

# Modernizing Slovnaft's network inventory system

## Slovakian refinery employs Hexagon's geospatial asset management system

Slovnaft, a.s., based in Bratislava, Slovakia, is a petrochemical company that produces, sells and distributes motor fuels and lubricants. Its refinery processes up to 6 million metric tonnes of crude oil each year and is among the most complex refineries in Europe, producing high-quality, sulfur-free fuels.

Among the key systems that keep the refinery operating is a vast telecommunications network. Essential to daily workflows in this fast-paced, safety-focused environment, the network is critical to maintaining the flow of communications to ensure safe operations and prompt response in the event of an emergency.

However, Slovnaft lacked a complete view and insight into its telecommunications network infrastructure. Its existing network inventory system was insufficient and much of the data was stored in paper form. To modernize its network inventory capabilities, the company chose HxGN NetWorks, Hexagon's geospatial asset management system.

### Complex network inventory rebuild

Running through the 6-square-kilometer refinery campus are more than 100 kilometers of fiber optic and metallic cables and a Wi-Fi network. The combined telecommunications network is a mix of new, old and very old technologies, with some cables 30 to 40 years old.

Slovnaft needed to completely rebuild its network inventory system, which was more than 25 years old. Also, the previous system only contained digital information for about 40% of Slovnaft's total network – 60% had not yet been digitalized. This created many problems because specific connections were hard to locate and performing emergency or routine maintenance was difficult. There was risk of accidentally cutting an incorrect line or disconnecting a critical component in such a demanding environment.



Hexagon experts began building a new, modern telecommunications GIS for the company by creating a data model, defining standards and conditions that should be used and determining how different assets including cables and ducts could be differentiated and visualized. The project was split into phases, from system installation through data migration, validation and verification.

The new, modern geospatial asset management system provides a full, complete map of the passive telecommunications network, providing location-based data and tools for the complete asset lifecycle, with full network tracing capabilities, fault analysis and path redundancy. The refinery's infrastructure is critical to the manufacturing processes throughout the entire campus and having a full overview of its network means Slovnaft can locate and repair faults quickly. This reduces downtime and, more importantly, helps maintain safe operations and reliable communications. Another major benefit to the company is the system's flexibility. Slovnaft plans to increase its telecommunications network, building new components and providing new services, and the new system makes full control and complete infrastructure management possible.

"We are very pleased with Hexagon's solution and how it has impacted our operations," said Dušan Furucz, senior network architect/infrastructure delivery at Slovnaft. "It saves precious time for our workers and saves costs, but most importantly, it makes finding problems and interconnections and maintaining the network much easier. It gives us a complete overview and a manageable system for our complex telecommunications infrastructure."

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**Dušan Furucz**  
Senior network architect/infrastructure delivery  
Slovnaft



## More than telecommunications

In addition to its telecommunications infrastructure, Slovnaft sought to improve location intelligence for its safety processes. Slovnaft's refinery is an enormous complex with multiple buildings and departments that handle massive amounts of oil and refined products. Its fire brigade is a critical component of ensuring campus safety.

However, the company had problems with extinguishers being damaged or stolen and with pinpointing the locations of water sources quickly when needed. It built a solution based on Hexagon's M.App Enterprise to monitor, measure and control its stock of 3,000 fire extinguishers located throughout the refinery, including data on when each unit is set to expire. The solution also maps out the locations of around 300 water sources so they can be found and accessed quickly.

"Maintaining a safe environment is critical for our employees and our business," Furucz said. "We have been able to do that more easily with Hexagon technology. Having an accurate representation of our fire extinguisher supply and status, and knowing the precise locations of all our water sources, improves routine and emergency safety operations."

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