



## CUSTOMERCASE

# DEPLOYMENT OF A DATA CENTER IN THE HEART OF PARIS, OPERATED BY TELEHOUSE

### EFFECTIVE LATEST-GENERATION DATA CENTER PARTNERSHIP

When the leading European provider of colocation data centers creates a new high-tech facility, selecting the best manufacturers of dedicated solutions is a must. By choosing Legrand products and support, Telehouse has opted for performance, reliability and security.

**T**he colocation and network-neutral secure data center provider Telehouse has operated in France since 1996. It oversees 3 data center facilities in Greater Paris, and one in Marseille. The company's flagship facilities are TH2 in Paris and TH3 located in the Yvelines department. Telehouse provides hosting services in ultra-secure rooms with racks, half-racks and



*Selma Kamel*

## Energy efficiency – a requirement necessitating the use of innovative & high-performance equipment

At both the customer and manufacturer ends, environmental aspects and the energy efficiency of solutions are major concerns. Energy efficiency has become a criterion in its own right in the design of new data centers. The current energy crisis and electricity shortages – combined with soaring costs – require data center designers, manufacturers and operators to keep a close eye on electricity supply contracts and on controlling usage. Telehouse is committed to maximising the efficiency of its facilities. At its end, Legrand is focusing on R&D and is now one of the manufacturers offering the most efficient solutions. In this way, the latest generation of Nexpan racks has been designed so that the cool air produced by the air conditioning units reaches racks and servers head on, and does not escape above or below them, or at the sides. A separation at the 19" uprights inside the rack helps separate the hot and cold air flows. In addition to the racks, there are various types of air containment systems aimed at guaranteeing an optimal IT room temperature.

## “This project was such a success that our relationship is now even stronger”

*Selma Kamel: Head of Design, Engineering & Customer Experience*

quarter-racks aimed at a wide range of customers (service providers, broadcasters, cloud providers, businesses, etc.). “Customers come to us for our resilient infrastructure and our rich ecosystem, explains Selma Kamel, Head of Design, Engineering & Customer Experience. We also offer high electrical and climatic availability, along with services such as racking, deracking and rebooting, as well as connectivity services. In short, all the services needed for colocation hosting and IT room layout!”

### A LARGE-SCALE PROJECT

The latest Telehouse data center officially opened in 2022. It is situated in the heart of a fully-refurbished office building, in which the IT rooms occupy a surface area of 4,500 m<sup>2</sup>. Boasting 5 MW of power, it hosts 1000 racks and 2000 PDUs. This latest-generation data center offers particularly high performances, reflected in its Tier 3 classification, providing maximum availability. Its target PUE is 1.35 (the average data

center PUE is around 1.60), giving an indication of its highly-efficient energy usage. Given that energy efficiency is a key concern (see boxed text), an efficient cooling system has been installed. In this way, the free cooling system allows the cooling units to take a break in the winter season, and an adiabatic system helps optimise their output in the summer. The heat released by the servers is reinjected into the urban grid to heat surrounding residential and commercial properties. On this site, Telehouse has also





## In the midst of the COVID crisis, Telehouse and Legrand rise to the challenge

The deployment of the Léon Frot facility took place in the midst of the recent health crisis. Multiple equipment production, logistic and installation challenges had to be dealt with in order to deliver the data center on time. Marc Daoud and Selma Kamel talk about this unprecedented experience.

**Selma Kamel, Head of Design, Engineering & Customer Experience, Telehouse**

"Building and fitting out the facility right in the middle of the COVID crisis was a major challenge. We had to factor in factory shutdowns, raw material shortages, etc. We encountered many high and low points and had to deal with a great deal of setbacks. Myself and Marc Daoud were in constant communication, and we pre-empted any problems. We were very proactive. I can remember one particular example of this. We were expecting a large delivery of PDUs that needed to be installed before the data center was switched on and which were delayed on account of a factory shutdown. Marc offered to assemble them in another production facility to meet the deadline. In the end, we came up with the solutions we needed and there was no delay. This project was such a success that our relationship is now even stronger".

**Marc Daoud, Sales Manager, Legrand Data Center Solutions**

"This was one of the largest-scale equipment deployment projects that we have ever worked on, and given the unprecedented circumstances and the very tight deadline, one of the most challenging and stressful. We encountered all kinds of setbacks, particularly with trucks delivering incomplete or damaged raw materials, whilst we were operating in lean production mode. We often had to cancel and postpone deliveries. Fortunately, the team at Legrand was a tight unit and Telehouse understood the circumstances. The communication between us was good and, despite the multiple mishaps, we successfully honoured our delivery commitments".

opted for rooms with raised flooring and a hot corridor/cold corridor layout. The choice of a cold corridor primarily addressed an essential need for containment in order to prevent hot and cold air flows from mixing. Ultimately, this option helps optimise the data center's energy efficiency and improve working conditions for customers.

### DEDICATED COLOCATION SOLUTIONS

Telehouse selected Legrand products to fit the Léon Frot facility out with racks, cold corridors and PDUs. For Selma Kamel, this was the obvious choice. "We were already well acquainted with Legrand as we had been using their solutions for years. Following a tender process involving five competing manufacturers, we selected them based on technical, financial, CSR and logistical criteria. We were also

keen to use a European group – it is important for Telehouse to support digital sovereignty in France. We specifically opted for Minkels racks, as we were looking for heavy-duty racks that were infinitely configurable according to customer profiles. For example, 52 U racks, which can be split into quarter- or half-racks. The compartments are also very secure with dedicated cabling compartments. These racks are very well suited to colocation and are popular with our customers. Our facility was also faced with a design constraint which led us to choose a water mist fire extinguishing system. With their FM Global-certified Drop Away roof panels, Minkels cold corridors are perfectly suited for our extinguishing system". Finally, in terms of security, Legrand offers all types of security systems: badge reader, biometrics, key or code lock, etc., meeting the most stringent standards stipulated by Telehouse and its customers.



## “ With Telehouse, we come up with solutions together ”

Marc Daoud: Sales Manager, Legrand Data Center Solutions



Marc Daoud, Sales Manager at Legrand Data Center Solutions, was tasked with following up the Léon Frot project. He talks about the challenges in this project and the solutions that Legrand came up with.

**How did the Minkels solution deployment process go, given the need to account for the facility's inherent constraints and customer requirements?**

Marc Daoud: We received a large order from Telehouse to deploy approximately 400 racks and a sizable number of PDUs. They made one-off containment requests, as their customers did not all have the same requirements. Some wanted to combine two rows of five racks placed in a cage, and others asked for the containment of two rows of fifteen racks with a large corridor, etc. As the deployments progressed, we received 2D drawings giving us indications of containment lengths, as well as the position of the posts located in the room. Each time, we had to come up with a cold corridor design and a precise quotation. We then progressively delivered as the customers moved in. Given the specific constraints and requests, we systematically worked on custom solutions and operated in project mode.



**What type of organisation did you set up at Legrand to carry out this project?**

Marc Daoud: In-house, we worked in a team of three. Besides myself, one person was in charge of incoming calls, orders, planning deliveries, managing any delays, as well as scheduling access to the site for our teams. We also had a project manager who was tasked with handling orders, acting as an interface with the factory when we needed custom solutions, and managing subcontractor teams assigned to assembling the racks. His duties also included supervising installation. We also communicated with the various project managers working in our factories.

**Why would you describe this project with Telehouse as a collaboration?**

Marc Daoud: Our collaboration is not new, Legrand has actually been working with Telehouse for over ten years. In terms of this particular deployment, our collaboration was underlined with constant communication in difficult circumstances and great transparency between us. When either party encountered a problem, we discussed it and we came up with the right solution together to handle the situation. We also helped each other out at critical points with equipment supplies. Throughout the project, we worked hard at both ends to keep our relationship strong; that is why we have been working together for so long. ■