



Security is a process

We integrate it into one platform

aquila.elektrotim.pl

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Don't wait for an incident

Choose full control with Aquila





Security is a process We integrate it into one platform

Aquila is a Polish proprietary PSIM system designed for comprehensive security management. It consolidates all key systems – anti-drone system, perimeter protection, critical infrastructure security – in one integrated environment.



One interface for monitoring and response

The operator uses one clear dashboard that combines 2D/3D visualizations, camera preview, GIS maps and alarms, accelerating response and minimizing the risk of errors.



Automation of response and alarms

The system analyzes dependencies and automatically triggers planned actions – from activation to lockdown.



Event handling in real time

Aquila processes data from multiple systems in real time, instantly presenting priority events with location, source and suggested action.





Full control Highest security standards

State security

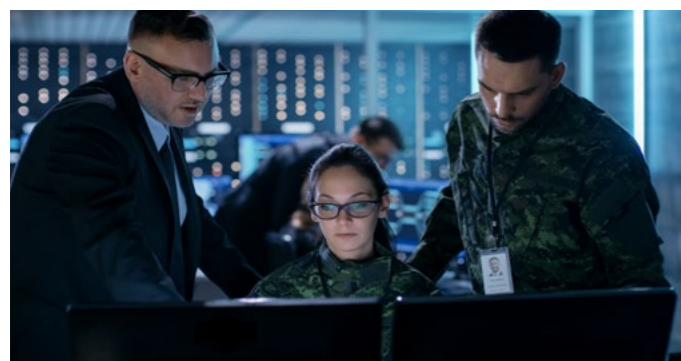


Public facilities



Aquila ensures the security of facilities in the military and strategic sector. The system meets departmental standards, enables operation in closed networks and full access control at the operational level.

The platform ensures continuity of operation of facilities such as shopping centers, hospitals, airports and office buildings. **Aquila integrates all security systems**, such as fire alarm systems, acoustic warning systems, industrial television, access control systems, environmental monitoring and evacuation systems.



Critical infrastructure



Aquila takes care of the security of key elements of critical infrastructure that require continuous operation, regardless of failures or attacks. The system guarantees reliability in the most demanding environments.



Industrial and traction facilities



The system integrates monitoring, access control, fire systems and automation in one platform. **Aquila comprehensively secures** and automates security processes in industrial facilities and traction infrastructure.





Reliability and supervision every second

- Dedicated backup servers capable of taking over the load of one of the communication servers at any time
- Replication server for database server (db) and www. Accelerates query execution (load balancer) and ensures short recovery time after failure (failover)
- Use of RAID disk arrays to increase reliability (protection against failure), accelerate data write/read (performance) and increase disk capacity
- Multi-year (MTBF) mean time between failures, high system reliability index



26 years

of experience in security system integration

323

facilities in Poland managed by the Aquila system

615

operator stations 24/7/365

100%

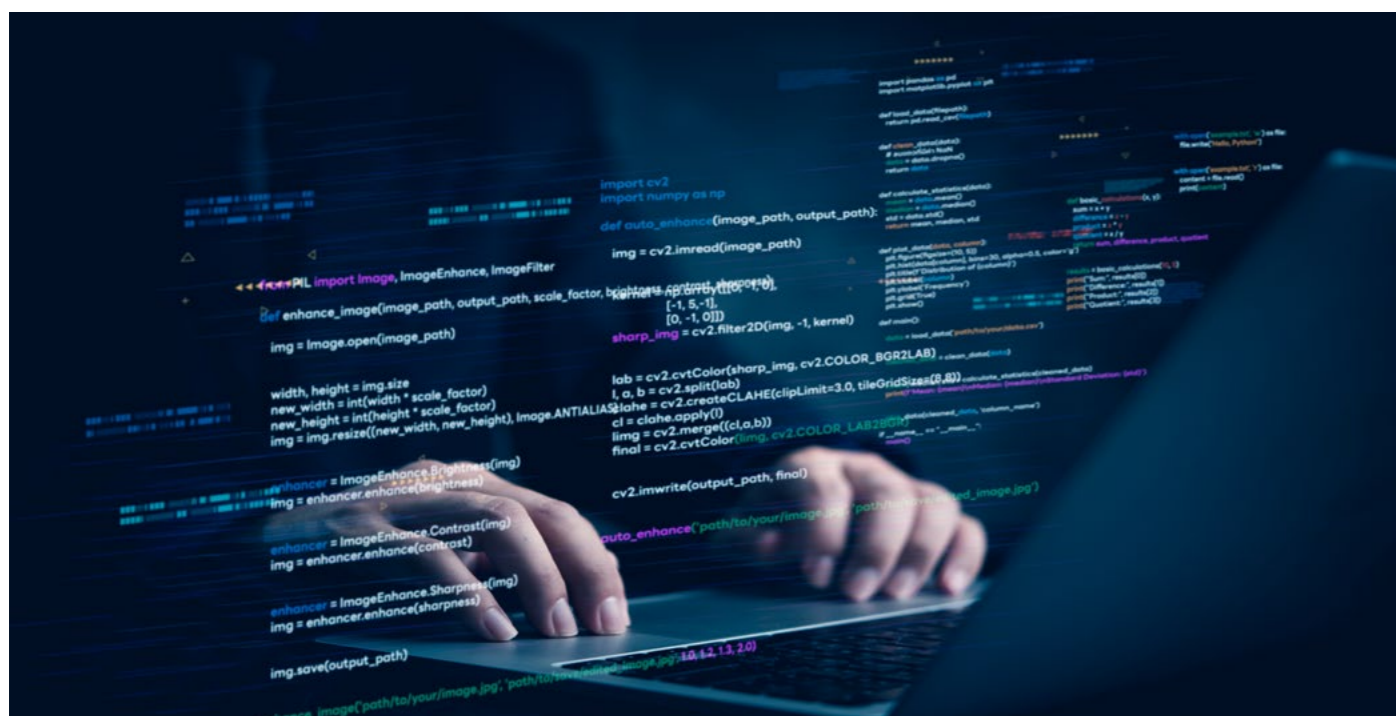
compliance with PN-EN and CNBOP-PIB standards

24/7

availability of support and monitoring for customers

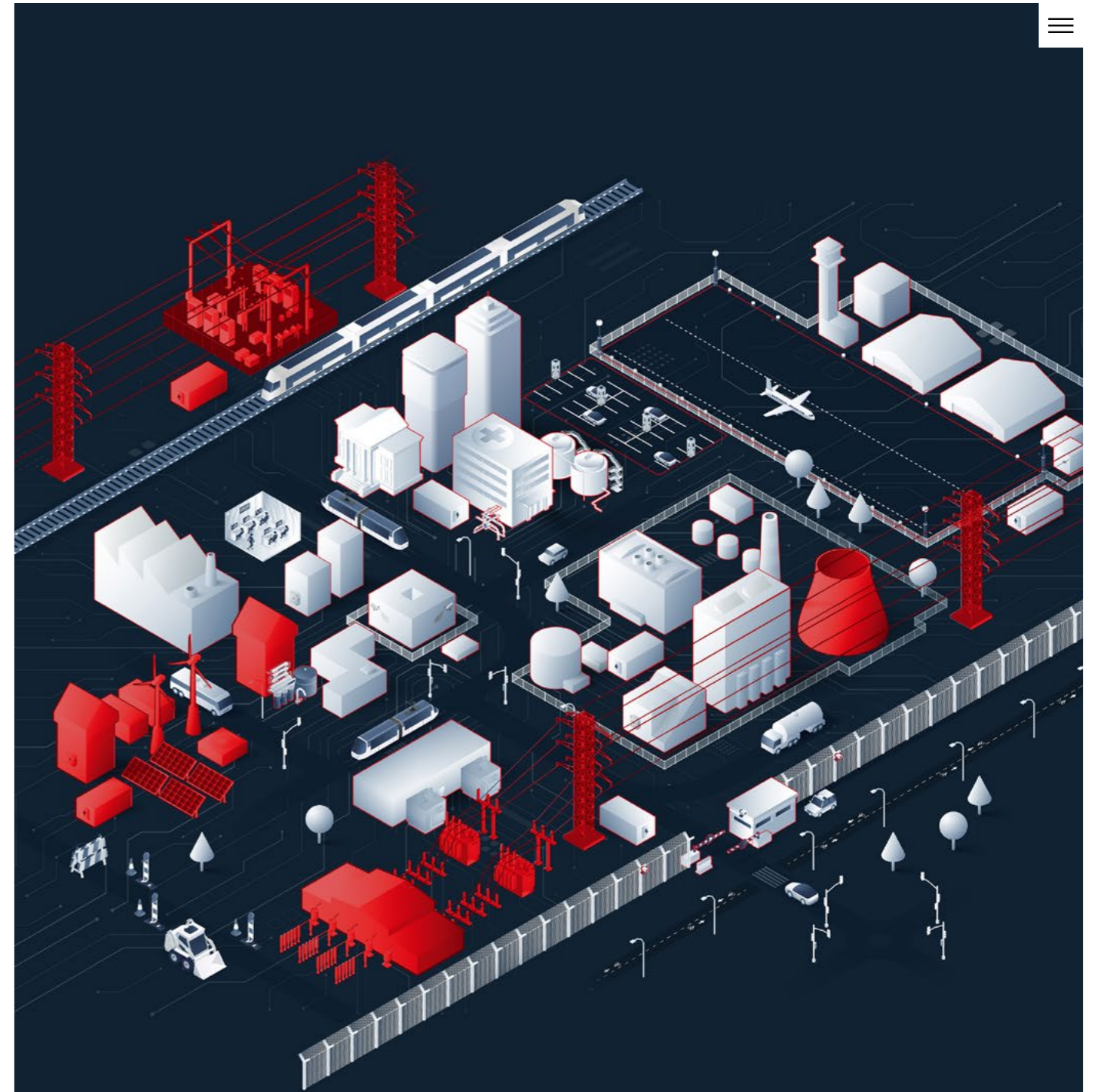
404 km

of Poland's borders secured by Aquila



Designed for your security

The Aquila system is tailored to the specific demands of your industry's infrastructure, delivering comprehensive support and security – from initial design through to full implementation



Discover the wide range of Aquila's applications

Aquila is a solution compliant with European standards, backed by full technical support and ensuring safety, stability, and reliability in critical situations.



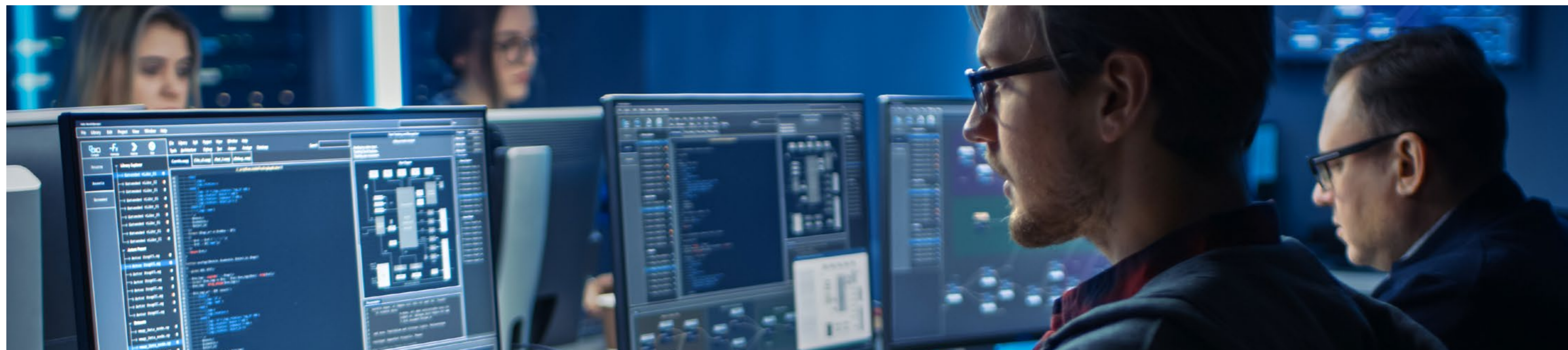
Control perfected in every detail

- Central control and remote system management
- Graphical monitoring of installation status and event handling
- Regular, automatic backups
- Fast technical support available 24/7 throughout Poland
- Storage of information about system configuration and about users, operators and their permissions



- Operating system: Linux / Windows

- Quick access to current and archived information from multiple workstations





Control perfected in every detail



- Reporting, work time registration and patrol monitoring
- Management of parking lots, tenants and access cards (including cashless payments)
- Integration of security systems with enterprise management systems – SAP and ERP, technology control – DCS, and process safety – SIS
- Multilingualism
- Communication encryption (SSL) and automatic backups
- Full redundancy of hardware, servers and databases
- Scalable, virtualized architecture



Why choose AQUILA?

Expert knowledge and experience



Comprehensive approach to projects



For over 20 years, we have been providing comprehensive solutions in the field of critical, industrial and public infrastructure security.

Our team consists of experienced specialists who combine technical knowledge with a practical approach to project implementation.

We provide comprehensive support at every stage of the project – from needs analysis and design through to implementation and maintenance. Our approach ensures consistency and efficiency, minimizing risk while delivering the highest level of safety.

Innovative technology – Aquila system

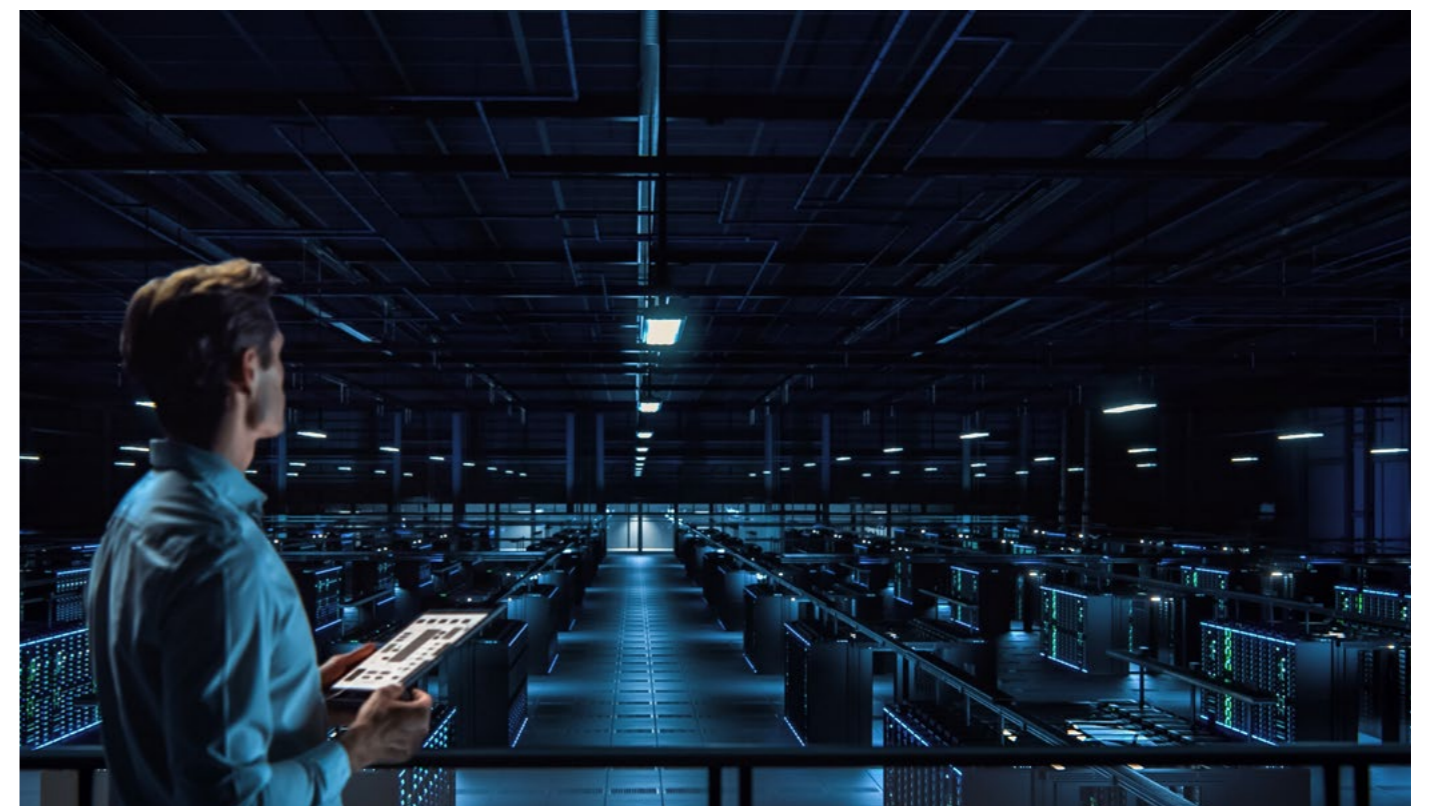
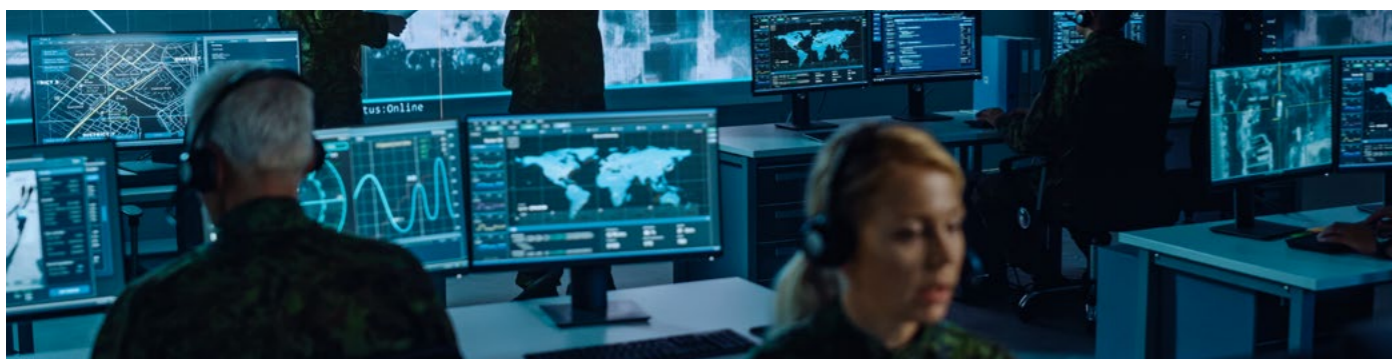


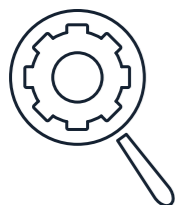
Compliance with standards and certification



We are the creators of the Aquila System – our proprietary PSIM-class platform that integrates diverse security systems into a single, cohesive solution. Due to its open architecture and flexibility, Aquila adapts to the specific needs of each facility, enabling effective security management.

Our solutions meet the requirements of national and international standards, such as PN-EN, Grade 3, PN-ISO IEC. We hold certified compliance credentials that demonstrate our reliability and professional standards.

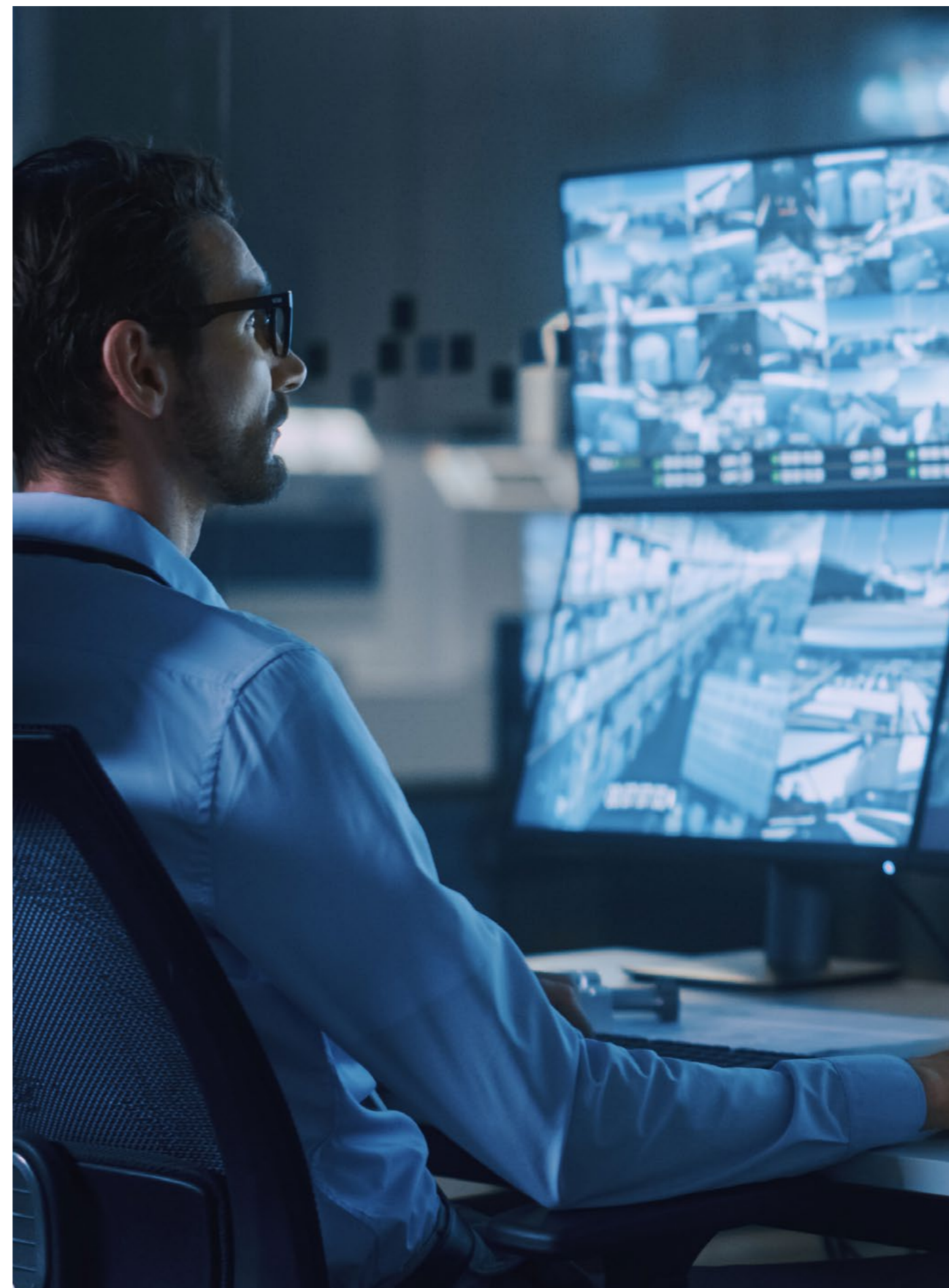
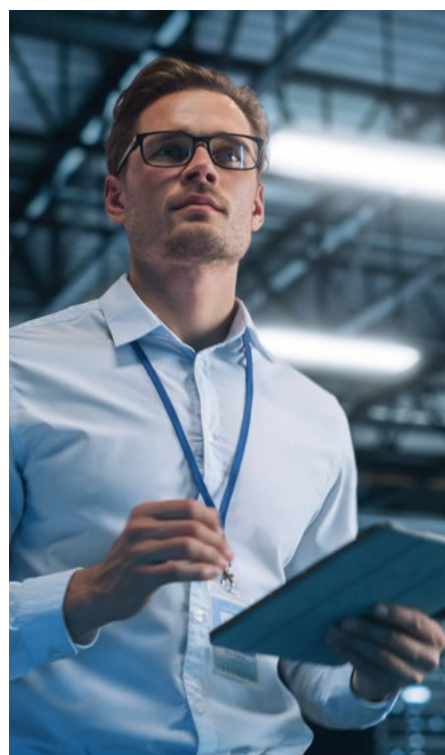




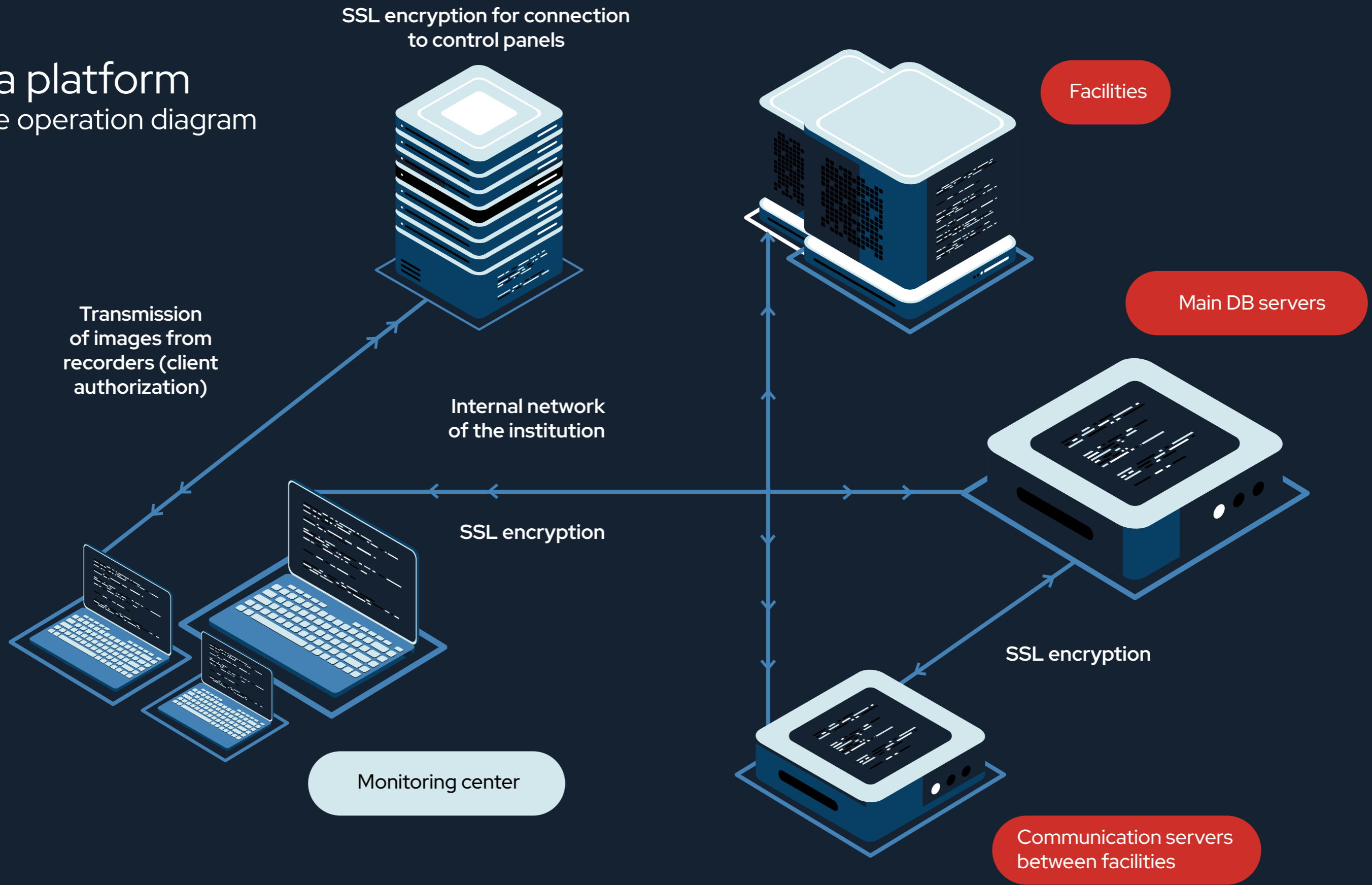
Full control and integration of all security systems

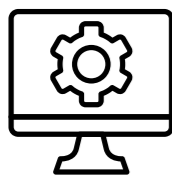
Aquila integrates security systems:

- Security systems
- Perimeter protection systems
- Technical and process systems
- Business systems safety systems
- Fire protection systems
- Industrial television systems
- Intrusion and hold-up alarm systems
- Access control systems



Aquila platform example operation diagram





Technology – architecture Client – server

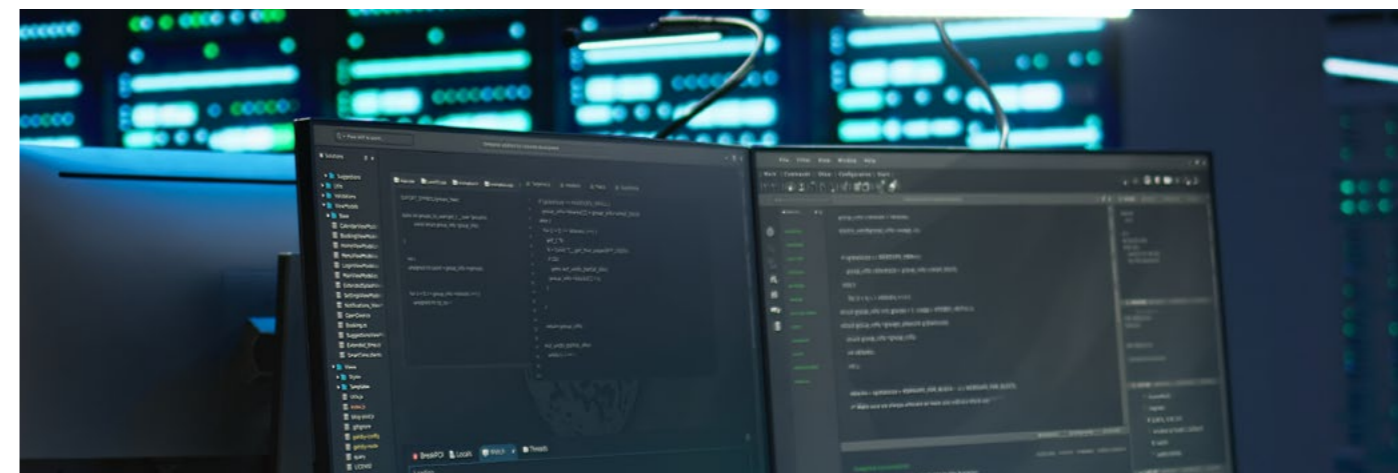
Continuous operation is ensured through a backup server operating in “hot spare” mode – a standby server kept in constant readiness and synchronized with the production system, automatically taking over in the event of a primary server failure

- **The server operating system** most often used is Linux for security and performance reasons.

- **The system server’s communication modules** are implemented at a low level (ANSI C, ensuring portability across multiple operating systems), providing fast, reliable connectivity with integrated security systems.

- **The system server’s database module** delivers a high-performance database engine responsible for recording data provided by the communication modules. It ensures fast access to both real-time and historical information from multiple workstations.

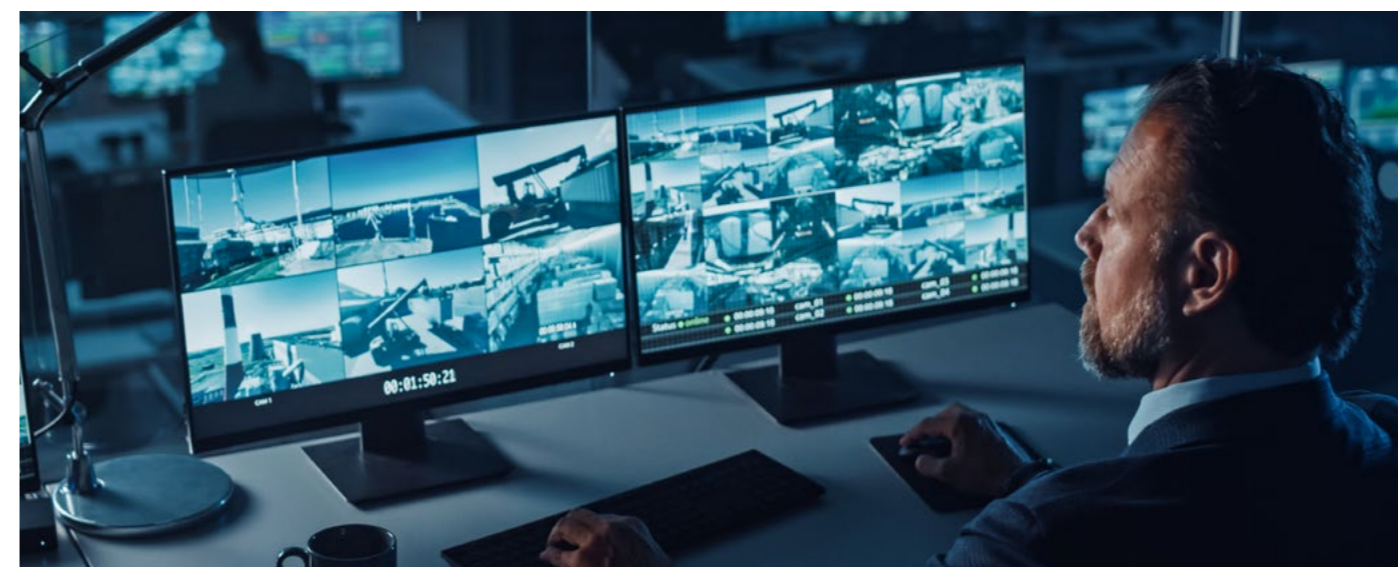
- **The system server’s spatial data module (GIS)** provides data for dynamic visualization of object statuses on synoptic maps.



- **The system server’s cryptographic module** is responsible for securing data and communications with workstations. All data (including maps) is stored exclusively on the system server in encrypted form. Access from workstations is provided online via a secure SSL protocol, with data visibility restricted according to the logged-in operator’s permissions.

- **An advanced operator permissions mechanism** enables multiple subsystems to be separated within a single server environment. A common configuration involves isolating locally managed subsystems from large, distributed systems operated by a central server, as well as creating dedicated subsystems for tenants of a building complex. These tenants can manage their own staff permissions within their leased areas, controlling access and other security functions within their allocated portions of the access control system.

- **The use of hardware acceleration for vector graphics (OpenGL)** in workstation software ensures efficient rendering of 2D and 3D maps on both Linux and Windows systems.





Administrator panel

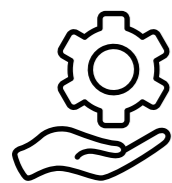
- Tool for managing facility security systems
- Preview of current status of each system element
- Permissions management
- Parallel work of multiple operators
- Reports (including work time registration)
- Programming and issuing cards to users
- **An innovative role-based mechanism** simplifies the management of facilities with multiple systems, such as Intrusion and Hold-up Alarm Systems (I&HAS) and Access Control Systems (ACS). It enables efficient control of complex security environments, including alarm systems protecting buildings against unauthorized access, theft or assault, as well as access control systems managing entry to secured areas
- Creating backups
- Always adapted to individual customer needs



Monitoring station

- Intended for security staff, dispatchers and operators in control rooms
- Visualization of security systems
- Preview of current events
- Voice messages for alarms
- Alarm confirmation with comment
- Monitoring system element status depending on permissions
- Integration with CCTV system





One platform Full control

Integration with analog systems

01

The Aquila platform enables the use of video analytics (including behavioral analysis) without the need to replace existing hardware. Video streams from analog cameras can be digitized using video servers/encoders and then analyzed by AQUILA's AI modules (H.264/H.265).

Scope of data necessary for integration

02

Integration is achieved through vendor-specific communication modules using native protocols and industry standards such as ONVIF, Modbus TCP/RTU, BACnet, SNMP, OPC, and others.

Solutions supporting night detection

03

The choice of technology depends on the characteristics of the facility and the type of threats involved. Solutions used include thermal imaging cameras, LIDAR sensors, PIR and MV detectors, fiber-optic sensing systems, day/night cameras with supplementary illumination, as well as low-power radar systems.

System endpoint sharing

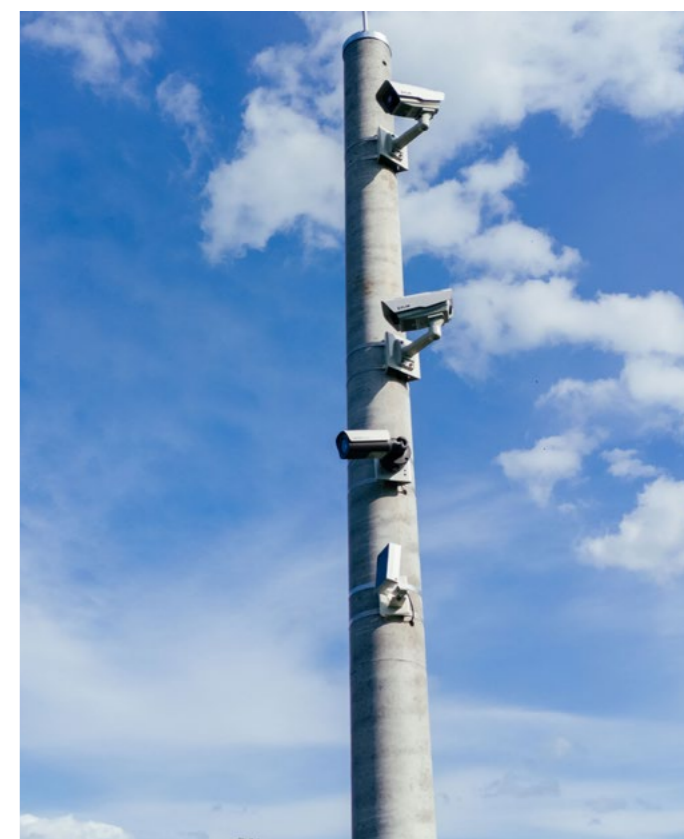
04

The scope of access depends on the confidentiality level of the network infrastructure, and it is the client who determines both the extent and manner of data sharing. Implementations within the Border Guard may serve as a reference point for solutions dedicated to the Police, with access tailored to the needs of individual units and the scope of shared data.

On-premise vs. cloud deployment preferences

05

In the area of security systems, only the on-premise model is used, in line with PLK preferences.





Individually tailored solutions

System openness model – preventing vendor lock-in

The Aquila system is a Polish-developed product. After implementation, it is possible to transfer the source code to the client, ensuring full control and flexibility.

As a result, the client gains complete ownership of the system and freedom to choose service providers. The client determines whether any risk of vendor lock-in exists—Aquila provides flexibility and long-term independence.

Licensing model

The Aquila system licensing model is flexible and tailored to the client's needs. The client determines the billing approach, which may be based on the number of endpoints, organizational units, or other deployment parameters. This approach enables cost optimization and ensures that licensing is aligned with the actual scale of system usage.





Certificates, licenses and credentials



Industrial security certificate of the first degree



Industrial security certificate of the third degree (NATO)



Industrial security certificate of the third degree (EU)



Certificate of IT system accreditation

License for trade in products for military or police purposes

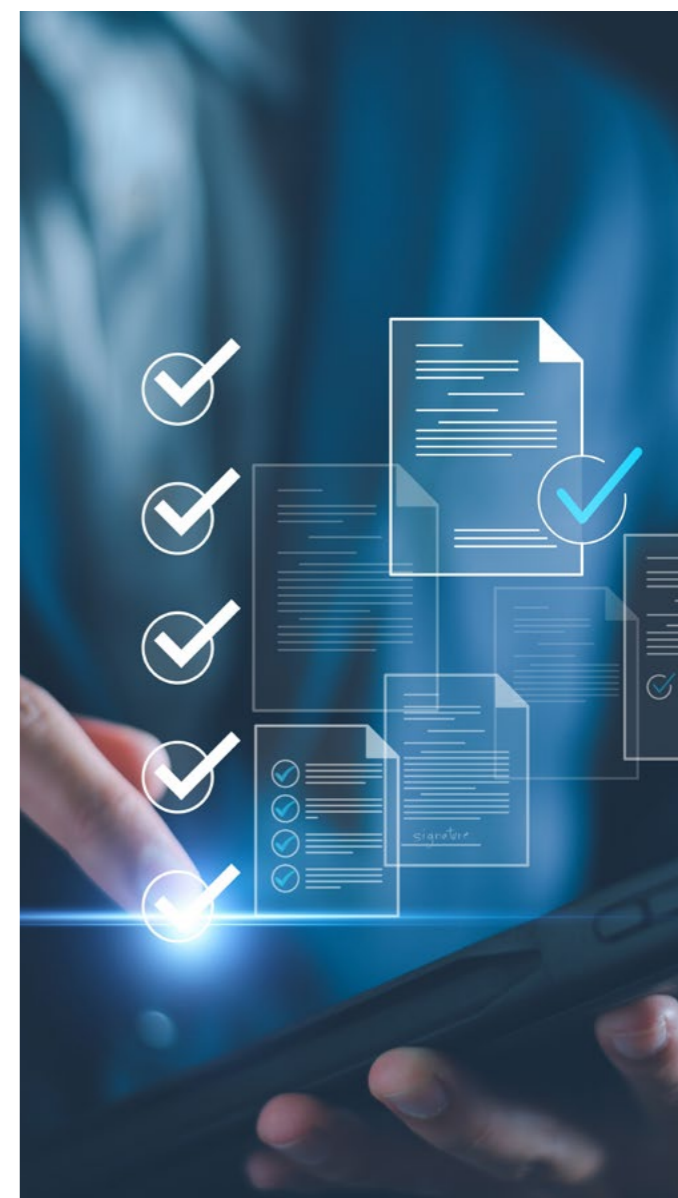
License for services of protection of persons and property provided in the form of technical security

CNBOP KOT – National Technical Assessment

CNBOP CSWU – National Certificate of Constancy of Performance Properties



CNBOP ŠD – Approval Certificate 4168/2020



Projects

Security in practice
Solutions you can trust



Selected projects

Nadbużański Border Guard Unit

Construction of a security system on the Polish–Belarusian border along the Bug River section, with a length of 172 km.



Podlaski Border Guard Unit

Design and construction of an electronic barrier on the Polish–Belarusian border, spanning 202 km.

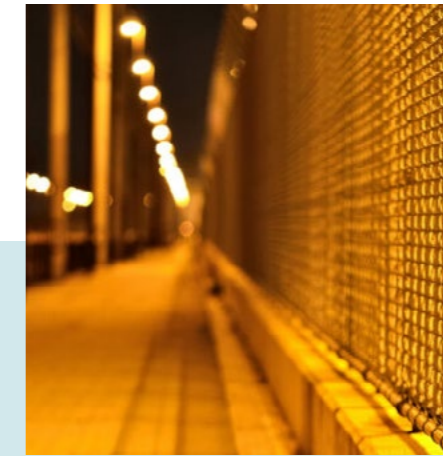


Bieszczady Border Guard Unit

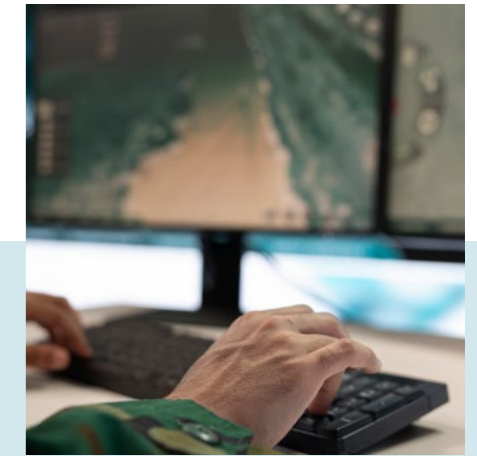
Expansion of technical border protection systems at the EU external border, including surveillance equipment along a 31 km section.



National Bank of Poland in Warsaw



Regional Infrastructure Management in Szczecin



Regional Infrastructure Management in Wrocław



Ergo Arena Gdańsk-Sopot



Ministry of Foreign Affairs in Warsaw



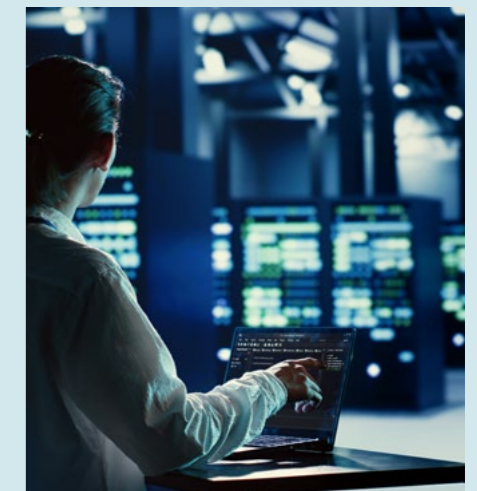
PCC Rokita S.A. in Brzeg Dolny



Business Park in Krakow



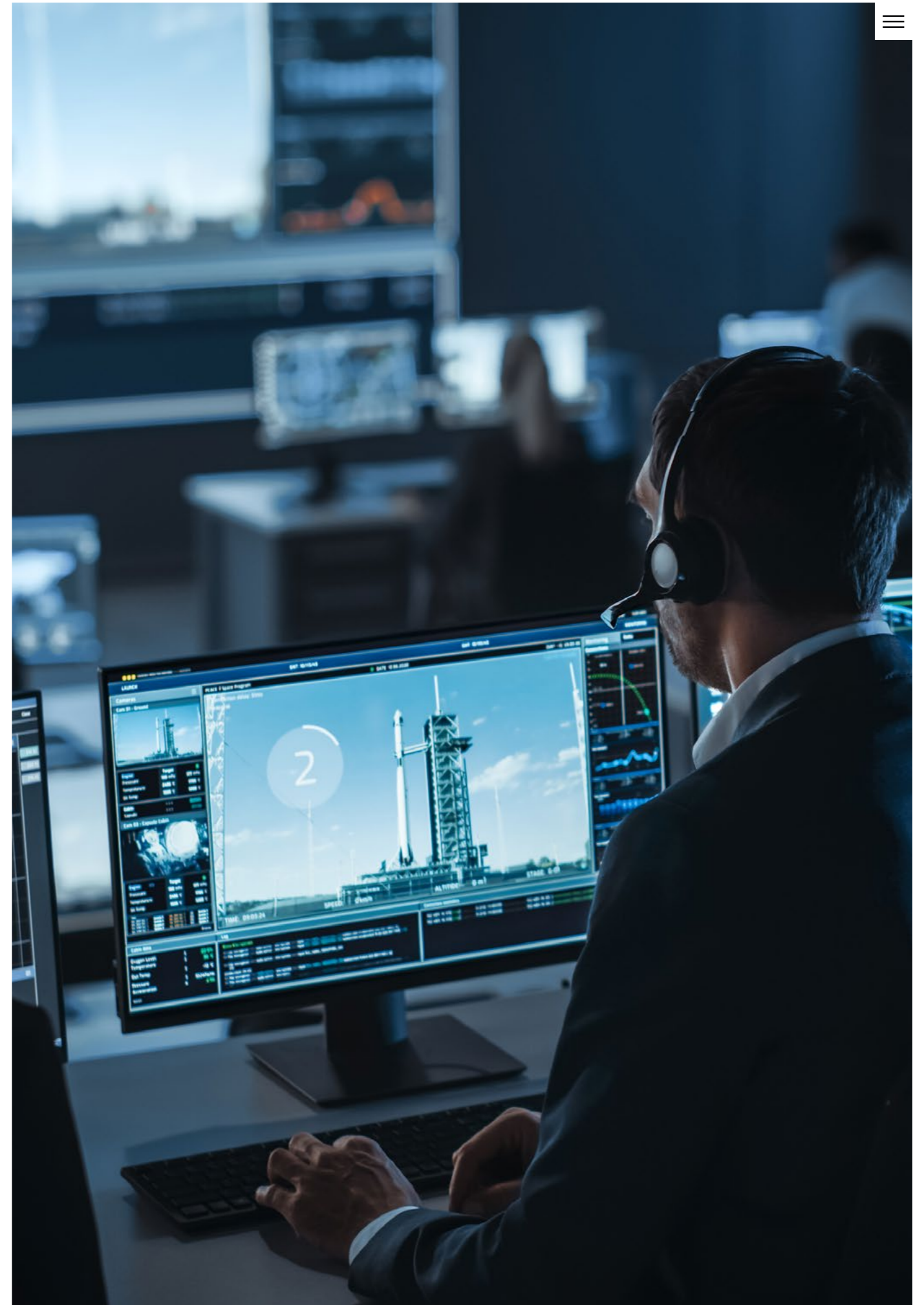
PKN Orlen Refinery Trzebinia



Military Institute of Aviation Medicine in Warsaw

About us

Knowledge. Technology. Innovation.



Reliable and effective partner

ELEKTROTIM is not only an experienced provider of power engineering services, but also a trusted business partner supporting the development and security of your operations. Since 1999, we have been delivering projects across public, industrial, and military infrastructure, as well as in the general construction and power engineering sectors.

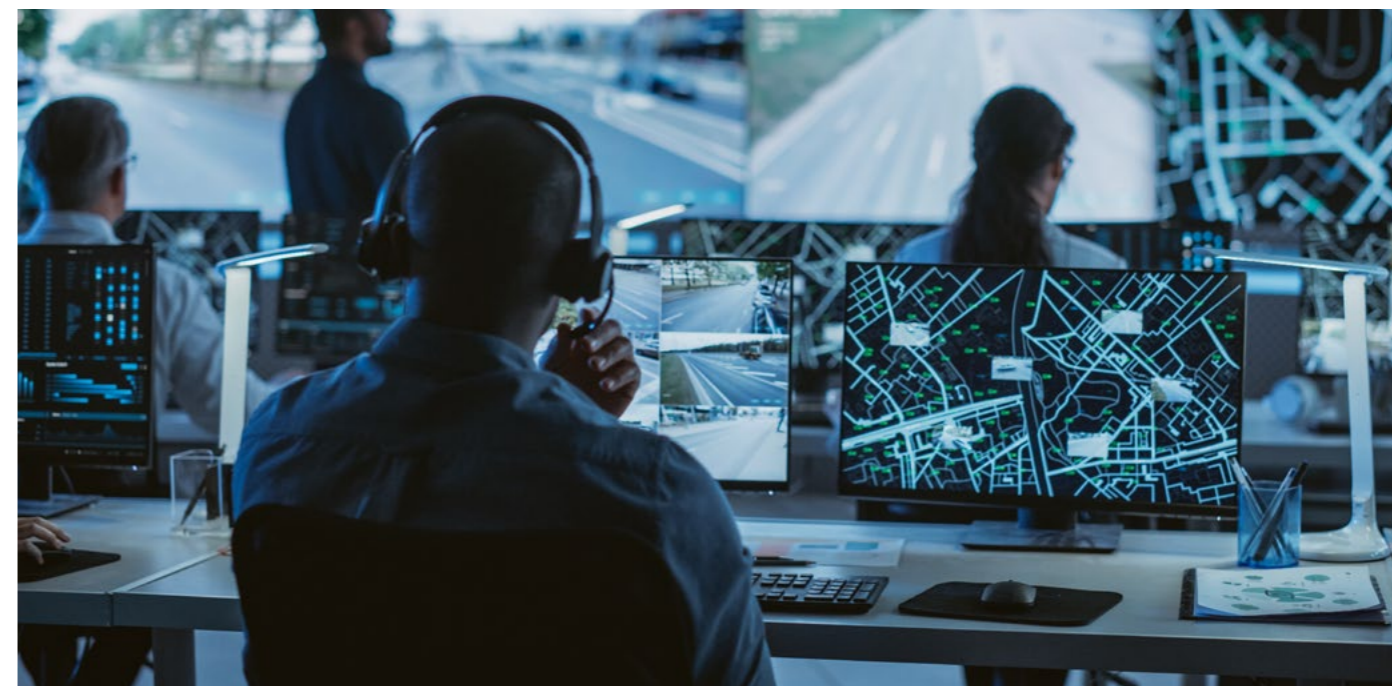
We specialize in security systems, including security management platforms that integrate and enhance protection in demanding environments. Combined with comprehensive electrical engineering services, we deliver solutions that ensure reliability, innovation, and a tangible contribution to building a safer future.

Innovative approach to ensuring security

Polish proprietary technology for 26 years

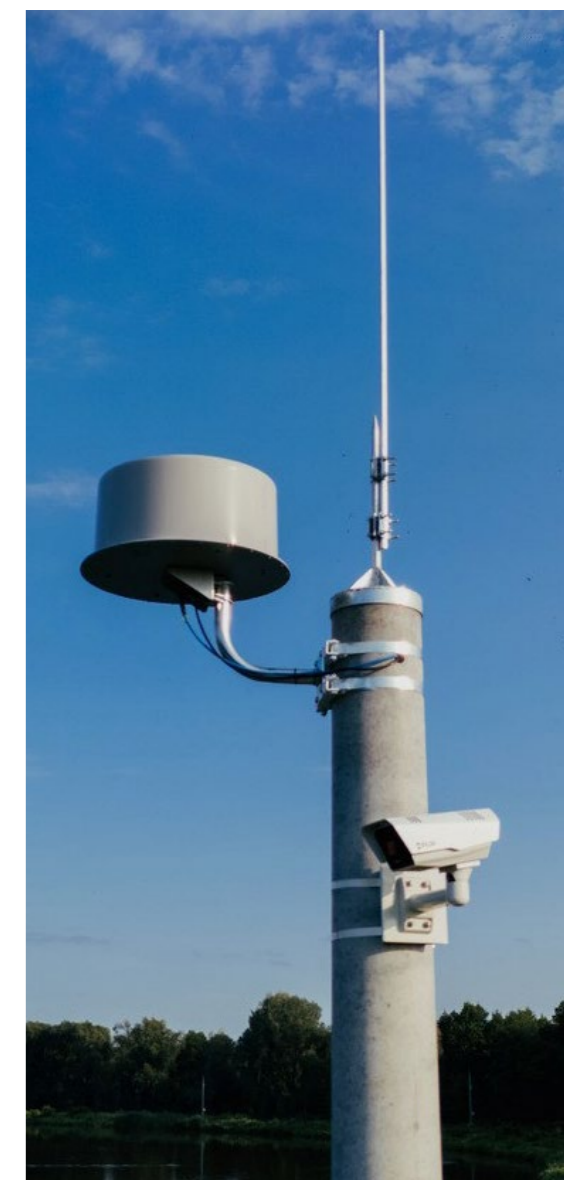
Adapted to any scale and specifics of infrastructure - from large industrial facilities to military facilities

Continuity of operation even in case of failure - thanks to software and hardware security mechanisms



Aquila is a proven and reliable system, resistant to cyberattacks (cyber resilience), anti-drone

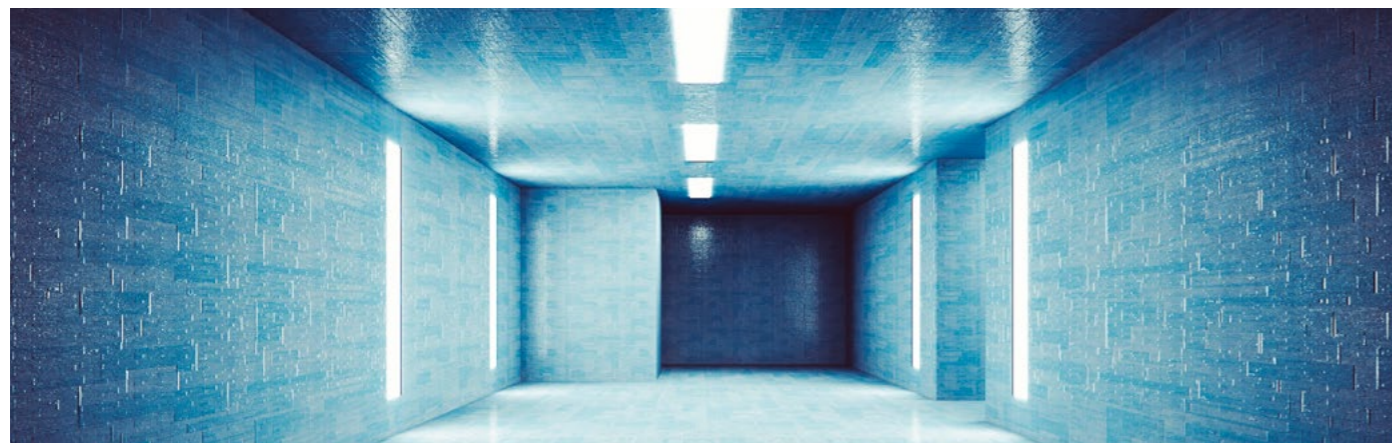
Aquila is a Polish system specializing in comprehensive security management for infrastructure, industrial, strategic, and public facilities. We are the creators of the Aquila System – an independent, proprietary PSIM-class solution that integrates technologies and processes into a unified security management platform.





Specialist Construction

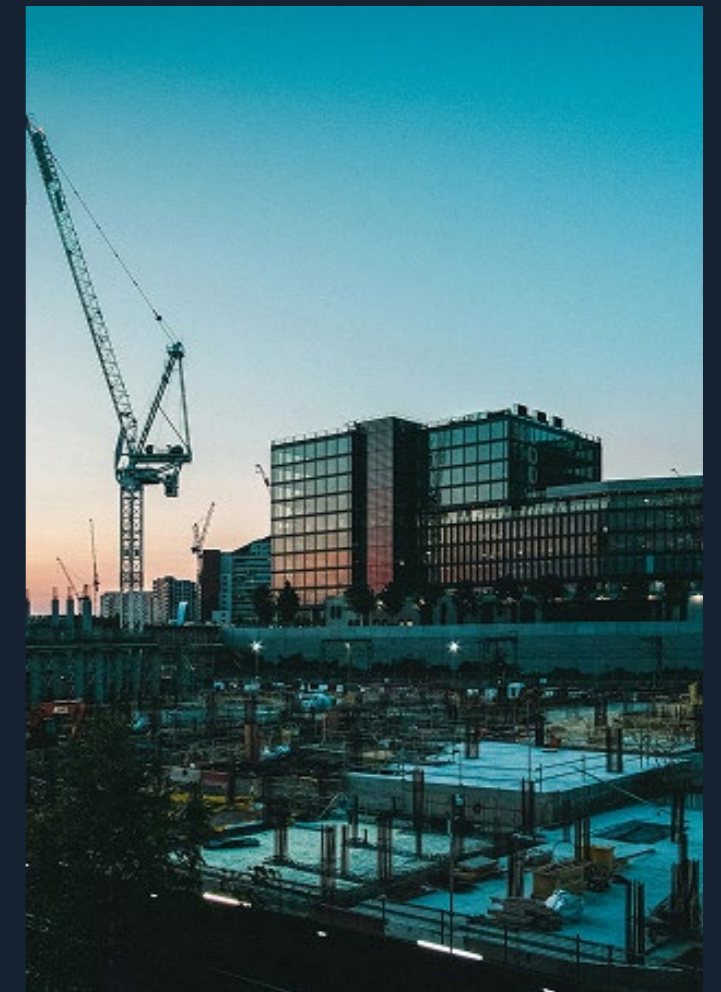
- 01 Critical infrastructure facilities for defense
- 02 Repair and production facilities for the military and other services
- 03 Logistics, technical facilities and laboratories for the military and other services
- 04 Military and civilian airports, heliports and hangars
- 05 Barracks and military garrisons
- 06 Social, training, sports facilities for the military and other services
- 07 Military equipment and ammunition warehouses
- 08 Fuel warehouses
- 09 Shelters
- 10 Military, police, private shooting ranges



General Contracting in Specialist Construction

We are a general contractor for specialized infrastructure projects. This allows us to deliver comprehensive solutions, increasing added value of our services while strengthening our market position.

- Predevelopment
- Tendering and pricing
- Design
- Contracting and production
- Execution
- Service and post-warranty service
- Property management





Don't wait for an incident.
Gain full control now!



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