Söderenergi in Södertälje Sweden
digitizes manual and automated tasks using ABB remote monitoring

District heating and electricity producer Söderenergi is using ABB Advanced Digital Services to perform more time-efficient maintenance, improve operational reliability and enhance security.

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01 Söderenergi facilities burn mainly bio and recycled fuels in its creation of electricity for 300,000 residents, offices and industries. All facilities were designed with a focus on the environment and perform work according to ISO 14001 certification standards. Besides fulfilling the Swedish government requirements and guidelines, Söderenergi has internal environmental targets that they regularly surpass.

Söderenergi
El och värme för ett hållbart samhälle

Söderenergi is a heating and electricity producer based in Södertälje, Sweden. Söderenergi produces heat for about 300,000 people in the southern part of Greater Stockholm and generates electricity equivalent to about 100,000 households each year.

Previously, Söderenergi monitored their control systems manually, which made the work both complicated and inefficient. But recently, the energy company digitized and automated control system management using ABB's Advanced Digital Services powered by ServicePort.

ABB Ability™ 800xA Performance Service
ABB has implemented the software-based service platform ServicePort as part of a multi-year service agreement. The agreement includes 800xA Performance Service, which uses data collected during scheduled and on-demand analyses for comparison against best practices and standards to detect performance irregularities. This comparison quickly pinpoints issues, helping to improve system reliability, availability and performance.

The collected data is then classified based on established key performance indicators (KPIs) to provide a list of items that are prioritized based on severity, criticality and/or financial impact. This analysis allows tracking and the development of accurate trend performance histories so that more decisions can be made with increased knowledge to make systems perform better with higher availability.

Cyber Security Monitoring Service
The agreement also includes ABB's Cyber Security Monitoring Service powered by ServicePort, that identifies, classifies and helps prioritize opportunities to improve control system security. The Cyber Security Service Monitoring Service collects system data for comparison against industry best practices and standards to detect weaknesses. This identifies areas that require action to help protect the control system by ensuring it has multiple layers of security. The Cyber Security Monitoring Service is non-invasive, and can be applied to any control system. It provides continuous, remote monitoring, and periodic or regularly scheduled security reviews.
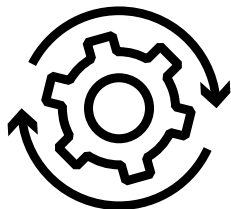
Loop Performance Monitoring Service
The Loop Performance Monitoring Service implemented at Söderenergi presents a complete report of process deviation in control loops, giving plant managers the opportunity to make corrections. Now plant personnel can control loop data analysis and identify troublesome loops through data collection, model identification, feedback tuning, feedforward tuning and controller simulation.

ABB's Loop Performance Monitoring Service is a platform-independent, non-invasive service that can be applied to any automated process or control system to benchmark, correct and sustain performance. Recommendations for improvements are delivered in a detailed report, prioritized based on resolutions that deliver the greatest benefits.

Security Update Service
The final component of the service agreement is for the Security Update Service which consists of an automated handling of approved security updates and antivirus files. In addition, ABB assists with remote support through a direct line to Söderenergi.

"The big advantage I see is that we now have a tool that allows us to see the health of our automation systems. We have worked with these things before, but it has been time-consuming. ServicePort simplifies everything," says Magnus Arnersten, who works as a supervisor at Söderenergi's automation group in the production unit.

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02 Magnus Arnersten, supervisor for the Söderenergi automation group's production unit.
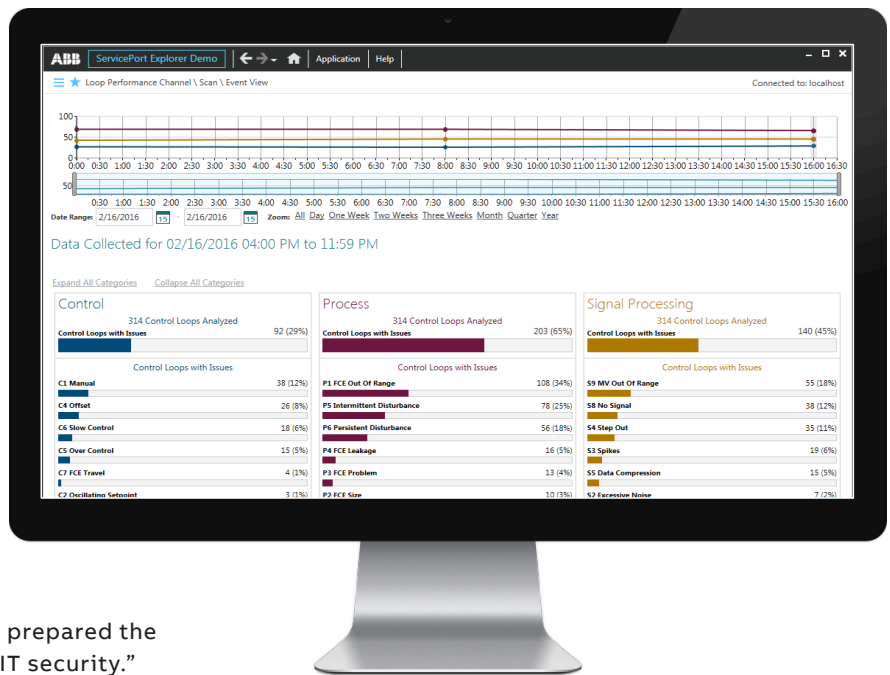
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ABB ServicePort provides Söderenergi automated system diagnostics in real time.

"ServicePort continuously gathers information from our 800xA system and gives us the predictive data. Now we can more easily see if we have any problems in our system, and we know better where to focus future efforts. The agreement also includes a tool that helped us to discover the control circuits that are not fully optimized. This means that in the future we will save money on more effective regulation. The transition from manual diagnostics to automatic diagnostics has not only simplified the maintenance and monitoring of Söderenergi's ten 800xA systems, it has also prepared the way for an equally important upgrade of our IT security."

Today's process automation systems are more networked than ever, creating new risks that threaten control system availability and security. Even an oversight in loading a software security patch, or retention of old software versions, can make a system more vulnerable.

"Normally, automation systems for industrial activities do not have the latest operating system or the latest software. Often [organizations] tend to remain with existing software for years, and frequently do not update the operating system with new security patches. Plants do not dare to update the virus protection because there is a risk that the virus protection has not been verified by, for example, ABB, and it can incorrectly knock out production. ABB has a service where we verify that the latest virus update works with our software. This means that we can maintain our systems in a secure and modern way," explains Magnus Arnersten.

For both Arnersten and Söderenergi, the benefits of the new service contract are obvious. "With this agreement, we are more prepared and stronger than ever. Our service staff and engineers can now easily get help around the clock from ABB, primarily via remote access but also on-site.

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03 Software tools resident in the ABB ServicePort Service Delivery Platform automatically gather and analyze data from assets, processes and risks, and use sophisticated data analytics to present that information to local and remote users who can take action to avoid downtime and mitigate risks.

Even the antivirus part is very important. Previously, we had known that we had a deficiency when it came to the cyber security of our automation systems. We have needed to upgrade. Now we have done that," he said.

Benefits
• Accelerates problem solving through 24/7 visualization and analysis of control loops
• Increases availability and utilization through reduced process variability
• Lowers maintenance, raw material and energy costs with quick identification of process errors or trends
• Reduces response time and travel expenses by providing remote access to ABB experts for troubleshooting
• Establishes a solid foundation for continuous improvement, including higher availability, increased production and improved quality

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