows operating system yet, the hospital will benefit from a range of new features, including enhanced security to prevent unauthorised access and management utilities to automate processes. This will give IT staff greater control over the IT infrastructure.



This will become the hospital's standard operating system, running on a platform of Dell™ PowerEdge™ servers. By investing in the latest Windows Server® 2008 and working closely with Microsoft® and Dell, the hospital's IT department is focusing its efforts on using the technology to support physicians and nurses, who can then better support the patients. The hospital will train approximately 400 users during January 2008, ready to go live with the operating system February 1st.

Bouquet says: "Windows Server 2008 will improve the automation of our system, which will give us greater control and manageability. We believe industry standard technology from Microsoft and Dell is the way forward. It keeps

our IT simple and manageable. We're happy to invest time and effort as an early adopter of technology as the reward is invaluable support back from Microsoft and Dell. Together they help us innovate and work successfully to achieve new levels of patient care."

For more information on this case study or to read additional case studies, go to www.dell.com/casestudies and www.dell.nl



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