



Challenge:

Germany-based Kärcher, the leading provider of cleaning technology worldwide, needed to reduce product development and production costs and improve global collaboration to expand its market leadership.

Solution:

The company adopted Dassault Systèmes' **3DEXPERIENCE** platform on the cloud to manage its product development process, leverage knowledge and know-how across the company and to monitor requirements management.

Results:

With all data in one place, rapid access to up-to-date product and project information is available at all times to all stakeholders enabling improved decision-making, a more agile product development process and faster time-to-market.



“The 3DEXPERIENCE platform is a key enabler in our digital transformation journey.”

– Michael Stritzelberger
Executive Vice President Central R&D

A FAMILY BUSINESS CLEANS THE WORLD

What do the statue of Christ the Redeemer in Rio de Janeiro, Mount Rushmore in the USA, the colonnade on St. Peter’s Square in Vatican City and the Brandenburg Gate in Berlin have in common? They have all been cleaned by Kärcher, the Germany-based leading provider of cleaning technology founded by the inventor and entrepreneur Alfred Kärcher in 1935.

For more than three decades, Kärcher has contributed to the preservation of world heritage sites. The list is long with more than 140 restored historical monuments and buildings worldwide. The cleaning specialist is known for its experience and expertise. It was in the 1950s that the family-owned company started to make a name for itself with steam cleaning technology bringing the first European hot water high-pressure cleaner (the DS 350 steam jet) to the market. The design of this water heater is still the basis of all burners today. Innovation was and is one of the main defining characteristics of Kärcher, along with top performance, a strong focus on customer satisfaction and the signature Kärcher yellow branding.

“Kärcher is a leading provider of cleaning technology worldwide with high innovation power focusing on customers’ demands and wishes,” said Michael Stritzelberger, executive vice president central R&D, Kärcher. “A central business driver for us is individualization because customer requirements are more heterogeneous. The customer expects very individual solutions that are reflected in the products they buy,” Stritzelberger said. “And this leads to a complex product portfolio.”

How does Kärcher master the increasing complexity of their product portfolio? “Digitalization is essential for us. It’s about matching our products with our solutions and systems and generating efficiencies and value for our customers,” Stritzelberger said. “Digital transformation is a key element

in generating internal efficiencies in our operations. It creates synergy by tapping into the productivity of our employees, which increases the quality of our products.”

DIGITAL TRANSFORMATION AND CLOUD

A longtime CATIA user, the company transitioned to Dassault Systèmes’ 3DEXPERIENCE® platform on the cloud. Digitalization with the 3DEXPERIENCE platform helps Kärcher focus on individual customer preferences thanks to the availability of baseline product information and an efficient way to keep track of customer requirements. “The 3DEXPERIENCE platform is a key enabler in our digital transformation journey. The platform helps us leverage internal efficiencies because we have a single point of truth; everyone knows at all times where we stand in a project, what the requirements are and what we have to do,” Stritzelberger said. “And with that, we’ll definitely be faster at bringing products to the market.”

“Kärcher has been pursuing a cloud strategy for several years now which we continue to pursue with Dassault Systèmes and 3DEXPERIENCE. The main advantages for us are scalability, global availability and low operating costs,” Jörg Wahl, manager IT at Kärcher said. “We are currently running three different projects with more than 50 participants using 3DEXPERIENCE on the cloud and will continue to scale this number up in the following months.”



“With 3DEXPERIENCE we better control the configuration of our products and thus reduce complexity since it allows us to modularize.”

– Matthias Steinmann
Senior Director Central R&D

“With the 3DEXPERIENCE platform on the cloud our information is maintained in one location and very importantly, product and project data are linked enabling us to assess the impact of any design changes to timelines and resources,” Matthias Steinmann, senior director central R&D at Kärcher said. “We will no longer maintain information in multiple sources; the advantage is rapid and full up-to-date access at all times for consultation and reuse, which results in less errors and redundant work.”

Kärcher was assisted throughout their implementation by Dassault Systèmes business partner CENIT. “CENIT has been a partner for a long time; we leverage their extensive

3DEXPERIENCE expertise and they are especially helpful with all integration issues to our ERP system," Steinmann explained. "Their added value is undeniable."

CONSISTENCY AND COLLABORATION CHALLENGES

Kärcher experienced many of the growing pains inherent with companies adopting CAD solutions in the early years. "Exchanging data was done manually, often requiring data conversions for the seven different CAD systems we were working with at the time," Steinmann said. "It was difficult to have a clear status of the information. Moreover, not everyone respected the same methodology and standards, which introduced data inconsistencies and accentuated silos. Bills of materials were created manually in Excel and again in our ERP system, creating repeat work. Finally, whereas the 3D model of a base product existed, variants were not documented in 3D so eventually, the final model did not reflect reality."

3DEXPERIENCE PLATFORM BRINGS STRUCTURE

"Before implementing the 3DEXPERIENCE platform, our development process was an abstract concept and not a viable approach to how a product should be developed," Andrea Klingler, PLM specialist central R&D at Kärcher explained. "By implementing the product creation process into the platform, we started with process automation the first time and we made the process transparently available to every project member. Integrated project management on the cloud provides transparency and consistency in our product development because we can standardize our methods, documents and guidelines and deploy them around the world. For example, now that we have formalized our processes on the 3DEXPERIENCE platform, we know sooner that we have to contact the patent people or packaging development department. This is no longer a last-minute activity thanks to information availability and transparency," Klingler said.

"In addition, searching for information on the 3DEXPERIENCE platform is facilitated by the 6W Tag filtering capability," Klingler added. "I can quickly find my data, which is a huge help in my day-to-day work and a big value for everyone involved. I just have to look in the platform and nowhere else and know that I can very easily find my data."

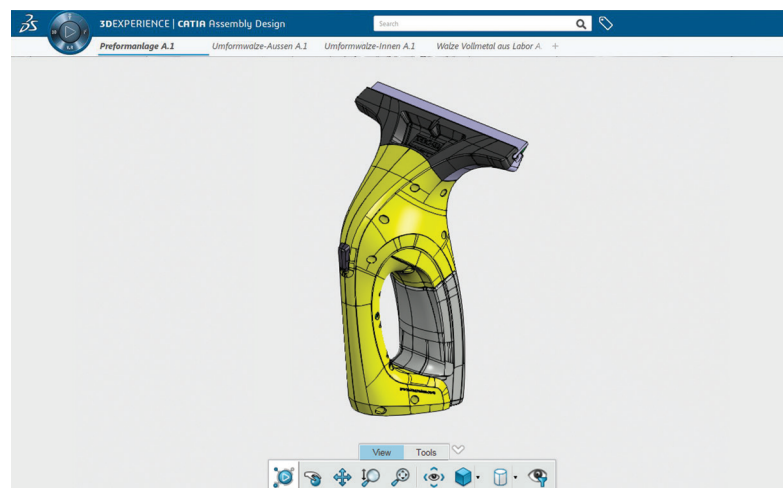
Through the 3DEXPERIENCE platform users can create personalized and role-sensitive dashboards that are automatically fed with information originating from different sources. Moreover, service documentation can be created early and automatically maintained up to date if design changes arise. "Illustrations can be derived directly from our 3D data enabling us to produce our documentation, even at an early stage," Klinger said.

"By collaborating on a central and global system, errors are identified very early and result in a more mature product



"The main advantages for us are scalability, global availability and low operating costs."

– Jörg Wahl,
Manager IT



Top image: Window Vacuum Cleaner

Bottom image: Virtual model of the Window Vacuum Cleaner

Focus on Kärcher

Leading worldwide provider of cleaning technologies.

Products: pressure washers, window vacuum cleaners, FC 5 Hard Floor Cleaner, vacuum sweepers and scrubber driers, gantry car washes, cleaning agents, dry ice blasting machines, drinking water and waste water treatment systems, water dispensers, a telematics-based fleet management system as well as pumps and watering systems for home & garden

Employees: 12,304 (2017)

Revenue: over €2.5 billion (2017)

Headquarters: Winnenden, Germany

For more information
www.kaercher.com

Focus on Cenit

CENIT is your partner for successful digital transformation. With a broad solutions and services portfolio, CENIT enables clients to optimize their horizontal and vertical business processes. With interdisciplinary knowledge of the processes involved and their considerable expertise in the field, CENIT consultants provide customers with end-to-end advice to ensure that solutions are implemented with an understanding of the entire value chain.

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“With the **3DEXPERIENCE** platform, we have our standardized process available worldwide with a high degree of automation and transparency.”

— Andrea Klingler
PLM Specialist Central R&D

at an earlier stage,” Steinmann added. “Thanks to the **3DEXPERIENCE** platform, we can quickly see who is assigned a task, when the task has been completed, and whether the task was done at the right time.”

THE FUTURE IS SYSTEMS ENGINEERING

Another key objective for Kärcher is systems engineering. “We want to focus on model-based system development so that we can combine device and electronics development,” Klingler said. “Currently this process is disconnected; the electronics development team may not be aware of changes in the requirements but the platform supports us because we define our requirements throughout.”

“The connection between mechanical and electrical design is becoming increasingly complex. The **3DEXPERIENCE** platform supports our systems engineering approach because it combines mechanical and electrical engineering,” Steinmann added. “We can, thus, better control the configuration of our products and thus reduce complexity since it allows us to modularize.”

Steinmann said, Kärcher will expand the use of the platform in addition to requirements management, project management and the full suite of CAD applications already in use. “Our next step is to leverage portfolio management and to add downstream processes such as service and production to the **3DEXPERIENCE** platform.”

Stritzelberger is categorical about the value of the **3DEXPERIENCE** platform. “With the **3DEXPERIENCE** platform, we’ll definitely be faster at bringing products to market,” Stritzelberger said. “I’m convinced that we will increase productivity with the **3DEXPERIENCE** platform by 10%, which means 10% lower project costs and 10% faster time to market.”

Our **3DEXPERIENCE**® platform powers our brand applications, serving 12 industries, and provides a rich portfolio of industry solution experiences.

Dassault Systèmes, the **3DEXPERIENCE**® Company, provides business and people with virtual universes to imagine sustainable innovations. Its world-leading solutions transform the way products are designed, produced, and supported. Dassault Systèmes’ collaborative solutions foster social innovation, expanding possibilities for the virtual world to improve the real world. The group brings value to over 220,000 customers of all sizes in all industries in more than 140 countries. For more information, visit www.3ds.com.

