

Integrated Access Control and Security System Visualisation at the Wrocław University of Economics and Business



Investor

Wrocław University of Economics and Business

Manufacturer

Roger Sp. z o.o. sp. k.

Users

1200

Doors

345

Visualisation as Part of VISO SMS

Integrations

- SATEL IAS
- Beckhoff BMS
- Virtual reception

Identification

- proximity: MIFARE® DESFire® cards (SSN)
- mobile: Bluetooth, NFC, QR

Upgrade from RACS 4 to RACS 5

Barriers

The Wrocław University of Economics and Business was established in 1947 as the Higher School of Trade and is one of the largest universities of economics and business in Poland. It offers a wide range of fields of studies, including economics, management, finance, and computer science for economics. Its campus combines modern infrastructure with rich history, and its graduates are regarded as highly-trained specialists in the labour market. The university actively cooperates with businesses and science institutions worldwide, supporting the innovativeness and professional growth of its students.

Requirements

The Wrocław University of Economics and Business is not only a vast campus with numerous educational, technical, and office buildings but, above all, a dynamic academic community that creates a space for learning, research, and idea exchange. Over 10,000 students attend the university, and its efficient functioning is facilitated by approximately 1,000 full-time and hundreds of contract employees. Given the scale and complexity of the facility, resulting from multiple buildings and a wide range of functions, ensuring its effective organisation and management is paramount.

The decision to introduce an access control system at the campus followed from the need to increase the security level for all its users. To adequately protect the large number of individuals on campus, it was imperative to modernise and computerise the university's infrastructure. The need for a single, integrated solution arose because the university already had three different access control systems. The implementation of an access control system in some areas of the campus was due to the provisions of law and the requirement to ensure compliance with current standards. The necessity to adequately secure the state-of-the-art equipment located in the laboratories and lecture rooms.

Several key factors determined the choice of the integrated Roger RACS 5 system, ensuring access control on the entire campus. One of them was the trust resulting from the positive experiences related to the RACS 4 system operating at the university to date. Another important reason was the readily available technical support, which allowed for efficient implementation and maintenance of the system both at the installation stage, as well as during its further use. The high reliability of Roger devices, which contributes to the reduction of stoppage risks and problems connected with the operation of the solution, was yet significant factor that needed to be considered. The RACS 5 system was selected also due to its flexibility, wide functional scope, and customisable settings. Based on this, it was concluded that the system would effectively control access to the campus by adapting to the unique needs of the university, while by optimising the processes it will improve overall security level on the premises.

Solutions

Installation of the RACS 5 access control system at the Wrocław university started in 2020. The current solution covers 345 doors and supports approx. 1200 users. Securing laboratories, lecture and class rooms, which are key to the university's daily didactic activities, was a priority during the system implementation works. The next step was to focus on technical rooms such as the Diploma Printing Centre.

Barriers at the campus entrances have also been incorporated into the access control processes using QR code identification. Proximity readers for the MIFARE® DESFire® cards configured to work with card numbers stored in encrypted memory sectors of the card's electronic memory (the so-called "SSN") were used to increase the security level to a maximum.

The standard access control has been enhanced with the VISO SMS software, allowing for advanced monitoring and visualisation of security systems. By allowing the creation of advanced facility maps, the platform simplifies the process of precise sending of notifications and efficient verification of alarms and system failures. Moreover, the software assists in making decisions during emergencies thanks to the pre-defined security scenarios. Adding notes to the map elements (e.g., sensors, doors, and cameras) optimises recording and organisation of service and maintenance works.

The facility which posed the greatest challenge in the installation process was the fully autonomous building of the Business Process Simulation Centre (CSPB). It is a modern computer lab for designing, modelling, visualising, and optimising business processes using the latest computer and virtual reality (VR) technologies. An Integration Server was utilised to provide such comprehensive functionality. It allowed interoperability of the RACS 5 system with the SATEL intrusion alarm system (IAS), Beckhoff building automation system (BMS), and virtual reception. As a result of integration with the virtual reception, temporary lab access can be granted after taking access cards from the electronic kiosk. The device grants appropriate authorisations based on the information from the RACS 5 system user database. Interoperability with other solutions allows for enabling or disabling alarms and controlling HVAC functions directly with the access control system managing software.



Identification

- proximity: MIFARE® DESFire® cards (SSN)
- mobile: Bluetooth, NFC, QR



Integration with SATEL IAS



Integration with Beckhoff BMS



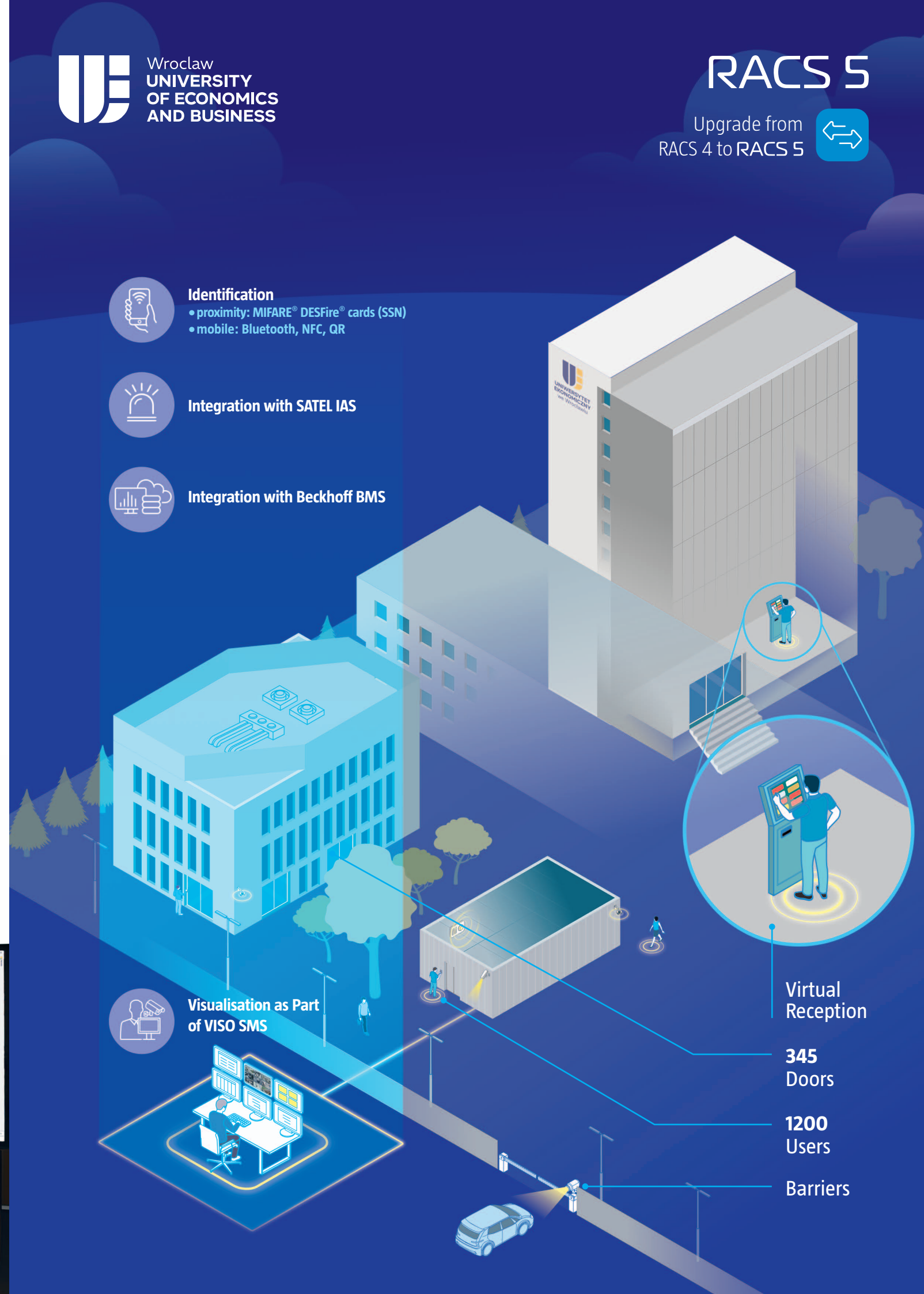
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Benefits

The use of the RACS 5 electronic access control system has first and foremost increased the security level at the campus. The risk of unauthorised access to rooms was reduced by implementation of the MCT80M-BLE readers and the MIFARE® DESFire® cards supporting credential numbers that are encrypted and secured against copying.

The VISO SMS software is an additional element that made security management more effective and optimal. Real-time central surveillance allowed for faster and more effective responses to emergencies.

The RACS 5 system's adaptability enabled the implementation and centralised management of advanced functionalities within the modern CSPB lab. This, in conjunction with its integration with various security systems, has facilitated the achievement of a solid and efficient control model for this autonomous building.

RACS 5 has also helped to unify and standardise the processes. This solution has significantly improved the comfort of using the facility by the employees who now need only one card to gain access to required rooms, and in the case of mobile identification, they just need to use a smartphone.

There are plans to further expand the system to cover all didactic and technical rooms and offices in the future. The investor intends to connect the authorisations of the access control system users with the present class schedule. Integration with the Active Directory services will contribute to the achievement of this goal. With this functionality, access management will become even more optimised, making it possible to precisely grant selected persons authorisation to access individual rooms during specified hours.



Roger Sp. z o.o. sp. k.
Gościszewo 59
82-400 Sztum
Poland

T. +48 55 272 0132
F. +48 55 272 0133
E. roger@roger.pl
www.roger.pl

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