Next Delft Case Study

Next Delft

The building located at Molengraaffsingel 8, in Delft (Netherlands), is part of the NEXT Delft complex, a hub dedicated to technological innovation, applied research and collaborative work, inserted in the ecosystem of the TU Delft campus.

It is a mixed-use building, designed to host technology companies, start-ups and scale-ups, providing flexible office spaces, laboratories and co-working areas. The infrastructure was designed to support demanding technical activities, while promoting collaboration between companies, researchers and academic talent.

NEXT Delft is a hub of innovation oriented towards growth and sustainability, offering not only physical space, but also an active community, with common areas, meeting rooms and spaces for events, fostering the sharing of knowledge and the development of joint projects.

Customer	Next Delft
Integrator Partner	WL-ICT
Location	Delft, Netherlands

Implemented Solution

Within the scope of this project, approximately 37 kilometres of cabling were installed, mostly composed of Cat.7 S/FTP copper cable, with fire reaction classification Cca-s1,d1,a1, ensuring compliance with the requirements applicable to evacuation routes.

In total, 767 network sockets were implemented, distributed in a balanced way over four floors, ensuring a high density of access points and flexibility for future growth.

The network infrastructure is centralised in eight Norma 4 racks, with two racks per floor, each with 47U of capacity, 800 mm wide and 800 mm deep, providing adequate conditions for the organisation, ventilation and maintenance of cabling and active equipment.

The network backbone was implemented in 8-fiber OM3 multimode optical fiber, ensuring high bandwidth, low latency and reliability in vertical connections between floors, supporting high-speed communications and ensuring scalability for future infrastructure evolutions.

Challenge

The NEXT Delft building project placed high demands on the network infrastructure, in line with its function as a hub for technological innovation, applied research and collaborative work. The client needed a high-performance, reliable, and scalable network capable of supporting office environments, labs, and co-working spaces with high user and equipment density, while ensuring regulatory compliance and preparing for future growth.

At the same time, it was essential to avoid performance limitations due to electromagnetic interference, Alien Crosstalk or signal degradation over long distances, as well as rigid solutions that would compromise the flexibility of the building or imply high maintenance costs in the medium and long term.

During the execution, technical and logistical challenges also arose, namely the limited space for the installation of the racks, which made the use of fully pre-assembled racks unfeasible, and the need to ensure consistent performance along extensive wiring paths. The assembly of the racks on site and the strict control of the quality of the installation allowed these constraints to be overcome, ensuring a certified, reliable infrastructure aligned with the client's objectives.

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Choosing our Partner

WL ICT B.V. is a network infrastructure integrator based in the Netherlands, specialising in the implementation of structured copper and fiber optic networks for corporate and technical environments. The company operates with a technical and quality-focused approach, ensuring compliance with the industry's best practice standards.

In the NEXT Delft building project at Molengraaffsingel 8, WL ICT acted as a barpa Certified Integrator, being responsible for the execution of the structured network infrastructure. His role was crucial to deliver a reliable and scalable solution, fully compliant with certification standards and requirements, and aligned with the needs of a building dedicated to innovation, research and collaborative work.

Its participation resulted from the hiring by Lomans Capelle B.V., which used WL-ICT as a specialised company for the implementation of the structured cabling solution.

Lomans Capelle B.V., part of the Lomans Group, is a reference partner with more than 95 years of experience in plant technology, working transversally in electrical engineering, mechanical engineering and intelligent systems.

Installation

Method

The structured network infrastructure has been designed and implemented with a focus on performance, reliability and regulatory compliance, taking into account the demands of an advanced technological environment.

It was decided to use Cat. 7 S/FTP cabling, ensuring high electromagnetic performance, with excellent behaviour in the face of external interference and Alien Crosstalk, particularly relevant on long routes and in areas with high cable density. This choice contributes to greater stability and performance margin of the network over time.

The terminations were carried out in RJ45 Cat.6A, ensuring support for 10 Gigabit Ethernet, maintaining full compatibility with standardised RJ45 interfaces, facilitating interoperability with active equipment and the operational flexibility of the infrastructure.

Reason

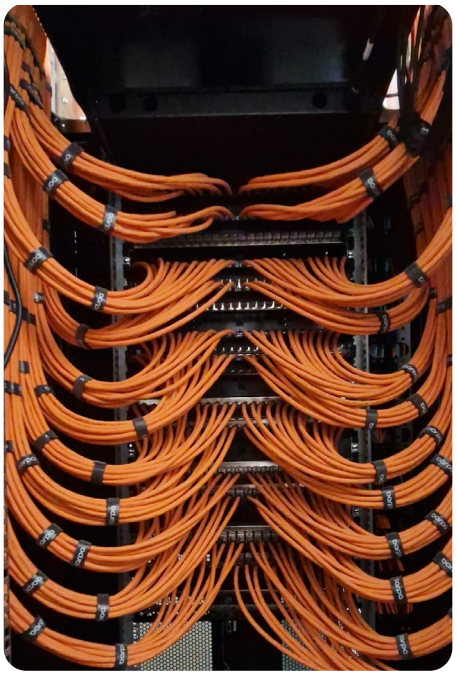
End users operate in the technology sector, where infrastructure performance is critical, requiring an ultra-fast, highly reliable network prepared to support technically demanding projects and equipment.

Execution

The installed network infrastructure fully met the technical and operational requirements, demonstrating high performance and reliability. The certification carried out by WL-ICT B.V., the barpa integrator, confirmed full compliance with international standards and the defined technical objectives.

Result

Thanks to the flexibility, the high quality of the products and the close collaboration between the teams, the project was completed with complete satisfaction. The customer now has a high-performance, future-proof network infrastructure that is adjusted to the stringent demands of the technology industry.



barpa actively collaborated throughout the project, closely accompanying the installation team and providing quick and continuous support whenever necessary. Its problem-solving approach has contributed significantly to the efficiency of installers and the fluidity of project execution.

I would highlight the contribution of the barpa team involved in this project, who played a fundamental role in coordinating partial deliveries and presenting effective solutions to the challenges encountered. Their dedication and responsiveness were decisive for the success of the project.

Bob Linthorst
CEO and Co-Owner • WL-ICT