

KNORR-BREMSE AG

Innovation puts the brakes on resource consumption and encourage sustainability

Knorr-Bremse is a global market leader in brake systems and a leading provider of safety-related subsystems for rail and utility vehicles. The company is committed to a policy of sustainable governance and is proving that in countless innovative details, many of which also apply to the conversion of its central business location in Munich, Germany. Siemens Smart Infrastructure contributed a broad range of ideas to this project in its capacity as implementing partner and put smart solutions in place to ensure that everything worked smoothly.



The task

REVITALIZING A LOCATION ON SUSTAINABLE PRINCIPLES

The task involved developing the headquarters of Knorr-Bremse in Munich as part of a restructuring program in order to meet sustainability regulations. The historic location became the site for state-of-the-art work spaces for about 2,600 employees in Development and HR. It also includes the new Visitor Center and a future-oriented parking structure with charging facilities. In addition to functionality, sustainability was high on the list of Knorr-Bremse's specifications, and the company was also open to unique and innovative solutions.



The solution

JUST THREE OF MANY INNOVATIVE SUSTAINABILITY SOLUTIONS

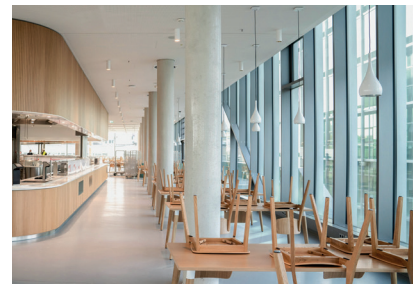
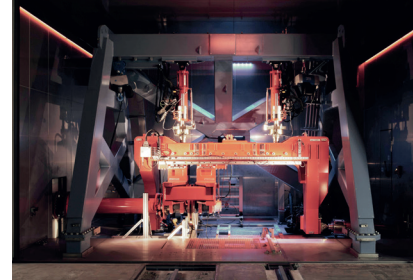
1 The new Technology Center of Competence includes a test bench 15 meters high and weighing 760 metric tons that simulates rail travel – at speeds of up to 350 km/h. Waste heat released in braking tests, for example, is recovered and used by the building control technology: Nothing is wasted.

2 Smart use of shade helps reduce the energy needed for cooling, heating, and lighting in buildings. The blinds used to provide shade are controlled to ensure that they're only lowered in areas that genuinely need shading. The Annual Shading system, developed exclusively by Siemens, also takes the shadows cast by adjacent buildings into account, which significantly reduces power costs.

3 The operation of most canteens is less than ideal. There are queues at peak times, some meals run out early, others lose their freshness in the warming cabinets, and food is left over. This is where the Siveillance Occupancy solution from Siemens comes in. This solution was customized for Knorr-Bremse; it uses integrated sensor technology and an app to control peak visitor flows and prevent wait time. Learning software also optimizes quantity calculations and preparation plans for the chef, which minimizes the number of unsold meals.

THE SIEMENS SOLUTIONS INSTALLED

They include heating, air-conditioning, ventilation, heat recovery, lighting, shading, access control system, video surveillance, fire alarm system, integrated facility management, and energy and asset management.



"Siemens and Knorr-Bremse are connected by more than 25 years as equal partners. We're united by the courage to try new things: creating new solutions, forging ahead with them, and implementing them impressively."

Frank Berkemeier, Vice President Industrial Engineering & General Service Munich, Knorr-Bremse

"Innovation is a tradition at Knorr-Bremse. With Siemens we have a partner that will continue to make good on this promise far into the future."

Michael Koch, Head of Facility Management, Knorr-Bremse

Summary

MANY INTELLIGENT DETAILS MAKE THE DIFFERENCE

Knorr-Bremse has committed to a policy of sustainable governance, and the company has a sense of responsibility toward people and the environment. This means that it always has to look for better solutions. With Siemens as a partner, it's put a full range of innovations into practice at its main location in Munich that allow it to set completely new standards for sustainability in action. These then radiate out to other locations in the form of best practices that the other locations are invited to adopt. That not only saves costs, energy, and carbon, it also contributes to employee comfort in many ways. In other words, it's a perfect win-win situation.

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