FOR DEFENCE AND SECURITY INDUSTRY

Review®

2|2026

ONE LIS NG WORLD

New Generation of Logistic Information System

Dear Readers,

in this second quarterly issue of the year, we bring you a number of engaging interviews, particularly with prominent representatives of the state administration, as well as our regular presentation of the Czech defence and security industry. Review, the media platform of the Defence and Security Industry Association of the Czech Republic (AOBP), is published on the occasion of the AOBP General Assembly, and the fact that the Association's membership base has now grown to more than 260 companies is also reflected in the content of this issue, as it is primarily AOBP members who are presenting themselves from across the industrial sector.

In addition to an interview with the Association's President and the Annual Activity Report, we also introduce several new member companies. We wish them every success within the Association and hope they will find not only valuable information and a strong professional background, but also meaningful support for their activities. It is precisely the domestic industry that forms the backbone of the state's defence capability during times of crisis.

This edition also focuses on presenting the security forces of the Czech Republic, particularly the Police, the Prison Service, as well as the Fire Rescue Service. This community is becoming increasingly important for the defence and security industry, and we are pleased that these institutions regularly use our pages to share up-to-date information that can be of value to our industry.

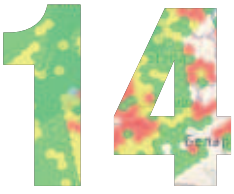
The magazine's main mission is to help improve communication between the state and industry within the defence and security community. I firmly believe and hope that, thanks to the diversity of topics covered in this issue of Review, every one of you will find something of interest.

Šárka Cook
Editor-in-Chief

As Defence Projects Grow More Complex, So Does the Need for Integrated and Secure Management.

Logistics as a Strategic Partnership: From Tradition to a New Generation of Data

European Manufacturer of Unmanned Aerial Systems



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As Defence Projects Grow More Complex, So Does the Need for Integrated and Secure Management.

The global security environment has changed significantly in recent years. The conflict in Ukraine, growing geopolitical rivalry among major powers, and the rapid development of new military technologies all indicate that relative stability in Europe has come to an end.

Projects in the defence industry are becoming increasingly complex. They involve long development cycles, strict certification requirements, and the coordination of many suppliers. This creates a complex ecosystem that is increasingly difficult to manage using separate tools and systems.

How do companies perceive these challenges in practice, and how are they reflected in concrete solutions? These questions are addressed by Jaroslav Lizner (Chief Relationship Officer, Easy8) and Filip Morávek (CEO, Easy8), who is behind the concept of the Easy8 Private WorkOps Platform for project and work management.

Where do customers face the biggest challenges today in managing defence programs?

Jaroslav Lizner: They most often mention increasing complexity and a higher volume of contracts. Projects today involve more suppliers, more systems, and compared to other industries, higher demands on documentation and control.

Certification requirements and the overall complexity of defence projects require full traceability across the entire lifecycle. Every requirement must be clearly defined, reflected at all levels of design, assigned corresponding tests, and have recorded results. Everything must be systematically documented and traceable retrospectively.

A typical project involves thousands of such requirements. This approach is comparable to development cycles in the automotive industry, but the final product is often highly customised for individual contracts.

At the same time, there is increasing pressure to shorten development cycles and increase the volume of contracts. In many cases, innovation is critical. Current developments, such as in drone technologies in Ukraine, demonstrate how quickly established approaches and the pace of innovation can change.

How does this complexity manifest itself in practice, and what lies behind it from a data and systems perspective?

Jaroslav Lizner: Ensuring this level of traceability creates pressure to connect systems and teams involved in research and production across different phases of the project and at different times.

Imagine a situation where a change request enters a large-scale technological project with thousands of requirements. It must go through all the phases mentioned earlier, while ensuring that the change is reflected wherever relevant. Methodologically, this complexity is addressed by the so-called V-model. Our task is to provide an information system that enables its practical implementation.

In practice, however, many companies still operate with isolated teams, separate systems, and coordination based on manual information sharing, meetings, and Excel. Data is scattered, inconsistent, and often outdated, and there is no single reliable source of truth. The result is slower and less accurate decision-making. Yet having a clear overview of the entire project is essential, without it, complex projects cannot be managed effectively.

Filip Morávek: From a technical perspective, the main problem is that different parts of the project run in separate systems. Requirements, development, testing, and documentation each have their own tools and data structures. The solution lies in integrating these systems and creating a continuous workflow where individual steps are interconnected. A change in one area is automatically reflected in others, ensuring that data remains consistent and up to date. An important part of this is also having an overview of the entire program. When data is unified, dashboards can be built to provide real-time visibility across all phases of the project. Management no longer works with fragmented reports, but has access to a single, up-to-date view.

How do companies work with tools today, and what approach can overcome their fragmentation?

Filip Morávek: Most companies have gradually assembled a set of tools that address different parts of the process: planning, development, documentation, or reporting. Each works relatively well on its own, but the problem arises in connecting them. That is why we are now moving towards an approach we call WorkOps.

It connects planning, execution, quality, reporting, and operations into one continuous flow of work. Technically, this means that alongside specialised tools, there is a central platform that unifies both data and work management. Integrations and automations (for example using n8n) run on top of it, connecting different parts of the system. Tools no longer operate in isolation but as one cohesive whole, resulting in smoother workflows.

How significant is traceability in defence projects today, and how is it ensured technically?

Filip Morávek: Traceability is critical because organisations must be able to demonstrate links between requirements, development, testing, and final validation. Technically, this means that all these elements are connected within a single system. This creates a complete chain that allows tracking changes over time and their impact on the entire project. This principle aligns with the previously mentioned V-model, where continuity between phases is key.

Jaroslav Lizner: From a business perspective, it is equally important. Organisations must be able to pass audits, meet regulatory requirements, and demonstrate that all steps were carried out in accordance with defined processes. Without this traceability, the risk of errors, delays, and certification issues increases.

With growing pressure on efficiency and the rise of AI, where do customers see the greatest benefits of automation and AI in project management today?

Jaroslav Lizner: In the defence industry, we already see practical applications of AI, for example in autonomous weapon systems. At the same time, many companies are slower to adopt AI tools, mainly due to concerns about data protection and know-how. This is gradually changing, with companies moving towards the use of local AI instances.

Technologies such as local LLMs already exist, and broader adoption will follow. From a project management perspective, the specific model used is not the key factor. AI helps with reporting, tracking deviations, and routine tasks, freeing up capacity for management and decision-making.

Security concerns are often associated with AI and automation. How do you address this in regulated environments such as the defence industry?

Filip Morávek: From a security perspective, the key question is where and how these technologies are operated. In regulated environments like defence, the ability to deploy on-premises or in a private cloud is essential. Automation platforms can run directly within an organisation's infrastructure, including so-called air-gapped environments that are completely isolated from public networks. We also have experience with deploying local AI models, ensuring that sensitive data remains within the internal environment. An alternative is a dedicated private cloud with maximum security measures. In both cases, data remains fully under the organisation's control, and all operations are traceable.

The growing complexity of defence projects is a reality confirmed by both strategic documents and real-world experience.

It is not only about technology, but the ability to coordinate programmes across teams, suppliers, and the lifecycle. However, this complexity does not have to be an unsolvable problem. The key lies in structured management, interconnected processes, and the effective use of automation to reduce manual work. Secure AI adoption plays an important role, supporting data processing, risk identification, and faster decision-making.

Organisations that combine these approaches gain greater control over their projects and can better respond to increasing market demands.

Gentlemen, thank you for the interview.

Šárka Cook

Ing. Filip Engelsmann, Owner and CEO of AURA, s. r. o.

Logistics as a Strategic Partnership: From Tradition to a New Generation of Data

An Interview with Ing. Filip Engelsmann, Owner and CEO of AURA, s. r. o.

Mr Engelsmann, AURA was founded at a time when the modern Czech private sector was just beginning to take shape. How did the circumstances of its founding shape the future direction of your company?

AURA's history began in 1989, when a group of developers from the state-owned enterprise Kancelářské stroje founded a production cooperative specialising in the development of comprehensive information systems for warehouse management. It was a time of enthusiasm, but also of enormous responsibility. Even before AURA became a strategic partner of the Czech Ministry of Defence, it gained valuable experience in the most demanding markets of Western Europe – our systems successfully managed logistics in Germany, Switzerland, and Austria. This "school of precision" taught us that in logistics, there are no small details.

You have been active in defence logistics for more than three decades. How do you view the current dynamics of cooperation with the Czech Armed Forces?

We appreciate that the Ministry is led by experts with practical insight into logistics. Our cooperation with the Ministry of Defence and the Czech Armed Forces has always been based on a high level of expertise and on jointly solving and optimising logistics processes.

In the current geopolitical situation, where the demands on process efficiency and speed are increasing dramatically, we feel the need to expand and intensify this cooperation even further. We are ready to offer our knowledge of the modern trends that are shaping the world today. Our global experience in implementing specific requirements in 23 countries can serve as a valuable benchmark for the future development of logistics support. We offer expert dialogue and partnership in finding optimal solutions, rather than merely delivering software code. We believe that precisely this synergy between the needs of the Armed Forces and our know-how is the path to technological superiority.

AURA's name is associated worldwide primarily with codification and the MC CATALOGUE system. How does this international success help Czech logistics specialists?

This is a crucial point. Today, MC CATALOGUE is used by armed forces in more than twenty countries across five continents. As a global leader in codification systems, we also have an influence on the development of NATO standards. For the Czech Armed Forces, this means that the systems we supply are natively and fully interoperable with those of our allies. In practice, this facilitates, for example, Host Nation Support or joint operations, where a unified "language" for describing materiel is critical. Our international successes also allow us to invest in research and development, the results of which we then offer primarily to the Czech defence sector.

How exactly are your international experiences reflected in your new products, such as LIS NG?

We do not passively wait for requirements to be handed to us. We have invested in the development of a next-generation Logistics Information System (LIS NG). We have tested it under extremely demanding conditions, including during our support for a Ukrainian customer in 2024–2025. LIS NG is modular, built on a modern Zero Trust architecture that supports a high level of cybersecurity, and is fully focused on user experience (UX). Our goal is to bring this technological leap to the domestic environment as well, for example by

validating concepts through Proof of Concept (PoC) activities. We want to demonstrate that a logistics system can be just as intuitive as the modern applications we use in everyday life, while still providing the resilience required by the Armed Forces.

But logistics does not end at the office desk. How do you deliver the necessary data to users directly at the equipment or in the field?

This is the direction we are actively pursuing. The answer is PUBLI, a product that has become part of our ecosystem. It enables fully digital management and distribution of technical documentation, user manuals, and standards – both online and offline. Technicians in the workshop therefore always have up-to-date data, diagrams and procedures available on their tablets or rugged terminals, directly linked to the logistics system. Digitalising documentation eliminates the burden of paper and dramatically speeds up service and operational tasks. It is exactly the type of innovation that increases the real operational capability of units.

In the past, it was standard practice for AURA and the Czech Armed Forces to form close joint teams. Is this approach still relevant today?

It is essential, and we want to actively return to this model. The previous model of multi-phase testing and joint integration teams naturally helped develop experts on the customer side with in-depth knowledge of the system. Logistics is a living organism, and without continuous user training, even the best data remains unused potential. This is also why, for example, in the field of cataloguing, we actively participate as an industry partner in the implementation of the international educational programme NCS College (NATO Codification System College), which operates under the auspices of the University of Defence. This platform serves to train logistics and codification specialists from around the world, and we also offer it for the needs of the Czech Armed Forces. Our goal is to revitalise expert dialogue and help train a new generation of military logistics specialists who will be able to fully leverage the potential of the data made available to them by modern technologies.

A major topic is the equipment life cycle and S-Series standards. How well prepared is AURA in this area?

The logistics information system already has a robust and field-proven data foundation for managing the equipment life cycle – from cataloguing and bills of materials to precise definitions of maintenance and cost indicators. Our goal is to further develop this expertise and deepen the use of S-Series standards, which are already natively supported by our new generation of LIS NG. This approach makes it possible to achieve a new level of automation in receiving structured technical data and electronic documentation in standardised formats directly from suppliers of key armaments and equipment. However, the key to maximising this potential lies in embedding requirements for this standardised data in the early stages of the life cycle – specifically, directly in acquisition contracts. Only in this way can we ensure that military leadership has a continuous and precise overview of the fulfilment of contracted quality indicators, expected and actual costs and, last but not least, the level of combat readiness throughout the entire operational life of the equipment. In the event of non-compliance with contractually stipulated indicators, the Czech Armed Forces will gain a tool enabling them to effectively pursue claims and address breaches of contractual terms.

In closing, what message would you like to convey to readers from the Armed Forces and industry?

In times of crisis, it is domestic industry that forms the backbone of every nation's defence capability. AURA is a bearer of national know-how with a 37-year tradition, and we are proud to be part of this system. We are convinced that modern, well-functioning logistics is not merely a support service, but a strategic necessity and a crucial foundation of the Armed Forces' combat readiness. We have the technology, experience and drive to bring the logistics of the Czech Armed Forces to a world-class level, because making the world of information more organised is our mission.

Interview by Jaroslav Řeha and Antonín Svěrák

Diagram and photos: AURA archive

AURA, s. r. o.

A medium-sized family-owned company based in Brno, focused on the development and delivery of specialised information systems for states, institutions and companies, with a primary focus on military logistics, legal agendas and the management of NATO standards. The company has been involved in information systems supporting military logistics since the 1990s. It has increasingly found application abroad and is therefore currently the largest Czech exporter of information systems for military logistics. Its codification software, MC CATALOGUE, has even become the most widely used information system supporting NATO codification worldwide.

European Manufacturer of Unmanned Aerial Systems

U&C UAS is a European manufacturer of unmanned aerial systems whose solutions are shaped by practical combat experience gained during the war in Ukraine. The combination of production within the European Union, full ownership of intellectual property rights, and a deep understanding of the modern battlefield enables the company to develop systems adapted to real operational conditions.

The team consists of specialists with hands-on experience in the design, integration, and operation of unmanned aerial systems in combat environments. This experience defines the technical requirements for every platform, every software update, and every modification. All solutions are developed with real operational scenarios in mind.

U&C UAS holds full intellectual property rights to its developments and manufactures within the European Union. The company continuously expands its production capacity and engineering base, ensuring supply stability and controlled quality. The quality management system complies with ISO 9001 standards. Products and documentation are adapted to the requirements of EU member states and are compatible with NATO standards in procedures, safety, maintenance, and personnel training. The company holds NCAGE code 8400G and is registered within the NATO codification system.

Holding the Sky represents a systematic approach to the application of unmanned solutions in modern warfare. Platforms are not viewed as standalone products, but as elements of a unified ecosystem of unmanned capabilities operating within a complete combat cycle.

The operational logic follows the principle:
DETECT → DESTROY → DENY

DETECT — Stork LR (ISR UAV)

Stork LR ensures timely threat detection and provides reliable intelligence for decision-making. Its extended endurance and advanced sensor suite enable deep reconnaissance missions, detection of force concentrations, logistical hubs, and artillery positions before the adversary transitions into an active phase.

Integration with artillery units enables real-time fire correction, increasing strike accuracy while reducing ammunition expenditure.

DESTROY — MACE (Middle-Strike Loitering Munition UAV)

The MACE system delivers rapid and precise engagement of priority targets.

The solution is built on the **RECON AND STRIKE** principle, integrating reconnaissance and strike capabilities within a single secure command network. A single crew conducts the full operational cycle — from target detection and guidance to engagement and battle damage assessment. This approach shortens response time, enhances operational efficiency, and minimizes decision-making delays.

DENY — Chaser (C-UAS) Interceptor System

Chaser is designed to counter aerial threats. The system synchronizes with radar assets and transitions into autonomous target engagement mode. In modern operational environments, reaction speed determines control of the airspace.

A Unified Ecosystem of Unmanned Capabilities

The combination of Stork LR, MACE, and Chaser forms a single integrated system that unifies reconnaissance, strike capability, and airspace control within one operational cycle. The integration of combat experience, EU-based manufacturing, and NATO compatibility enables the development of solutions ready for integration into the defence structures of European countries and partner nations. In today's security environment, holding the sky means acting ahead of the threat.

U&C

TELINK

Drones Without Illusions:
Benefits, Risks, and Reality

Drones are no longer a matter of the future. They are already part of today's reality—one that public administration, local authorities, and security services must be prepared to address. What matters is not only the ability to deploy this technology, but also a clear understanding of its limitations, regulatory framework, and associated risks. This is what ultimately determines whether a drone becomes an asset or a threat. Today, drones are actively supporting operations carried out by firefighters, emergency responders, and police forces. Within integrated emergency systems, they can accelerate decision-making, improve situational awareness, and expand operational capabilities. At the same time, however, the other side of the equation is growing just as rapidly: the drone as a security threat.

TELINK is registered as an auxiliary component of the Integrated Rescue System (IRS). The company actively participates in testing new technologies, takes part in professional exercises, and shares practical field experience. This collaboration enables not only rapid response in crisis situations but also the long-term enhancement of preparedness across individual units.

Education forms a key pillar of these activities. TELINK is an accredited training institution of the Ministry of the Interior and delivers professional courses and specialized training programs, both through its own aviation school and directly at client sites.

Among the most sought-after seminars are:

- Analysis of current technical solutions for drone detection and countermeasures
- Drone as a Tool, Drone as a Threat

Training content is tailored to the specific needs of public administration, municipalities, and critical infrastructure operators. One of the main barriers to broader drone adoption is often not the technology itself, but the level of expertise. Organizations typically encounter their limits when attempting to operate drones systematically, in complex environments, or under BVLOS (Beyond Visual Line of Sight) conditions.

It is therefore essential to establish robust internal processes, develop appropriate documentation, and ensure the professional readiness of personnel.

In this area, TELINK supports organizations in transitioning to lawful operations within the "Specific" category. This framework enables more advanced operations, including BVLOS flights, which significantly expand deployment possibilities—for example, in monitoring large areas or linear infrastructure. An additional driver is the emerging SORA 2.5 methodology, introducing a new approach to risk assessment and authorization processes. Organizations that prepare for this transition early can gain a substantial advantage.

This support goes beyond mere navigation of regulatory requirements. It includes identifying practical pathways for safe drone operations in environments where such use was previously not feasible. This involves designing operational scenarios, optimizing technical equipment, and facilitating communication with regulatory authorities. The goal is to achieve efficient operations that deliver expected outcomes while maintaining a high level of safety.

Alongside the expansion of drone operations, the need for protection against their misuse is also increasing. TELINK therefore focuses on the design and implementation of systems for the detection and identification of unmanned aerial vehicles. These solutions are based on detailed environmental analysis, including 3D modeling to determine optimal placement of detection elements. Equally important is the integration of these systems into existing security infrastructures, or the design of new, comprehensive integration solutions.

In the case of critical infrastructure, solutions must always be based on specific risks and operational conditions. There is no universal approach. Effective protection is achieved through a tailored combination of technologies and procedures designed for each individual site.

Support for the integrated rescue system with the help of unmanned technologies has a long tradition in the Czech Republic, even outside the IZS. DronySIT has been cooperating with the IZS units since 2016 and has been classified as JSDH since 2020. In recent years, they have also focused on the development of transport drones for the rapid transport of material needed for field interventions. The picture shows a tactical exercise in which a transport drone transported a medical box 13 minutes faster than by land (5 minutes compared to 18 minutes).

PEI-Genesis™

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Secure Seconds in Fibre

Why We Will Not Distribute Time in Europe from Orbit, but via Optical Fibres

Motto: The phenomenon of time and its perception in engineering is a fascinating topic that connects physics, philosophy, and technology. Time is not merely an abstract concept; in engineering, it plays a key role in process control, synchronization, and measurement. The history of precise timekeeping is a story of humanity's effort to understand and control time, evolving over thousands of years.

Abstract

As modern technologies continue to develop and be implemented in practice, the requirements for time measurement accuracy are increasing, particularly in fields such as radio astronomy, gravitational wave detection, metrology, 5G networks, navigation and precise positioning, coherent radar, electronic warfare, process synchronization, and timestamping. The demand for highly stable reference signals has increased dramatically over recent decades, and traditional satellite systems (GNSS) are no longer sufficient in terms of stability and security.

This article addresses both the technical motivations and legislative requirements for this transition. It presents current activities and achievements of Czech science and industry in advancing the distribution of precise time and frequency (T&F) using existing telecommunications optical fibre infrastructure.

Technical Motivation

Precise time is fundamental to reliability, security, and efficiency across many areas of modern society. Its role is critical wherever processes must be synchronised, the correct sequence of events must be ensured, or locations must be determined accurately. Precise positioning, navigation, and knowledge of exact time are intrinsically linked, as reflected in the commonly used acronym PNT – Positioning, Navigation, and Timing.

Everyone is familiar with navigation systems such as the Global Positioning System (GPS) or Galileo, and many people use them as time sources. What is less widely known is that time transfer is not merely an auxiliary function of these systems; rather, it is the very foundation of their operation.

In engineering, time is inseparably associated with precise measurement and control. While human perception of time may be subjective and variable, technical systems depend on objective, precise, and stable time standards.

Telecommunications

In **telecommunications**, precise time is essential for **network synchronization and telemetry**, both in fixed networks – where the transmission of a single symbol over fibre may occupy as little as tens of picoseconds – and especially in mobile networks, which employ advanced multiplexing techniques based on time, frequency, and code division.

Requirements for timing accuracy, reaching the nanosecond level, and frequency stability are increasing significantly with the deployment of **5G and future mobile generations**.

Data Centres and Cloud Services. Synchronization of servers is required to ensure the correct ordering of database records and event logs.

Security – accurate timestamps are indispensable for auditing, anomaly detection, and forensic analysis. Distributed systems require coordinated transactions and operations across geographically dispersed nodes.

Banking and Stock Exchanges. Financial transactions rely on precise timestamps, which are critical for the sequencing and validation of trades and for preventing disputes and fraud. European regulations require transaction time accuracy in the microsecond to nanosecond range.

High-frequency trading demands extreme precision and minimal latency, both of which are decisive competitive advantages.

In **Precise Positioning (GPS and Other GNSS)**, an accurate time enables the calculation of distances and, consequently, the determination of exact positions.

In **geodesy and mapping**, millimetre precision in measurements is required. Drones and autonomous vehicles depend on real-time synchronization of positional and sensor data.

Defence Applications. In radar/lidar systems, the time delay of reflected signals determines target distance and velocity. For **fire control**, precise timing is critical for trajectory calculations and firing synchronization. Military **navigation and targeting** systems likewise rely on exact time to achieve high-precision weapon guidance.

Even this brief overview demonstrates that precise time in modern technology functions

is much like the nervous system in a living organism: it interconnects, coordinates, and enables reliable and secure operation. Without precise timing, telecommunications networks would collapse, financial markets would lose integrity, and military operations would become inefficient and hazardous.

A Brief History of Time Measurement

Time measurement is arguably the oldest engineering discipline, dating back to antiquity (around 3500 BCE) with the invention of sundials.

Skipping the era of water clocks and hourglasses, we arrive in the Middle Ages, when the first mechanical clocks appeared in the 13th and 14th centuries. These early devices used verge escapements and were highly inaccurate, with deviations of several tens of minutes per day. Only after Galileo discovered the pendulum principle in the mid-17th century did truly precise timekeeping become possible, dominating until the 1930s.

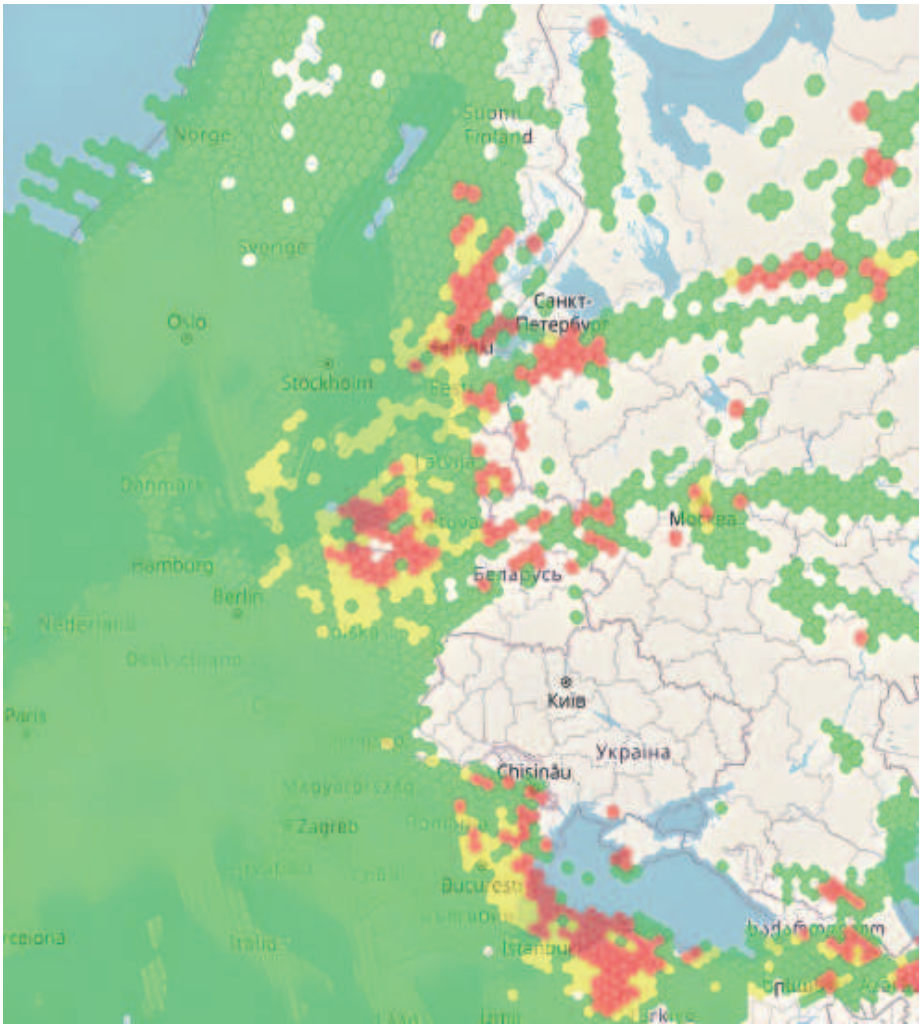
A critical application of accurate clocks was maritime navigation, specifically the determination of longitude. Latitude could be determined by measuring the Sun's altitude at culmination, but longitude required knowledge of the difference between local solar time and the time at a known reference location. An error of just one minute in this time difference results in a positional error of one quarter of a degree of longitude, equivalent to 15 nautical miles at the equator. The breakthrough came with the marine chronometer developed by John Harrison in 1759, achieving an accuracy of approximately five seconds over a month-long sea voyage.

In the 20th century, electronic clocks based on quartz crystal oscillators improved precision to the milliseconds order. The first atomic clocks were developed in the 1950s, and in 1967 the second was defined based on the caesium atom. In the coming years, another redefinition of the second is expected using optical clocks. These also belong to the family of atomic clocks, but their atomic transition frequencies lay in the optical domain – hundreds of terahertz rather than several gigahertz. Several hundred atomic clocks distributed worldwide are used to realize the international time scale UTC (Coordinated Universal Time).

This progression illustrates humanity's continual pursuit of greater precision – from the shadow of the Sun to the quantum vibrations of atoms.

Time and Frequency Transfer

The transfer of time from clocks to users has a long history, from church bells to the telegraph. Many households use radio-controlled clocks synchronised via the DCF77 system, transmitted from near Frankfurt am Main and covering approximately 1,500 km. Its achievable accuracy is only in the millisecond range, as propagation delay is not compensated. A major improvement in time transfer was introduced by GPS and later by other GNSS constellations such as Galileo, GLONASS, and BeiDou. These systems provide sufficient timing accuracy for nearly all applications, except for applications such as optical clock comparisons. Their principal weakness, however, is that they use very weak signals that can be easily jammed or spoofed to provide false time and position information. See the figure showing reported jamming on April 10, 2026.



Satellite signal interference reported on April 10, 2026

Since the beginning of the invasion of Ukraine, such interference has become a routine reality. It is increasingly recognized that critical systems cannot depend solely on GNSS, and attention is therefore shifting toward optical fibre-based distribution.

New methods for distributing precise time and stable frequency are gaining growing societal importance and are vital for both modern science and industry. This is evidenced by European projects such as CLONETS and its successor CLONETS-DS, aimed at analysing the implementation of a pan-European optical fibre network for time and frequency transfer. Participants included national metrology institutes, research organizations, academic networks, and commercial partners. One of the contributors was CESNET, operator of the Czech academic network CESNET3. CESNET has been active in optical time and frequency transfer for more than 15 years – as early as 2011, a comparison link between UTC(TP) in Prague and UTC(BEV) in Vienna was put into operation.

The White Rabbit System

In recent years, the new technology called White Rabbit has become the standard for transferring precise time and stable frequency over optical fibres. Originally developed at CERN for synchronizing instruments and sensors in accelerator experiments, White Rabbit achieves timing accuracy better than one nanosecond – the time it takes light to travel approximately 30 cm in vacuum. White Rabbit devices provide standard outputs of 10 MHz and a 1 PPS (Pulse Per Second) signal, with the rising edge of each pulse marking the start of a second.

Although White Rabbit was originally designed for local networks, CESNET and other users have spent the past decade adapting it for large-scale networks while maintaining sub-nanosecond accuracy. Another important aspect is the sharing of fibres with telecommunications traffic and advanced applications such as quantum key distribution and fibre sensing. Last year, CESNET successfully demonstrated White Rabbit time transfer over the operational pan-European GÉANT network across a distance of 500 km, with no measurable impact on other parallel data traffic. Timing accuracy and stability remained well below one nanosecond.

Currently, precise timing services in the CESNET network operate over more than 2,000 km of optical routes alongside high-speed data channels of up to 400 Gbps. The same infrastructure also carries ultra-stable laser references for collaboration among connected scientific institutions working with optical clocks. This year, the infrastructure based on White Rabbit technology will be substantially expanded to more than 20 locations across the Czech Republic. For this deployment, the company PEI / Genesis manufactures bidirectional optical signal amplifiers under licence from CESNET – see the picture.

Legislative Requirements

The NIS2 Directive (Network and Information Security Directive 2) represents a major shift in how European organizations have to view their IT and network infrastructure. For new precise time distribution technologies such as White Rabbit, NIS2 acts as a key driver, because for the first time in legislative history, time is explicitly defined as a critical parameter.

Under NIS2, entities in sectors such as energy, banking, and transportation must ensure operational continuity.

- **Dependence on GNSS:** Most organizations currently obtain precise time from GNSS. According to cybersecurity methodologies, this approach is considered vulnerable because the signal can be easily jammed or spoofed.
- **NIS2 Requirement:** If a monitored system depends on accurate time – for example, for synchronizing circuit breakers in power networks or logging banking transactions – the source of this time must also be under control. An appropriate solution is to connect via multiple independent routes to UTC(TP), generated in the National Time and Frequency Standard Laboratory at the Institute of Photonics and Electronics of the Czech Academy of Sciences. This eliminates **dependence on external radio-based systems.**

The implementation of the fundamental requirements of the NIS2 Directive, as addressed in the Czech Republic, can be demonstrated using a model White Rabbit infrastructure, as planned by CESNET.

A major advantage of White Rabbit technology is that it is an open system under active development by a large international user community, including telecommunications operators and national metrology institutes. CERN provides complete source code and open hardware and software licences.

Unlike closed proprietary systems, both government institutions and private companies can audit the source code and hardware design. This significantly reduces the risk of hidden backdoors, which is a crucial issue in the context of NIS2 and national security.

Significance for Czech Companies: Approximately 6,000 entities in the Czech Republic fall under the scope of NIS2. The implementation of technologies developed domestically and compliant with NIS2 should no longer be viewed as an experiment, but as an investment in regulatory compliance.

RNDr. Ing. Vladimír Smotlacha, Ph.D., CESNET
Ing. Josef Vojtěch, Ph.D., CESNET
Doc. Ing. Milan Šnajder, CSc., PEI / Genesis

Bidirectional optical signal amplifier

NIS2 Requirement	Czech/CESNET Solution with White Rabbit
Resilience to outages	Terrestrial time distribution is immune to radio interference
Accuracy and auditability	Nanosecond-level accuracy ensures indisputable timestamps
Independence (autonomy)	Time is derived from the national standard (Institute of Photonics and Electronics, Czech Academy of Sciences), not from navigation systems
Security monitoring	Real-time monitoring of signal quality
Supply chain security	Implemented by companies operating under Czech legislation

Demonstration setup of the White Rabbit system

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Future Forces Exhibition & Forum 2026

Where Decisions Are Made

Europe's security landscape has not looked like this in a generation. The war in Ukraine has rewritten the operational playbook across land, air and cyber domains. Autonomous systems, counter-UAS technologies and electronic warfare are no longer future concepts – they are present requirements.

Against this backdrop, Prague will once again become a central forum for defence and security when the **16th Future Forces Exhibition & Forum (FF26)** opens at **PVA EXPO PRAGUE on 21–23 October 2026**.

For over 25 years, Future Forces events have connected operational users, capability developers, policymakers and industry. What began as a specialised exhibition focused on individual soldier systems has evolved into one of the most important defence and security platforms in Europe.

FF26 is not a trade fair with a conference attached. It is a working platform combining three days of exhibition with official NATO working group sessions, more than 40 expert panels and conferences, bilateral meeting facilities and structured delegate engagement.

More than **400 exhibitors** from over **35 countries** will present across **20,000 square metres** of exhibition space. Delegations from over **70 countries** are expected to participate. The event is held under the auspices of the President and the Government of the Czech Republic, in close cooperation with NATO and EU structures.

A key strength of FF26 is its direct connection to Allied governance. Prague will host official sessions of the **NATO Army Armaments Group (NAAG) Land Capability Group Dismounted Soldier Systems** and the **NATO Support and Procurement Agency (NSPA) Dismounted Soldier Equipment User Group**. These are practical working platforms where interoperability standards, user requirements and procurement directions are shaped. A dedicated **NATO Pavilion** will provide structured engagement between Allied institutional representatives and the wider professional community.

The expert programme reflects the complexity of the current security environment. The Future Forces Conference opens with the strategic panel **Defence 2035+: Adapting to the New Security Reality**, setting the frame for a wider debate on where Allied capabilities must be in the coming decade.

From there, the programme moves into operational and technical areas: armed UAV operations, advanced sensing and electronic warfare, counter-UAS technologies, robotics and AI, CBRN innovation, battlefield medicine, cyber crisis preparedness, space as an operational domain, logistics and resilience of the state security system. Lessons from Ukraine run through many of these sessions – not as theory, but as direct operational input.

The Future of Cyber Conference will include a Live Hacking Zone and Cyber Escape Rooms, putting concepts into immediate practical context. The Future of Civil Security Conference, developed in cooperation with Ukraine's defence and security industry association, will draw on hard-won operational experience from the conflict itself.

New for 2026, a **mobile container live firing range** – the first of its kind in the Czech Republic – will allow live testing of firearms, ammunition, ballistics, protection systems, optics and sensors directly within the exhibition environment.

FF26 is designed for those who must make consequential choices: senior officials, military leaders, procurement authorities, capability planners, R&D directors, industry representatives and diplomatic missions. Its value is not only in presenting technologies, but in connecting them with real operational needs.

The most valuable outcome of such a gathering is not a catalogue. It is a decision informed by the right conversation with the right counterpart.

The **16th Future Forces Exhibition & Forum** takes place **21–23 October 2026** at **PVA EXPO PRAGUE**. Professional visitors may attend the exhibition and forum free of charge.

Exhibitor & general enquiries: **info@future-forces.org**

www.future-forces-forum.org

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Interview with the Chairman of the Union of Municipal and City Police of the Czech Republic, Martin Macháček

Martin Macháček is the Chairman of the Union of Municipal and City Police of the Czech Republic and the Chief of the Municipal Police in Písek. Since this year, he has also become a new member of the editorial board of Review for the Defence and Security Industry.

Mr Chairman, could you introduce your organisation to our readers and explain its mission?

Of course. The Union of Municipal and City Police of the Czech Republic (SOMP ČR) is the only official organisation established primarily to provide an overarching platform for municipal and city police forces across the country. There are nearly 400 such forces in the Czech Republic, employing around 10,000 people, of whom approximately 8,500 are officers.

The level of equipment, training, facilities, and organisational structures varies significantly. One of SOMP ČR's key tasks is therefore to reduce disparities between larger and smaller municipal police forces. If we have 400 different opinions, for example on legislation, change is impossible. However, if dialogue leads to a reasonable consensus and a unified position representing municipal police, the chances of success increase substantially. We also aim to standardise training, equipment, and ensure regular, high-quality professional development for officers.

What are your objectives regarding inclusion in the Integrated Rescue System (IRS)?

Our primary goal is to ensure proper legislative anchoring of municipal and city police, including clearly defining the activities officers deal with on a daily basis—just like the core components of the Integrated Rescue System.

In reality, municipal police officers are often the first responders at the scene of emergencies. This is due to their constant presence in the field and their detailed knowledge of the local environment. This combination makes them an important partner for all core IRS units.

Our aim is not to duplicate or replace the work of existing IRS components, but to become a natural and systemically embedded part of the system. This requires clearly defined roles and competencies, as well as emphasis on joint procedures in crisis situations.

We place strong emphasis on joint exercises, information sharing, and coordinated operations—whether during natural disasters, emergencies, protection of soft targets, or migration waves. In such situations, it is crucial that all units act in a unified and efficient manner.

From our perspective, this is a logical step. If we want to strengthen public safety, we must fully utilise the potential of all participating

forces—and municipal police undoubtedly belong among them.

At the same time, this is not just about formal inclusion, but about real cooperation in practice: clearly defined roles for specific scenarios, shared communication channels, involvement in crisis planning at municipal and regional levels, and regular joint training. If implemented systemically, this will lead to more effective interventions and greater safety for responders—and ultimately for every citizen.

There is currently high demand for municipal police officers. Are you facing staff shortages, or does it vary by region?

Demand for officers is undoubtedly high, closely linked to developments in the global security situation. While the Czech public has not yet experienced a significant deterioration in security, we can observe its impact in Western Europe—for example in connection with migration and refugee crises.

Social media and the news frequently present images of worsening security conditions in countries such as Germany, Sweden, France, Belgium, and Austria. These reports primarily affect citizens' sense of safety.

Both the state and municipalities are responding. The state strengthens its armed forces and offers higher salaries and various benefits. Municipalities, however, do not have such tools and must compete individually to attract candidates.

The situation varies across the country. Some municipal police forces are fully staffed, while others struggle to recruit even a few additional officers and repeatedly announce recruitment processes.

In general, municipalities increasingly recognise that local-level security is crucial and cannot rely solely on state forces. Strengthening municipal police is therefore a logical step seen nationwide.

Differences between regions and cities do exist. Larger cities offer better financial conditions and benefits, while smaller municipalities often struggle to remain competitive.

The main challenge, however, is not only attracting candidates but also retaining them.

The job is physically and mentally demanding, often involves shift work, high responsibility, and quick decision-making under pressure. It is also constantly under public scrutiny.

Competition is another factor—candidates have broader opportunities, whether in other security forces with higher prestige or in the private sector offering less stress and more regular schedules.

Generational change also plays a role. Younger people prioritise work-life balance, flexibility, and personal comfort, which shift work and night duties may discourage.

From practice, we know that recruitment alone is not enough—retention is key. Without a supportive work environment, good leadership, and fair conditions, officers leave, often within a few years.

Going forward, it will be essential not only to make the profession more attractive but also to systematically support those already in service—through development, equipment, working conditions, and overall societal recognition. Without stable staffing, long-term security cannot be guaranteed at the level the public expects.

Are there any obstacles you would like to see addressed to improve public safety?

From a practical perspective, there are several key areas requiring change. The most important is legislation, which in many respects no longer reflects current realities. The law on municipal police was created in a different security context and does not always meet today's needs.

Another issue is funding. Municipal police are entirely dependent on local budgets, which creates inequalities between regions. Yet security should be considered a nationwide priority.

There is also a need to unify methodologies and standards—both in training and equipment. Current differences between cities can complicate cooperation and knowledge sharing.

Finally, administrative burden is a major issue. Every hour an officer spends at a computer is an hour they are absent from the streets.

Our goal is to gradually remove these barriers and strengthen the system to make it more efficient, modern, and responsive to current security challenges.

How would you motivate candidates to join this demanding profession, and what are the conditions, job content, and salary?

This is one of the key issues today. Recruitment is not easy and requires an active approach. Simply announcing a selection procedure is no longer sufficient.

It is important to be honest: this is not a job for everyone. It is a service—physically and mentally demanding, often involving shift work and difficult situations.

At the same time, this is exactly what attracts a certain group of people. We emphasise three key aspects.

First, the meaning of the work. An officer is not "just someone in uniform"—they have a real impact on safety, help people in concrete situations, and are a visible part of public life. Many people today seek meaningful work, and this fulfils that need.

Second, diversity and dynamism. No two days are the same. Officers deal with traffic, public order, emergencies, and preventive programmes. There are also opportunities for specialisation—from traffic policing to youth work, kynology, mounted units, water patrols, or tactical operations.

Third, stability and job security. The public sector offers a regular income, benefits, additional leave, and contributions for sports or meals. Salaries typically range from CZK 40,000 to 60,000 gross, depending on the city, experience, and position, including allowances.

Work environment is also crucial. People care about team atmosphere, leadership, and organisational culture. If they feel their work has meaning and they are supported, they stay.

We are therefore adopting more modern approaches—open communication, presenting real work, using social media, and sharing real-life stories. We also cooperate with schools and sports organisations, where potential candidates are naturally found.

What equipment do municipal police officers use, how is it financed, and what opportunities exist for the defence and security industry?

Equipment has significantly improved in recent years. Municipal police are no longer seen as a "second line"—in many cities, officers are equipped with modern technology meeting current standards.

Basic equipment includes service firearms and standard coercive tools such as handcuffs, batons, and pepper spray. Increasingly, tasers and other modern tools are also used.

There has been major progress in officer protection—ballistic vests, quality gear, and functional clothing are now standard.

Technology plays a key role, including:

- urban camera systems,
- body cameras,
- automatic number plate recognition systems,
- modern communication systems,
- data analytics tools.

These tools increase both efficiency and public safety.

Funding is primarily provided by municipalities, which leads to differences in equipment quality. Subsidies—from the Ministry of the Interior or EU funds—play an important role, especially for larger projects.

This creates significant opportunities for the defence and security industry—not just in supplying equipment, but in long-term cooperation. Municipal police are ideal partners for:

- testing new technologies in real conditions,
- pilot projects,
- developing tailored solutions.

There is strong potential in areas such as:

- smart camera systems and AI analysis,
- modern protective equipment,
- integration of long firearms,
- training and simulation technologies,
- drone-based monitoring,
- equipment for crisis situations.

However, products must not only be technologically advanced but also practical and compliant with legislation. That is why involving practitioners from the early stages of development is essential.

The ideal model is a partnership between municipalities, professional organisations, and manufacturers—creating solutions that make sense for all parties and, above all, enhance safety.

Mr Chairman, thank you for the interview.

Šárka Cook

Photo: SOMP ČR

Vzduchotechnik Expands with New Products

The Chrastava company Vzduchotechnik, which was already involved in the production and supply of CBRN filters and filter ventilation units before the Velvet Revolution, and returned to the market with these products in connection with the war in Ukraine, is experiencing its greatest expansion. It designs new and revitalizes old civil defence shelters in the Czech Republic, Slovakia, Bulgaria and Poland. *"We are very pleased with the recent penetration into the Scandinavian markets, and we are particularly pleased with the cooperation in Norway. In addition, the local government has decided to allocate funds for the reconstruction of existing shelters and the construction of new ones to protect its residents, and we supply CBRN filters and some other components here in particular. The Norwegians appreciate our quality, technical innovation, relevant certification, along with the ability to deliver solutions quickly. At the same time, thanks to the first references, the private sector has also opened up to us, where large developers are planning underground shelters as a safety standard for their residential projects in connection with the prepared legislation,"* says Marek Houda, the firm's sales director.

The company places great emphasis on the innovation of its products and believes that as a manufacturer of these solutions in the Czech Republic, it will be the first choice for the Fire Rescue Service and the Army of the Czech Republic. A technological innovation is the COLPRO N1000 CBRN filter, which is designed for extra large areas of underground shelters. *"This new product of ours is also packed with nanotechnology, and the standard is complementarity with NATO AEP 54. We have invested a lot of money in the production and control of CBRN filters and we are proud that we will have implemented high-tech control of the CBRN filters themselves, which is unparalleled in Europe. A wider team of specialists from Germany and the Institute of Chemical Process Fundamentals of the Academy of Sciences of the Czech Republic worked on the implementation project,"* adds the company's executive director Jiří Svoboda. The company is also active in the development of nanofiber applications and, as part of its corporate spin-off, wants to soon launch its bactericidal and virucidal air membrane, which has the potential to replace the well-known HEPA filters. **firbach.cz**

VZDUCHOTECHNIK CHRASTAVA

Training at the Pace of Modern Operations: a New Approach from Dogfight Boss

Modern military training no longer follows long-term, stable planning cycles. Weapons systems are becoming increasingly complex, operational environments change rapidly, and feedback from combat returns almost immediately. At the same time, access to real-world platforms is limited and financially demanding. Relying solely on traditional forms of training is no longer sufficient.

Large, highly sophisticated simulators remain an important part of military preparation. However, their development and modernization are costly and slow. Fixed upgrade cycles make it difficult to respond quickly to evolving operational requirements, thereby negatively affecting force readiness.

Dogfight Boss introduces a more flexible approach. The company does not aim to replace large simulators but to complement them with high-fidelity systems focused on procedural and tactical training. These platforms serve pilots, helicopter crews, armoured vehicle crews, JTAC specialists, and other operators who require regular, realistic training.

The primary focus lies in behavioural realism – accurate control response, correct reaction timing, ergonomic crew station layouts, and effective instructor integration. As a result, skills developed in simulation transfer directly into real operational deployment.

In-house development and manufacturing of key hardware components enable rapid adaptation and reduce dependence on external suppliers. This allows the systems to respond flexibly to operational feedback and the current needs of armed forces.

Dogfight Boss therefore represents not just a simulator manufacturer, but a partner capable of aligning training with the pace of modern operations.

Delivered solutions for armed forces in Oceania, South America, Ukraine, the United States, and the Czech Republic clearly demonstrate the quality and reliability of this approach.

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From Jablonec to the world:

CleanAIR® protects those on the frontline

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A discreet Czech technology leader making its mark worldwide

When operating in environments containing hazardous substances, there is no room for compromise. Protective equipment must work instantly, reliably and without restricting the user. Respiratory protection is one of the key elements of user safety. The Czech brand CleanAIR®, founded more than 35 years ago in Jablonec nad Nisou, now protects users around the world – from industrial operations to emergency responders and security services.

Malina Safety, the company behind CleanAIR®, has grown from a family business into a global supplier exporting to more than 40 countries, while retaining complete development and manufacturing in the Czech Republic.

"In emergency response and security environments, protective equipment must not only provide protection, but also allow users to perform their tasks to the fullest extent. This principle has long been at the core of CleanAIR®'s approach," says Petr Čermák, Sales Director at Malina Safety.

The company operates its own development department, working closely with end users in the field, testing solutions in real-life conditions and responding to scenarios brought about by modern threats – from industrial accidents to extraordinary crisis situations.

The brand's portfolio includes powered air-purifying respirators (PAPR), protective filters, masks and positive-pressure protective suits designed for use by frontline teams during interventions, evacuations or decontamination operations. For situations where maximum protection must be combined with high performance, the CleanAIR® Panoramate Lite positive-pressure protective suit has been developed.

The suit combines low weight, mechanical durability and a wide field of vision, enabling safe orientation and coordination in demanding conditions. When used together with the CleanAIR® Chemical 2F filtration unit, it provides a stable, positive-pressure supply of filtered air, ensuring greater comfort during extended use.

"Our products are designed for situations where equipment must function immediately and without compromise. That is why close cooperation with field units is essential for us," explains Petr Čermák of Malina Safety.

CleanAIR® has proven itself in industry in the Czech Republic, across Europe and as far afield as Australia, combining technology, ergonomics and innovation. Health protection is a strategic priority, and this Czech brand demonstrates that world-class solutions can be developed locally and perform globally.

Text: Malina Safety Marketing Team
Photo by: Jaroslav Hollmann, Malina Safety

CleanAIR & Malina Safety – key facts

Founded: 1990
More than: 35 years on the market
Employees: 205+
Exports: 60+ countries worldwide
Manufacturing: 100 % in the Czech Republic
Headquarters: Jablonec nad Nisou, Czech Republic
Background: family-owned company with its own development department
Scope: global sales network, wholesale distribution of welding technology and PAPR systems

More information at www.clean-air.cz or watch a real-life action video here:
https://www.youtube.com/watch?v=EdtaEDqli8M

The **CleanAIR® Panoramate Lite** protective suit is used by emergency response units or is part of the equipment at the Těchonín Military Hospital.

The **CleanAIR® Panoramate Lite** positive-pressure protective suit provides both safety and comfort during prolonged use.

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FIND OUT MORE

New Critical Infrastructure System in the Czech Republic

In the middle of last year, the Czech Republic introduced a fundamental transformation of its critical infrastructure system. On 19 August 2025, Act No. 266/2025 Coll., on the Resilience of Critical Infrastructure Entities (hereinafter referred to as the "Critical Infrastructure Act"), entered into force. This legislation revised the critical infrastructure framework that had previously been regulated under Act No. 240/2000 Coll., on Crisis Management (the "Crisis Act"), since 2011.

The Critical Infrastructure Act transposes into Czech law Directive (EU) 2022/2557 of the European Parliament and of the Council of 14 December 2022 on the resilience of critical entities (the "CER Directive"). The CER Directive replaced the earlier Council Directive 2008/114/EC on the identification and designation of European critical infrastructures and the assessment of the need to improve their protection. Its objective is to strengthen the resilience of critical entities within the EU internal market through harmonised minimum rules.

While the new legislation builds on the principles of the previous critical infrastructure system under the Crisis Act, it also introduces a wide range of new requirements and obligations arising from the CER Directive.

In this regard, the Critical Infrastructure Act shifts the focus from identifying individual physical elements of critical infrastructure to identifying the critical infrastructure entities themselves that provide essential services. Consequently, the law no longer concentrates solely on the physical protection of infrastructure assets such as buildings, facilities, or installations against disruption. Instead, it aims to ensure and strengthen the broader resilience of the entire entity, including measures guaranteeing business continuity and the uninterrupted provision of essential services.

In the Czech Republic, the list of essential services is largely based on European legislation, namely the CER Directive itself and Commission Delegated Regulation (EU) 2023/2450 of 25 July 2023 supplementing Directive (EU) 2022/2557 by establishing a list of essential services. The Czech framework also includes nationally specific services, for example in the field of security.

Within the critical infrastructure system, all essential services are divided into 12 sectors, including energy, transport, healthcare, digital infrastructure, and security. Each sector is overseen by a designated authority from among the relevant ministries or central administrative bodies. Overall coordination of the system is carried out by the Ministry of the Interior through the General Directorate of the Fire Rescue Service of the Czech Republic.

The new system also changes the process for identifying critical infrastructure entities. The decisive step will now be the issuance of a decision by the Ministry of the Interior placing an entity on the list of critical infrastructure entities. However, the process requires the involvement of all relevant ministries and central administrative authorities, which assess the relevance of the information necessary for inclusion on the list based on their sectoral expertise. This follows a prior self-assessment process conducted by the potential critical infrastructure entity, referred to in the legislation as a provider of an essential service.

This reporting obligation is directly stipulated by the law and is linked to specifically defined essential services and significance criteria set out in implementing legislation, particularly the Government Regulation on Essential Services and Significance Criteria.

From the perspective of newly introduced obligations, the Critical Infrastructure Act requires the preparation of a national risk assessment in the field of critical infrastructure and essential services, as well as a national strategy for strengthening the resilience of critical infrastructure entities. Together, these two documents create the fundamental framework for identifying all relevant threats across sectors and defining measures for the further development of the system.

At the level of individual entities, a new obligation has been introduced to prepare a critical infrastructure entity risk assessment. This assessment must identify all relevant threats that may affect the continuity of essential services and potentially result in incidents.

Based on this assessment, the entity is required to adopt resilience measures, which are subsequently incorporated into a resilience plan. This plan serves as the key planning document for business continuity management and preparedness for incident response.

Another obligation is the appointment of a critical infrastructure manager. This responsible person coordinates compliance with the legislation, oversees the implementation of resilience measures, and acts as the main point of contact for state authorities.

Furthermore, critical infrastructure entities are required to report incidents. If an event has the potential to cause, or has caused, signifi-

cant disruption to the provision of an essential service, the entity must notify the Ministry of the Interior within 24 hours at the latest.

As was the case under the previous critical infrastructure framework governed by the Crisis Act, the new system remains closely linked to cybersecurity legislation. All critical infrastructure entities fall under Act No. 264/2025 Coll., on Cybersecurity, in a manner similar to regulated entities subject to the higher obligations regime. This ensures that critical infrastructure entities are required to implement cybersecurity measures in accordance with applicable legislation.

At present, the implementing legislation related to the Critical Infrastructure Act is in the final stages of the legislative process. Specifically, this includes the Government Regulation on Essential Services and Significance Criteria, as well as two Ministry of the Interior decrees: the Decree on the Resilience Plan, Risk Assessment, Resilience Measures, and Incident Reporting, and the Decree on the Critical Infrastructure Portal.

The purpose of the implementing legislation is, in the case of the Government Regulation, to establish a complete list of essential services and the related significance criteria that will form the basis for identifying critical infrastructure entities. The decrees will define the detailed requirements and content of the required documentation and resilience measures, while also specifying the operation of the Critical Infrastructure Portal, which is scheduled to be launched later this year.

Authors:
Colonel Martin Tilcer
Colonel Dušan Uhlík, MBA
Ministry of the Interior – General Directorate of the Fire Rescue Service of the Czech Republic
Photo: Archive of the Fire Rescue Service of the Czech Republic

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Pyrotechnicians
of the Czech Prison Service

One of the lesser-known specialized professions within the Czech Prison Service is the pyrotechnic unit, currently consisting of the chief pyrotechnician and around ten additional pyrotechnicians stationed at individual prisons. In total, there are 13 positions, including the head of the unit—equivalent to four pyrotechnicians per region—although two of these positions are currently vacant.

The pyrotechnic service falls under the Department of Prison and Judicial Guard at the General Directorate, specifically within the Special Activities Division. Pyrotechnicians are managed by the chief pyrotechnician, who reports to the head of this division. The Chief Pyrotechnician of the Czech Prison Service is Senior Commissioner Captain Rostislav Hrubý from Rapotice Prison.

The main responsibilities of the pyrotechnic service, similarly to the police, include the disposal and destruction of defective, failed, or unexploded ammunition that is part of the service's armament. They also carry out systematic pyrotechnic surveys of prison facilities and premises. The most recent survey took place between 2017 and 2022 at the Poštorná site, part of Břeclav Prison. This area is located on the grounds of a former German munitions factory from the Second World War, known as "Muna." For a long time, the site was inaccessible to the public as it lay directly on the Austrian border.

"Given the history of this location, there was a significant likelihood that dangerous wartime ammunition could be present," explains Chief Pyrotechnician Rostislav Hrubý. Many other prison facilities are also located on former military sites, including those once used by the Soviet army, so discoveries of ammunition are not as unusual as one might expect.

"Actual emergency interventions are relatively rare. They typically involve suspicious packages delivered to prisons, where X-ray inspection reveals various components that could form an improvised explosive device," adds Captain Hrubý. The duties of prison pyrotechnicians also include carrying out initial response measures and establishing a safety perimeter when there is a risk of explosion from a suspected device.

Another important task is the use of pyrotechnic means in connection with interventions carried out by officers under unified command, as well as during training exercises and training of operational escort units. Pyrotechnicians also participate in training officers in the use of pyrotechnic intervention tools and, when necessary, in handling improvised explosive devices.

The chief pyrotechnician also takes part in courses for shooting range supervisors, where he lectures on small-caliber ammunition, ballistics, and legal regulations related to shooting range operations. Additional responsibilities include supporting presentation events of the Prison Service, during which pyrotechnic simulation devices are used.

Cooperation with the Police of the Czech Republic

Training for prison service pyrotechnicians is conducted in cooperation with the Police of the Czech Republic, specifically at the Police Training Facility in Pardubice, where police pyrotechnicians are also trained. Training takes place twice a year and focuses mainly on practical, methodical disposal of ammunition at a permanent demolition site in Ralsko.

"We also work very closely with instructor-methodologists, supporting training for units operating under unified command and members of escort units for dangerous individuals. We also conduct regular training on pyrotechnic intervention tools," says Rostislav Hrubý.

The basic pyrotechnic course lasts three months. It is intensive and includes a large volume of theoretical knowledge and practical skills that candidates must master. After completing the training, they undergo progressive examinations. Successful candidates then take final theoretical and practical exams before a commission.

Further training takes the form of instructional and methodological sessions organized by the police or other security forces. *"One of the largest educational events for pyrotechnicians of the Czech Prison Service is the international INMEP conference, organized by the police in cooperation with the military. The conference is attended by pyrotechnicians from police and security forces from various countries, including Slovakia, the USA, Belgium, the Netherlands, Lithuania, France, and others, as well as representatives of technology companies,"* explains Hrubý.

"The conference features expert lectures, case studies from practice, and discussions of current security threats. Technology companies present various X-ray technologies, spectrometers, detection kits, robotic systems, and protective equipment," he adds. However, prison service pyrotechnicians currently do not have access to specialized equipment such as protective suits, detectors, or robotic systems.

"In the event of extraordinary incidents, we only carry out initial measures on site, secure the area, and wait for our colleagues from the Police of the Czech Republic, who have the necessary equipment and training," Hrubý explains.

"Cooperation with the police is at a very high level and is based on coordination agreements. It's not just about the police helping us—we also assist them. For example, we have participated in the relocation of ammunition depots and, in 2004, in the Ice Hockey World Championship, where we conducted pyrotechnic inspections together with the police."

Author: kpt. Mgr. Robert Blanda

Photo: Czech Prison Service

JABLOTRON – Precise EMS Solutions for Critical Applications and the Defence Industry

JABLOTRON, a Czech technology icon with more than 30 years of tradition, confirms its role not only as a leader in security but also as a strategic partner in the field of EMS (Electronic Manufacturing Services). For sectors where one-hundred-percent reliability and data integrity are critical requirements, we offer the background of a family-owned company with global reach and top-tier technical know-how.

Cutting-edge Technologies and Manufacturing Standards

At the heart of our production in Jablonec nad Nisou are fully automated SMT assembly lines, which guarantee high variability and precision. Our machinery is prepared for the most demanding challenges of modern electronics:

- **Advanced assembly:** Handling of components such as BGA or miniature 01005 packages.
- **Multi-stage quality control:** Processes including Automated Optical Inspection (AOI), 3D X-ray analysis, and In-circuit Testing (ICT).
- **Elimination of error rates:** Every module leaving production undergoes a strict testing protocol, which is crucial for deployment in critical infrastructure.

High-Reliability: Electronics for the Defence Sector

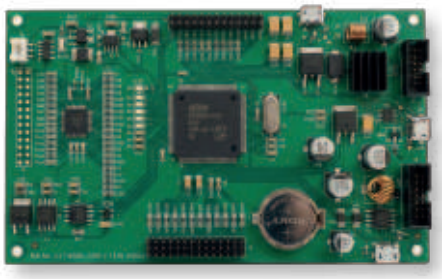
Within the EMS division, we focus on High-Reliability production. Thanks to ISO 9001 and ISO 13485 certifications and experience in developing certified security systems, we are the ideal partner for:

- **Control units** for unmanned aerial vehicles (UAVs) and advanced robotics.
- **Communication modules** with a high degree of security and resistance to interference.
- **Sensor networks** for monitoring extensive sites and perimeters in demanding terrain.
- **Resilient components** capable of flawless operation in extreme climatic and mechanical conditions.

Strategic Partnership and Nearshoring

One of the greatest assets of collaborating with JABLOTRON is our strategic location in the heart of Europe. In a time of volatile global markets, we offer stability and efficiency:

- **Shortening supply chains** – Fast logistics and operational technical support.
- **DFM/DFA Optimisation** – Our experts provide consultancy in Design for Manufacturing/Assembly, thereby streamlining production and reducing costs as early as the prototyping phase.



Are your safes truly secure?

Safes and vaults form the last and most resilient barrier between an attacker and the content that needs to be protected – whether that means classified documents, proprietary business knowledge, weapons or valuables. How difficult is it for a skilled attacker to defeat such a safe? That depends on the type and class of the safe, as well as the locks used.

An attacker can gain access to a safe not only through destructive means, such as drilling, cutting or explosives, but also without causing any damage at all, by bypassing the safe's lock or by obtaining access to the key or combination. The second scenario can be far more dangerous. It may take a very long time to discover that an attack even took place, and if sensitive documents were simply photographed, it may never be discovered at all.

Safe locks fall into three types: key locks, mechanical combination locks and electronic locks. Each has its own specific advantages and weaknesses that are worth understanding.

Key locks are a proven choice with a long history. Today's safe key locks use a system of levers with false notches that complicate opening with standard tools. Their advantages include independence from electronics and a long service life. The downsides are the risk of losing or having the key stolen, and the possibility of unauthorized key duplication.

Mechanical combination locks operate without a key or batteries, and their combination can be shared remotely if needed. Standard models use three discs that generate up to one million theoretical combinations. Their weaknesses include somewhat slower opening and the risk of forgetting the code.

Electronic locks are growing in popularity. While they offer fast opening and may have useful features such as multi-user management, access auditing and time-delay functions, they come with a range of drawbacks. They depend on a power supply, their electronics can fail without warning, and some models may be vulnerable to sophisticated attacks capable of opening the lock very quickly.

Safe locks are certified under the EN 1300 standard, which classifies locks into four grades from A to D. Certification is nonetheless only a minimum baseline standard and does not by itself guarantee resistance to all types of attack.

Would you like to learn more about the real security of your safes? Those who know the true limits of specific models best are the ones who have spent years working to defeat them. MPM Lock Decoders has unique expertise in the non-destructive opening of certified safe locks. The company supplies lock-opening tools to security forces and provides consultancy on protecting critical infrastructure against sophisticated attackers.

www.mpmlockdecoders.com

LATANIR

COMPREHENSIVE ENGINEERING SOLUTIONS

LATANIR s.r.o. is a specialised Czech supplier of wiring systems and related engineering services for the defence and aerospace sectors. The company acts as a partner to customers who need more than just manufacturing – those requiring deep technical insight into the design and integration of complete subsystems. LATANIR is one of only a handful of companies in the Czech Republic capable of delivering projects from concept all the way through to completion, and of supporting customers far beyond the role of a standard supplier.

REVERSE ENGINEERING & SYSTEMS INTEGRATION

LATANIR has built up its engineering and manufacturing know-how step by step – from its early days in automotive, through land defence systems, and on to aerospace. We cover the full lifecycle of wiring systems – from reverse engineering on modernisation projects, through engineering and design of new platforms, to systems integration and series production. This end-to-end approach is particularly valued in modernisation programmes of legacy equipment and in projects with incomplete documentation, where a functional and certifiable technical assembly must be reconstructed from the ground up.

LAND SYSTEMS & AEROSPACE

LATANIR production serves two key segments – land defence systems and aerospace platforms. Our wiring harnesses are integrated into systems operated within NATO. Every product undergoes rigorous outgoing inspection and meets demanding requirements for electromagnetic compatibility, vibration resistance and operation under extreme temperatures.

READY FOR THE MOST SENSITIVE PROJECTS

LATANIR is currently finalising the process of obtaining a security clearance at the NATO Secret level, which will open access to the most demanding contracts within both the Czech and allied defence industries. We are ready to expand cooperation with integrators, OEMs and system suppliers across NATO nations.

CZECHWEST AND THE A&D SIG

LATANIR is also a member of the Czech Western U.S. Chamber of Commerce, where we are building the Aerospace & Defence SIG platform from the ground up – with the goal of strengthening and developing relationships with U.S. companies in our sector. We are open to partnership with any Czech company interested in actively co-building the CzechWest platform and deepening cooperation and trade with businesses on the U.S. West Coast.

LATANIR s. r. o.
Wiring harnesses for defence and aerospace

www.latanir.com

LATANIR

SINGING ROCK JACK

SINGING ROCK presents compact **descender JACK** for work at heights designed mainly for rope access and rescue operations. Its advantages are durability, maximum simplicity and intuitive operation. Can be used for positioning, ascending and descending on the work line, as well as for lowering and belaying persons. Automatically locks the rope, allowing the user to concentrate fully on the work. Speed of movement on the rope is conveniently controlled by the lever. Easy retrieval of the rope allows the device to be used for short rope ascents. With an unloaded rope, the locking mechanism can be deactivated by pressing the cam and thus the rope can be pulled out of the device without using the lever – this allows the device to be used for quick movement on a flat roof.

Patented design with magnetic holding of the cam facilitates rope insertion. It is not necessary to disconnect the device from the harness when inserting and removing the rope. No additional friction is required up to a load of 200 kg. Compatible with a wide range of rope diameters 9.3–12 mm (see specifications for individual standards). Parts in contact with the rope are made of stainless steel, which prolongs the lifetime of the device. Using a screw, the device can be permanently locked to the rope to create a non-removable system. Lever and lock can be disassembled and cleaned if necessary.

JACK weights 410 g with maximum working load 200 kg and fulfill the requirements of the following standards: EN12841-C, 10–12 mm, max. load: 200 kg; EN341-2A, SINGING ROCK STATIC 11, max. load: 150 kg, max. descent length: 100 m, min. temperature: -30 °C; EN15151-1 type 6, 9.3–11 mm.

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EVO Max Series

Reach New Frontiers

The Autel EVO Max Series features industry-leading A-Mesh networking, anti-interference, autonomous flight (Autonomy), high-precision visual navigation, AI target recognition and positioning, and 720° omnidirectional obstacle avoidance. These capabilities ensure stable and intelligent operations in all-weather, complex environments. EVO Max 4T is equipped with a 10x optical zoom camera, enabling long-range reconnaissance of vehicles and vessels up to 2 km away. EVO Max 4N integrates an ultra starlight night vision camera, delivering clear visibility in extremely low-light conditions. The powerful flight platform, combined with a range of gimbal payloads, delivers outstanding performance across public safety, energy inspection, emergency response and many other fields, setting a new benchmark for industrial UAV applications.

- 720° — No Blind Spots
- Superior Anti-Interference Capability
- High-Precision Visual Navigation
- A-Mesh Networking
- AI — AI Target Recognition
- 8K 10x Optical Zoom Camera
- 0.0001 LUX Starlight Vision Camera
- Hot-Swappable Battery
- 15 km Transmission Range
- 42 min Max. Flight Time

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Interview with Deputy Minister of Defence

René Schreier was appointed Deputy Minister of Defence on 15 January 2026. At the same time, he joined the representative editorial board of our magazine Review, and on this occasion we asked him for an interview not only about the ministry's plans, but also about his perception of the Czech Republic abroad and the importance of the Czech defence industry within the current strategy.

Mr Deputy Minister, you were appointed to this position at the beginning of this year. What exactly does your role involve?

My role primarily consists of coordinating key processes within the ministry. I strive to ensure that individual areas operate in an interconnected manner rather than as isolated units. A significant part of the agenda involves strategic financial management, meaning the setting of priorities and work with the budgetary framework. We are looking for efficient ways to use available resources, including NATO and EU instruments. An important area is also oversight of acquisitions and military modernisation, where it is necessary to align the needs of the armed forces with the state's actual financial capabilities. I am also heavily focused on digitalisation. This is not just about introducing technologies, but also about transforming management methods and the use of data. My responsibilities also include oversight, audits, and transparency, because without these elements it is impossible to maintain long-term trust and efficiency.

Could you define your key priorities for this year?

The Government Policy Statement clearly defines the strategic direction of defence, and implementing it forms the main framework of our work. At the Ministry of Defence, we are translating these priorities into concrete steps, from stable and predictable financing to the further development of the Czech Armed Forces. We want to build forces that are fully interoperable with our allies and genuinely prepared to respond to current and future threats. One major step is the elevation of the Territorial Forces as an independent Command Headquarters, which has achieved full operational capability at 1 January 2026 and is becoming the key element of the Czech Armed Forces' crisis preparedness. This project will strengthen the state's readiness for crisis situations and create conditions for closer coordination with other security services at the regional level. It is a long-term process whose importance will continue to grow as part of force development through 2035. Alongside rearmament and strengthening capabilities such as air defence, we are also focusing on the ministry's internal transformation. This includes more efficient management, modern acquisition procedures, and the digital transformation of the ministry itself. It is not only about technology, but about new ways of handling information, sharing data, and coordinating processes across institutions. The aim is to improve decision-making speed and make better use of available capacities. Support for the domestic defence industry and research remains one of our priorities, because it strengthens both strategic autonomy and the country's economic stability.

From July 2026, this agenda will be coordinated across ministries, particularly between the Ministry of Industry and Trade and the Ministry of Defence. We are also paying close attention to personnel issues—from improving service conditions and developing housing infrastructure to supporting recruitment and active reserves. At the same time, we are working on national crisis preparedness and more open communication with the public, so that it is clear how investments in defence concretely enhance the security of the Czech Republic. We also want to make more effective use of European and NATO financial mechanisms that can significantly support the development of defence capabilities. Our long-term objective is to build armed forces capable of performing in a real conflict, not just on paper. That requires stable financing, flexible decision-making, and the ability to turn strategy into tangible results.

The issue of billion-crown advance payments for strategic military equipment is often discussed. how will you ensure this is not merely risky spending, but a transparent and economically justified tool?

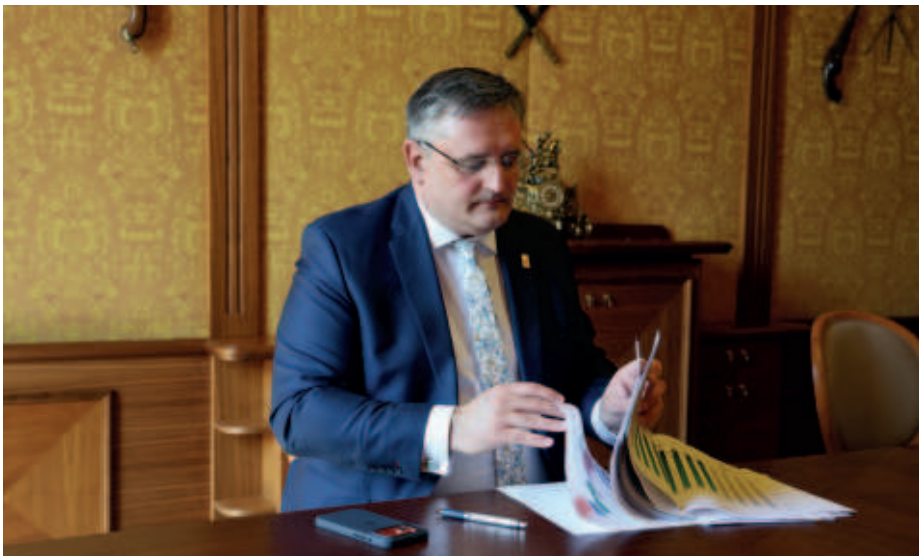
We do not want to make only cosmetic adjustments to existing rules. Our goal is to create a comprehensively designed system for handling public funds. We are currently preparing an in-depth study that will review selected investment projects and compare our procedures with practices used by other NATO countries. Precise categorisation of payments will be crucial. It is necessary to clearly distinguish mandatory advance payments under government programmes such as FMS from optional payments to commercial suppliers. Every release of funds will have to undergo an economic assessment proving that any resulting benefits outweigh the costs to the state. At the same time, we are introducing a risk management system and mandatory safeguards, such as bank guarantees, to ensure maximum defensibility of the entire process. Another important issue is the impact on the domestic defence industry. We are seeking a balance between protecting the state budget and maintaining the competitiveness of Czech companies. The result will be a clearly defined decision-making mechanism and standardised ”business case“ documentation to ensure a transparent and fully controllable process.

According to the approved 2026 budget, defence spending is rather stagnating. How does this fit into your long-term plans?

This issue must be viewed in a broader context. Defence planning takes place over many years, and financing reflects this long-term perspective. The pace of growth in defence spending also depends on the condition of public finances, economic performance, GDP growth, and the budget deficit. These factors cannot be separated and must be approached realistically. That is why stability and predictability of financing are so important. Defence projects have long investment cycles, and without certainty regarding future funding, implementation becomes extremely difficult. We are therefore moving toward a financing model that is both sustainable and sufficiently ambitious. The important point is that our most significant projects continue and continuity is being maintained. Beyond the overall volume of resources, we are also focusing on their practical effectiveness. The key question is not simply the size of the budget, but whether the funds genuinely strengthen operational readiness and national security.

The Czech republic has long faced challenges in meeting NATO commitments. What impact could this have?

Fulfilling commitments to allies is an important part of every member state’s credibility. The Czech Republic recognises the importance of these obligations and has consistently declared its intention to meet them, because the Alliance is built on trust and predictability. However, allies do not focus solely on numerical spending targets. They also evaluate how countries contribute to collective security, for example through capabilities, participation in missions, or involvement in joint projects. If defence investment were not maintained at an adequate level or continuity in planning were lost, it could gradually affect our standing within the Alliance and our ability to respond to security challenges.



It would not become an immediate issue, but rather a matter of long-term perception of the Czech Republic as a reliable partner. That is why we need a realistic and stable defence financing strategy aligned with both economic capabilities and current security needs. Equally important is demonstrating that the Czech Republic has a clear plan and can consistently implement it.

You are planning to establish a unit focused on efficient use of NATO and eu funding. What exactly should we imagine under this concept?

This unit would function as a specialised coordination centre for projects financed through NATO and European defence programmes. Its main task would be to unify currently fragmented activities so that projects, funding applications, and international cooperation would all operate under consistent management and professional support. In practice, the team would identify funding opportunities, prepare project applications, and provide methodological support to the armed forces, public administration, and the defence industry. An important part of its role would also be increasing the involvement of Czech companies in NATO and EU programmes. The unit would additionally serve as an information hub, sharing updates on upcoming NATO and EU initiatives, financing opportunities, and areas in which the Czech Republic could participate. The goal is to increase utilisation of these instruments, which offer significant potential for developing defence capabilities, research, and international cooperation, while improving coordination of Czech participation.

How do you perceive the current security situation in Europe?

The current situation in Europe is far more dynamic and less predictable than it was a few years ago. The importance of whole-of-state preparedness is becoming increasingly clear—the ability to coordinate the armed forces, public administration, and regional structures. Some of the structural changes now underway are aimed precisely at strengthening coordination and preparedness across the security system. Alongside the return of conventional military threats, we are also witnessing a growing number of cyberattacks, disinformation campaigns, and other forms of hybrid activity targeting both the functioning of the state and public trust in institutions. This places greater demands not only on the military, but on the state as a whole. We must be prepared to manage a broader spectrum of risks while strengthening societal resilience, from critical infrastructure to public awareness. Security today is simply not just a matter for the armed forces—it is a collective effort involving the entire society.

How important is the Czech Republic's participation in international missions today?

Participation in international missions remains a stable component of Czech defence policy. It is not only about solidarity with allies, but also about invaluable experience for our soldiers that cannot be gained domestically. Foreign operations improve the professionalism and preparedness of the armed forces while reinforcing the Czech Republic's credibility within the Alliance. At the same time, it is always necessary to carefully assess where and to what extent we participate so that it corresponds with our priorities and capabilities.

Recruitment of new soldiers has long been a challenge. What are your plans in this area?

It is not only about recruiting new personnel, but also about retaining them in the armed forces. We are already seeing positive trends in the data. By mid-April 2026, we had fulfilled approximately 88% of the recruitment target, and many applicants had already entered service. In response, we are expanding basic training capacities in Vyškov. We are also introducing stabilisation measures, such as salary increases from the beginning of 2026 and the construction of service housing. We are focusing on the overall quality of service, from infrastructure and career development opportunities to day-to-day working conditions. At the same time, we want to communicate more openly about what military service truly involves and what opportunities it offers. Active reserves also play an important role as a vital link between the military and civilian society. We intend to continue developing this model in the coming years because it significantly contributes to national preparedness.

How would you like the Czech Armed forces to be perceived by the public?

We want the armed forces to be perceived as a professional, trustworthy, and technologically advanced institution that citizens can rely on. At the same time, we do not want the military to appear distant or closed off—it should be a natural part of society. It is essential that the public understands what the armed forces actually do. This includes not only foreign operations, but also everyday domestic activities, from supporting the integrated rescue system during crises to protecting critical infrastructure and preparing for emergencies. When people understand the importance of these activities, it becomes much easier to have an open discussion about defence investments and their long-term necessity. Security is not something automatic—it is the result of systematic work and responsible decision-making.

Is communication between the ministry and the public important?

Clear communication with the public is absolutely essential. If citizens do not understand

why the state invests in defence and what concrete benefits it brings to their security, it becomes very difficult to maintain long-term support for defence policy. That is why we want to communicate more openly, factually, and understandably than in the past. It is not only about general strategies and declarations, but above all about concrete projects and their practical impacts. Equally important is the ability to respond to concerns, criticism, and public questions. Defence communication cannot function as a one-way process—it must create dialogue that strengthens trust and helps explain complex issues transparently. In the long term, the better the public understands the importance of defence and security, the more resilient society becomes in times of crisis.

What role does the Czech defence industry play in the current strategy?

Without a strong domestic industry, it is impossible to build strong defence capabilities. The Czech defence sector is therefore considered a key partner of the state's defence policy. This approach is reflected in specific projects, with a significant portion of acquisitions carried out in cooperation with Czech companies, for example in aviation technology, unmanned systems, and equipment modernisation. This model is important both for developing the domestic industrial base and for the long-term sustainability of defence capabilities. However, the role of industry extends beyond the delivery of equipment. It includes a broader ecosystem involving research, development, innovation, and the ability to respond to emerging technological trends. We want Czech companies to become more successful in international NATO and EU projects and remain competitive over the long term. That requires not only government support, but also more systematic cooperation between industry, academia, research institutions, and start-ups. We are placing major emphasis on innovation and technology transfer into practical applications so that high value-added solutions can emerge for both defence and civilian use. Ultimately, our goal is for the Czech Republic not to remain merely a passive customer of ready-made solutions, but to become an active player involved in the development of advanced technologies and the shaping of the European security architecture.

How is the role of modern technologies in defence evolving?

Technological superiority increasingly determines success. That is why we are investing in areas with a direct impact on defence capabilities, such as counter-UAS systems and advanced information platforms for operational and crisis management. We are also applying automation and artificial intelligence wherever they provide operational advantages. This is already evident in cyber-security and analytical data processing. Equally important, however, is the speed at which we are able to introduce new technologies into practice. This requires greater flexibility in planning and acquisitions, openness to innovation, and closer cooperation with technology companies, research institutions, and start-ups. Adaptation speed will be decisive. Those who can integrate new tools effectively will gain a significant advantage. This approach is also increasingly reflected in professional debates on defence modernisation, which emphasise the importance of more effective information management, openness to innovation, and modern command methods.

What do you consider the greatest challenge for Czech defence in the coming years?

One of the greatest challenges will be maintaining stability and predictability—the ability to plan, finance, and implement major projects without major fluctuations or frequent changes in direction. It will also become increasingly important to align military capabilities with the functioning of public administration, regions, and other security services. Strengthening this preparedness will be one of the defining factors of successful defence policy. Defence is an area where results become visible only over the longer term. This also requires a change in mindset. Modern defence no longer depends solely on traditional platforms, but increasingly on technology, data, cybersecurity, and rapid innovation adoption. This requires greater openness to new solutions, more flexible decision-making, and closer cooperation with the private and academic sectors. At the same time, we must adapt to a rapidly changing strategic environment where both threats and methods of conflict evolve quickly. That makes it even more important to maintain a stable strategic framework capable of responding flexibly to new developments. Communication also plays a major role—the ability to clearly explain these steps to the public and maintain support for them. Without public trust, itis extremely difficult to implement and complete major modernisation reforms. The greatest challenge, therefore, will be maintaining momentum and carrying reforms through to completion. The security environment is changing rapidly, and there is no room for half-measures. The decisive factor will be whether we can create a functionally integrated system connecting the military, the state, and other security services.

Mr Deputy Minister, thank you for the interview, and I wish you much strength and success in this important role within the ministry.

Šárka Cook

***Photo:** Lauren Imari Cooková*

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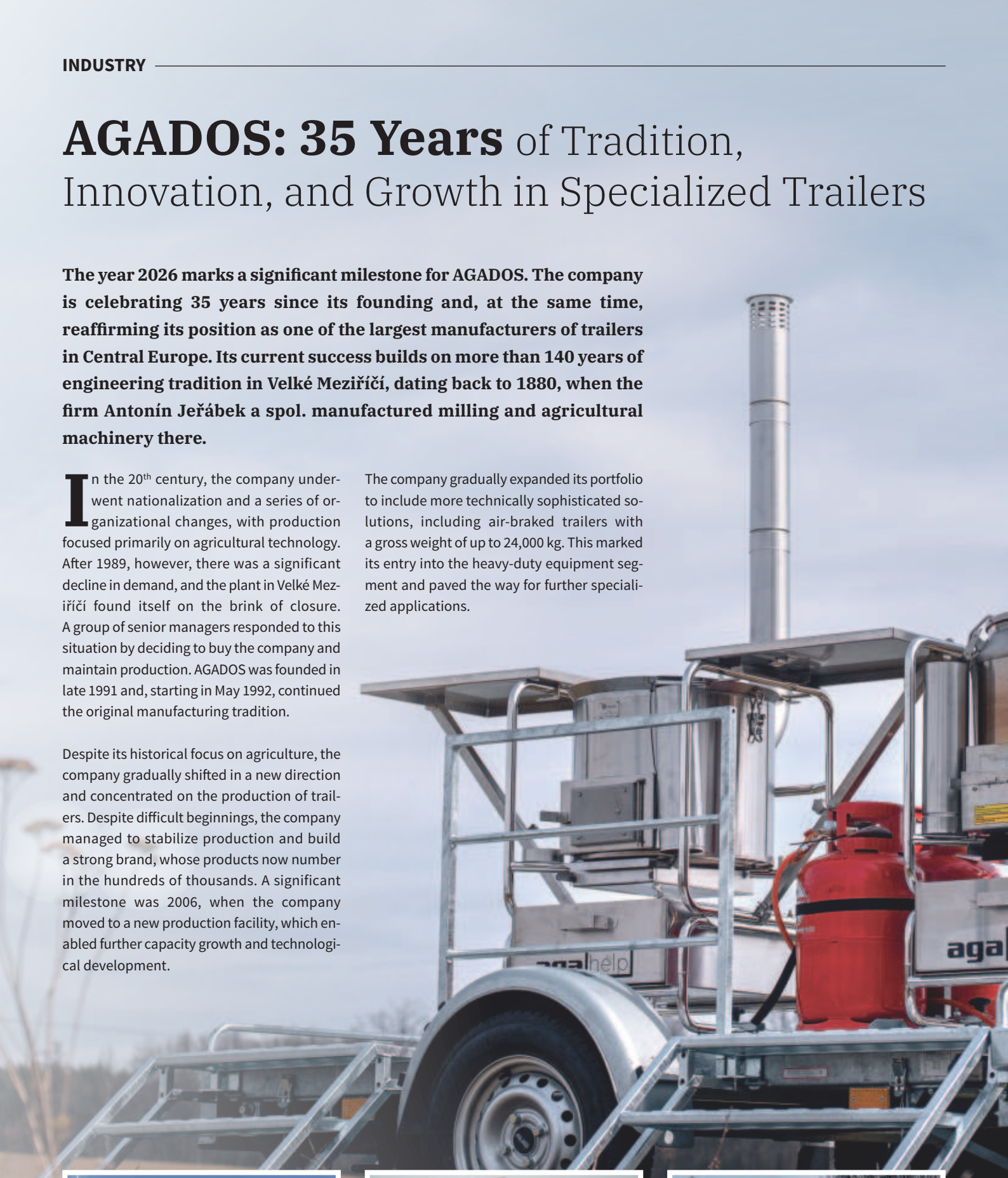
AGADOS: 35 Years of Tradition, Innovation, and Growth in Specialized Trailers

The year 2026 marks a significant milestone for AGADOS. The company is celebrating 35 years since its founding and, at the same time, reaffirming its position as one of the largest manufacturers of trailers in Central Europe. Its current success builds on more than 140 years of engineering tradition in Velké Meziříčí, dating back to 1880, when the firm Antonín Jeřábek a spol. manufactured milling and agricultural machinery there.

In the 20th century, the company underwent nationalization and a series of organizational changes, with production focused primarily on agricultural technology. After 1989, however, there was a significant decline in demand, and the plant in Velké Meziříčí found itself on the brink of closure. A group of senior managers responded to this situation by deciding to buy the company and maintain production. AGADOS was founded in late 1991 and, starting in May 1992, continued the original manufacturing tradition.

Despite its historical focus on agriculture, the company gradually shifted in a new direction and concentrated on the production of trailers. Despite difficult beginnings, the company managed to stabilize production and build a strong brand, whose products now number in the hundreds of thousands. A significant milestone was 2006, when the company moved to a new production facility, which enabled further capacity growth and technological development.

The company gradually expanded its portfolio to include more technically sophisticated solutions, including air-braked trailers with a gross weight of up to 24,000 kg. This marked its entry into the heavy-duty equipment segment and paved the way for further specialized applications.



A major shift occurred in 2014, when AGADOS began systematically focusing on the development and production of special trailers under the AGAHELP brand for the armed forces and the integrated rescue system. This segment has gradually become one of the key pillars of the company's growth.

AGAHELP products are developed through long-term collaboration with military and humanitarian organizations and are designed with an emphasis on high mobility, robustness, and modularity. As a result, they are used in a wide range of conditions—from military operations to crisis and humanitarian missions. They are utilized not only by the Czech Army but also by other NATO member states.

One of the most significant products is the PK4 mobile field kitchen, launched in 2017. This model won the prestigious Golden IDET 2017 and IDEB Prix 2018 awards and addressed the long-standing shortage of modern catering equipment in the military. The success of this solution led to the further development of the field kitchen product line.

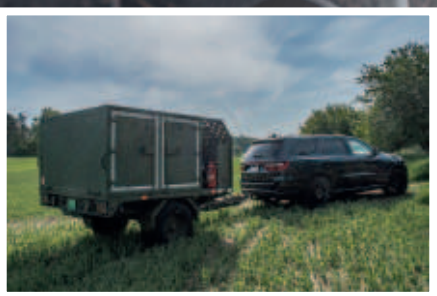
Building on this line is the new addition for 2026—the AGADOS PK-M field kitchen. It is the smallest model in the portfolio, designed as a compact, fully mobile, and affordable solution with a capacity of approximately 100 to 150 servings per cooking cycle. The design, featuring two removable cooking modules, enables efficient preparation of meals and beverages in field conditions. Emphasis was placed on ease of operation, rapid deployment, and high versatility, while the modular and lightweight construction allows for deployment even in challenging terrain.

However, AGAHELP's portfolio includes a broader range of solutions—from mobile lighting systems to water treatment plants and drinking water tanks, as well as logistics and technical trailers. Since 2023, the company has also been manufacturing chassis for mobile diesel generators, which can be customized to specific power and size requirements and are used not only by the military but also in crisis management and the civilian sector.

The next step in the development of specialized technologies is a refrigeration/freezer trailer with its own power generator, introduced in 2024. This system enables fully autonomous operation and ensures the safe transport of food even in environments without available infrastructure.

Over the course of 35 years, AGADOS has undergone a significant transformation from a traditional engineering company into a modern manufacturer with an international reach. The growing importance of specialty and military trailers clearly points to the direction of the company's future development. During this time, the company has also become a reliable supplier not only to the Czech Army but also to the Czech Fire and Rescue Service and other components of the Integrated Rescue System.

This development is complemented by a focus on modernization and innovation in company management. In 2026, AGADOS therefore plans to gradually digitize key processes across the company—from production to customer care. The goal is to increase efficiency, improve control over production, and further enhance the quality of the products and services provided.



ZETOR ENGINEERING, s. r. o.

The company was established in June 2009 and is engaged in research and development in the field of industrial know-how. Currently, the company operates as a professional research and development center for mobile applications for machinery and special vehicles. The company is a professional partner for development, innovation, and comprehensive supply solutions, including for the defence industry.

Our portfolio of activities primarily includes design engineering, technical consulting, project management, and technological support. Zetor Engineering, s. r. o. is a professional partner in the area of military equipment, focusing on research, development, innovation, and comprehensive supply solutions. The flagship product of Zetor Engineering, s. r. o. is the armored tactical vehicle ATV 4×4 ZETOR GERLACH. The Czech project of the 4×4 armored tactical vehicle GERLACH reflects new combat and security factors derived from modern skills and experience gained from 21st century combat operations, including the successful integration of the RCWS RS6 KONGSBERG with 30 mm cannon.

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Stable economy

Changes in the security landscape in Europe and a sharp rise in demand for ammunition and energetic materials have put Explosia in the spotlight. Explosia is now a rapidly growing company with ambitions to not only strengthen its position in the Czech Republic, but also within the European industry. *"Explosia straddles the line between tradition and the modern defence industry. Our aim is to be a reliable partner to the state, specifically the Czech Armed Forces, as well as to international customers,"* said Tomáš Rubáček, company Chairman of the Board.

Explosia's financial position has significantly strengthened in recent years. Whilst the company was still reporting relatively low profitability at the start of the decade, it can now rely on steady growth in both turnover and profit. In 2025, it achieved an approximate CZK 1 billion profit before tax with turnover exceeding CZK 3 billion, representing a substantial year-on-year increase. This development is the result of a combination of several factors. In addition to growing demand for the company's products, it is also due to the introduction of new production management methods and improvements in the efficiency of its own operations. According to the company management, the ability to reinvest profit back into development is particularly crucial. *"We have long drawn on financial stability and the ability to reinvest our own funds. This enables us to achieve long-term growth without excessive debt"*, said Ondřej Havlík, Deputy Chairman of the Board of Directors. At the same time, Explosia flexibly responds to new market opportunities – whether in the civilian sector or, above all, in the defence industry.

Investment

The company's growth would not have been possible without the extensive investment programme that Explosia has been implementing in recent years. While just a few years ago investment was capped in the tens of millions of crowns, the company now plans to spend up to hundreds of millions annually, with the total investment volume set to reach around three billion by 2027. These funds are primarily being channelled into modernising production technologies, expanding capacity and improving production efficiency, as well as into renovating company premises. One notable project was, for example, the construction of a new production line for fully combustible propellant charges, which quickly became one of the key pillars of production. Support from European sources also plays an important role. Explosia has secured a grant of approximately EUR 10 million to help fund the expansion of its production capacity in response to growing demand for ammunition in Europe. However, investment is not solely aimed at increasing the volume of production. The company also focuses on innovation, automation and ensuring its operations are more environmentally friendly. *"Investment is key to our ability to respond to dramatically rising demand whilst keeping pace with our competitors in terms of technology,"* emphasised the Chairman of the Board.

Capacity, safety and modernisation

One of the most visible signs of Explosia's current transformation is the expansion of its production capacity. The company is responding to the situation on the European market, where the demand for ammunition and energetic materials has long exceeded supply. In practice, this means a significant increase in the production of key products. For example, production of certain powder types is set

to rise from tens of tonnes a year to hundreds of tonnes, whilst production of propellant charges is expected to increase from around 80,000 to 200,000 units a year. Such ambitious plans not only require investment in new technologies, but also a reorganisation of production processes.

An increase in capacity goes hand in hand with a focus on safety. The manufacture of explosives is one of the most high-risk industrial activities, which is why Explosia has long been investing in state-of-the-art safety systems, automation and staff training. *"Security is not an area where we can afford to make compromises. All new technology must not only deliver better performance, but also greater operational safety"* said Ondřej Havlík. The modernisation also encompasses environmental aspects, such as improving wastewater treatment systems or reducing emissions.

Strengthening partnerships and collaborations

Today, Explosia does not operate in isolation but as part of an extensive network of partners both in the Czech Republic and abroad. Cooperation with other companies in the defence industry plays a key role, enabling us to effectively respond to growing demand and become part of wider supply chains.

The first of several significant, long-term partnerships in recent times was the signing of a memorandum of understanding with the University of Defence in Brno at the beginning of January. This agreement represents an important step towards systematically linking the academic, research and applied sectors in the field of defence and security in the Czech Republic. *"By signing this agreement, we are reaffirming our role as a strategic partner to the defence industry, whilst strengthening our collaboration with the academic sector in the fields of applied research, innovation and sharing of specialist expertise. Together with the University of Defence, we want to train specialists capable of responding to current and future security challenges,"* said Tomáš Rubáček, Explosia's Chairman of the Board. This was followed by further memoranda with the Czech Institute of Informatics, Robotics and Cybernetics at the Czech Technical University, the Military Technical Institute, Colt CZ Defence Solutions and the Polish company ZSP Niewiadów. *"These partnerships are in line with the strategy of strengthening Europe's defence capabilities through the integration of manufacturing and technological capacities. Joint planning and the exchange of know-how in the field of energetic materials will enable all parties to respond more effectively to growing market demand,"* noted Tomáš Rubáček. Explosia is thus increasingly becoming an active player in the European defence industry. The signed memoranda are not only intended to contribute to the company's technological development and strengthen the capabilities of the Czech Armed Forces, but also those of other NATO allies.

Future development

The outlook suggests that Explosia will continue to strengthen its role as a strategic manufacturer. The company plans to continue expanding its capacity, investing in new technologies and increasing the proportion of higher value-added products. A key factor in this regard is the development of the security situation in Europe. The war in Ukraine and the growing emphasis on national defence capabilities are leading to a long-term increase in demand for ammunition and energetic materials. Explosia is seeking to capitalise on this situation, whilst at the same time viewing it as a commitment to responsible and sustainable growth. There will also be a strong focus on human resources. In an industry where expertise and experience are key, skilled staff represent a crucial competitive advantage. *"We want to be one of Europe's leading producers of energetic materials. This includes, among other things, working systematically with people,"* summarised Rubáček, Chairman of the Board.

Today, Explosia is a company that has successfully leveraged changes in the economic and security landscape to transform itself. A company that was only a few years ago seeking stability is now becoming an economically strong and investment-active player with growing international significance. Thanks to a combination of government support, substantial investment and a focus on safety and innovation, Explosia has the potential to become one of the key pillars of the European defence industry.

Interview with the President and Executive Director of the Defence and Security Industry Association of the Czech Republic, Jiří Hynek

The General Assembly of the Defence and Security Industry Association of the Czech Republic is approaching. Such an occasion is usually a good time to reflect.

How would you evaluate the past year?

The role of the defence and security industry is becoming increasingly important. Many countries have begun to realize how weak their defence capabilities are and that they cannot be strengthened without a robust defence industry. Public perception of the arms industry is also gradually changing, particularly in connection with Russian aggression in Ukraine. More and more people recognize the irreplaceable role of the armed forces and manufacturers of the necessary military equipment.

Of course, there are still individuals or groups who fantasize about a perfect world where everyone gets along and there is no place for violence. Unfortunately, we do not live in such a world, nor will we ever. That is why we must be able to defend our freedom and independence. There is a reason why people say that without weapons, we are defenseless. And it is precisely to ensure that we are not defenseless that the defence industry exists.

I am pleased to see this sector continuing to grow. More manufacturing companies are reorienting themselves toward it, particularly in the area of so-called dual-use technologies. After the last General Assembly, our association had 219 members, and since then, more than 60 additional entities have expressed interest in joining.

While the primary role of defence and security companies is to serve as a key pillar of national defence, their economic contribution is also significant. We directly employ 25,000 people and support another 90,000 jobs indirectly through suppliers of materials, components, and services. The annual turnover of defence technologies amounts to CZK 210 billion. Exports of military material will again reach record levels in 2025, and we expect them to exceed CZK 100 billion.

From the perspective of the defence and security industry, the past year can be considered a successful one.

In your media appearances, you often emphasize the need to strengthen other industrial sectors in EU countries—such as mining, processing, chemical, and engineering industries. What leads you to this view?

The primary role of the defence industry is to serve as one of the pillars of our country's defence capability. This role becomes especially critical in times of crisis, including war. The COVID period clearly demonstrated how international trade functions—or rather, fails to function—during crises. Air and maritime

transport collapsed, and international cooperation was more apparent than real.

At that time, one could fully appreciate the saying: *"If you are looking for a helping hand, you will find it at the end of your own arm."* Unfortunately, this realization came too late. The long-standing fanaticism of what I call the "green religion" within the European Union has severely damaged the broad industrial base of EU countries.

The defence and security industry is the tip of an imaginary pyramid, whose foundation consists of mining, processing, chemical, engineering, and electrical industries. In peacetime, globalization ensures that international supply chains function smoothly, and there is no issue sourcing raw materials and components from around the world. However, this system creates significant security risks. In times of crisis, many components may become unavailable.

EU countries are more than 90% dependent on imported raw materials. For example, of the 17 elements required for optoelectronics production, only five are mined within the EU. The rest are imported, mainly from Asian countries.

If we want to build a strong and independent defence industry in Europe, we must not neglect the other industrial sectors that feed into it. We need to rebuild a broad industrial base; otherwise, we will not be able to ensure the security of our citizens.

The European Union plans to significantly increase funding for defence industries in member states, and the United States is pushing NATO members to raise defence spending. In this context, how do you see the future of the Czech defence industry?

What is happening now represents a tremendous opportunity for Czech manufacturers. Our association is doing everything possible to help our companies participate in international projects. In the most recent call of the European Defence Fund, 14 Czech entities were successful. Given that a total of 57 projects were supported, this can be considered a success. For the first time, we also have a Czech project coordinator, which had not been achieved before.

On the one hand, EU institutions deserve credit for trying to find tools to mobilize defence industries and encourage greater cooperation. On the other hand, the European Union is so overburdened with bureaucracy that it is not only demotivating but often even destructive for industry. The bureaucracy is so extensive that it can paralyze manufacturing operations and is often a reason why investors move to more industry-friendly countries.

Is European bureaucracy the only issue Czech manufacturers face?

It is certainly the biggest problem, but not the only one. Another major issue is the shortage of labor, particularly highly qualified professionals. The most sought-after positions are in design and technology, which require a university-level technical education. Additionally, there is a shortage of input materials and raw resources. And we must not forget the high cost of energy.

In the past, you have been critical of banks for their reluctance to work with defence companies. Has the situation improved?

There was a lot of media coverage about banks refusing to provide loans to arms manufacturers. However, the lack of loans was actually the least of the problems. For companies with "foreign trade in military material" listed as a business activity, it was often nearly impossible to even open a standard bank account. Receiving payments from abroad for deliveries of military equipment was also a major challenge.

I hope we will reach a point where we can speak about these issues only in the past tense. The defence industry and the banking sector are on the same side. Defence industry products ensure the security of our countries and all institutions within them—including banks.

We have set out on the right path; now we just need to see it through. The goal is for the defence industry to be perceived like any other industrial sector. The fact that the situation is improving is also evidenced by three banks having already joined our association.

Before the previous General Assembly, you mentioned the need for open communication between users—such as defence and security forces—and manufacturers. How do you assess the current situation?

It wouldn't be me if I said I was satisfied. That said, I understand that officials are very cautious in this area due to concerns about potential criminalization of such contacts.

For users—soldiers, police officers, firefighters, and others—to receive the most suitable equipment, there must be close cooperation between them and the designers and developers of potential suppliers. Suppliers need to understand what users require, and users must be aware of technological possibilities. When looking for best practices, it is useful to look abroad. In Ukraine, which is fighting for its very existence against Russian aggression, close cooperation between users and suppliers is absolutely essential. It is common for engineers or programmers to accompany soldiers to the front to adapt and modify equipment on-site according to current needs. This represents real-time development and innovation in a war environment—something unimaginable in our conditions.

In the Czech system, any technical modification would require a new procurement process. At a conference, I was asked: *"But we are not at war, so why should we do this?"* My answer was simple: because it is effective and can help ensure that we do not end up at war. The exchange of experience between developers and users is absolutely essential to create products that are truly useful and enhance our defence capabilities. If we do not quickly change our approach, we will never be prepared for a potential conflict. Those who question this kind of cooperation should read the document *"Framework for NATO-Industry Engagement."* Although it dates back to 2013, it could serve as a solid foundation for stronger cooperation between the military and industry. And if we complement it with best practices from Ukraine, I will be much closer to being satisfied.

What can we expect from the Association in the coming period?

Exactly what defines our mission: to contribute to creating optimal conditions for research, development, production, trade, and marketing services related to defence and security technologies and materials. And to do so with determination and energy.

We must always remember that we are here for our members and that our goal is for the Czech defence and security industry to play a key role in strengthening the defence capabilities of our country.

Mr. President, thank you for the interview.
Lauren Imari Cooková

Photo: AOBP


AOBP
THERE IS NO DEFENCE
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PBS Grows Alongside Defence and Aerospace, Adding Hundreds of Jobs in Velká Bítěš

PBS GROUP has seen strong growth in recent years, demonstrating that Czech industry can play a significant role in global aerospace and defense. The group is benefiting from rising demand for its products while increasingly participating in prestigious international programs and supply chains of major global players. Its dynamic expansion is driven by a combination of long-term technological development, sustained investment, and the ability to respond to shifts in the global environment.

PBS has long specialized in the development and production of small jet engines and auxiliary power units (APUs), which are used to start main engines and supply onboard systems in aircraft and helicopters. Its technologies are primarily deployed in the defence sector, including unmanned systems, guided missiles and other advanced applications. Demand for these products has surged in recent years, becoming a key driver of the group's growth. Between 2023 and 2026, jet engine production increased by 800 percent, positioning PBS among global leaders in its segment.

This growth is underpinned by a strong technological base. PBS combines a long industrial tradition with in-house development and a high share of proprietary production. This allows the company to respond flexibly to specific customer requirements while meeting the strict standards of the aerospace industry. Innovation also plays a central role, with the company consistently investing a significant portion of its revenue to maintain a competitive edge.

PBS is involved in a wide range of highly demanding programmes and is increasingly becoming part of prestigious international projects and supply chains of leading global manufacturers. Among the most prominent examples is its role in the supply chain for the F-35 fighter jet, where it works with Lockheed Martin on the development and qualification of specialised components. At the same time, PBS is expanding its collaboration with Pratt & Whitney on a new generation of auxiliary power units, designed to be smaller, lighter and more powerful, with applications across a wide range of aerospace platforms.

Development is carried out in parallel in the Czech Republic and the United States, enabling efficient knowledge sharing and faster innovation cycles. *"This can involve improvements in flight envelope performance, engine reliability and other key parameters,"* says Milan Macholan, CEO of PBS Velká Bítěš.

The growing volume of orders is matched by significant investment in manufacturing capacity. In Velká Bítěš, new infrastructure is being built, including production facilities and R&D support, to secure further growth and long-term competitiveness. These investments, amounting to billions of Czech crowns, are complemented by expanding international operations, particularly in the United States, where PBS is building its own manufacturing and development base.

The company's expansion is also reflected in employment. PBS GROUP is currently hiring hundreds of new employees in the Czech Republic, primarily in technical roles. In Velká Bítěš alone, up to 300 positions are being filled for development engineers, designers, technologists and other specialists, with the total headcount at the site expected to reach around 1,060 by the end of the year. This offers not only stable employment but also the opportunity to work on projects with global technological impact, shaping the future of aerospace and defense.

PBS GROUP thus demonstrates that a combination of industrial heritage, in-house development and sustained investment in innovation can drive strong growth even in a highly competitive global environment. At the same time, it highlights the potential of Czech industry to become an integral part of today's most advanced technological projects.

”European defence self-sufficiency is a major technological challenge that we are helping to address,“ says Tomáš Szaszi of Honeywell Aerospace

Defence technologies are evolving rapidly, and the importance of self-sufficient European systems is growing. Honeywell is building local solutions in the Czech Republic, with Brno as the key hub. The company’s largest research and development center in Europe is located there, employing a thousand engineers and scientists who work on technologies for aviation, space and defense, as well as their application. *”We support the technological self-sufficiency of the Czech Republic and Europe. We develop technologies and grow the capabilities of European experts so they can meet the region’s defence needs,“* says Tomáš Szaszi, Director of Technology and Strategy for Honeywell Aerospace’s European Research and Development.

He goes on to explain what is essential for building European solutions. Everything used during development and production must be European and protected by both digital and physical firewalls. Research and development

rely exclusively on European talent – EU passport holders – and extends all the way down to details like storing data in cloud environments that do not have data centers outside the EU. *”We ensure the highest level of security. Thanks to our own infrastructure, we create robust local scientific intellectual property and build a self-sufficient European ecosystem,“* Szaszi explains.

Honeywell in the Czech Republic is a key player in a number of European defence projects. Among the main solutions it develops are technologies for aviation autonomy and control. These include work on Collaborative Combat Aircraft projects for autonomous drones accompanying sixth-generation fighter jets and compact fly-by-wire control systems that enable vertical take-off and landing. The company is also developing smart munition systems, ranging from alternative navigation independent from GNSS/GPS signals to position sensors and actuators. Other areas include anti-jamming and anti-spoofing systems, drone control, and secure quantum communications.

According to Szaszi, the European defence industry is facing a comprehensive transformation. The shift from production under foreign licenses to proprietary research, development and manufacturing represents a fundamental change in requirements. If successful, however, Europe will create an ecosystem that can be built upon by a wide range of players – from start-ups and universities to other manufacturers.

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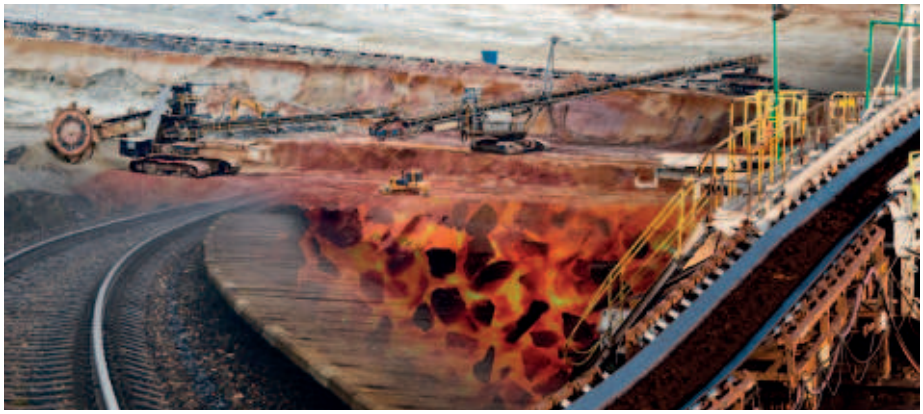

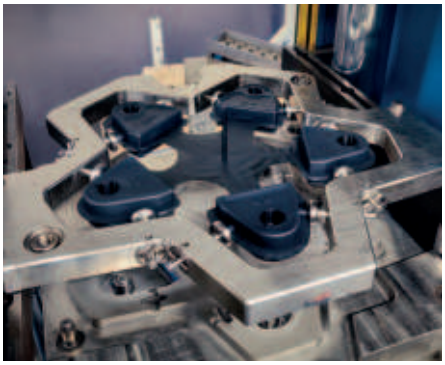

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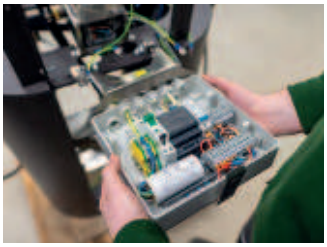

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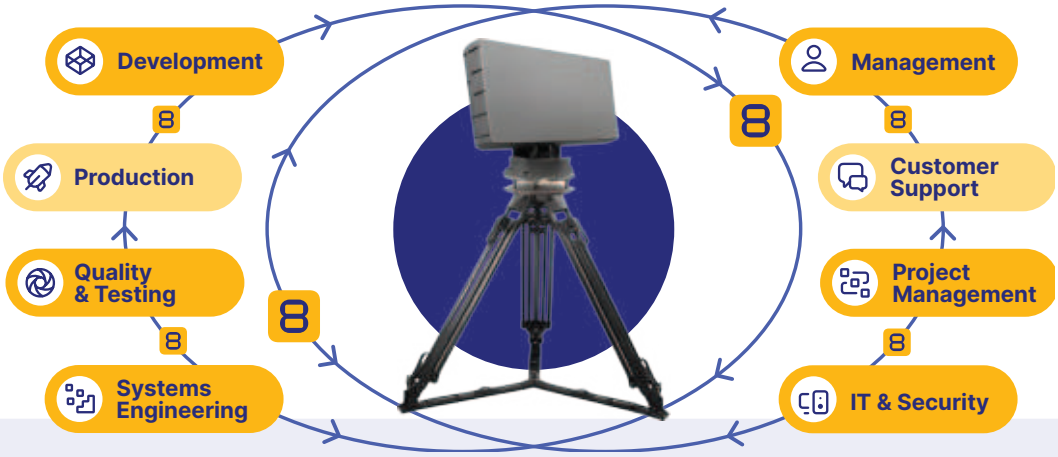

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