

Case study

Industry Sector Building Technologies Division

Zug (Switzerland), April 27, 2010

Comprehensive Solution for Shopping Centers

The integrated management, control, and monitoring of all building technologies systems allow shopping centers to operate more efficiently, as can be seen with the example of Torvbyen in Norway. This has a positive effect on the operating costs.

Torvbyen in Fredrikstad is one of the largest regional shopping centers in the southeast of Norway. The shopping center covers the broadest variety of needs with a total of 85 stores including grocery stores, fashion stores, furnishing specialists, specialty stores and also service providers such as hair stylists and various restaurants. The center generates total revenues of over a billion Norwegian kroner per year.

During an expansion to add new buildings and stores as well as renew building technologies systems, it was discovered that the different controls for the HVAC systems made efficient operation impossible. The personnel responsible for building technologies therefore had no other choice but to individually operate and monitor the different control systems at the different locations on the site. It is obvious that energy is used extremely inefficiently under such conditions.

Easy to operate

The expansion of the shopping center provided the opportunity to replace all of the different control systems with a single overall control system. The Synco 700 modular HVAC controller version from the Siemens Building Technologies Division was selected, which is tailored to such applications. Thanks to its simple and efficient operation, Synco 700 demonstrates a high level of user-friendliness and serviceability. Previously tested applications and energy-saving functions are already integrated. Costs can therefore already be saved during project planning, engineering, and startup.

The Synco 700 controllers communicate with each other via the worldwide standardized KNX bus system, guaranteeing automatic coordination of all processes as well as efficient control of all systems according to their needs at all times. Thanks to the ACS715 system and operation

software and the OZW775 communication control center from Siemens, all controllers can be operated and monitored from a central location. As an option, the entire system can be accessed via the internet from any location at any time, which enables even more efficient operation and rapid intervention for all types of malfunctions.

Considerable energy savings

Efficient energy use was considered very important during the planning of the renewal and expansion of the shopping center's building technologies. This included the installation of new heat pumps and cooling units, renewing windows, and adjusting the lighting to low-energy settings. In combination with the pre-programmed energy-saving functions of the installed 32 Synco controllers, today they can save a considerable amount of energy and operate the shopping center at significantly lower costs.

Comprehensive controlling with Synco 700 pays off for the Torvbyen shopping center in two ways: Firstly, all building technologies systems can be controlled and monitored significantly more efficiently from a central location, and secondly the pre-programmed energy-saving functions enable drastic reductions in operating costs. Thanks to the modular construction, the Synco 700 can also be upgraded and adjusted to changed conditions at any time during subsequent expansions.

The **Siemens Industry Sector** (Erlangen) is the leading provider of environmentally-friendly production, transport, building and lighting technology in the world. Using consistent automation technologies in comprehensive industry solutions, Siemens increases the productivity, efficiency and flexibility of its industry and infrastructure customers. The sector consists of the six divisions Building Technologies, Drive Technologies, Industry Automation, Industry Solutions, Mobility and OSRAM. With approx. 207,000 employees worldwide (correct September 30th 2009), Siemens Industry achieved a turnover of around 35 million euro in 2009. <http://www.siemens.com/industry>

The **Siemens Building Technologies Division** (Zug, Switzerland) is the leading provider of safe and energy-efficient buildings ("Green Buildings") and infrastructures in the world. As a service provider, system integrator and product supplier, Building Technologies provides building automation, HVAC technology, fire prevention, security, electrical installation technology and low-voltage energy distribution. With approx. 43,000 employees worldwide (correct September 30th 2009), Building Technologies achieved a turnover of around 7.0 million euro in 2009. www.siemens.com/buildingtechnologies