



Benefits

- 4G connects directly to control equipment in the field
- Manage and monitor all connected plants centrally
- Quickly set up new data collection points
- Minimize technician on site visits
- Real time equipment status updates

Solution:

Remote Networks

Products:

eWON Flexy, eFIVE

Customer: Bergen Vann

Distributor: Triple-S

Country: Norway

Remote Solutions ensure efficient Operation and Cost Savings for Bergen Vann

Bergen Vann is fully owned by the municipality of Bergen in Western Norway and is responsible for the operation and maintenance of the water and sewerage works both in Bergen and the nearby municipality of Os. It also provides services to other clients in the public and private sector. The company has 145 employees and operates about 500 small and large technical plants such as water and wastewater treatment plants and pump stations.

Operating on this scale it is obviously necessary for the company to have robust control and monitoring systems in place. Moving away from radio systems and traditional phone lines to a fibre optic network, mobile devices and remote access has been of great importance for Bergen Vann. Thanks to smart solutions from Triple-S (distributor of eWON solutions in Norway), the company now operates more efficiently, and anything from data collection to following up work at the plants is simply easier to do.

The Challenge

In 2004 Bergen Vann took over the operation of the extensive water and sewerage system in Bergen. A few years later the municipality of Os was also included in the contract. Not long before, the company had been separated from the Agency of Water and Sewerage Works of Bergen Municipality as part of an increased push for competitive water and sewerage services. With technical installations spread across vast areas and equipment easily affected by weather conditions, it was often necessary to drive out to the various plants. "We spent a lot of time on the road, even though issues were quick to solve," says Thore Nilsen, Head of Electrical Engineering and Automation at Bergen Vann. "We used rented communication systems and had a cumbersome system for booking phone lines, meaning setup and troubleshooting was very time consuming. On top of this the connections were often unstable."

The company also depended on a telecommunications provider to get the communication lines up and running after faults or downtime. "Forecast of rain could be enough for the communication and phone line quality to become noticeably worse. And when there were actual faults on the lines, we often had to prove there were faults, or document that our equipment was in working order, before the telecoms provider would investigate the problem. It could take days before the lines were in operation again," says technical consultant Øyvind Hjortland. Without the possibility of remote access and troubleshooting, using a car was necessary to get access to the equipment.

The Solution

Bergen Vann has tried several solutions to find a combination which would meet its needs. Now the systems are monitored through a fixed fibre optic network, where this is possible, but there are still a number of plants which are outside the network reach. "We have tried several providers and suppliers of radio solutions and mobile broadband, but with varying results," says Nilsen.



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In 2010 Bergen Vann started trying out remote access with eWON from Triple-S, but the full roll-out did not happen until 2015. "Once we started using the system to its full extent, it turned out to be very easy to use," says Hjortland. "Really you just have to configure it and put it into use. The documentation is very good and easily accessible online, meaning we can handle most things ourselves. There is a great eWON knowledge base with forums, guides and descriptions."



“It’s the sum of all things that makes eWON a preferred solution for us. This solution allows us to establish secure networks linking multiple remote sites to our central control room through permanent VPN connections make the changes locally.”

Thore Nilsen, Head of Electrical Engineering and Automation at Bergen Vann

eWON with 4G communication is now connected directly to local control equipment at the plants, and a central eWON eFive ensures a safe and stable connection for all the eWON Flexy units. This way Bergen Vann can manage and monitor all connected plants centrally and troubleshoot and modify the control equipment without leaving the office. During the last 18 months more than 100 plants have been connected to the network using this solution.

"Some of the things we love about eWON are the fact that we can easily and quickly set up new data collection points, access our systems and perform troubleshooting, without having to travel to our stations. We can now respond much faster and run live updates when necessary, for instance if there is a broken line or we need to start and stop pumps or open and close valves," says Hjortland.

The Result

The eWON remote solution and the flexible solutions and the fast installation at new points mean that Bergen Vann saves time and resources. "It is definitely a cost-efficient solution for us. The cost is far less than with the other solutions we had before," says Hjortland. "The fact that we can check the status of each of our stations on an ongoing basis saves us a lot of time and is very practical. This way we are in better control and can be proactive when things need to be replaced. And we are no longer dependent on a third party to troubleshoot our systems, but we can handle everything ourselves." Both Hjortland and Nilsen agree that eWON is a great and flexible solution which boosts efficiency and reduces costs. "And that is always a good thing when it's the municipality and citizens that pay for it," says Nilsen.