

More energy efficiency and security due to HVAC and access control systems

70 gymnasiums, Rotterdam/Netherlands



In Rotterdam, the municipality rents gymnasiums to schools and clubs. Staff members are not stationed at the locations concerned. Therefore in the past tenants were given a key. This system was open to abuse and was reason enough for the Sport and Recreation department to look for a better management system. This had to be able to control heating and lighting as well as access control. In close collaboration with Siemens Building Technologies, Solutions Partner ASE Technisch Installatie Buro Barendrecht supplied an inventive, ultra-modern solution. This served to combine access control with the control of heating and lighting using SiPass® and Synco™ systems from Siemens. A side effect of the installation designed for the gymnasiums was the reduction in power consumption.

Engineer Ferry Broeders, managing director of ASE, explains that management takes place in the boroughs where the gymnasiums are located. Each borough has a permanent manager who used to issue the keys. These managers set the timers to manage the heating, so that the hall was at the right temperature when the rental period commenced. The tenants had to switch the lights on and off themselves.

Ferry Broeders: "This procedure was susceptible to misuse. Tenants could simply use the halls for longer or at other times than they were entitled to. The large number of keys that were in circulation impeded adequate management. Above all, illegal use, as well as tenants forgetting to turn off the lights, had a negative effect on the power bill."

■ Well-organised

Thanks to the Siemens SiPass access control system now only rightful tenants gain access to the gymnasiums for exactly the amount of time that has been allocated to them. Instead of a key they now receive a chip pass that holds all their data. The registration of the data shows exactly when a person was in a facility. The system is so clever that tenants do not actually get an opportunity to occupy a gymnasium for longer or at a different time. Ferry Broeders:

"As soon as a tenant has registered with his pass, a contact in the SiPass system ensures that the Synco air conditioning system starts to operate. Both the comfort position for the heating and lighting are switched on. Ten minutes before their time is up, a bell sounds, warning those present. As soon as the booked time has expired, the lights in the hall go out and the heating switches to half comfort. In the changing rooms the light continues to burn for another twenty minutes. After ten minutes, the bell sounds again and ten minutes later the lights go out in the changing rooms. Warm water also stops running in the showers. Emergency lighting continues to burn. Once the final rental period for the day concerned has finished, the heating switches to night position. The next day the system ensures that the heating is set at half comfort position prior to the first rental period."

In comparison to the past, heating and lighting are now used more efficiently. This reduces the municipality's energy consumption by up to 20%. In turn,

this reduces the CO₂ emissions, so that the new installation is environmentally friendly! The City of Rotterdam now has 10% more income out of the rented time slots because in the past even if time was up people kept on using the facilities.

■ Remote management

Each gymnasium is equipped with its own individual GSM modem. Each night the registered data from that day is automatically sent to the managers' computers. This does not only provide insight into the actual use of the gymnasiums, but also into the times that cleaners or engineers have been at work. The GSM modem facilitates remote active management. As Ferry Broeders says:

"The halls are rented according to a yearly plan. Based on this, each evening a programme is transmitted for the next day. This specifies exactly who has access and at what times. If the programme deviates from the yearly plan, the managers can change this from their computers. If changes occur after the transmission, the manager is able to alter the programme by ringing in. Any faults are notified by text message. This could be a fault with the heating, but it could also be an emergency exit that was left open by the tenants for ventilation."

He goes on to explain that engineers and cleaners can put the lights on using a key. There is also a switch behind a pane of glass for emergencies. If this is used, data on the SiPass access control system will always reveal which tenant is responsible.

■ Know-how available

In fleshing out the new system, based on the requirements of Rotterdam Municipality, both ASE and Siemens have gained a lot of knowledge and experience. This know-how is available for creating solutions in similar circumstances. A great advantage here is that the wheel does not need to be reinvented. Of course this solution uses Siemens equipment, which means that realising comparable solutions with other manufacturers' products will unavoidably result in increased costs.

Highlights

- Customer-friendly booking system
- 20% energy saving costs
- 10% increase in turnover
- Remote administration
- Keys no longer required by servicing staff

The information in this document contains general descriptions of technical options available, which do not always have to be present in individual cases. The required features should therefore be specified in each individual case at the time of closing the contract.

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