Electrolux Professional Reduces Design Complexity and Leverages More Efficient Processes with Windchill PLM

Furthering Digital Transformation with the Help of Platinum Partner PDSVISION and a Windchill-Enabled Market-Driven Modular Design

As a highly profitable, customer-centric business trusted by over half of Europe's Michelin-star restaurants, Electrolux Professional is always looking for more agile and innovative ways of working. Facing process and data complexities with three global business units and thousands of unique configured-to-order products, its world-class R&D Enablers department decided it was time to standardize product data management (PDM). It partnered with PTC and PDSVISION, a PTC Platinum Partner, to implement PTC's Windchill PLM solution to reduce complexity for itself and its customers, accelerating product development, and taking further steps towards a digital transformation journey.

Electrolux Professional is a trusted partner in the food and laundry industries

Sustainability and innovation are at the heart of Electrolux Professional, while connecting and synchronizing products, and delivering full professional solutions to food, beverage, and laundry customers around the world. The manufacturer prides itself on offering complete solutions that connect products and services. These solutions, which include commercial washers, dryers, ovens, and freezers, support hard-working business owners and employees, helping to make their jobs easier. Its products enable high productivity and low lifecycle costs, and are easy to use, maintain, and service for customers around the world.

In early 2020, Electrolux Professional became an independent company from what previously was Electrolux AB. It's made up of three divisions: food, beverage, and laundry, and its customers include kitchens, restaurants, hospitals, hotels, laundries, and more. The manufacturer operates globally with 12 factories and 4,000 employees. Its commitment to sustainability and innovation is what drives its competitive advantage: over the last 20 years, water, detergent, energy use, and CO_2 emissions have been reduced by 25% to 45% in its laundry solutions.

Electrolux Professional's focus is to cater to customer needs, productivity, and efficiency while prioritizing the digitization of appliances, appliance connectivity and agility, minimizing environmental impact, and making more energy-efficient solutions. The manufacturer is accelerating its digital transformation by investing in industry-leading technology. This commitment to cutting-edge innovation makes its offering stand out from competitors. In fact, it's captured 50% of sales from products introduced in the last three years.

However, capturing these growth opportunities requires reducing design complexity. As a newly independent company, Electrolux Professional's goals are to enable new ways of working, take control of its technology landscape, and win long-term customers. "We have to build a new culture to adapt to our customers' needs. For example, today's restaurants and laundromats need their equipment and solutions to work 24/7 at peak efficiency. Supporting customers is our focus, and that means focusing on innovation and efficiency," says Lars Örnholmer, the Enablers Director at Electrolux Professional.

Minimizing design complexity with market-driven modular design

Electrolux Professional must react quickly and efficiently to market requirements and customer demands and without adding complexity. Product designs often need to be adjusted for functionality, new intelligent technologies, and aesthetics. But with thousands of product variants and three distinct business units, it wasn't always possible to "re-use" as opposed to "re-doing."

Electrolux Professional produces configured-to-order products with thousands of customer-requested variants and options, based on a few product platforms. The laundry unit alone has roughly 3,000 product numbers. Furthermore, the manufacturer makes approximately 5,000 changes per year. Adding to the complexity, it has a couple of hundred ongoing product development projects across all three business units. "There are so many ongoing changes, all the time," says Örnholmer. "And it's critical we keep track of them, which can be challenging."

At the same time, engineering, manufacturing, and service departments rely on many different CAD and data management systems. In terms of product data, duplicate—and sometimes as much as fourfold—information was a common issue. Electrolux Professional teams use four different CAD programs across its design and manufacturing locations: SolidWorks, CATIA, Autodesk, and PTC's Creo. This multi-CAD environment created barriers to finding and re-using information.

"We realized we had more manufacturing sites than we ever had in the past, and they all have differences in type of products, ways of working, etc. We needed to standardize them to a realistic level and still allow some variation and creativity," says Örnholmer.

Furthermore, being a global company means requirements and compliance standards are different across the world. Information wasn't standardized, making it hard to coordinate and share information. "With so many different requirements, it's not efficient if we can't reuse information and work in a structured way," says Örnholmer.

In addition to reducing product development complexity through architecture consolidation and modularization, Electrolux Professional sought to make improvements throughout the value chain. It wanted to build a foundation of operational excellence to improve sales productivity, cost efficiency within the supply chain, and responsiveness to customer demands. To that end, the R&D department had to empower the other departments and standardize the front end, making it easier to re-use data and information. That process started with reducing the number of parts, reducing complexity, and reducing the number of new variants.

Electrolux Professional decided to take a product platform strategy and modular design approach to meet market requirements while reducing complexity. It set out to implement a unified product lifecycle management (PLM) solution. Its goals were to:

- Establish a product configuration process that supports Electrolux Professional's business strategy and product families.

- Accelerate product development and respond to market demands faster without increasing complexity.

- Increase collaboration across sites and find and reuse information faster.

- Standardize and unify engineering tools, reduce the number of new parts and variants, and establish parts governance.

- Improve the quality of product data and designs by standardizing data and processes—enabling the right data to get to the right people at the right time.

- Set the stage for future transformation initiatives.

Electrolux Professional worked with PDSVISION to achieve its digital transformation goals

PDSVISION—a global Platinum PTC Partner and trusted partner to Electrolux Professional—helped ensure success on Electrolux Professional's digital transformation journey. Electrolux Professional decided to work with PDSVISION due to its expertise in PTC solutions, extensive understanding of the business domain, and solution integration skills.

"Our partnership with PTC and Electrolux Professional is very strong," says Daniel Teymouri, Sales Executive at PDSVISION. "Everyone communicates very openly and honestly. We know where we stand, where we should go, and what obstacles we might face."

With PDSVISION's expert guidance, Electrolux Professional knew that PTC's Windchill would

be the right solution for its needs. Windchill is a comprehensive PLM software for data governance and traceability, providing out-of-the-box functionality to realize value quickly through standardized processes. It enables all teams to collaboratively manage product hardware complexity in one place, across all products—ultimately empowering Electrolux Professional to get its digital house in order.

"One big reason why we chose to work with PTC is when I first met them years ago, it wasn't focused on just selling us products. Instead, they were trying to find solutions to help us work more efficiently. And that approach was very important for me," says Örnholmer. "PDSVISION has added valuable competence and been instrumental in making this journey happen. It gave us the attention and support we needed to be successful with PTC products."

PDSVISION helps companies take control of their digital transformation journey

PDSVISION is a global PTC Platinum Partner, offering world-class, end-to-end solutions and services to drive digital transformation within manufacturing companies. Specializing in 3D design, PLM, PDM, simulation modeling, augmented reality, and more, they are considered a leading and trusted advisor within the product development sectors.

Delivering value across the business with a step-by-step approach

Electrolux Professional implemented Windchill in stages, organizing data and delivering value every step of the way. Currently, Electrolux Professional has implemented Windchill across five of its 12 sites, starting with the laundry division and using the lessons learned as a model for other business units. It's in the process of investing in further sites with the goal of deploying Windchill in all sites. The R&D Enablers department is leading the charge, as they're well positioned to help other teams take full advantage of the new system.

"What we've learned is that Windchill is a great PDM system for the sake of handling different CAD systems. It's very open, so we can manage all four of our CAD programs," says Örnholmer.

Electrolux Professional is delivering value back to the business every step of the way. "The journey has to be done in a logical way. Our laundry sites are on the frontline, and we really want to implement step by step with the others. So, we've started by establishing PDM as a placeholder for CAD data and helping people take advantage of it. And then we can really take these next steps and contribute to the larger vision," says Örnholmer.

With the foundation in place, Electrolux Professional and PDSVISION are making clear and ambitious plans for their journey. Along the way, they'll learn what works and what doesn't—improving their current systems and future implementations. "The implementation takes time, but we have a clear blueprint for the future. We're very excited," says Örnholmer.

Ensuring long-term success by accelerating the digital thread and simplifying ways of working

With the goal of delivering more value to its customers, Electrolux Professional is improving parts and variants management with a modular design approach. The manufacturer has increased efficiency, improved collaboration, and laid the foundation for a digital thread. While its journey is ongoing, it has achieved many of its initial goals.

To start, it's reduced complexity by standardizing systems and processes for users. It's built one platform and one front-end experience that service organizations can use to find information. "We wanted to reduce complexity and help each part of the organization find the same new parts. It's about reusing parts and reducing the number of new unnecessary variants," says Örnholmer.

It's also established a market-driven modular design with Windchill to respond to customer requests faster. "We have modularized almost all the washer and dryer designs, and we have good control over the modules. We almost have complete engineering bills of materials (EBOMs) across those products," says Örnholmer.

The benefits of working with a digital system are clear—making product variants in response to order requests is much more efficient. In fact, the first time they introduced modularization, Electrolux Professional experienced a 40% reduction in parts. "The modular thinking and structure for working with options and variants is there," confirms Teymouri

Now, Electrolux Professional's unified engineering tools have helped increase cooperation around the world by sharing the same CAD models and parts data via its PLM system. This has helped improve efficiency for engineers and manufacturing teams, enhance data and design quality, increase reuse, and reduce the total number of unnecessary parts. Ultimately, all of these standardized processes and systems help Electrolux Professional accelerate its time to market, serve its customers better, and establish the foundation for its digital transformation.

A clear blueprint for the future

With its data organized and digital foundation established, this is just the beginning of the journey for Electrolux Professional. Moving forward, Electrolux Professional will continue to work with PDSVISION and leverage PTC products to achieve its digital transformation goals. "Our setup in Windchill right now is very good. We have great data, especially at the manufacturing sites that we've focused on. And we're in discussions with PDSVISION to map out the rest of the journey," says Örnholmer.

Electrolux Professional is seeing incredible progress and it knows the future is bright. In fact, it is exploring other aspects of the PTC portfolio to drive improvements throughout the value chain. And the changes aren't going unnoticed: already, teams outside of R&D are seeing the smarter ways of working and asking for more features and capabilities.

"More and more departments outside of R&D are asking for features, capabilities, and information that can be stored or reused. We've had requests from the assembly lines in manufacturing, compliance teams in quality, project leaders for more project traceability, and more. There are so many things we can do now that we have our digital house in order," says Örnholmer.