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# SEAB

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# How Industry 4.0 is Ushering in a Sustainable Era

*Text and photos courtesy of dormakaba.*



**Revolving door driven by Electromagnetic Direct Propulsion Technology.**  
Photo: © dormakaba

Industry 4.0 doesn't necessarily refer to a specific set of technologies – although things like cloud computing, IoT, and machine learning are undoubtedly critical parts of the equation. These technologies illustrate the primary aim of Industry 4.0, which is merging physical processes with digital connectivity. A sustainable smart building, for instance, might have connected IoT sensors that self-regulate energy usage based on real-time demand and use.

Another hallmark of Industry 4.0 is data and data analytics. Connected devices, equipment, and users are constantly generating data. Big data tools like AI, machine learning, and real-time data processing allow organizations to increase productivity further, optimise processes, and enhance growth. In the context of sustainable development, this can mean operating factories run more leanly, more energy-efficient, and with fewer carbon emissions as a result.

The applications of Industry 4.0 in construction range from design to ongoing management. Architects now use tools like building information modeling (BIM) software to optimise buildings for sustainability. They can design industrial and commercial buildings with elements like eco-friendly bacteria that repair structures organically. Sustainable design and architecture can now be conducted with Industry 4.0 technology in mind.

Once erected, heating and cooling systems can self-regulate for energy efficiency in real-time. With attendance-tracking



**Access Control Solutions to track attendance and regulate entry.** Photo: © dormakaba

**HSW FLEX Therm Horizontal Sliding Wall System ensures energy efficiency through improved thermal separation.**  
Photo: © dormakaba



access solutions, sensors and IoT devices can be programmed to alert the environmental control systems to make

automatic adjustment to the lights and air-conditioning when people exit a room or building. Automatic doors also help to keep the temperature regulated by ensuring the doors don't stay open longer than necessary. Industry 4.0 is a sustainable construction game-changer because smart buildings can operate in an eco-friendly manner.

Ultimately, Industry 4.0 tech might enable buildings to be entirely closed-loop for resource usage, energy consumption, and overall sustainability. The wastewater might automatically be filtered and recycled. And AI systems will continuously analyse data to make real-time adjustments for more sustainable energy usage.



**Charon Turnstiles as an access point to specific areas.** Photo: © dormakaba

With Industry 4.0, business growth and environmental sustainability don't have to be mutually exclusive. Industries like manufacturing and construction are, in many ways, the backbone of the global economy. And business leaders need

to look no further than technologies like connected factory equipment, AI-enabled energy systems, and industrial IoT devices to help those industries growing strong, smart, and sustainably.

With more than 150 years of experience specialising in safe and secure technology, dormakaba is more than willing and able to champion the sustainability movement. For more information on how your workspace can be adapted for efficiency without compromise, contact dormakaba for the high-tech solutions to your sustainability needs.



**Worker safeguarding quality in the production of energy-efficient products and solutions.**  
Photo: © dormakaba



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