

Grand Calais | Grundfos Connect Network Analytics

From scattered data to proactive digital wastewater management in Grand Calais

With increasing challenges to its water and wastewater infrastructure, the Grand Calais water utility in northern France needed to improve its system monitoring. Grundfos Connect Network Analytics helped the utility to digitise its network and turn data into a powerful, strategic tool.

See the solution here:

grundfos.com/network-analytics

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Possibility in every drop

The situation

Grand Calais Terres et Mers, a consortium of municipalities on the northern coast of France, faces significant structural and environmental challenges. Spread across a vast and flat, low-lying area, the Grand Calais water utility must deal with an increase of groundwater inflows into the sewer systems, more extreme rainfall events, an increasing risk of pollution of coastal bathing waters, and monitoring and maintenance of over 200 lifting stations.

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Hélène Beaurain, the Head of Wastewater Monitoring Engineer Manager.

The water utility operates a 429 km network (wastewater, stormwater and combined sewers), serving a population of 95,000 users. Each year, it treats more than 7.5 million cubic meters (1.98 billion gallons) of wastewater. In 2023, the water utility’s Water Cycle Directorate began a collaboration with Grundfos to improve its wastewater network monitoring.

“We had a significant amount of data available, but we didn’t analyse it because it wasn’t structured or organised, and therefore unusable,” says Hélène Beaurain, the Head of the Wastewater Monitoring Engineer Manager.

She adds that the utility collected and recorded data via its SCADA system. “Given the large amount of data, we only analysed level curves in the stations. During rainy weather, for example, it took half a day to review all the lift stations – without being sure we detected everything.”

The way to solve this challenge, Grundfos suggested, was to implement a software platform that simplifies and automates permanent diagnostic data collection and monitoring: Grundfos Connect Network Analytics.



The software:
Grundfos Connect
Network Analytics

The solution

Grundfos Connect Network Analytics combines hydraulic expertise with advanced, human-AI analyses. The software continuously collects and monitors the main performance indicators of a utility’s wastewater network, based on a detailed understanding of the system’s operation. Such monitoring in France is imposed by law and requires water utilities to frequently produce reports on main performance KPIs.

“With Network Analytics – especially through the indicators – we now have a global and instantaneous view,” says Hélène Beaurain. “We now have much better visibility into how our networks operate, which will allow us to adapt our management strategies.”

For instance, she says, Grand Calais is now able to target areas sensitive to unintentional stormwater inflow into the sewer network – known as Eaux Claires Parasite Météoriques (ECPM) in French. “We are now able to create a list of streets where connection checks and smoke-injection tests will be prioritised to address this issue,” she says.

Grundfos Connect Network Analytics allows water operators to anticipate malfunctions, prioritise investments and strengthen their networks’ resilience to climatic hazards.

The outcome

In just over a year, Grand Calais has created a dynamic database that collects all network measurements. Working with Grundfos, the utility has configured the software to create a "digital twin" of its system, allowing them to validate the diagnostic results to ensure the consistency of the figures.

Thanks to this collaboration, several energy efficiency reports were also produced on three lifting stations, identifying savings opportunities to reduce energy consumption. "The implementation of Network Analytics has allowed us to make our data management practices way more reliable and structured, in order to continuously understand the network's operation," H el ene Beaurain says. "I'm proud that we're using an innovative tool that continuously analyses the performance of our networks – compared to SCADA, which mainly monitors equipment operation – and the tremendous work done to integrate and ensure data reliability."

At a time when network monitoring for permanent diagnostic data is a major challenge for water utilities in France, Grand Calais can now use an automated tool that identifies network problems in almost real-time and produces the necessary data to enable continuous monitoring.

This transformation allows Grand Calais to move from reactive to proactive management of its wastewater network, thus improving its efficiency and their ability to make strategic decisions. H el ene Beaurain says, "The implementation of Network Analytics would not have been possible without the continuous support from Grundfos through our dedicated contact person. This is what ensured the success of the project."

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Grundfos supplied:

Grundfos Connect Network Analytics helped the Water Cycle Directorate of Grand Calais to digitise its wastewater network monitoring.

[Learn more](#)

Case story info:

Topic: Grundfos Connect Network Analytics
Location: Grand Calais Terres et Mers, France
Customer: Water Cycle Directorate of Grand Calais

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Hélène Beaurain, Head of Wastewater Monitoring Engineer Manager

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