
Optimizing Data Center Infrastructure for the Present and for the Future Case Study



Processing and Securely Storing 1 Petabyte of Data to Continue to Drive LIH's Mission Forward

The Luxembourg Institute of Health (LIH) is one of the major healthcare research institutes in Luxembourg. To continue its pioneering work that could save lives in the years to come, LIH aimed to expand its IT infrastructure. “Redundancy” was the keyword, and strong partnerships were deemed essential. Integrator Conostix selected Panduit to meet all requirements, with Rexel coordinating logistics.

LIH's mission is to have a direct and significant impact on public health through the application of knowledge and technology derived from qualitative research. The Belgian institute closest in operation is Sciensano. However, unlike Sciensano, which gained recognition mainly during the coronavirus crisis, LIH has long been known for its leading-edge research among the public.





Organization

[Luxembourg Institute of Health \(LIH\)](#)

Industry

Healthcare

Country

Luxembourg

Strategic Objectives

Building a data center infrastructure that was scalable for their future to match ever-evolving technology requirements

Partners

- [Conostix](#)
- [Rexel](#)

Solutions

- [HD Flex™ Fiber Cabling System](#)
- [QuickNet™ Fiber Cabling in the Data Center](#)
- [PanMPO™ Connector](#)
- [G5 iPDUs](#)

Benefits

- Continuing collaboration to position for success
- Future-proofing data infrastructure designed for long-term development

Business Challenges

AI and ML Demand Significant Data Capacity

LIH focuses its efforts across six sites in Luxembourg on two key areas: cancer and immune disorders.

John-Yves Bertrand, IT Infrastructure Team Leader at LIH, explains, “Advancements in medical research are now driven by artificial intelligence and machine learning. This means our 470 staff and researchers must securely store and process vast amounts of data. Our existing data infrastructure was reaching its limits, given that volumes are set to increase.”

Strategic Objectives

Scalability is at the Top of the List for Requirements

To preempt issues, LIH issued a public tender in 2021 to build a new data center infrastructure. At the top of LIH’s list of requirements was scalability.

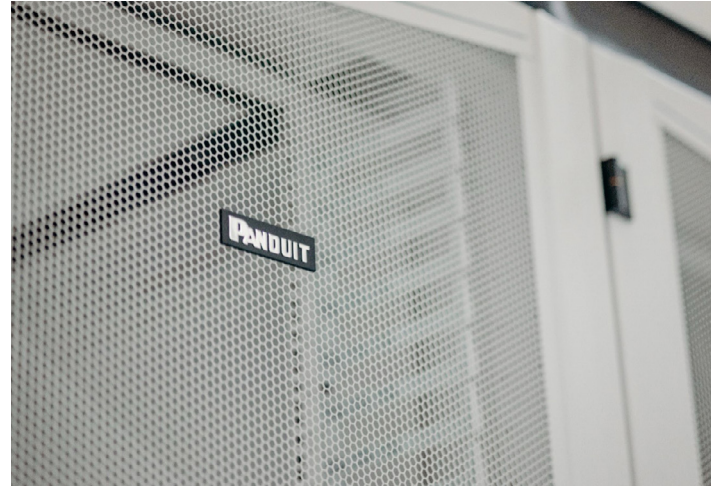
“Research is ever-evolving. We wanted an infrastructure we could reconfigure as needed, ensuring a future-proof solution,” says Bertrand. The second item on the agenda was finding a redundant and reliable operation, under no circumstances should these systems fail because they are driving real-time research and handling sensitive information. In addition, the energy efficiency of what was being built was an important point of attention.”

Innovative Solutions from Panduit

Cooling, Copper, and Fiber Data Cabling Make the Difference

The technology that best met LIH's needs was clear for data security specialist Conostix.

Business & Sales Development Manager Jean-Marc Servais explains, "Only with Panduit cabinets could we build a solution to the customer's specifications. This was achieved through Cold Aisle Containment technology for efficient cooling and pre-assembled data cabling in copper (QuickNet™) and fiber optic (HD Flex™). The infrastructure is duplicated across two identical halls. To handle massive data volumes, we trust Panduit for the right connectivity."



Four Hundred Servers Pave the Way for Flexibility

The numbers are staggering if you're not familiar with medical research. The four hundred servers in the two halls account for a storage capacity of 2.5 petabytes and a RAM of 15 terabytes. Using Panduit technology, Conostix built a total of twelve cabinets.

Erik Adriaenssens, Territory Account Manager Panduit, explains some of the components.

"Inside, everything is there for the flexibility that LIH wanted. A good example is the PanMPO/MTP Connector. You can change this on-site from gender (male to female and back) and polarity without any tool. That makes it easier to make changes or additions in the future. Or the G5 iPDUs that enable a higher output density and more power capacity from a single power distribution unit."

Benefits

Meeting the Deadline

Conostix played a crucial role in tailoring this solution for LIH. Conostix is the only company in Luxembourg with the 'gold partner' label but, according to Adriaenssens, is much more than that.

"They are truly our ambassador for Luxembourg," he says enthusiastically. While not the largest project with our technology, it is one of the most comprehensive, covering our entire range."

"Building everything according to the customer's specifications and within the predetermined deadline wouldn't have been possible without expertise in our products, organization, LIH's working methods, and the infrastructure in the Luxconnect data center in Bissen," he adds.



Continuing Collaboration will Equal Continued Success

Adriaenssens and Servais highlight a second key to success in this story which was the role of Rexel:

“Expertise is needed there too, to bring a project of this magnitude to a successful conclusion,”

The datacom team in Wallonia within Rexel proved its added value. Anne-Françoise Genot and Laurent Peiffer ensured that Conostix could always continue working.

“We worked with just-in-time deliveries due to limited space in the data center. This required extensive planning and good communication. Fortunately, there was already a basis of trust between Conostix, Panduit, and Rexel. While obstacles arose, we found solutions together in an open atmosphere to respect the timing and budget.”



Future Proofed and Ready to Build Upon

The result of the project ended with a very satisfied customer and with the approval to build out LIH's second hall.

John-Yves Bertrand, IT Infrastructure Team Leader for LIH explained, “We are now fully prepared for the future. Our new data infrastructure is built in such a way that we will be able to use it for as long as possible, even if our needs change along the way. We had set the bar really high in that respect. But by joining forces, Conostix, Panduit, and Rexel have succeeded with flying colors.”



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