

# University of Aarhus

The largest Danish project to date focusing on integration of security and BMS



## CUSTOMER BENEFITS

- Access control using the intelligent chip card ensures that faculty, students and staff have access to the appropriate areas, and that unwanted visitors do not
- The chip card functions as a debit card everywhere on the campus – minimizing the need for cash on hand
- Electronic sensors report open doors or windows in unauthorized situations
- The system is future-proof, as it can accommodate new possibilities that arise as technology advances
- Open IT architecture ensures that the University is not bound to specific IT system suppliers
- One common user interface provides operators with a general overview, allowing them to respond quickly when necessary

## PROJECT AT A GLANCE

Project Type: Integration of Building Management System & Security

Location:  
Århus, Denmark

Total Area: 334,000 m<sup>2</sup>

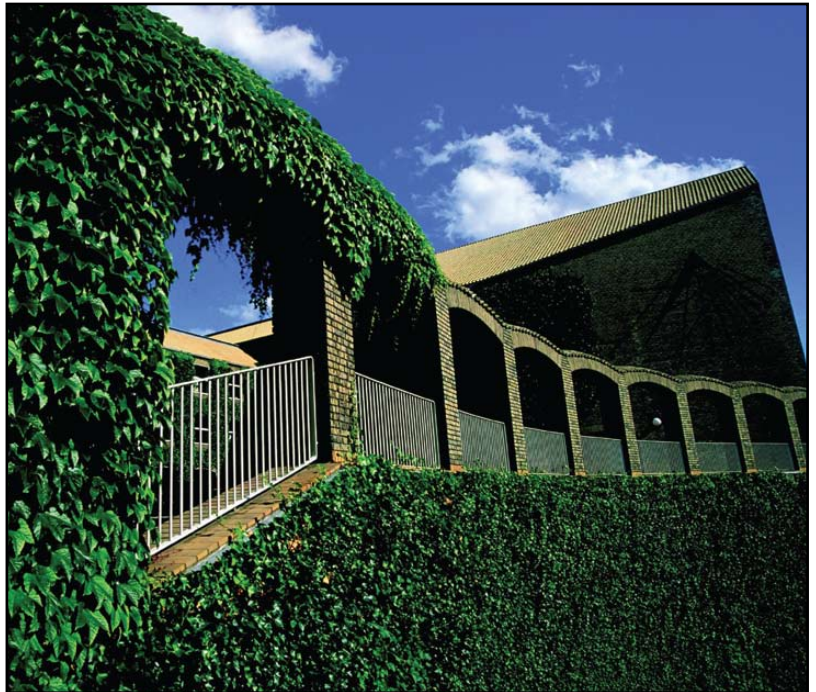
Applications:  
Building management  
Access control  
Security  
Energy monitoring  
Payment system



For more than 80 years, Aarhus has been a university town — although conditions were rather modest during the first years of the institution's existence. Architects Kay Fisker, C.F. Møller and Povl Stegmann won the competition to design the new buildings, which led to the construction of the unusually beautiful campus which has attained international fame for the harmonic interplay between the architecture and the landscaped surroundings of the park.

The University of Aarhus, after merging with a number of other institutions of higher learning, has now become almost as large as the University of Copenhagen. Incidentally, the latest Nobel Prize awarded to a Dane was given to Jens Christian Skou, who for many years was a professor at the University of Aarhus.

Today, the University has approximately 34,000 students and 9,000 employees. The distinctive yellow brick buildings in the university park contain a total floor space of 246,000 m<sup>2</sup>. In addition, the University owns a number of buildings beyond the park area that contain a total floor space of 88,000 m<sup>2</sup>.



### The Challenge

The University of Aarhus is divided into eight areas of operation, each with its own engineer in charge. A single, coordinated administration is led by a technical manager responsible for BMS, security and energy use. Traditionally, the areas of operation each functioned using different systems, and that created a number of problems in day-to-day work processes.

As the University needed to improve overall security against theft, vandalism and other problems resulting from the behavior of unwanted visitors to the campus, the obvious choice was to select a total solution.

The old access cards with magnetic strips were to be replaced by an intelligent chip card which, in addition to providing improved security, featured a number of other functions as well. The card was intended for use by faculty, students, staff and others with daily business on campus.

### The Solution

The University of Aarhus was interested in undertaking a long-term framework agreement with the supplier, one that focused on ongoing updates and further developments to the system in addition to the primary ones of access control, burglar alarms and payment systems.

TAC Vista is based on open standards, enabling all building technology to be integrated into the system. Using the TAC Vista single operator interface, staff members can monitor and control the entire system either on the spot or through remote access.

The University of Aarhus has earmarked a double digit, million Danish kroner sum for the project, which is scheduled to be completed over a number of years.

The solution is the largest of its kind in Denmark to date, covering a total area of 334,000 m<sup>2</sup> and offering the capacity to handle 75,000 users. The framework agreement will run over 15 years with an option to purchase by the University of Aarhus. During this period, the University is entitled to extend the selected solution to encompass a number of additional purposes.

Financially speaking, the solution chosen by the University is very practical to work with. Quite simply, unit prices are established for each individual operation — and as the project runs over several years, the price naturally will be regulated according to the price index.

The University of Aarhus is implementing Denmark's largest intelligent building technology solution to date. The project encompasses a total area of 334,000 m<sup>2</sup>, and the system is scaled to handle the requirements of 75,000 users.

“We chose TAC because the company is a market leader when it comes to integrating building technology.”

Søren Harboe  
Technical Manager  
University of Aarhus

### The Bottom Line

The contract with TAC was signed in October 2007, and before the end of the year the first areas were under preparation to implement the new intelligent chip card which, along with improved technical security, makes it exceptionally difficult to be on campus without permission.

The card holder has access only to the areas of the University where he or she is permitted to be — for example, relevant lecture rooms, classrooms, labs, offices and common areas such as libraries, cafeterias, and administration offices.

A new feature of the chip card will be its ability to function as a debit card for the purchase of books, educational materials, items from the cafeteria, and services such as photocopying.

As students will be using the chip card rather than cash to make purchases, the University will be able to reduce the amount of cash kept on hand in its retail operations.

The card also functions as an external ID card for staff members and as an international student card for students. During the transition phase and until the entire University is equipped with the new access control system, a magnetic stripe on the chip card will ensure that it can be used everywhere