Case Study

Electrolux Turns Connected Data into Transformational Insights

How The Electrolux Group is using Kepware to drive global digital transformation

For over a century, The Electrolux Group has been synonymous with reliable, beloved appliances in homes around the world. In that time, it has cultivated a diverse portfolio of brands to become a leading global appliance company that has improved living. With a footprint that spans numerous factory sites, dozens of brands—including Frigidaire, White-Westinghouse, and Eureka—Electrolux understands that continued success doesn't come easily; it requires smart planning and careful, data-driven execution. As such, it has embraced digital transformation across the value chain. This includes harnessing factory and machine data to reduce errors, improve performance, and ensure product quality.

The Challenges of a Global Production Ecosystem

With a global footprint bringing 60 million household products to over 120 markets every year, Electrolux is well acquainted with complex value chains. They also understand that continuous improvement is a requirement, not an aspiration.

Digital transformation promises efficiency, sustainability, and reliability. But the operational complexity for market leaders like Electrolux doesn't just mean that digital transformation and data-driven improvements are game-changers—it also means that **undertaking digital transformation is seen as inherently difficult and potentially risky**. In fact, just the foundational step of connecting to factory machine data is a big enough hurdle to dissuade less ambitious manufacturers. But Electrolux didn't get to where it is today by shying away from big changes.

Scoping Electrolux's Connectivity Needs

Each Electrolux factory includes hundreds of different machines and equipment. Most of these machines automatically generate data that can be used to boost overall equipment effectiveness (OEE), reduce scrap and waste, and ensure safe conditions and reliable products.

Each of its factories are situated in different locations, with unique equipment varying in purpose, age, manufacturer, and their programmable logic controllers (PLCs).

What is a PLC?

Programmable Logic Controllers are industrial computers that enable machines to be controlled, monitored, and automated. While there are connectivity standards that have evolved over time, PLCs frequently use unique protocols for communicating data. This is part of the reason why PLC connectivity has historically been seen as a point-to-point effort, where one machine is connected to at a time.

A single Electrolux factory contains hundreds of assets that speak dozens of different protocol languages—and that diversity is multiplied by each factory site. As a result, collecting that data has always been a manual, labor-intensive, and time-consuming process that is susceptible to human error. And some sites may have legacy machines that predate native connectivity entirely. Naturally, the harder it is to get at that data and share it with the right audience, the more challenging it is to put that data to work to improve performance metrics.

To unlock the benefits of automated communication, monitoring, and control of machines, Electrolux understood the need to rethink machine connectivity at a macro level. Consequently, it pursued a platform to implement a standardized, scalable connectivity layer that could eventually blanket all its machines across the globe. It also understood any solution would have to bridge the gap between OT (operational technology) and IT (information technology) systems.

This would enable the ability to draw all data into a central repository and communicate data back out to where it is needed most—whether that is on the manufacturing line or routed to an Production Manager's desk.

Because digital transformation efforts that weave together IT and OT systems depend on a trusted connectivity foundation, there was no question that Electrolux's selection of an industrial automation and connectivity solution was a mission-critical step.

After a thorough vetting of available solutions, The Electrolux Group selected PTC's ThingWorx Kepware Server, based on its breadth of connectivity, access to real-time data, granular security, ability to scale, and high-touch support dedicated to ensuring success.

Meet Kwabena Hobbs, IT Automation Lead at Electrolux

Leading the charge for Electrolux's IT automation initiatives in North America is Kwabena "Kwab" Hobbs. It was entrusted to Kwab and his team to ensure a successful pilot, and a rapid scale out to full production. Electrolux was keen to see a swift implementation and rapid value, and had little patience for a "pilot purgatory," the nebulous state where an initial investment fails to cross the chasm from small-scale experiment to a substantial, enterprise-wide implementation.

"To be honest, the team was momentarily overwhelmed by the challenge," admits Kwab. "Connected manufacturing isn't a typical challenge for IT professionals. For our team, connecting to OT systems literally meant speaking a different language. Considering how many machines we have; it was like speaking many different languages." Electrolux IoT resources collaborated globally on how to initiate connectivity—including how to handle machines that were designed without native connectivity.

"Thankfully, the ThingWorx Kepware Server platform and PTC's support helped us ramp up our efforts as quickly as possible," Kwab confirms. "The training was extremely hands-on and simulated our factory conditions." And the results speak for themselves, "Our earliest connection took weeks of testing and configuration; what used to take us a month now takes seconds."

The first six months saw the automation team building out a single site pilot; within the first year, Electrolux was standardizing connectivity at the enterprise level, enabling industrial automation across several other sites.

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Kwabena Hobbs
IT Automation Connectivity Lead NA
Electrolux

Why ThingWorx Kepware Server

ThingWorx Kepware Server, PTC's platform for industrial connectivity, is the preferred choice for manufacturing leaders like Electrolux. It's connectivity layer unlocks improved automation and helps proliferate the use of data across the organization with notable features, including:

- **Breadth of connectivity** with deep support for OPC apps and native connectors.
- **A cloud-based approach** that simplifies management and configuration, including batch processing and project creation.
- **Rich localization support** for companies with a global manufacturing footprint.
- **Granular security** that allows administrators to assign and manage access permissions down to the system tag level.
- **Native ThingWorx integration** that puts connectivity into action.

Bridging OT and IT systems doesn't just mean dealing with the complexity of OT machines—it also means addressing the diverse ecosystem of users and IT systems. Kwab credits Kepware's granular security with simplifying that process. "Security policies can be set down to the system tag level. We're fully confident in how we enable our teams to view and control systems. And we're doing it in a way that reduces data complexity, rather than creating information overload."

What Digital Transformation Looks Like at Electrolux

While connectivity is just one part of any digital transformation story, it unlocked benefits almost immediately. Kwab details that, "Within months, we've used connectivity to realize a number of benefits, including reducing scrap, automating OEE to drive efficiency improvements, and speeding up our response to downed equipment." All of this adds up to reducing production overhead, eliminating defects, and shoring up their supply chain.

Digital transformation redefines the nature of change. Improvements are no longer considered a single, disruptive event, but an ongoing state of agile evolution. It signals the end of a mindset where heavy manufacturing equipment is equivalent to a glacial pace of change. Consistent with that perspective, Electrolux is already looking ahead to how they can build on their previous achievements, including increased integration with their PLM systems, and implementing machine learning that uses their connectivity to accelerate performance analysis. That promises even more advances in predictive maintenance, so that fewer machines will ever go down or operate out of spec, but instead will be secured in a perpetual state of optimal performance.

This is all part of Electrolux's ongoing strategy to retain and extend their leadership position with a more efficient production process, less wasted scrap and downtime, and a brand that remains synonymous with durable, trusted products.

Conclusion

Electrolux's forward-looking appetite for digital transformation, and its strategic, value-based view on achieving it is another example of how PTC isn't defined by the software solutions it builds, but by the quality and innovation of its customers. If you'd like to learn more about how our industrial connectivity and automation can unlock digital transformation across your operations, visit our industrial connectivity and Kepware resource pages for more information. Or, if you're ready to discover how weaving a digital thread throughout your operations is a game-changer, contact us to speak with a digital transformation expert.