



Kerlink helps Grand Paris Metro Project realize its tunnel vision with LoRaWAN connectivity

When Worldsensing, a Barcelona-based Internet of Things (IoT) and operational intelligence technology provider, needed to create an edge-based, connected computing infrastructure to support tunnel construction for the Grand Paris Metro construction project, it turned to Kerlink to provide its low power wide area network system

Worldsensing provides smart cities and industrial customers with tools to understand the performance of distributed infrastructure, improve efficiency and make predictions

Worldsensing's technology required low-power connectivity on nodes placed 20 metres underground in Parisian tunnels. To achieve the required operational performance Worldsensing selected Kerlink to provide LoRaWAN gateways and support services. With Kerlink's help, Worldsensing created a low-touch, high quality solution that is set to last for at least eight years, well beyond the Grand Paris Metro completion date in 2022.

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Worldsensing pioneers IoT deployments

The Grand Paris Metro project is one of the largest, urban, public transportation projects of the 21st century. According to the Société du Grand Paris, the project will culminate in a new metro for the capital of France, providing connections to developing neighborhoods, three major Parisian airports, business districts and research centres.

The Grand Paris Express will serve 165,000 companies and transport two million commuters daily, creating vast new opportunities for economic development.

By using Industrial IoT (IIoT) communications technology, Worldsensing needed to create nodes for the Paris Metro project that could gather data from sensors installed deep in metro tunnels. These critical sensors are needed to measure tunnel structural data including changes in incline and positioning, load, structural strain and structural deformation. The safety of construction workers and the citizens of Paris can be enhanced through carefully aggregated and analysed real-time data from these sensors.

To achieve these goals, Worldsensing needed a communications infrastructure and services partner that could supply a high quality, reliable, wireless solution that would also minimise node power consumption, as the node batteries needed to last through to 2022.

Kerlink was able to provide the answer with a Low power wide area network (LPWAN) IoT solution, deploying a solution with a set of gateways and support services. The combination of Kerlink Wirnet Stations and network design support was the right set of hardware and services to power Worldsensing's 400 Loadsensing nodes.

"Our solution for the Grand Paris Metro project needed end-to-end quality and monitoring, from sensor to node to gateway," said Juan Perez, the product manager for Loadsensing and ►

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Worldsensing. “Kerlink’s LoRaWAN and Wirnet Stations filled an important gap for us.”

The technology solution from Kerlink will support longevity and safety requirements of the nodes, provide deep indoor coverage and offer bi-directional node communication for remote maintenance, diagnostics and software and firmware updates.

“Kerlink’s design and attention to detail made interactions with Kerlink exceptional,” added Perez.

Worldsensing believes that IoT solutions will continue to drive its business growth. In the future, Worldsensing is looking at additional LoRaWAN-powered solutions for other applications including above ground bridge repair, construction site monitoring, mine monitoring, smart parking and asset management. Worldsensing knows that having accurate, real-time smart city construction and monitoring data helps services companies meet timelines, lower costs and maximise personal safety of workers and citizens. ■



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