



DIGITALIZATION BUILT ON Relationships AND Reliability

Siemens and Henkel Partner for Closed Loop Efficiency



Digitalization as Essential

'Digitalization' is a word used broadly these days. It describes everything from the way we order consumer products on electronic devices to our car-driving experience and the automated efficiency of smart factories. Indeed, digitalization has wide-ranging applications with far-reaching implications. Data-informed eCommerce, predictive AI, 5G and IoT all serve to drive cost optimization, resource conservation, ultra-personalization, and global connectivity, creating value for customers and consumers.

Digitizing operations, communications and customer experiences are vital to Henkel – so much so, in fact, that the company launched a new business unit, <u>Henkel dx</u>, to push the digital innovation envelope and leverage the power of data and analytics across company manufacturing operations, product development, consumer engagement tools and sustainability initiatives.





Then, Now and Tomorrow

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Well before Henkel put the new division in place as part of its commitment to digitalization, the company was heavily investing in technologies to make worldwide production facilities increasingly energy-efficient, quality-centric, and automated. Over the last eight years, **Henkel has made significant investment to implement Industry 4.0 practices across its operational footprint, integrating next-generation hardware, software, sensors and robotics**. The objectives of this investment are always to streamline communication for real-time production feedback, automate routine tasks, reduce manufacturing downtime, and improve material tracking and supply-chain data. Decreased production costs, high quality and increased competitiveness are the meaningful outcomes.

Digitalization is evolutionary, however, as **noted by Dr. Dirk Holbach**, Henkel Corporate Senior Vice President International Supply Chain Laundry & Home Care, in a recent interview. "Digitalization isn't accomplished in a single day," he explained. "It's a process that will never be completed." Much like the Six Sigma principle of continuous improvement that is employed at every Henkel factory so, too, will data-driven systems transform over time. Importantly, relationships with leading tech innovators are critical to Henkel's success and continued progress in this key component of the company's purposeful growth agenda.

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Innovation through Cooperation

Henkel dx has described its investment in start-ups and open idea incubation as 'innovation through cooperation'. This same collaborative approach is what has driven manufacturing transformation in Henkel factories. Long-standing partnerships with companies like **Siemens**, an innovation and technology leader in industrial automation and digitalization that provides comprehensive hardware and software solutions as well as an open industrial ecosystem based on Industrial Edge, have helped Henkel realize significant gains in Industry 4.0 automation, capacity expansion, energy efficiency and CO₂ reductions.

At its **state-of-the-art Laundry & Home Care plant** in Montornés del Vallés near Barcelona, Spain, Henkel's production lines precisely produce up to 300 bottles of laundry detergent per minute, including the assurance of exacting volumes at the correct pressure, automatic cap closure and box packing. Open communication interfaces, line monitoring software, advanced PLCs, motor controls and drives keep the lines running reliably at maximum productivity. Thanks to digital technologies, this facility – one of Henkel's most automated – has increased overall efficiency by 18%.

Henkel's Bowling Green, Kentucky, USA warehouse, also part of its Laundry & Home Care business, recently celebrated the completion of its <u>latest Industry 4.0 project</u> in collaboration with Siemens. The undertaking included, for example, implementation of a state-of-the-art warehouse management system, fully touchless monorail technology and automatic truck loading/unloading. This enables the largest warehouse in Henkel's Global Supply Chain to achieve a capacity of 200,000 pallet positions with loading/unloading of up to 500 trucks per day.

Based on simplified processes, and the increased level of automatization with a simultaneous reduction of human intervention, Henkel aims to achieve an average OEE of 80% globally. Today, the company already has a multitude of sites that consistently achieve OEE of greater than 90% and, using best practice sharing through digital tools, these factories are supporting other facilities in the network to achieve a comparable level of efficiency.

Henkel recently announced its **ambition to be** <u>climate neutral</u> in operations by 2030. To support this goal, digital energy management is not only lowering cost, but also to contributing to the climate action agenda. Since the 2013 introduction of a global energy management system that acquires consumption data from meters and processes it in real time, the Laundry & Home Care business has reduced energy use by 18% (2022 LBE).



Closed Loop Collaboration

Line control systems, machine controllers, sensors, rugged motors, drives and robotics that make Industry 4.0 a reality can only deliver if they execute on reliability and longevity expectations. Manufacturers of these technologies are evaluated by tough customer metrics and are also bound by increasingly more challenging and strict regulatory compliance such as the Maximum Efficiency Performance Standards (MEPS) which sets motor efficiency requirements.

Performance demands, legislative dictates and the value of automation as a sustainability tenet are what have led **companies like Siemens to ensure reliability and efficient operation are at the foundation of the technologies it develops**. Designing and building motors, controllers and drives – many of which operate 24/7/365 – on the backbone of high-reliability components and protecting them from the damaging, performance-diminishing effects of excessive heat, moisture, contamination and vibrational/mechanical stress are essential to realizing the promise on *Industry 4.0*.

With its comprehensive portfolio and ecosystem around Industrial Edge computing and industrial-grade Artificial Intelligence (AI) – both key ingredients for the efficient realization of such promises – Siemens makes IT and OT convergence reality. This is why **Siemens partners with Henkel, which leads the market in thermal management material solutions, protective coatings and reinforcement adhesives for electronics.** This closed-loop collaboration – from engineering next-generation automation systems using market-leading materials to realizing Industry 4.0's power in global operations – is how partnerships come together to fuel the progress of a digital future.



Partnerships come together to fuel the progress of a digital future!





Relevant Links

<u>Henkel dx</u> <u>Interview Dr. Dirk Holbach, Henkel</u> <u>Siemens Partner in industry digital transformation</u> <u>Henkel Laundry & Home Care plant in Spain</u> <u>Henkel USA latest Industry 4.0 project</u> <u>Henkel climate neutral in operations by 2030</u> <u>Realizing the promise of Industry 4.0</u>

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