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*Gerard Hensels  
 Head of ICT & Medical Technology  
 Kennemer Gasthuis*



## Netherlands Hospitals: Kennemer Gasthuis in Haarlem and Spaarne Ziekenhuis in Hoofddorp

**INDUSTRY** Healthcare

**SOLUTIONS** Enterprise Platform, Business Continuity and Replication, Storage Management  
**Hardware** — Hitachi Universal Storage Platform® V, Hitachi Universal Storage Platform VM (2)  
**Software** — Hitachi TrueCopy® Synchronous, Hitachi Device Manager; Hitachi Data Protection Suite, powered by CommVault®

## North Holland Teaching Hospitals Lay the Foundation for Data Growth with Hitachi Enterprise Storage

Kennemer Gasthuis in Haarlem and Spaarne Hospital in Hoofddorp are two different teaching hospitals in the North Holland provinces of the Netherlands that offer highly specialized medical care. They work closely together, not just by exchanging medical and scientific knowledge but also by sharing their IT infrastructure. Due to the explosive growth of data that the medical world is currently experiencing, new demands are being made on the IT environment. To address the vital need for greater storage capacity to digitally save patient files, X-rays and scans and store these for longer time periods, the hospitals chose a solution based on Hitachi enterprise storage.

Kennemer Gasthuis and Spaarne Hospital strive to deliver the best possible patient care and innovation, in both medical care and scientific practice. The STZ status, which has been awarded to both hospitals, is a perfect example of this. STZ stands for Samenwerkende Topklinische opleidingsZiekenhuizen (association of tertiary medical teaching hospitals). It is a collaboration of 27 large teaching hospitals that have the education and training of new consultants and medical specialists as an extra focus, as well as a commitment to scientific research. With this in mind, the two North Holland hospitals have set up a shared learning center in order to organize

education, training and science centrally and efficiently. Called the Linnaeus Institute, this center is focused on nurse training issues and supporting scientific research. This means that the quality of health care is increasingly important. In order to strengthen its position in the area of training and to be able to progress with developments in healthcare, it is important to have a solid infrastructure. Therefore, it is with good reason that Kennemer Gasthuis and Spaarne Hospital are working together on an IT level.

“The cooperation between the two hospitals creates economies of scale,” says Gerard Hensels, head of ICT & Medical

Technology at Kennemer Gasthuis. “By sharing our IT applications and infrastructure, we can buy new technologies, which we would have struggled to afford otherwise. This is why we also have a shared infrastructure for storing our data.”

### More Digitally Accessible Data

Society demands more and more from hospitals. Health insurers and patients are increasingly keen to express exactly what they want but the government is also contributing to the surge in information requirements. On the basis of these demands, it is necessary to constantly strive for improvement, and quality plays an important role in this. The amount of information that has to be digitally accessible is drastically increasing in the medical world. Files are forever getting bigger because, for example, hospitals are adding high-quality, detailed scans to electronic patient files more often. On top of this, medical information has to be stored for longer time periods. In the medical world especially, the accessibility of data is literally a matter of life and death. The explosive growth of data is putting new and greater demands on the IT environment.

“Our storage infrastructure had almost reached full capacity, so we had to look for a new solution,” explained Hensels. “We wanted to create a completely new storage environment, which would be better at meeting the requirements of the two hospitals. Things such as the constant



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accessibility of data, information security and scalability formed the basis of a solid IT infrastructure.”

Another important requirement was that the hospitals’ own personnel should be able to manage the environment as much as possible, so that the IT managers would be less dependent on the suppliers.

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### Implementation Process

Hitachi Data Systems began implementing the system in early 2009 and, in the first phase, Hitachi Data Systems clearly defined the organization’s information requirements. “Through thorough preparation, Hitachi Data Systems really knew how our IT architecture was put together,” said Hensels. “This brought up things which we hadn’t initially foreseen, such as a mirrored environment or synchronous mirroring with three locations and the fact that we wanted to double the original volume.”

Hitachi Data Systems offered a solution comprising one Hitachi Universal Storage Platform® V and two Hitachi Universal Storage Platform VM systems, complete with SAN components and backup applications. In order to protect the critical data in the best way possible, they installed a central storage environment in the primary locations at Haarlem and Hoofddorp.

Thanks to the permanent synchronization between the two locations via Hitachi TrueCopy® Synchronous, the information is secure. The total storage capacity has been extended to 80TB. This gives the hospitals sufficient capacity to expand for the time being and the capacity can easily be increased. A third location in Heemstede has been built with fallback scenarios in mind.

Other people, such as pharmacists, are able to use the infrastructure to save their information. In addition, this location forms a shared location for testing.

The hospitals had to move all of the existing information from the old infrastructure to the new one, which required the use of operating systems such as Sun Solaris, Microsoft Windows and Linux, as well as a VMware environment. “Before making the move, we started with a few sample and smaller applications. After a while the change just became an everyday task and we were able to work at a fast pace. After two months it was fully implemented,” explained Hensels. Hitachi Data Systems also trained six members of staff in the two hospitals so that they could manage the storage environment themselves.

### Outcome

The platform went into production in the middle of 2009. After a couple of weeks of trials, the new storage environment was working at full speed and everyone was and is enthusiastic about the technical performance as well as the cooperation. “We now have at our disposal a stable and reliable storage system,” said Hensels. “We manage the system ourselves but we can still rely on our supplier. And thanks to virtualization, we can make choices today that would previously have been inconceivable. We’ve become much more independent with regard to storage systems and can manage the whole architecture from a central management platform.” He added, “Because of Hitachi Data Systems’ experience in the medical world, this task was made for them.”



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