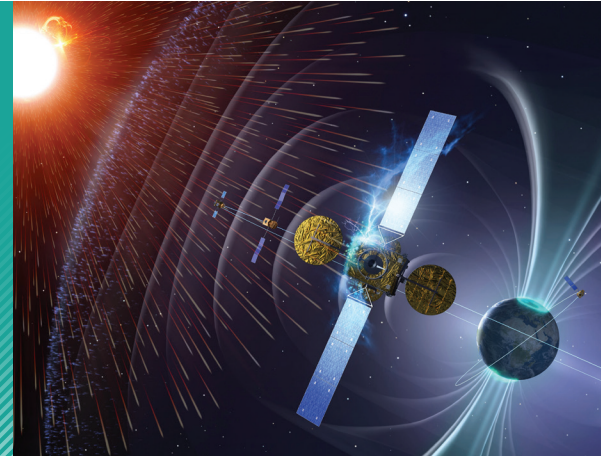


“With HDS, we are set to remain at the forefront of weather, climate, earth and space research. For us, 24/7 availability is a must, and we simply cannot afford to lose instrument data from cutting-edge satellite missions and scientific experiments. The HDS solution gives us the reliable storage we need.”

*Johan Bulcke, IT Manager,  
Royal Belgian Institute for Space Aeronomy*



## Belgian Science Institutes Support Cutting-Edge Weather, Climate, Earth and Space Research With Hitachi Technology

**Challenge:** Support stellar research projects and push the boundaries of weather forecasts without overstressing public budgets.

**Solution:** Implement a simple, efficient and fault-tolerant high-end storage solution that maximizes throughput and minimizes unused resources.

**Outcome:** Streamlined storage management with cost-efficient architecture increases user satisfaction for leading researchers.

### The Challenge

The Space Pole comprises three national research institutions: the Royal Meteorological Institute of Belgium, the Royal Belgian Institute for Space Aeronomy and the Royal Observatory of Belgium. The three institutions share one campus near Brussels, Belgium and employ more than 500 people altogether, from researchers and PhD students to administration staff.

The three organizations are at the forefront of research into weather, climate, earth and space sciences. Leading research partners around the world, such as the European Space Agency, rely on data and results from the Space Pole institutes to deepen their understanding of our universe.

As each of the three constituent institutions has a different focus and works on a broad range of different projects, the technical requirements within the Space Pole vary greatly. What research projects across the institutes have in common, however, is that they all generate ever-increasing volumes of data to be processed and analyzed to gain new insights.

Coping with this constant growth in data was pushing up the costs and eating into the budgets of all three institutions. Emmanuel Strobbe, IT manager at Royal Meteorological Institute of Belgium, explains: “We realized that to continue delivering the computing capacity and performance that researchers need to conduct experiments, gain new insights and push the boundaries of scientific discovery, we needed to consolidate our data management processes.”



**Space Pole:** Royal Observatory of Belgium, Royal Meteorological Institute of Belgium, Royal Belgian Institute for Space Aeronomy

### INDUSTRY

Research and Development

### SOLUTIONS

Storage, File, Data Protection

### HARDWARE

Hitachi NAS Platform 4080, Hitachi Virtual Storage Platform G400

### SOFTWARE

HNAS 4080 software bundle, Hitachi Command Suite, Hitachi Device Manager

### SERVICES

Advanced implementation, training, monitoring and management services provided by Hitachi Data Systems Global Services Solutions

## The Solution

The Space Pole invited a dozen vendors to develop a new central storage architecture. Fabienne Leclère, project manager at the Royal Belgian Institute for Space Aeronomy, comments: "We laid out our functional requirements very clearly so that all of the vendors could come up with the solution that meets our exact needs. We received a lot of very different proposals, and the HDS offering stood out. What initially attracted us to the HDS solution was how clear and straightforward it is: There was no unnecessary complexity."

After evaluating the different concepts, the team decided to partner with HDS to consolidate all its storage environments onto a single central platform. The three institutes worked closely with the HDS team to tailor the solution to their specific requirements. Bulcke comments: "Working with the technical specialists from HDS was great. They were highly competent, answered all of our questions and helped us get hands-on experience quickly."

In a team effort, the three institutions and HDS set up a highly redundant cluster solution spread across two data centers with a total capacity of 8PB. The joint team installed two Hitachi NAS Platform 4080 systems in combination with two Hitachi Virtual Storage Platform G400 models at each data center. All components serve data in parallel to maximize throughput and minimize unused capacity. Leclère elaborates: "With this configuration, we get the benefits of high-end performance and asynchronous disaster recovery, using all storage resources as efficiently as possible. In the event of a disaster, researchers can continue to work without long delays, thanks to a very short failover time."

VSP G  
Series for  
Performance

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## Outcomes

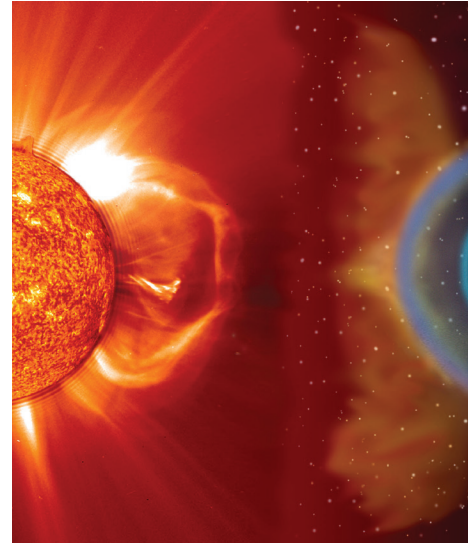
- Consolidated, simplified storage cut administration time by 50%
- Direct costs reduced by 50%.
- Increased user satisfaction.
- Top support for reliability and performance.

## The Outcomes

The Space Pole now has an integrated storage solution that is easy to manage with just a single storage tier. Leclère explains: "The Hitachi storage system meets our requirements perfectly. And perhaps more importantly, the service is excellent. We really enjoy working together with HDS and wish more vendors would provide this level of service."

Due to the simple solution architecture, the Hitachi storage environment is highly cost-efficient, reducing direct costs by 50%. By using many disks in parallel, the solution gives the institutions fast access to their data without the need for manual management of storage tiers. Fabian Roosbeek, IT manager at the Royal Observatory of Belgium, confirms: "With over 1700 spindles being used concurrently, our researchers benefit from consistently good performance. And it potentially doubles the performance by using all the spindles for active data serving," he explains. "Whatever research project our colleagues are working on, we know we can cope with the demands and enable them to gain new insights."

The Space Pole is also satisfied with the preventive maintenance service from HDS. When a disk fails, or reports that it is due to fail, HDS service engineers replace it before there is any impact on reliability or any risk of data loss. The solution automatically and rapidly rebuilds the cluster to include the new disk, ensuring that there is no loss of performance or service to researchers.



Roosbeek concludes: "Thanks to the HDS solution, we can give our [end] users more freedom. We are happy to be able to provide a better service, increasing user satisfaction and enabling them to take on bigger and more challenging research projects. The transparent system architecture substantially simplifies management, saving us significant time (50% less) and effort previously spent on low-level administration." He continues: "Outstanding reliability in combination with brilliant support from HDS gives us full confidence in the solution. With HDS, we are set to remain at the forefront of weather, climate, earth and space research. 24/7 availability is a must and we simply cannot afford to lose instrument data from cutting-edge satellite missions. The HDS solution gives us the reliability we need."

## About HDS

Digital transformation improves enterprises' cost-efficiency, time to market, customer experience, and revenue through better data management. Hitachi Data Systems uses data to power the digital enterprise. [HDS.com](http://HDS.com).

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