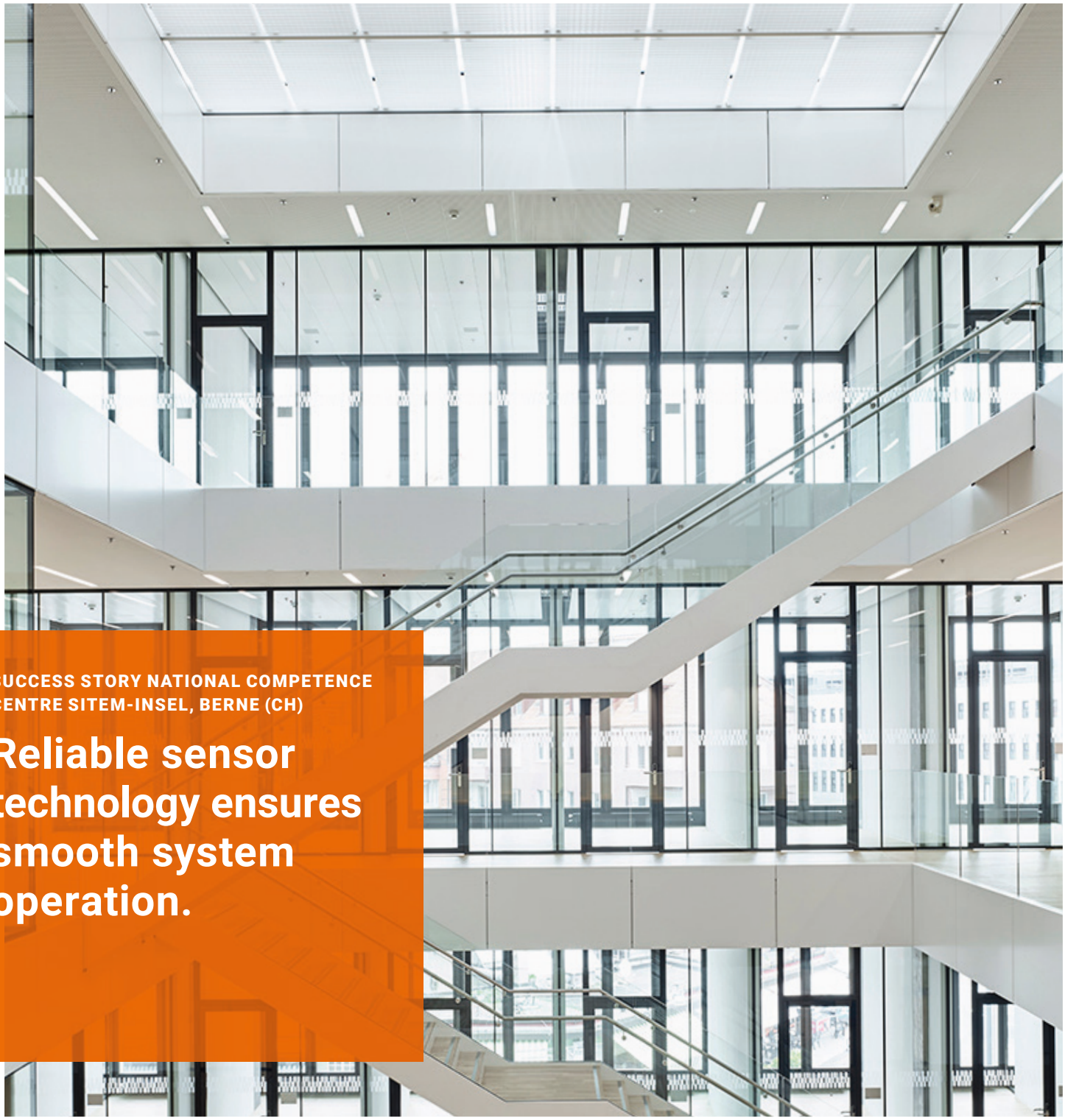


SUCCESS STORY NATIONAL COMPETENCE CENTRE SITEM-INSEL, BERNE (CH)

Reliable sensor technology ensures smooth system operation.

The new sitem building strengthens its location in Berne as an international hub in the medical field

In August 2019, the Swiss Institute for Translational and Entrepreneurial Medicine (sitem) in the Berner Insel district was opened after a construction period of almost two and a half years. This site should further strengthen Berne as a leading medical location with international appeal. The main objective of the research and innovation centre is the transfer of scientific findings from basic research and industrial developments into clinical applications.

External transparency and internal communication determine the design guidelines of the new building designed by the firm B Architekten. The uniform double-skin facade ensures transparency, while the atriums, spanning all four upper floors with a network of access and communication zones, promote exchange and encounters among the approximately 600 building users.

TYPE OF BUILDING
Research institute

PROJECT
New building

FACILITIES
Heating, ventilation, air conditioning

PRODUCTS
Globe valves and butterfly valves, globe and rotary actuators, duct/immersion temperature sensors, pressure and differential pressure sensors

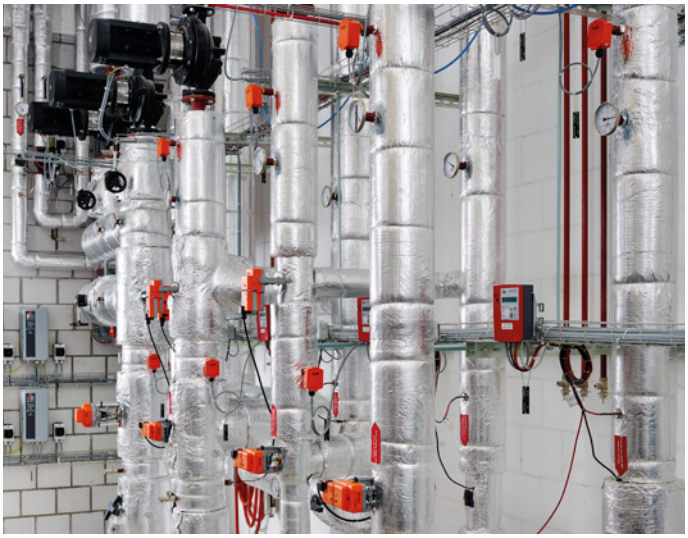
BELIMO®

Fully compatible and seamlessly integrated into the building automation.

Jobst Willers Engineering AG was responsible for the overall spatial coordination of building technology and building automation, a company highly specialised in the pharmaceutical and life sciences sector. The level of requirements was higher than usual due to the tight schedule, the high complexity and flexibility of use that are greater than usual, said Head HVAC Consulting Engineer Balz von Moos. 'The building requires a high level of chilling capacity due to the magnetic resonance tomographs. Part of the waste heat from cooling production is used to preheat the domestic warm water. The remaining waste heat from the cooling processes is also used and integrated into heat recovery to preheat air'.

Belimo components ensure that primary systems are operated as required.

Demand-based control: 'Each area has different requirements for room conditions and ventilation. For example, if there is a higher process air requirement in a laboratory area, the air volume is increased for that area', explains von Moos. Despite a high degree of automation, laboratory users can control room temperature and air volumes. Enabling users to adjust the room conditions to suit their needs is all thanks to Belimo, underscores von Moos. He also emphasises energy efficiency. Thanks to the bus connection for air distribution, current consumption is also significantly reduced. A total of 474 Belimo components and accessories worth around CHF 60,000 were used.



The large utility rooms on the second basement level house the primary systems for heating, air-conditioning and ventilation applications. A large majority of Belimo's sensors, actuators and valves were installed here.

'Today, it is no longer a given that I can order specific products by noon and have them delivered the very next day. At Belimo, however, it is'.

Project Manager Steven Fuhrer, Schütz Service AG, Belp, on the right in the picture, his colleague Patrick Beyeler, Technician, on the left

Low cabling requirements thanks to interoperable network communication.

The bus system solutions from Belimo enable unrestricted access to the control devices. Cabling expenditures are reduced by up to 90% compared to actuators with conventional wiring. MP-Bus and Modbus are used to ensure the connection and integration of the HVAC actuators and control elements in the new sitem building. This applies in particular to the floor distributors and circulating air cooling. BACnet was used to connect to the higher-level management system of the building automation. This proven communication protocol ensures network interoperability between devices.

Schütz Service AG from Belp was responsible for cabling the control cabinets with the primary systems, commissioning the hardware components and programming the necessary software. 'On a technical level, the construction project is comparable to a hospital building', says Project Manager, Steven Fuhrer. 'Only the level 3 biosafety laboratory would have had to take additional requirements regarding fail-safety, redundancy and emergency operation into account'.

High reliability and availability of products paired with a solution-oriented cooperation.

Schütz Service AG is an expert in laboratory and hospital buildings and has been working with Belimo products for over forty years. However, this was the first time that the system integrator worked with the new sensor product range, which required regular exchange with the Hinwil-based control technology supplier, especially while gathering information in the preparation phase. Managing Director, Philipp Schütz has a great appreciation for the cooperation: 'When we work with Belimo, we know that it works'. Technician Patrick Beyeler praises the reliability of the products: 'They deliver what they promise'. And Project Manager, Fuhrer emphasizes the very high degree of availability: 'Nowadays, it is no longer a given that I can order specific products by noon and have them delivered the next day. At Belimo, however, it is'.

In addition to the prompt delivery times, there are further advantages, such as simple operation and short installation times. Sales Consultant, Thomas Kandt, who was responsible for Belimo's suppliers, assures us that the intuitive and tool-free mounting of the sensors in particular is a major plus. 'We always receive positive feedback from installers regarding this, not only for this project, but in general'.

Cold accumulator for optimising the chiller running time.

DUCT/IMMERSION TEMPERATURE SENSORS FROM BELIMO
provide accurate and reliable temperature readings and are essential for optimal building comfort and energy efficiency.

- Up to 8 measuring ranges can be selected on the sensor.
- Sintered coating for extra protection.
- Quick and easy assembly.
- Various cable gland options.
- Complete and seamless connection to all major building automation systems.

All inclusive.

Belimo is the global market leader in the development, production, and sales of field devices for the energy-efficient control of heating, ventilation and air-conditioning systems. The focus of our core business is on damper actuators, control valves, sensors and meters.

Always focusing on customer value, we deliver more than only products. We offer you the complete product range for the regulation and control of HVAC systems from a single source. At the same time, we rely on tested Swiss quality with a five-year warranty. Our worldwide representatives in over 80 countries guarantee short delivery times and comprehensive support through the entire product life. Belimo does indeed include everything.

The "small" Belimo devices have a big impact on comfort, energy efficiency, safety, installation and maintenance.

In short: Small devices, big impact.

- 5-year warranty
- On site around the globe
- Complete product range
- Tested quality
- Short delivery times
- Comprehensive support

EN – 06.2020 – Subject to technical modifications

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