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*Maurice Steijvers  
 Team Leader, Automation of Centralized ICT  
 Organization (ICTS)  
 Maastricht University*

## Universiteit van Maastricht (Maastricht University)

**INDUSTRY** Education

**SOLUTIONS** **Replication, Storage Management, Modular Platform**  
**Hardware** — Hitachi Adaptable Modular Storage 2500  
**Software** — Hitachi TrueCopy® Synchronous software and Storage Navigator Modular 2 program  
**Services** — Project coordination provided by Hitachi TrueNorth Channel Partner PQR

## Maastricht University Prepares for Email Data Growth with Centralized Storage Platform

Although Maastricht University, founded in 1976, is the Netherlands' youngest university, it has made it into the top three of Dutch university rankings, and it is also attracting increasing numbers of students and academic staff from outside the Netherlands. One side effect of being such a fast growing university is rapid growth of the volume of digital data. To manage this challenge, Maastricht University chose a solution based on Hitachi Adaptable Modular Storage 2500.

Maastricht University operates with just under 14,000 students and over 3,500 staff members spread across six faculties. Email and e-learning are important focus points within the university's teaching profile. The amount of data involved is growing profusely. Students and staff need ever more space to store information on their email accounts. A 50MB inbox simply was not big enough anymore. As the university's Microsoft® Exchange environment was also up for replacement, the university's IT department decided to consolidate the entire email environment into Exchange 2007 and expand capacity.

Team Leader for Automation of Centralized ICT Organization (ICTS), Maurice Steijvers, explains: "Until recently we had two email

environments, one for students and one for staff. But looming data growth meant that situation would be difficult to sustain. Many of the faculties had their own IT departments, and stored data locally. That was also an area where we saw an opportunity to boost efficiency. It then turned out that old storage equipment was also up for replacement, which led us to decide to tackle all these issues in one all embracing project."

The university wanted to have the central ICT organization manage all IT affairs as much as possible. Apart from expansion of the storage capacity, another requirement was the merger of the different environments. "We were looking for one centralized storage platform for all email related data. Key requirements were futureproof

capacity, flexibility and, of course, good value for money," Steijvers says. The university's 14,000 students were to each have a 500MB inbox at their disposal. Standard storage capacity for staff members was to be raised to 1GB. And if the need were to arise, capacity would have to be easy to expand even further.

"Together with our regular supplier, PQR, we looked into which systems would meet our requirements," Steijvers continues. "Our IT environment is HP oriented, and we therefore preferred to have as much of the new equipment covered by a HP maintenance contract as possible. As a result, we initially looked at a direct attached storage system (DAS) by HP. But a storage area network (SAN) soon emerged as a better option for us. An external storage consultant and PQR advised us to consider the Hitachi modular storage solution, Adaptable Modular Storage 2500. And that system did indeed turn out to dovetail best with our requirements. With 480 disk positions, the Adaptable Modular Storage 2500 more than met our requirements in the area of scalability. But also in terms of price, Hitachi Data Systems simply offered the best solution," he recalls.

In February 2009, two Adaptable Modular Storage 2500 systems were delivered: one for the data center at the central ICT site in downtown Maastricht, and one for the Randwyck site. Each site now has 22TB of capacity available for Exchange alone.



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Both data centers run 50-50. That means that half of all mailboxes are stored in the Randwyck data center, and the other half in the downtown data center. In addition to serving as mail servers, both data centers are also used as file servers, and they operate with VMware.

### Disaster Recovery

Both systems contain a copy of all mailboxes, so that email data can be recovered quickly from the other system when a system goes down. That limits recovery time to an absolute minimum, and it provides for optimal availability of students' email data. Maastricht University uses Exchange 2007 replication options for the replication of email. VMware and the file server environment use synchronous replication options of Hitachi TrueCopy® Synchronous software.

### Implementation

"Project coordination duties were taken on by PQR, and we can look back on a very smooth implementation process," says Steijvers. "We started with a kick-off meeting, where all parties involved laid down an implementation plan, fleshed out the technology to be used and ensured their activities were in sync. We drew up a tight plan of action, and everyone stuck to it without fail. We started rolling out the new system in early February. Equipment installation and storage environment setup were concluded within four hours," he explained. The project was subsequently handed over to Steijvers and his team, leaving PQR free to start configuring the Exchange environment and Microsoft Windows® 2008.

"We first got to work on the new systems. We soon found that centralized storage management is quite different from local storage systems. Internal knowledge is something we still have to work on. Together with Hitachi Data Systems, we are currently looking at followup courses that will further explain the use of Storage Navigator Modular 2 program in combination with the SAN environment," Steijvers notes.

All users, students, alumni and staff members have meanwhile been using the new system for a few months. Their first experiences are positive. "We are playing it safe with our new storage environment. We have more capacity available, and can therefore offer better quality to our students and staff. The system does exactly what it says on the box," says Steijvers.

### Future Centralization

In the long term, the SAP environment, library systems and Blackboard, the university's e-learning software, will also migrate to the Hitachi platform. That will finally lead to a centralized platform for all of the university's IT applications. "With the Adaptable Modular Storage 2500 we have acquired a complete storage solution, which allows us to face the future with confidence," Steijvers concludes.

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