

CUSTOMER CASE STUDY

Covestro uses the PI System™ to achieve sustainable growth – in more ways than one

Covestro - www.covestro.com
Industry - Chemicals

Highlights

- Reduced energy consumption by 30%
- Reduced CO₂ emissions by 39% per ton of product
- On track for a 50% reduction in consumptions and emissions by 2030

In many ways, technology life cycles are the opposite of those frequently seen in chemical production. Chemical plants are used for 20 to 30 years or more, while many technologies are here and gone within five years or less. Products are difficult – and sometimes dangerous – to ship over long distances, while information can travel around the world and back in the blink of an eye. However, these dynamics do not mean the chemicals industry has to resign itself to being an out-of-touch dinosaur. Covestro shows how using the PI System can help drive innovation by allowing teams to make data-driven decisions that advance goals in sustainability and many other areas.

Where vertical meets horizontal

Covestro's strategy was a two-pronged approach: vertical integration within the organization and horizontal, or B2B, integration with other industry partners. The PI System allowed the company to achieve both by making data more widely available within the organization and to partners outside of it. Internal users benefited from one version of the truth and a shared understanding of how to address problems. Meanwhile, a more open approach to sharing data with suppliers led to innovation and better service concepts throughout the value chain.

"At Covestro, our focus is all around people, planet, profit," said Dr. Felix Hanisch, Covestro's head of process-control technology. "We look at our operations, our supply chain, our own production units, and how we ship the product, but also what's being done with the product and what's the end-of-use concept for those products."

Saving the planet while increasing profits

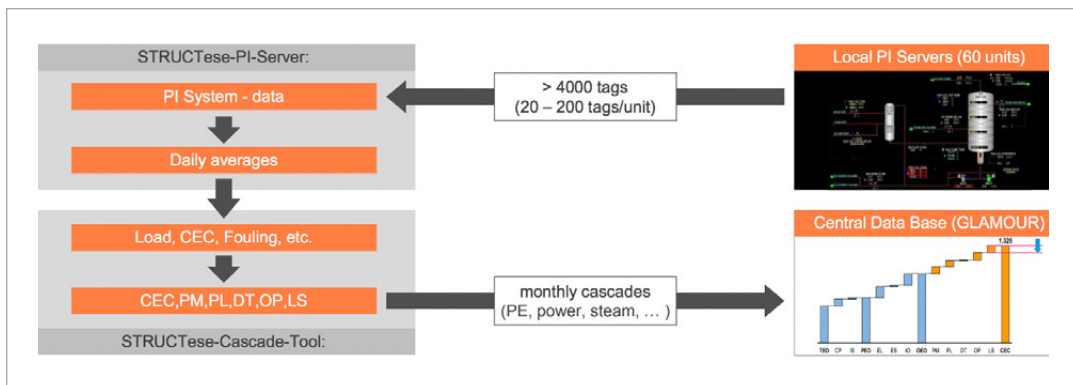
Covestro uses the PI System in STRUCTsee, its three-tiered energy management system. In the first tier, an energy-efficiency check aggregates PI System data from all the production plants and delivers it for analysis to process experts and operators. They identify potential places to save energy through small modifications or large investments or by changing how the plant runs. The result is a clearly prioritized project portfolio that the company can use to direct its investment budgets. This approach ensures that the projects completed are those that save energy while saving money.

Covestro also utilizes PI ProcessBook to monitor energy efficiency on an ongoing basis – down to the minute if needed. The data is visualized in a way that's consistent across plants and easy for operators to understand on the fly. Finally, the PI System allows Covestro to standardize its energy and production data, which gives managers the ability to compare plant energy usage side by side and to put an end to what Hanisch calls "hide and seek" in the data.

"I believe that starting easy, starting simple, actually provides more success than the 'big bang' concept."

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Dr. Felix Hanisch,
Head of Process Control Technology, Covestro



Covestro used the PI System to gain a better understanding of energy usage across its chemical-production plants.

Slow and steady wins the race

As a result of these process changes, Covestro reduced its energy consumption by 30% and its carbon dioxide emissions by 39% per ton of product. The company is on track to see a 50% reduction in both consumption and emissions by 2030. It will accomplish this goal by making deliberate, scalable changes rather than getting caught up in the hype cycle that's so prevalent with emerging technologies.

Rather than panicking about keeping up with the latest trends and technologies, Hanisch recommends staying the course and keeping an eye on the bigger picture. He also advises focusing on how chemical companies can innovate on their own terms, which is exactly the approach Covestro took with the PI System. "We don't have all the answers," he added, "but we have a better understanding of the issues that need to be resolved, and that's what we're working on."

For more information about Covestro and the PI System, [watch the full presentation here.](#)