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EU & NATO



GlobalEye
A strategic national asset

The Economics of Drone Warfare
Winning the cost-per-kill battle

Deployable Healthcare
Integrated, mission-ready medical support

Content

Multi-Domain Operations **4**
GlobalEye **8**
Underwater Battlespace **10**
Deployable Maintenance Facility **12**
SKELDAR V-200 **14**
Ground-Launched Small Diameter Bomb **16**
Ground Combat **19**
Combat Training Centres **24**
Advanced Camouflage Systems **28**
Counter-Unmanned Aerial Systems **30**
Sirius Compact **36**
TactiGuard XD **40**
CBRN **42**
Deployable Healthcare **44**
Maritime Live Training **48**
Autonomous Ocean Drone **50**
Autonomous Ocean Core **53**
Electronic Warfare **56**
Seabed Operations **58**
Sea Giraffe AMB D **62**

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Integrated defence for a new security era

NATO's security landscape has fundamentally changed. Europe is facing a persistent, multi-domain challenge. Success in this environment demands more than isolated capabilities in the five operational domains – land, sea, air, cyber and space. It requires an integrated defence architecture where sensors, decision-makers and effectors work as one.

For NATO, this is not only a question of strategy, but of technology partnership. The Alliance needs industry partners that can deliver interoperable, combat-proven solutions across domains and that understand NATO standards, NATO doctrine and NATO's tempo. Saab is embodying this role with perfection: enabling allied nations to counter the drone flood, strengthen ground combat capabilities and achieve multi-domain operations – with platforms such as GlobalEye providing airborne early warning and cross-domain integration at its very core.

The concept of Multi-Domain Operations (MDO) requires activities in one domain to create effects in others: actions in the electromagnetic spectrum enabling ground manoeuvre, maritime surveillance informing air operations, or cyber intelligence shaping space-based ISR tasking. To achieve this, NATO needs platforms that combine data from numerous sources, process it in real time, and distribute an accurate, trusted Common Operating Picture (COP).

Saab's GlobalEye airborne early warning and control solution is designed as precisely such a node. Recent decisions by Sweden and France to procure GlobalEye aircraft underscore how central such capabilities have become to national and allied defence. In littoral, congested environments like the Baltic Sea – where air, naval and ground activities are tightly interwoven and response times are short – GlobalEye acts as the hub that enables coordinated situational awareness: sharing early warning data with air defence units, providing targeting information to surface forces, and cueing other sensors and platforms across the operational area.

Land forces still decide the outcome
Despite the rapid proliferation of drones and long-range fires, ground forces remain decisive. It is soldiers who must ultimately seize, hold and defend territory – from Arctic environments on NATO's northern flank to dense urban terrain along the Alliance's eastern frontier. Here, Saab's ground combat portfolio plays a central role in enabling NATO land forces. Saab's decades of experience in Nordic conditions, combined with recent operational feedback, is fed directly into product development and training concepts. Training and simulation systems complement this hardware.

Countering the drone flood – and the cost curve
Ukraine has demonstrated just how rapidly unmanned systems can become decisive. Commercial quadcopters, loitering munitions and military-grade UAVs now shape the battlefield, from tactically valuable reconnaissance to precision strikes. For NATO, this has turned Counter-Unmanned Aerial Systems (C-UAS) into a strategic priority. Saab addresses this challenge by offering a layered C-UAS approach built around three pillars: advanced sensors, intelligent command and control, and scalable effectors.

Unmanned systems as NATO force multipliers
Unmanned systems will not replace manned platforms, but they will be indispensable force multipliers for NATO. Rotary-wing unmanned aerial systems provide tactical advantages that fixed-wing platforms cannot match: vertical take-off and landing, operation from small decks and austere sites, and the ability to hover over a point of interest. Within this segment, Saab – through its involvement in the UMS Skeldar VTOL system – supports NATO navies and land forces with solutions designed around Alliance interoperability.

Shaping Europe's security together
Yet technology alone is not enough. To "strengthen ties between stakeholders and shape the future of security and defence in Europe", NATO, nations, industry and research communities must work in close partnership – from concept development and experimentation to acquisition, training and lifecycle support. Saab's long-standing cooperation with allied and partner nations, its focus on interoperability and its experience from complex operational environments position the company as a key contributor to that collective effort.

Emerging new technologies **Multi-Domain Operations**

The European security order has changed significantly in recent years, with conflict increasingly taking hybrid forms. Modern "hybrid warfare" combines military force with non-military tools such as cyberattacks, disinformation, economic pressure and covert operations. These activities are often difficult to detect and attribute, yet they can bring about wide-ranging political, economic and social effects in highly interconnected societies.



Rather than relying on open military confrontation, hybrid threats exploit multiple domains at once – including diplomacy, trade, cyberspace and domestic political environments. They may involve border provocations, propaganda campaigns, IT system disruptions, sabotage or limited military interventions. Typically, such activities unfold gradually and in ways that can appear minor in isolation, making them harder to recognise as part of a coordinated strategy. The overall aim is to create uncertainty, weaken trust in institutions, and increase polarization within and between states.

One consequence is that it is difficult to assign blame to a country or a particular organisation for an attack. Hybrid warfare has, of course, always been around to some extent but has increased significantly due to today's more vulnerable, complex and uncertain world, which is more interdependent and interconnected through social media, for example. This implies that attacks on a single node can result in huge cascading effects. Hybrid warfare is of great concern for society as a whole, including the military community. To challenge and resist hybrid warfare, new methods must be developed in parallel with the traditional tools and concepts already in place.

Time as the most critical parameter

Together with hybrid warfare, a new generation of warfighting, such as distributed operations, is emerging to create and sustain a Common Operating Picture (COP) and to manage sophisticated networks. A variety of sensors and effectors distributed on different platforms can track and manage numerous hostile targets simultaneously, such as swarms of unmanned systems in all physical domains (underwater, on the surface and in the air). By extension, this complex environment also includes Information and Cyber Warfare in all of its various forms.

In order to survive, prevail and win in such an environment, rapid adaptation within a highly dynamic environment is necessary, including full control over the electromagnetic spectrum (EM). Because all of our modern sensors, communication systems and effectors are dependent on the EM spectrum, having full control over the electromagnetic spectrum can be regarded as the central tool for warfighting. For the warfighter, it is fundamental to be ahead of an opponent's OODA loop (Observe, Orient, Decide and Act), so that "time" (meaning speed of decision-making and action) becomes the most critical parameter. Even the most perfect decision will result in failure if not made at the right time. We should therefore assume that all domains (including cyber) are contested and that both civilian and military operations will be conducted across a full spectrum of conflicts and domains. New and multiple threats demand new ways of sensing, control, action, and coordination. This implies that resources in all domains must be coordinated in order to work together. A temporary advantage in one domain will enable effects in others.

Multi-Domain Operations are key

Multi-Domain Operations (MDO) are crucial in modern warfare, and require building an adequate and appropriate infrastructure and determining a suitable "modus operandi". For example, we need to leverage networks for distributed sensing and real-time control of weapons. Traditional stove-piped capabilities must now work together, and it is necessary to reduce friction by bringing all these capabilities together. Doctrines must be flexible and adaptable; education and training must be revised and we need to take advantage of emerging new technologies. To merge big data from all current domains together and create something useful, we need a new way of thinking about Command and Control (C2).

The most obvious MDO concern is system integration networks on platforms that previously had no need to exchange multi domain data. Today, all systems, effectors and fire control systems must be integrated on one platform, and that information must be interchangeable with platforms of allies and partners. This is harder than it seems. Not only might hardware be incompatible, but the nomenclatures and formats for the same data may be expressed in very different ways.

Classification boundaries between warfare communities can vary and become a serious obstacle. Likewise, bureaucratic organisations with different command and control structures, decision levels and technical language can be a barrier for efficient MDO. Within recent years, information assurance has risen to become a paramount concern – do we trust the information that emerges from other networks or a different domain? We have two fairly new domains in MDO, space and cyberspace, which will create new possibilities for the warfighter, but also new risks, depending on the situation at hand on the battlefield.

Act across the five operational domains

The core of MDO in the maritime domain is a well-adapted Command-and-Control system together with communications. The major segments of the C2 system include the Combat Management System (CMS), a software-intensive system designed to operate in complex battlefield environments. The CMS manages information received from various subsystems and displays it, and efficiently detects, tracks, assesses and engages threats utilising the available effectors, such as weapons and countermeasures.

Future operating environments will produce high quantities of information that far exceed the ability of current C2 capabilities. Adversaries will strive to deny, obfuscate, imitate, and degrade the information that commanders require to make the right decision at the right time, and seek to prevent those decisions from being carried out. In the past, successful operations were achieved through a single unified command that delegated authority through a hierarchy of subordinates. Traditionally, a hierarchical C2 structure has been regarded as the optimal approach to C2. However, the future operational environment will limit the ability of such systems to achieve the goals for which they were designed. Recent conflicts have increasingly shown that centralised C2 structures are less resilient to attacks. Rapidly responding to changing conditions and the ability to command across the five operational domains in all operating environments and dimensions is imperative. In future scenarios, it will not be feasible to have a constant command oversight. Instead, senior commanders will have to conduct their functions by effectively communicating intent, priorities and restrictions, such that subordinate commanders are trusted to make decisions based on the information available to them.

Secure communications with effective C2 systems

Optimising a C2 system for MDO requires minimising the time for decision-making (the OODA loop). One way of doing this is to look into human factors and investigate how our brains struggle to process information. It is a fact that we see the world in 3D and we process information most effectively in three dimensions. However, most information relevant to command and control is delivered as 2D, via graphs, charts and other data delivery formats. We cannot alter the way our brains work, but we can change the way information is delivered to us. Dramatic advances in data visualisation – such as virtual reality – gives us the power to present information three-dimensionally. New advanced data analytics and autonomous capabilities, aided by Artificial Intelligence (AI), can also be effectively integrated into command networks. However, this is a dual edged sword. All new technological capabilities will impose both new opportunities as well as challenges.

For example, AI can process huge amounts of data and make predictions based on patterns in that data. This enables better and faster decision-making, reduces uncertainties, and can reveal an opponent's intentions and capabilities. Machine Learning (ML) is a subset in artificial intelligence concerned with the development and study of statistical algorithms that can learn from data and generalise unseen data and thus perform tasks without explicit instructions. ML will increasingly influence how political and military leaders perceive the strategic environment, weigh risks and options and judge their adversaries. However, relying on AI, decision-makers will also introduce a new source of uncertainties. If the AI systems are insecure, inadequately trained or applied to the wrong types of problem, they could inject bad information into the decision-making processes and lead to an inadvertent escalation with perhaps catastrophic consequences.



GlobalEye has a mix of modern active and passive sensors, providing long-range detection of objects in the air, at sea and over land.

C2 system effectiveness is based on safe and reliable communications. We can assume that all communications will be contested in future conflicts, presenting complex challenges for the whole communication architecture. Remote sensing, monitoring, quantum encryption and diagnostic technologies, plus the advent of new communication channels, like social media have given us new tools to disseminate information. Advances in high-bandwidth, low-latency data transmission (5G and soon 6G) mean that the information flood gates are about to open. Mobile ad-hoc networks can be rapidly implemented to provide secure communication when normal communication networks are compromised or there is a lack of communication infrastructure.

Holistic platforms for multi-domain operations

As mentioned earlier, AI is fundamental in protecting the integrity of the data, and in protecting and defending information and information systems by ensuring their availability, authentication and confidentiality. Likewise, cybersecurity must be practised to protect systems, networks and programs from digital attacks aimed at accessing, corrupting or destroying sensitive information. Implementing effective cybersecurity measures is particularly challenging today because the number of devices has exploded and attackers are becoming more innovative.

The key to staying ahead of the threat is to innovate, but both armed forces and industry are hampered in their ability to innovate quickly enough to stay ahead of an opponent's operational concepts and technological developments. Interconnectedness of commercial and military technologies must be utilised in a better way, and we need to embrace new technologies and use them where it suits us best.

> **It is fundamental to work together between industry, defence forces, acquisition agencies and research communities.**

With many years of experience in developing cutting-edge and battle-tested C2 systems for all relevant domains, Saab has consistently emphasised human factors and the fusion of sensor data to present an unambiguous COP for the warfighter. This enables accurate targeting for weapons when required, even in highly complex and hostile environments. Saab has embraced all the new trends. Requirements and technologies for future C2 systems will gradually be able to offer our warfighters the necessary C2 tools to conduct effective multi-domain operations.

The complex environment in the Baltic Sea

Saab has developed larger holistic platforms where sensors, communication and Command and Control are fully integrated and can act as a node for MDO. A good example is the GlobalEye, an airborne platform which supports cross-domain exchange of information to both civilian and military authorities (coast guard, police, customs, joint military headquarters etc.) by using, for example a national security cloud computing service.



The 9LV Combat System delivers a comprehensive C4I solution for naval forces, supporting all types of mission.

The same situation can be described with the Visby corvette system operating on the surface and the new A26 submarine under the surface. Acting together, these three platforms in their different domains can improve overall situational awareness in a hostile and complex environment, but also create a temporary advantage in one domain to enable effects in others.

The Baltic Sea is a good example of where MDO will be of utmost importance in the years to come. The Baltic Sea is a cul-de-sac and a littoral sea. This implies that it is a very complex environment where it is easy to hide but also difficult to detect an adversary. The space to manoeuvre and act is limited, which means very short reaction times.

Finally, MDO will have to adapt and develop in order to cope with military tasks of the future and to survive. To succeed, both governments and industry must work together, and commercial and military technologies have to be interconnected. This will enable our warfighters to prevail and survive in an increasingly sophisticated combat situation.



GlobalEye – eyes in the sky for the army

As the current AWACS fleet reaches the end of its service life, NATO is facing a crucial modernization phase. Therefore, Secretary General Mark Rutte announced during the NATO summit in Turkey that negotiations are being initiated with Saab regarding the procurement of up to ten GlobalEye systems.

For the army, GlobalEye is an indispensable capability: a force multiplier that provides early detection, superior situational awareness, and a decisive information advantage on the modern battlefield.

GlobalEye is a true "joint solution" because it is not only focused on the air domain, but by using highly modern sensor and AI techniques, it can also provide essential information for land and sea operations. Hostile activities in these domains can namely be rapidly detected, analysed, and passed on to, for example, the operational commanders of land units. This significantly improves the quality and speed of their decision-making processes, which is essential for the successful execution of military missions.

Today's threat also demands a true multi-domain approach, requiring good collaboration between different branches of the armed forces, nations, and often between civil and military organisations. In critical circumstances, effective decision-making requires the best possible 'situational awareness'. To this end, real-time information must be shared rapidly between all involved forces and other organisations. Recognizing this need, Saab developed GlobalEye a solution designed to significantly enhance the speed and quality of military decision-making process.

A decisive role in mission success

In an armed conflict, the deployment of Saab's Airborne Early Warning & Control (AEW&C) solution GlobalEye can be decisive for success on the battlefield. The system can operate standalone in this regard or can be seamlessly integrated into existing Command & Control systems.

The core of GlobalEye is based on two key capabilities:

- Sensors: The AEW&C solution features a suite of active and passive sensors that can detect threats in every domain, from electronic warfare to hypersonic missiles, stealth fighters, and small, slow, and low-flying objects, as well as targets on land and water.
- Command & Control: GlobalEye features a powerful mission management system that enables multi-domain surveillance and the real-time sharing of information for rapid decision-making processes.

Made for complex environments

From altitudes above 35,000 feet, GlobalEye can detect, identify, and track various objects and signals up to distances of 650 km. It is currently the only AEW&C solution that can provide long-range air, sea, and land surveillance from a single platform. The system can cue and command other sensors in the network, significantly reducing the time for planning and executing countermeasures. This enhanced responsiveness is particularly crucial in land operations within a rapidly changing operational environment. By gaining insight into the depth of the battlefield, hostile centres of gravity are recognized earlier, and preparations can be disrupted. The system can therefore be complementary to the deployment of reconnaissance units in the depth of the battlefield. The locations of enemy artillery, command posts, and logistical installations can also, after detection, be effectively engaged with our long-range artillery such as the Pulse, but also by the modern "land attack" assets of our navy.

Software-defined capabilities also ensure continuous modernization as technology advances. GlobalEye creates, maintains, and updates common operating pictures shared with friendly forces, enabling sensors and effectors across the network to act on each other's information and intelligence in real time.

With the capability to operate from airfields with relatively short take-off and landing runways, GlobalEye offers NATO nations a solution to reduce vulnerability. GlobalEye is namely a so-called "High Value Target", making the likelihood of enemy missile and drone attacks in the depth, as well as actions by "special forces" against it, high. Dispersal of these systems is therefore of great importance. Centralisation of these kinds of major and essential assets must be prevented as much as possible.

Powerful Command & Control system

In joint operations diverse systems, including communications, sensors, weapons and Command & Control systems must work seamlessly together. Sharing sensor data across a common network is essential to creating a "Common Operational Picture".

As an airborne command centre, the true power of GlobalEye emerges when all data from space and land, air and/or naval forces can be uploaded, analysed, fused, and distributed. The enormous amount of data that can be managed with GlobalEye must be processed quickly and efficiently to, among other things, immediately recognise patterns and deviations that could impact success during a conflict. AI functionality and machine learning improve real-time data analysis and form a powerful addition to the intelligence built into the Command & Control system.

Saab's AEW&C solution continuously generates, maintains, and updates situational awareness pictures from space, in the air, at sea, and on the ground, sharing these with friendly units. This ensures, among other things, that accurate targeting data is delivered quickly and reliably.

The connectivity across all domains offers unique tactical and operational advantages, providing commanders with reliable, consistent, and real-time decision support via the aforementioned Common Operational Picture.

Software-based solution

With increasingly rapid and advanced technological developments and a mission environment that is becoming ever more complex , it can be a significant challenge to keep a modern AEW&C solution up to date. GlobalEye is designed as a fully software-defined solution, allowing new functionalities and capabilities to be easily added throughout the entire life cycle, ensuring long-term relevance and adaptability.

Keeping people and society safe

GlobalEye is designed to support both civilian and military tasks. Integrating this into a single solution is highly effective when addressing modern security challenges. Especially in a world where threat scenarios are constantly changing and the dividing line between military and civil challenges and threats is no longer so clear.

In an unpredictable world where the nature and scale of conflicts and security challenges are difficult to foresee, protecting people and nations requires continuous and complete 'Situational Awareness' and 'Situational Understanding' across all domains, resulting in early warnings. GlobalEye delivers precisely that capability.

The mission network will facilitate rapid and secure information exchange, and integration across domains, supporting combined operations between all branches of the military.

Saab to lead NATO's new underwater battlespace project

The Saab-led MANGROVE consortium has been selected by NATO to lead the Allied Underwater Battlespace Mission Network project (AUWB-MN). The project formally commenced on 1 September 2025 and will deliver interoperability for Maritime Uncrewed Systems and conventional platforms across allied nations.

The project is designing a Reference Architecture and a Test and Reference Environment for a mission network that leverages both crewed and uncrewed systems, above, on and below the water.

The mission network will facilitate rapid and secure information exchange, and integration across domains, supporting combined operations between all branches of the military. The outcome is expected to become a new standard for NATO.

The AUWB-MN project is a significant step forward in the modernisation of our warfighting capabilities and the ability for NATO allies to operate effectively together in the underwater domain of the future. Saab and the MANGROVE consortium are expected to deliver a robust and effective mission network that will strengthen NATO's maritime defence.

The consortium was selected on 16 July, 2025 and the project is part of NATO's Digital Ocean and Antisubmarine Warfare Barrier Smart Defence Initiative. It is sponsored by twelve different nations led by the UK, together with Sweden, the US, Australia, Spain, Germany, Italy, Portugal, Canada, the Netherlands, Denmark and Norway. Together they have committed to adopt the standard developed through this project.

Saab's business area Naval is leading the multinational consortium, MANGROVE, comprising CETENA and IDS part of Fincantieri Group, FlySight, GraalTech, Miraya, Saab UK and BlueBear, S2IX and the University of Plymouth.

Deployable Maintenance Facility anytime and anywhere

Being deployed often means operating under rather primitive conditions, especially in the early stages of a mission. However, this need not be the case. The mobile support solution DAM Deployable Maintenance Facility can largely mitigate these conditions.

DAM can be rapidly deployed without the need for construction machinery or cranes. However, its applications go far beyond that. Thanks to its modularity, robustness and integrated protection, DAM is a versatile solution also suitable for land operations. Examples include its use for the storage and maintenance of vehicles, helicopters and larger drones, as a command post, in disaster relief operations, for personnel accommodation, as a field hospital or for NBC (Nuclear, Biological, and Chemical) decontamination. DAM seamlessly integrates into the modern compound environment.

Within DAM, Saab has incorporated the requirements and experiences of international armed forces. It also includes stealth capabilities through Saab Barracuda's integrated multispectral camouflage. This camouflage provides effective protection against modern reconnaissance and combat sensors, thereby reducing the risk of detection. In addition, Barracuda offers protection against solar radiation, achieving a temperature reduction of up to 10 degrees, which results in cost savings and a more comfortable working environment.



TRACKFIRE RWS

Remote Weapon Station for the Swedish Army

In January 2026, the Swedish Army selected Saab to deliver the Trackfire Remote Weapon Station (RWS). The system will be used by the Swedish Army and specifically the Amphibious Battalion 2030, an ongoing defence project aimed at developing the future amphibious capabilities of the Swedish Armed Forces.

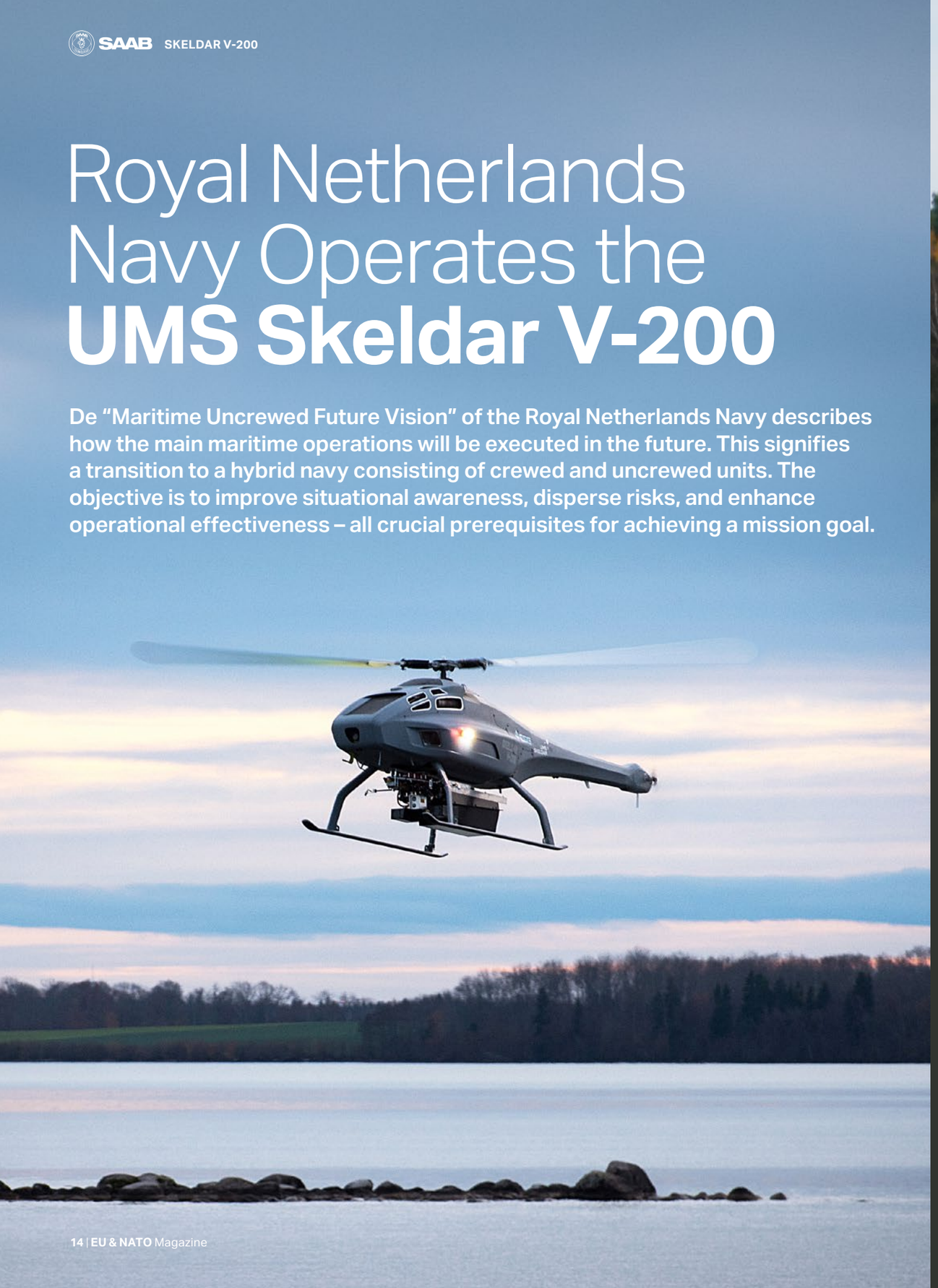
The Trackfire RWS is a fully stabilized, remotely operated dual weapon station that offers pinpoint accuracy while on the move and can be mounted on naval vessels, land vehicles, or deployed in stationary defence positions. Delivered to Finland, Sweden and other nations, it can fire on the move and provide aerial cover from both naval ships and land vehicles and has been integrated on platforms ranging from combat boats to missile boats.

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Royal Netherlands Navy Operates the **UMS Skeldar V-200**

De “Maritime Uncrewed Future Vision” of the Royal Netherlands Navy describes how the main maritime operations will be executed in the future. This signifies a transition to a hybrid navy consisting of crewed and uncrewed units. The objective is to improve situational awareness, disperse risks, and enhance operational effectiveness – all crucial prerequisites for achieving a mission goal.





An important consideration is to identify solutions that require as little personnel as possible. Under the name UMS Skeldar, Saab develops unique solutions for maritime and other defence applications, security and civil protection. The Skeldar V-200 is an uncrewed helicopter with a Maximum Take Off Weight (MTOW) of 250 kg that can play a key role in future maritime operations. The system was acquired in 2020 by Belgian and Netherlands Navy and is currently being delivered and used within the combined Naval Mine Warfare collaboration with Belgium, enabling mine countermeasure vessels to remain at a safe distance from hazardous minefields.

The helicopter drone’s key characteristics include its long endurance of up to six hours, payload capacity of up to 40 kg, and modularity, allowing it to carry a wide range of sensors and communications equipment.

The helicopter drone can carry a “toolbox” of capabilities including radar, Automatic Identification System (AIS), Electronic Support Measures (ESM), Communications Intelligence (COMINT), electro-optical (EO) and infrared (IR) sensors, and a laser range finder. It can also serve as a communications hub for over-the-horizon missions (OTH). The Skeldar V-200 is capable of acting as a versatile platform that can be specifically tailored to the mission. With these sensors, the helicopter drone can contribute to Surface Picture Compilation and Anti-Surface Warfare.

The Skeldar V-200 could be equipped with a Magnetic Anomaly Detector (MAD) or sonobuoys for Anti-Submarine Warfare (ASW). With its relatively long endurance and payload capacity, the Skeldar V-200 can cover large areas and detect threats in real time. And the integration of UMag Solutions’ advanced FastMAG high-speed magnetic MAD sensor provides the Skeldar V-200 with a unique capability for detecting submarines and sea mines.

In addition to maritime operations, Skeldar V-200 can directly support amphibious operations. Equipped with EO, IR and Light Detection and Ranging (LIDAR) sensors, it can conduct beach and coastal reconnaissance to identify obstacles and suitable landing zones for landing craft. Skeldar V-200 surveillance can also identify threats to the landing force. A Skeldar V-200 equipped with a laser designator can designate targets in support of fire support missions or Naval Gunfire Support.

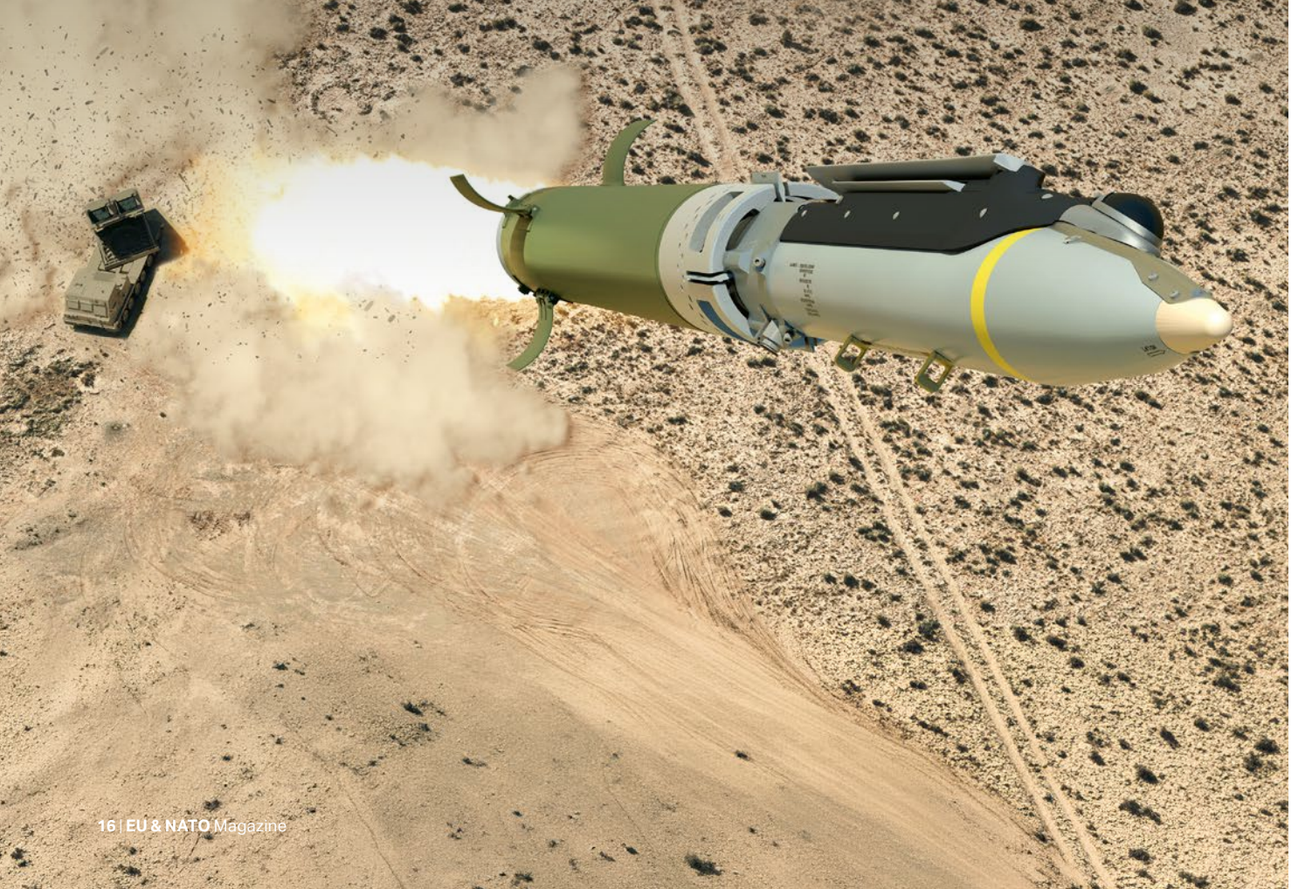
The Skeldar V-200 system essentially consists of two helicopters, each remotely controlled by a pilot and a sensor operator. The pilot determines routes, monitors the system and navigates the helicopter drone, while the sensor operator operates its sensors. Even in severe weather conditions, the system can perform autonomous precision landings. Despite these capabilities, the Skeldar V-200 is economical to operate. Individual adaptations to specific requirements or operating environments are also possible.

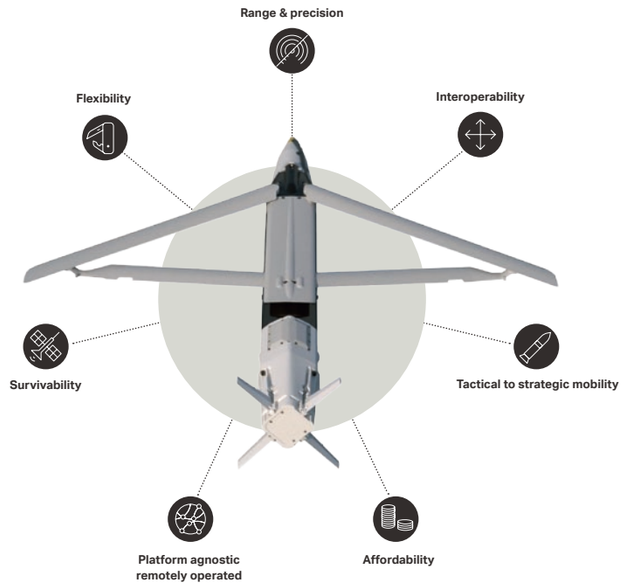
Skeldar V-200 can also be deployed to identify weapons smuggling, illegal migration, sabotage and threats to critical infrastructure. Such missions require the ability to monitor complex environments and respond in real time, often at very short notice. With a start-up time of less than 15 minutes, the system can be rapidly made ready for operations. Its vertical take-off and landing capability (VTOL) also enables it to operate from ships, mobile platforms or shore-based facilities.

Skeldar V-200 can therefore support a broad range of missions, including Intelligence, Surveillance, and Reconnaissance, Naval Mine Warfare, Anti-Submarine Warfare, amphibious operations, special operations, maritime strike, and the protection of the North Sea and the Caribbean region. The system therefore fits seamlessly into the requirements outlined in the Royal Netherlands Navy’s “Maritime Uncrewed Future Vision”.

Long-Range Missiles for the Artillery

The Ground-Launched Small Diameter Bomb (GLSDB), a new artillery weapon, is a long-range system that significantly increases the striking power of land forces. With an impressive range of 150 km, it engages targets with very high precision.





Boeing and Saab have partnered to enable the launch of the Small Diameter Bomb (SDB I) – an air-delivered, precision-guided munition – from the ground. The SDB I, also designated GBU-39/B, entered service with the US Air Force in 2006 and has proven its effectiveness in conflicts such as those in Iraq and Afghanistan. The Netherlands Air Force also operates the SDB I.

Saab and Boeing have now fitted this glide bomb with a rocket motor and integrated it into a mission-planning system, enabling ground launch. Development has continued since its introduction in 2023, producing a rocket with outstanding accuracy and a long range. This gives commanders an effective means to neutralise all types of enemy units deep within their area of responsibility – a capability essential for mission success.

The warhead of the GBU-39/B is roughly 1.5 times the size of a 155 mm artillery shell. The weapon features standard fuze options, including impact detonation, airburst (HOB) and delayed detonation. Its penetration capability is also noteworthy, leaving targets vulnerable even under steel-reinforced concrete.

360° target engagement

After launch, the GLSDB climbs to altitudes of up to 15,000 metres. At apogee the GBU-39/B separates from the rocket motor. Wings and control surfaces then deploy and the GBU-39/B glides towards its target using GPS navigation and an inertial navigation system (INS). Each GLSDB is programmed individually and can attack its target from any angle along varied approach paths – for example, from the rear or almost vertically from above. This represents a critical difference from conventional rocket artillery, which follows a ballistic trajectory. With the GLSDB, targets can no longer hide behind steep terrain features – the lee of a hill, or the shadows cast by large buildings.

Another capability is that an operator can program multiple rockets simultaneously to strike a single target or several targets at once from multiple directions, making defensive countermeasures extremely difficult. The GLSDB gives operational commanders a weapon with a cost-to-range ratio unmatched by any other system on the market and with uniquely powerful performance.

Blend into the environment

Long-range precision munitions like the GLSDB allow strikes up to 150 km away with high accuracy, keeping troops out of harm's way. However, the rise of drones has made launcher survivability critical, as launch positions can be detected and targeted within minutes.

The GLSDB is launcher-agnostic: it can be integrated with and launched from a wide range of existing launch systems. Saab's solution is a low-signature launcher hidden in a standard 20' ISO shipping container. Internally, it houses two launch pods with up to 12 missiles, capable of 360° engagement. The system can "shoot and scoot" within minutes, then revert to a normal container and relocate. Its inconspicuous design also enables scalable decoys, further enhancing survivability.

The launcher is fully remotely operated, allowing prepositioned, concealed strike capability without personnel on site – reducing risk and manpower requirements while increasing operational endurance. Cost-effective and highly mobile, the system integrates easily with existing transport infrastructure, offering a flexible, survivable and affordable alternative to traditional launch platforms.

PROTECTION ON THE MOVE

Netherlands signs long-term agreement

Saab has signed a long-term agreement with the Netherlands Ministry of Defence that enables the latter to place orders and equip vehicles with the Barracuda Mobile Camouflage System. An initial order has already been placed for the Royal Netherlands Army's existing Fennek and Panzerhaubitz vehicles, with deliveries scheduled over the coming years. The agreement also includes options to equip additional vehicle types in the future.

Featuring woodland, urban or arctic camouflage patterns, the Barracuda Mobile Camouflage System is tailor-made for a perfect fit for any vehicle and can be deployed in any environment.

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SAAB TECHNOLOGIES SAAB

Ground Combat Systems

Decisive firepower for dismounted forces

Ground combat remains decisive in modern conflict. Well-equipped infantry with versatile weapon systems determine outcomes when operations extend beyond initial phases, particularly in urban environments and complex terrain where technological advantages diminish. NATO forces require man-portable systems combining firepower, flexibility and operational simplicity.

Our world is becoming increasingly complex and technologically advanced. While growing connectivity and digitalisation bring many advantages, they also introduce risks in the form of new threats. At the same time, they make the world more unpredictable. To safeguard our future security, we must push both technological and intellectual boundaries. That is why Saab continually analyses historical and modern military conflicts and links these insights to emerging trends – enabling our customers to succeed on the battlefield.

With versatile weapons systems such as Carl-Gustaf®, NLAW and the AT4 family, we give soldiers the tools they need to carry out their missions successfully.

An unpredictable conflict landscape

The nature of conflict is becoming ever more unpredictable. Current operational concepts may already be obsolete tomorrow. In addition, geopolitical developments – such as the ongoing war in Ukraine – are causing major shifts on every level: political, social and economic, making future projections increasingly uncertain. Military forces, together with their partners, must be able to provide the right solutions flexibly and rapidly – which is no easy task.

What can ground forces achieve?

Many lessons will be drawn from the war in Ukraine – but the first trends with implications for weapon systems are already emerging. The conflict once again confirms the importance of Combat Support and Combat Service Support units; cyber capabilities in particular play a crucial role.

New technologies will largely shape how infantry conducts combat operations by 2040: in addition to threats on land, at sea and in the air, there will be growing dangers from cyberspace and outer space. This so-called multi-domain battlefield presents armed forces with major challenges in protecting their troops, populations and national security. Training and equipment must be improved in light of the opportunities offered by artificial intelligence, robotics and network-centric systems.

On one point, experts agree: the classic role of combat units – the "boots on the ground" – remains a decisive factor in warfare. "Ground warfare will therefore continue to exist. Even though precision long-range operations are becoming increasingly important, soldiers will always be needed to seize and/or defend territory," says Anders Wahlström, infantry expert at Saab. "With versatile weapons systems such as Carl-Gustaf®, NLAW (Next Generation Light Anti-Tank Weapon) and the AT4 family, we give soldiers the tools they need to carry out their missions successfully. Because Saab designs these systems modularly, modern technologies can be integrated directly. As a result, these products will remain effective and reliable through 2040 and beyond."







NLAW

The anti-tank weapon NLAW defeats modern tanks. It is a true "tank killer" for short-range engagements and the best weapon in its class for operations across varied terrain, including built-up areas. The NLAW has a selectable Overfly Top Attack (OTA) mode for tanks and a Direct Attack (DA) mode for more lightly armoured targets. The system is effective from as little as 20 metres and, because it can be fired from an enclosed space, is ideal for fighting in, for example, urban terrain – even when a tank is behind cover. The NLAW is very user-friendly for a single operator and weighs 12.5 kilograms.

In June 2026, Saab signed a contract with the French General Directorate of Armaments (DGA) for the supply of NLAW systems, including indoor and outdoor trainers, with deliveries scheduled between 2026 and 2030.

Carl-Gustaf®

The latest Carl-Gustaf® M4 is a multifunctional weapon for short-range use, offering tactical flexibility and effectiveness against a wide range of targets. The M4 weighs only about 7 kilograms.

New HEAT 758 ammunition further enhances the Carl-Gustaf® system's anti-tank capabilities. Equipped with an advanced pre-charge designed to neutralise any generation of Explosive Reactive Armour (ERA) and a powerful main charge capable of penetrating up to 700 mm of armour, the ammunition delivers exceptional effectiveness against modern armoured threats. The HEAT 758 provides operators with increased lethality, greater battlefield flexibility and a significantly strengthened anti-tank capabilities.

AT4

The AT4 is one of Saab's most successful weapons against armoured targets. The AT4 series comprises a selection of easily manoeuvrable, lightweight and disposable weapons designed for straightforward operation by a single soldier. Capable of countering tanks, heavy combat vehicles, and threats within structures and fortifications, the AT4 also serves to safeguard fixed installations, supply points and other critical assets.

Urban warfare – The city as a battlefield

Recent conflicts show that cities are more often the theatre of combat than in the past. Many of the capabilities of the NLAW, Carl-Gustaf® and AT4 are therefore geared towards fighting across diverse environments, including urban areas. Development has taken into account very short engagement distances, complex terrain and the need to fire from within buildings, as well as to engage targets inside structures. At the same time, existing features have been modernised and improved. Greater precision, high hit probability, increased effectiveness, improved user-friendliness combined with low weight, and flexibility in the types of ammunition that can be used are all important aspects.

Full autonomy still unrealistic?

Robotics and AI offer promising ways to support infantry. They can help provide better situational awareness and observe the enemy to strike at their weakest point. They can perform rapid analyses to adapt tactical action. And through automation they can pass new information to weapon systems within seconds, gaining a decisive time advantage. "As a company that develops and manufactures missiles, Saab has acquired years of experience with systems that operate without human intervention," Wahlström explains. "That does not, however, mean these weapons act fully autonomously. For now their role is in mission preparation. Truly autonomous weapon employment raises ethical questions." He does not expect new rules or regulations in the near future, pointing to the prolonged approval processes seen in other domains, such as self-driving cars.



Studies also confirm that, for the time being, employing weapons without the human factor tends to be less effective. Machines decide faster than humans, need no breaks and can endure more. But they are not (yet) intelligent enough to replace people. Robots are not more effective than soldiers (only more efficient at killing) and would not act in accordance with international humanitarian law, not least because programmed pattern recognition cannot reliably distinguish civilians from combatants.

Think one step ahead

The capabilities of soldiers and their weapons will remain decisive in the future. The more complex the threats, the more important training and education become. While live training with outdoor simulators and live firing will remain central components of military training, virtual training also brings many new opportunities. On the one hand, for basic training – where virtual exercises will partly replace live firing for reasons of environment, cost and time. On the other hand, at the tactical level, for realistic virtual indoor training. "We anticipate a growing need for realistic simulations of a wide variety of weapons that replicate true ballistic behaviour and handling", Anders Wahlström explains.

Saab also invests heavily in usability aspects of its weapons. The company collaborates with leading universities and research institutes, and the exchange with customers and experts from many disciplines is an important factor in its success.

Anders Wahlström: "Looking ahead is enormously important, especially for us as a supplier. We must always think one step ahead to give our customers the decisive edge on the battlefield. Forecasts are never better than the assumptions on which they are based. That is why we devote a great deal of time to analysing current events so we can respond quickly and act with flexibility."

Exactly what the year 2040 will look like nobody can say with certainty. What Saab's experts do agree on is that there will be no decoupling of the battlefield from the soldier. Infantry will therefore remain central in the future.

SAAB TECHNOLOGIES SAAB

Saab expands its engagement in the **Space Domain**

Saab intends to take a broader role in the space domain as a system integrator, leveraging its expertise in sensors, communications and system integration to strengthen sovereign Swedish and Nordic capability across the space value chain. As a step in that direction, Saab has signed MoUs with SSC Space, OHB Sweden and Ericsson.

The aim of the three Memorandums of Understanding (MoUs) is to explore cooperation in key areas for future multi-domain and space-enabled capabilities. Space is becoming increasingly important as a strategic, operational, and tactical domain within defence and security. Military capabilities are also becoming ever more reliant on space-based solutions within areas including communications, navigation, surveillance and early warning.

While a number of actors in Sweden have strong capabilities in many parts of the space value chain, Saab sees opportunities to connect these strengths more closely and combine technologies and capabilities into operational systems through partnerships.

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Excellence begins with training – why practice makes the difference between victory and defeat

Nowadays, an effective army needs more than high-performance equipment and a strategy – it must be able to use its resources effectively, be prepared for a variety of scenarios and remain capable of acting under the most extreme conditions. Combat Training Centres (CTCs) and state-of-the-art training concepts provide a wealth of data that are already able to provide answers to tomorrow's questions.



Learning means adapting to a new environment. This requires addressing psychomotor skills in order to handle the appropriate equipment correctly, socio-effective skills to perfect teamwork, and cognitive skills, which are necessary to process information and ultimately make decisions on the basis thereof. About 20 years ago, most nations began investing in modern Combat Training Centres (CTCs) to test the effectiveness of their capabilities under realistic conditions and to prepare their own troops for deployment in the best possible way. After all, there is no substitute for experience. Increasingly sophisticated equipment and complex tasks require repeated training. Only those who have understood their objectives and tasks and practised techniques and tactics have the ability to recall them at any time under time pressure and extreme conditions. Confronting numerous situations during joint training strengthens troop cohesion and makes it possible to deal with an opponent in the first place.

But CTCs can do so much more. They play a central role in the development of new tactics and doctrines, says Hans Lindgren, Head of Business Development for Combat Training Centres at Saab: "In modern CTCs, troops not only train for their next mission. They also test new methods and strategies in simulations and various scenarios to build the skills needed for future conflicts." A quality that is becoming a necessity not least because of the geopolitical situation. Hybrid conflicts such as that in Ukraine require new approaches, and these must also be tested. "More and more armed forces are recognising this opportunity and taking advantage of it. They train more frequently, collect data all the time and everywhere – even during operations – and thus gain an enormous wealth of data," says Lindgren.

Changing locations = increased training effect

The objectives of a training session can be diverse. While individual soldiers can use the immediate feedback mechanisms to practise combat in a realistic way, the training data also provides key insights into whether the methods used and the available technologies are sufficient to achieve the desired results. In this context, mistakes made during training are often more valuable than success, because CTCs provide the space to learn from them, draw conclusions and rethink one's own tactics without endangering a single human life. Along with the sensors and communications software that collect the data, the Exercise Control (EXCON) software is at the heart of a Combat Training Centre. It is responsible for planning, executing and evaluating military exercises. The more regularly training is carried out – ideally at different locations – the better the troops' skills become and the higher the data quality because different factors can be taken into account.

"More and more customers are deciding in favour of a mobile Combat Training Centre. On the one hand for reasons of space, and on the other because they have recognised that training on different terrain offers numerous advantages," explains Lindgren. Studies and reports show that training in different environments – in terms of climate, terrain or enemy threat, for example – leads to increased adaptability and generally improves soldiers' decision-making skills. Mental resilience also increases because different environments simulate the challenges of real operational scenarios. Furthermore, it is possible to train in terrain that may not be available in one's own country. A mobile CTC can do all of this because all of the equipment needed for a training exercise can be quickly and easily transported to different locations in containers.

Joining forces and resources

Training centres can provide various levels of training – from individual training to collective training, to combined training of different units, and even multinational training. Even if the requirements or needs of individual armed forces are very different, the equipment of a combat training centre should ideally not be, for precisely this reason. This is because using the same system makes combined training easy. More than 35 nations worldwide, with focus in Europe and North America, including numerous NATO member states, are already using Saab's GAMER live training system. This system is interoperable and uses a combination of laser and geometric coupling technologies to effectively support various types of operation. The GAMER system has thus become the de facto standard for military training. In the context of NATO countries in particular, which now also includes Sweden, this market penetration offers enormous advantages. With GAMER, CTCs from different nations can be connected to each other 'plug-and-play' and the practising nations have complete interoperability. The system was used, for example, in the recent 'Nordic Response' exercise. Nordic Response is part of the NATO exercise Steadfast Defender 2024, in which more than 20,000 participants are taking part. By using a system that has been tried and tested in international operations, global defence cooperation can be effectively strengthened.

A dedicated community of GAMER nations – the 'Interoperability User Community' (IUC) – with its current 16 actively participating nations is also working on common requirements and standards that are also incorporated into the development of new technologies in order to continuously develop cooperation within the alliance.



A new level of realism

While many live training systems in CTCs use a single-path laser to simulate the firing of ammunition, Saab relies on the BT46 two-track laser technology for GAMER, which accurately models the speed, flight time and flight path of the ammunition. This system is currently the most precise and realistic laser-based simulator system in the world. For example, when a vehicle is hiding behind a building, only the real-time trajectory provided by a 2-way laser can determine whether the vehicle or the building has been hit. This factor is extremely important for effective training, especially for longer-range weapons, which are increasingly being used. Among many other features, BT46 offers high accuracy, wireless technology and augmented reality in sights. The setup and control functions are carried out compactly via smartphones and tablets. A scaled-down version of Saab's Exercise Control software can also be installed on these tablets, making exercise control even more mobile. The system displays each trainee and their status in real time and records every shot and hit. Sensors can be attached to weapons, various devices, vehicles and even drones, creating a deceptively realistic live training environment.

24/7 support

While in the past large-scale exercises were often only conducted a few times a month or even a year, today training takes place almost daily. Data is collected in a wide range of situations and sometimes even in action, providing key insights into the capabilities of one's own troops and technologies that are needed for future operations. To ensure that armed forces can concentrate on the essentials during these exercises – namely the execution of an exercise – experts are needed in the background to ensure that everything runs smoothly. Saab offers what's known as an availability concept as part of its CTC. This means that equipment will be replaced within an hour in the event of damage or malfunction. In addition, there are a variety of services: Saab can take over the entire management of a CTC or just provide a few people to support the armed forces team. From the provision of spare parts to the implementation of repairs and the management of resources, the entire exercise can be coordinated and controlled by Saab experts. According to Hans Lindgren, Head of Business Development at Saab's Business Unit Training & Simulation, the needs of individual armed forces vary greatly in this regard. However, in recent years, he has noticed an increasing demand for external support, which is ultimately likely to be linked to the efficient use of scarce resources.

Lessons learnt

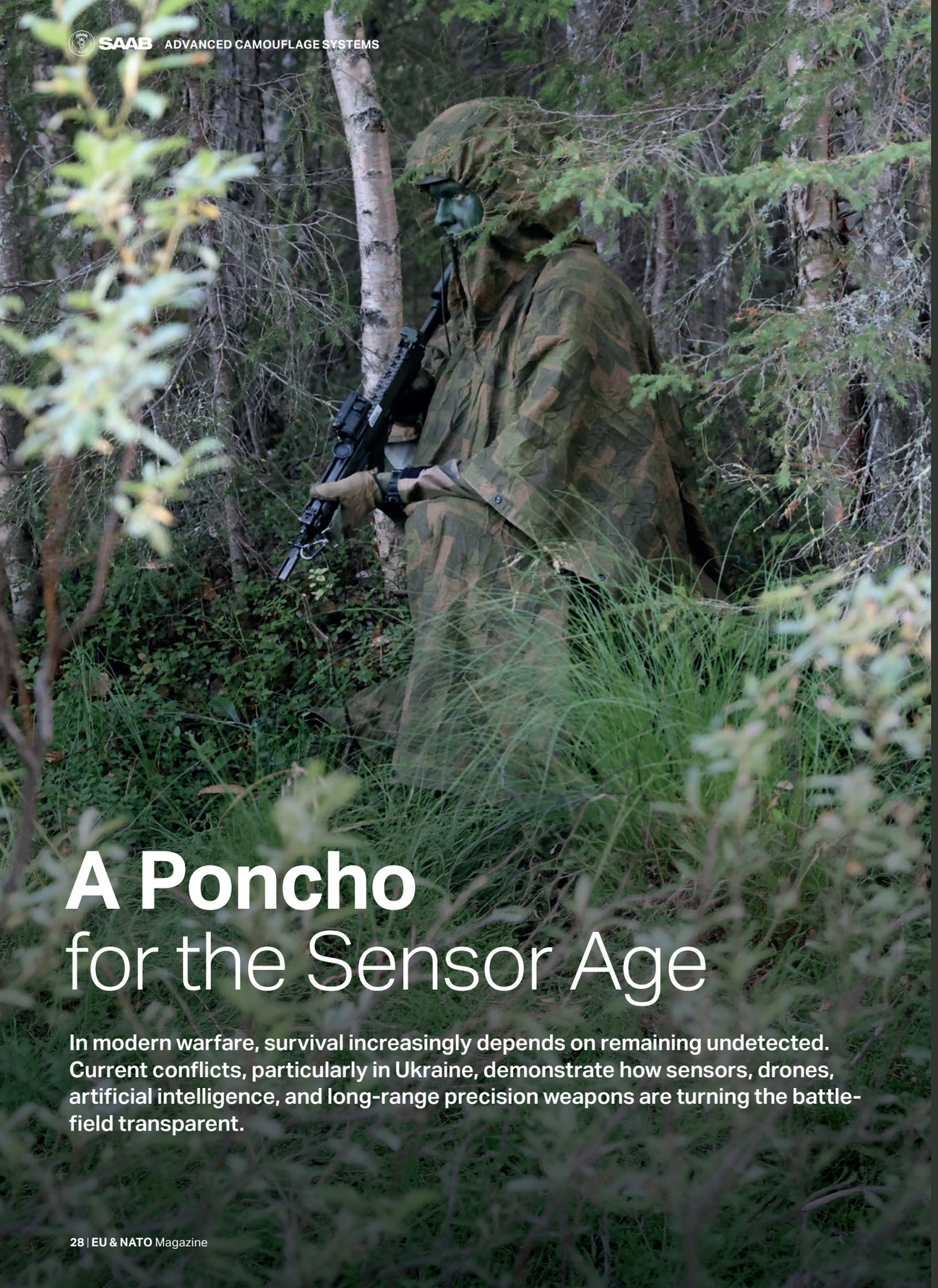
Only by recognising tomorrow's challenges can solutions be developed today to meet them. Ultimately, nothing less than the protection of human life is at stake – this applies to the individual soldier in the field and to the societies they protect or defend. In many Western armed forces, the importance of training is already enshrined in the most recent doctrines. According to the NATO Training Directive and the US Army Field Manual, training and the development of capabilities are at the top of the list. They emphasise that sustainable operational readiness cannot be achieved without regular and effective training measures.

Combat Training Centre to Denmark

In June 2025, Saab received an order for the Combat Training Centre from the Danish Defence Acquisition and Logistics Organisation. The order value is SEK 680 million and deliveries will take place 2025–2027. The order includes a comprehensive package of soldier and vehicle training systems, anti-tank and sniper training weapons, as well as communication systems and EXCON software which is used for after-action review. Saab will also provide training support in Denmark at four designated sites.

Effective training is essential to achieving sustainable operational readiness.





A Poncho for the Sensor Age

In modern warfare, survival increasingly depends on remaining undetected. Current conflicts, particularly in Ukraine, demonstrate how sensors, drones, artificial intelligence, and long-range precision weapons are turning the battlefield transparent.

Forces that fail to master camouflage, concealment, and deception risk being detected and engaged within minutes. Modern multispectral camouflage must cover the entire electromagnetic spectrum, including ultraviolet, visible, infrared, thermal, and radar signatures. Saab's business unit Barracuda has spent decades developing signature management systems designed to reduce the detectability of soldiers, vehicles, and infrastructure across all domains.

Next-Generation soldier camouflage

Saab is now expanding its portfolio with the new Barracuda Poncho, a lightweight multispectral camouflage solution designed to protect individual soldiers from detection by thermal, UV, and other battlefield sensors. Weighing just over 1 kg, the poncho combines advanced signature management with high mobility, enabling soldiers to move quickly and quietly while remaining concealed in environments ranging from woodland and desert terrain to Arctic conditions.

The reversible design provides dedicated day and night configurations with enhanced thermal protection for low-visibility operations. Developed in response to the growing threat posed by UAV-based surveillance, the Barracuda Poncho is intended to protect soldiers even when operating outside camouflaged vehicles or positions, offering wearable multispectral protection without compromising freedom of movement.

Camouflage is survival

The war in Ukraine has reinforced the importance of these capabilities. More than 80% of casualties are linked to sensor-enabled long-range fires, while AI-supported sensor fusion and the widespread use of drones dramatically accelerate target detection. According to Major Håkan Darvall of the Swedish Army's 18th Armoured Regiment, the conflict clearly shows that effective camouflage of vehicles and static positions has become essential to avoid detection, particularly from drones and reconnaissance aircraft. The regiment has operated Saab's static camouflage systems since 2016 and expanded its capabilities in 2022 with mobile Barracuda systems for combat vehicles. Darvall describes multispectral camouflage as a critical survivability capability against aerial threats.

Invisible - but still connected

Saab's camouflage technologies, including the Ultra-Lightweight Camouflage System ULCAS and Mobile Camouflage System MCS, significantly reduce radar, thermal, and visual signatures. For example, the radar cross-section of a static tank can be reduced from 150 to 15 square metres when protected by these systems. Overall, Saab's Barracuda solutions can reduce multispectral signatures by 80–90%.

The advanced camouflage systems provide multispectral protection against radar and other sensors, but traditional camouflage can also restrict GPS and VHF communications. Saab's ULCAS-FSS Frequency Selective Surface technology solves this challenge by allowing selected communication and GPS frequencies to pass through the camouflage net while maintaining protection against radar detection. The technology marks a significant advancement in signature management, improving tactical communication flexibility without compromising multispectral protection.

Beyond survivability, the systems also improve operational efficiency. Saab's camouflage nets reduce heat build-up in vehicles, command posts, tents, and containers by up to 80%, lowering cooling requirements and fuel consumption. The systems are lightweight, weather resistant, and designed for operation in extreme conditions, including Arctic environments from –40°C to +70°C.

Camouflage as a force multiplier

Interoperability is another key requirement. In NATO operations, a single unprotected platform can compromise an entire mission. Saab therefore designs all Barracuda systems to be fully compatible, allowing armed forces to integrate and upgrade camouflage capabilities across different platforms and national systems. Demand for multispectral camouflage is rising rapidly.

As sensor technology, AI, and drone warfare continue to evolve, camouflage is no longer a supporting capability – it is becoming a decisive force multiplier on the modern battlefield.

The “Loke” Counter-Drone Concept Debuts in NATO Mission

The Swedish Air Force’s new counter-drone concept, Loke, has for the first time been deployed in a live NATO mission. Developed by the Swedish Defence Materiel Administration (FMV), the Swedish Air Force and Saab, the concept has already become a central part of Sweden’s base-defence capability.

The “Loke” counter-drone concept was deployed during the Swedish Air Force’s contribution to NATO operations at Malbork Air Base in Poland between April and September 2025. Military units from the 21st Wing and later the 17th Wing supported the protection of allied facilities, including a key logistics hub for military aid to Ukraine.

First presented in February 2025, “Loke” is built by combining existing technologies into a modular system. It integrates a mobile radar, Saab’s Giraffe 1X, with a Trackfire Remote Weapon Station that is armed with heavy and medium machine guns, as well as electronic warfare components. The system can track both physical targets and signals in the electromagnetic spectrum, providing early detection and multiple options for neutralisation.

The Swedish Armed Forces and Saab continue to develop the capability, with lessons learned from operational deployments and exercises supporting further development and integration.

Building on this capability development, Saab received an order from the Swedish Defence Materiel Administration (FMV) in April 2026 for a mobile and modular Counter-Unmanned Aerial System (C-UAS). Valued at approximately SEK 2.6 billion, the system is designed to protect the Swedish Armed Forces and critical infrastructure from drone threats through a layered, interoperable defence solution that integrates proven sensors and effectors.

The Economics of **Drone Warfare**

For NATO allies, the capability to counter drones is no longer optional, but essential for the successful execution of missions on the battlefield.



The core of an effective air defence is formed by a layered ground-based air defence architecture (GBAD), built up from three important components: sensors, effectors, and command and control systems (C2). These elements must be fully integrated to successfully counter the various types of drone threats.

Drones can operate at different altitudes and speeds, attacking individually or in swarms from long or short range. A layered defence approach – from timely detection to soft or hard-kill – guarantees continuous protection and forces the attacker to constantly change tactics, for example by deploying multiple assets to achieve saturation.

Sensors

Modern sensor systems, including advanced multi-mission radars such as the Giraffe 1X make it possible to detect, classify, and identify even very small targets at longer range. In combination with passive sensors such as electro-optical, ESM, RF (for example the Saab's Sirius Compact) or acoustic sensors, they enable multi-sensor fusion, resulting in an integrated operational picture of the threat.

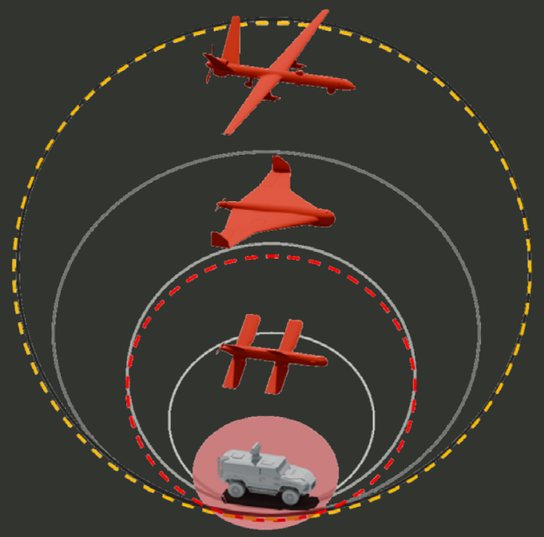
Effectors

Detection, classification, and identification form only a part of the solution. Effective defence requires a combination of soft-kill and hard-kill capabilities. Soft-kill solutions – such as camouflage, provided it covers the entire signature spectrum, concealment & deception (CCD), electronic warfare, jamming, and cyber attacks – can neutralize many commercial or less advanced drones.



For more complex or autonomous threats, powerful solutions are required, such as missiles, programmable ammunition, and interception drones.

The main challenge is achieving a cost-effective balance between costs and effectiveness, as neutralizing low-cost enemy drones can lead to the deployment of disproportionately expensive countermeasures. Such as, for example, neutralizing a drone with a Patriot or Sidewinder missile. A layered, proportional response, ranging from Saab's soft-kill assets to the deployment of their advanced RBS 70 missiles, the cost-efficient NIMBRIX missiles or the remote weapon station Trackfire, ensures that every threat can be countered with the most appropriate weapon.



C2

The growing amount of data is increasingly managed by AI-driven C2 systems. These systems support the decision-making cycle by filtering, prioritising, and pre-classifying threats. This improves situational awareness and enables operators to concentrate on crucial decisions.

C-UAS activities

The Netherlands is a clear example of how NATO nations should respond. After repeated drone incidents over vital objects such as the air bases Volkel and Eindhoven, the Dutch Ministry of Defence has prioritised C-UAS capabilities (counter-drone systems). To address immediate shortcomings, the Netherlands is accelerating the deployment of mobile, temporary solutions while simultaneously developing longer-term air defence systems.

In Sweden, the collaboration between research institutions such as FOI, the Swedish Ministry of Defence, the Swedish Air Force, Saab has led to the development of a mobile, modular system called "Loke", which covers the entire engagement chain for hostile drone deployments. The system integrates a Giraffe 1X radar, a lightweight SHORAD-based C2 system, and effectors such as the Trackfire weapon station, enabling deployment across both land and maritime domains, including aboard a Combat Boat 90. Loke was successfully tested in Poland in 2025 and has been procured by the Swedish Armed Forces.

The Netherlands establishes C-UAS

At the same time, the Netherlands is opting for a structural approach by integrating drones and anti-drone assets across all units, including combat and support units. This makes it one of the first NATO nations to integrate these capabilities so comprehensively. This reflects a broader trend: drones are no longer an isolated threat, but are a constant element in all types of military missions.

In addition to technology, success depends on training, doctrine, and continuous rapid adaptation. Military units must refine tactics, improve coordination, and ensure that systems, operators, and processes evolve together. According to the experts at Saab, there is no single "perfect" solution that can counter all threats. Instead, an effective defence requires a combination of layered capabilities, rapid innovation, and close collaboration between defence, industry, and research institutions. Saab therefore considers it essential to integrate both defensive and offensive drone deployment into the Mobile Combat Training Centre (MCTC). The Netherlands has already taken important steps in this direction.

The way forward

Drone warfare is developing at an unprecedented pace. For the NATO nations that form part of the "NATO Enhanced Forward Presence" – such as the Netherlands – the capability to deploy integrated, scalable, and cost-effective C-UAS systems can be decisive for a successful defence. The challenge is clear: although technology is developing rapidly, success will depend on the speed of implementation, interoperability, and finding the right balance between effectiveness and costs. For that reason, the integration of drone deployment into new tactical concepts must be subjected to extensive testing and training of the units.

Saab's Trackfire RWS enables firing on the move and provides cover from naval ships or land vehicles. It has been delivered to the armed forces of Finland, Sweden and other nations.



The Sirius Compact can be integrated onto drones, vehicles, and smaller boats such as Saab's Combat Boat 90 or an Unmanned Surface Vessel.

The silent ears of the battlefield

The growing use of electronic warfare and the huge investments in technology have produced ever more conflicts in which adversaries employ the same types of weapons. The ability to obtain information quickly at an early stage will play a key role in the outcome of combat operations.

Detecting and analysing enemy radar and communication signals is one of the most important tasks on the modern battlefield. The high-tech equipment required for this makes it possible to create a high level of situational awareness across all domains – the foundation for military decision-making. Rapid technological change poses a major challenge here: ever more signals are being generated while the latest technologies are used to hide, obscure or manipulate them. The fact remains: those who can collect and analyse the greatest possible volume of data most rapidly will be one step ahead of the enemy.

With decades of experience developing and producing complex passive-sensor systems for ships, vehicles, and aircraft, Saab brings deep technical expertise to the field. Mathew Willmot, Sales Director for Sirius Compact, explains, "A major challenge in obtaining data is your own visibility. Anyone using radars also reveals their own position. One solution is passive sensors: these allow you to observe the enemy's signals without being detected yourself. That is increasingly relevant because it greatly reduces your vulnerability."

Lightweight with 360° coverage

Saab is one of the market leaders in Signals Intelligence (SIGINT) and Electronic Support Measures (ESM). The company demonstrates this with the Sirius Compact: a modular and scalable, lightweight passive Electronic Warfare (EW) sensor. The sensor answers the growing challenges of modern combat operations. Sirius Compact can be used standalone, as part of a sensor network or to complement existing sensors.

It is user-friendly and can be deployed by an operator virtually anywhere, with range adjustable to the situation. The sensor therefore delivers essential situational awareness immediately. "This type of portable system, which does not require extensive specialist training, answers the need for mobile, flexible 'real-time' intelligence collection and thus opens new possibilities for tactical electronic warfare," Willmot explains.

Characteristics and performance

Sirius Compact is available in several configurations. The smallest variant is 35 cm high, has a diameter of 15 cm and weighs no more than three kilograms. The system therefore fits in any rucksack. It also features an integrated IMU/GNSS sensor to provide positional data and draws less than 60 W of power. Power is supplied by batteries. Mounted on a tripod, Sirius Compact can be deployed virtually anywhere, but it can also be integrated into drones, vehicles or smaller boats such as Saab's Combat Boat 90 (CB90) or an Unmanned Surface Vessel (USV).

> **Only those who can quietly collect as much data as possible, classify and analyse it in a very short time will be ahead of the enemy.**

A defining characteristic is its 360° azimuth coverage, which enables immediate detection of radar and datalink emissions across the 1-18 GHz frequency band from any direction. The sensor's platform and datalink independence are also significant, allowing integration into existing networks and platforms. A single sensor already improves situational awareness; with three sensors, accurate geolocation by triangulation becomes possible with bearing accuracy of less than 2° rms (root mean square).

Finally, Sirius Compact is controlled by the TRS Lite software (Tasking & Reporting System) via a tablet. A single operator can manage up to five sensors, which in turn can be grouped and controlled as bundles. This latter capability is available in the more advanced TRS 9EW. "With these software systems, users can automatically generate reports, assign tasks to other sensors or even register new signals, thereby expanding their own 'Threat Library'," Willmot says.

> **The increasingly complex requirements and threats require efficient and precise early warning systems.**

Identification and analysis

Detecting signals is the first step in obtaining situational awareness. In a second step, the identified signals must be analysed and classified. Saab does not store sensitive data on the sensor but forwards signals immediately. When the sensor is used on a drone it can also be operated without a network connection.

The perfect complement to any network

Portable passive sensors are suitable for a wide range of applications. They complement more complex systems and primarily act as an early-warning capability, for example for ground-based air defence. Owing to its size, the sensor can be mounted almost anywhere, even on civilian infrastructure. Sirius Compact is part of the Sirius family. The common DNA of all products in this family delivers high precision and combines decades of R&D expertise in a new, compact model.

Saab has carried out numerous tests and demonstrations that demonstrate the impressive performance of the compact sensors. For example, an aircraft taking off 200 kilometres away can be detected as soon as it appears above the radio horizon with very accurate direction finding (DF). During the entire detection and analysis process that aircraft receives no signal from the sensor and therefore has no indication that it has been detected. Sirius Compact also proved reliable when deployed on a fast-manoeuvring combat boat in challenging weather conditions.

The performance and usability of the TRS Lite software have also been independently tested by military organisations. After a short introduction, infantry operators were able to set up the sensor in just a few minutes and were impressed by its operational capability and ease of use. "The product naturally benefits from our expertise in signals intelligence. The challenge is not only to make high-technology devices as small and mobile as possible, but also to ensure that performance is not compromised," Willmot observes.

Willmot concludes: "Mobile systems are more than just a technological achievement; they are indispensable on the modern battlefield. The complex demands and threats faced by combat units require efficient and precise early-warning systems. Passive sensors provide – as the 'ears' of the battlefield – a detailed picture of enemy activity. These sensors, such as Sirius Compact, add a new dimension to planning and decision-making and can play a key role in the cat-and-mouse game of electronic warfare."



RBS 70 NG

Ground-Based Air Defence

The RBS 70 NG is Saab's advanced short-range, ground-based air defence system, designed to protect forces and critical assets against a wide range of aerial threats. Combining automatic target tracking, high-precision laser-beam-riding guidance and an integrated day-and-night sight, the system enables effective engagement of aircraft, drones and missiles at ranges of up to nine kilometres.

With 24/7 operational capability, high accuracy and resistance to electronic warfare, the RBS 70 NG delivers reliable air defence in demanding environments. Its flexible and modular design allows integration with vehicles, remote-control solutions and wider air defence networks, providing armed forces with a scalable and future-ready capability to meet evolving short-range air defence requirements.

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Protect data, secure missions uncompromising information control

Control of sensitive information is the key to mission success. Increasing numbers of systems exchange vast quantities of data, raising the risk that classified material may end up in the wrong hands. A modern security architecture must therefore operate across domains and must not be hardware-dependent.

When countries, institutions or armed forces exchange information, information control plays an extremely important role. In the past this could be achieved using data diodes within a less complex information architecture. These ensured that data flowed in only one direction – from a less-secure system or network to a highly secure one, or vice versa.

Today the situation is different: because six, seven or more distinct security levels are typically required within ever more complex information architectures, high-tech security filters are needed to guarantee the integrity and confidentiality of classified information. "Cross Domain Solutions (CDS) ensure that information can be filtered in different directions. This allows a large number of systems to communicate without sensitive information leaking," explains Swen Ventker, Director Sales and Business Development for communications systems at Saab. The company has been installing its CDS, TactiCall, for communications and information security on naval vessels since the early 1990s. Remarkably, the core software – originally developed as an integral part of the hardware – is now also available as a standalone product called TactiGuard XD and can be used on any hardware.

Efficient certification and scalability

Several companies offer sound information-security systems. However, CDS products are often tightly coupled to the hardware used. Once that hardware reaches end-of-life, the entire system must be replaced, involving high costs and often prolonged unavailability. Any structural change to a vehicle, for example, typically triggers a new accreditation. A software solution, by contrast, can be installed on a commercial off-the-shelf computer (COTS) or a customer-specific computer when that device is replaced. In that case you only need to purchase a new device and reinstall the software – a faster and more cost-effective approach. Moreover, a system such as TactiGuard XD offers further advantages: where space for new hardware is limited it can be used on existing equipment. This is an important consideration in combat vehicles, where space for additional computers is often scarce.

TactiGuard XD can be customised to meet a customer's specific requirements and is available worldwide thanks to the International Traffic in Arms Regulations (ITAR). "Our system is certified in Norway under the Common Criteria (CC) licence, but we can also provide national licences if required. Although the CC licence does not expire, periodic re-certification takes place. Cross domain solutions ensure that information is filtered in different directions. This way our software continues to meet the highest standards and allows us to address the challenges of military operations," says Swen Ventker. Many systems on the market are only nationally certified. That can be problematic in a NATO context when data must be exchanged between different armed forces.

Highest security level

The more flexible cross-domain solutions are, the better. Security must always be the highest priority. TactiGuard XD enables the creation of a bespoke Interface Control Document. This document uses a 'Parameter Guard' to translate all data into the required syntax. That ensures protected, filtered data transfer through multiple security mechanisms and provides a high level of resistance to cyber attacks. "Our protocols define in detail who may send which data, when, and in what form and length. All information is checked for format, syntax and semantics. Only those who know the exact, pre-defined structure can disrupt the system." The entire process occurs near-real time, in a fraction of a second. Artificial intelligence is not used because it does not provide the required level of security.

Information security more important than ever

Experience from Ukraine again demonstrates how crucial rapid and reliable information exchange is to protecting lives. On the battlefield in particular the secure transfer of classified information, such as location data, is essential. Mobile phones that transmit or can be tracked must be replaced by robust systems that improve decision quality and provide strategic and tactical advantage. Military communications require solutions that can be deployed simply and flexibly at any time and scaled up at low cost. After all, information control is essential in a world where surveillance and cybercrime are commonplace.

Strengthening **CBRN Defence** for the Netherlands and NATO

After decades in which many Defence organisations focussed primarily on expeditionary and peace-support operations, CBRN defence (Chemical, Biological, Radiological, Nuclear) has once again returned as an essential component of defence planning. The war in Ukraine has also highlighted the Netherlands' need for rapid CBRN detection and warning capabilities. Only with this can the Defence components respond effectively and operate seamlessly alongside NATO allies under a CBRN threat.

The war in Ukraine has underscored this urgency: investigations by the Organisation for the Prohibition of Chemical Weapons (OPCW), headquartered in The Hague, have confirmed the presence of chemical elements following the sampling in Ukraine. This emphasises the need for forces that can detect, identify and report CBRN threats rapidly - and continue operating in a contaminated environment.

For the Netherlands, this is not simply a question of rebuilding a specialist capability. The focus is on ensuring that Dutch Defence units can detect and report a CBRN threat early, and continue to operate in a contaminated area to successfully complete missions.

NATO policy is aimed at ensuring that CBRN capabilities focus on integration and interoperability during joint operations. In 2025, NATO reinforced this focus with STEADFAST WOLF 25, the largest CBRN war game, built around an Article 5 collective-defence scenario. For the Netherlands, the challenge is clear: CBRN information must move faster than the threat.

From protection to shared awareness

Dutch CBRN defence is structured around three levels: Basic Protection, Extended Protection and Specialized Protection. Basic Protection supports individual survival and mission continuation. Extended Protection provides earlier warning and protection at unit level. Specialized Protection brings trained personnel and dedicated capabilities into the mission.

A critical part of that specialist capability is Detection, Identification and Monitoring (DIM). These must detect and identify the hazard, understand its consequences, and determine how the contaminated area influences the mission. But detection alone is not enough.

The operational advantage comes from turning sensor data into a warning - and getting that warning to those who need it before they enter the hazard area. This makes connectivity between sensors, specialists, commanders and deployed units as important as the individual detector itself.

Shortening time to action

Saab's CBRN Automatic Warning and Reporting system (AWR), operating within a broader CBRN Communication and Information System, is designed around this principle: connect Detection, Identification and Monitoring with Warning and Reporting in a single information environment. Instead of isolated sensors producing isolated information, data can be brought together to create a consolidated CBRN threat picture. Specialists remain central to interpreting and managing that picture, but their expertise can be utilised across the entire armed forces rather than requiring specialist personnel alongside every individual sensor.

The architecture can integrate chemical, biological and radiological detectors alongside meteorological, positioning, video and other sensors. Sensor fusion can help validate information and reduce false detections, while existing sensors can potentially remain part of the network rather than requiring an entirely new sensor inventory. The result is straightforward: detect earlier, understand faster, warn sooner.

Open architecture for a NATO force

For the Netherlands, national capability must also function as part of a multinational force. NATO's CBRN concept explicitly seeks common and harmonised approaches across the Alliance and stresses integrated CBRN defence across military domains. NATO's deployable Combined Joint CBRN Defence Task Force likewise depends on multinational contributions and is designed to conduct reconnaissance, monitoring, sampling, identification and CBRN assessment in support of Allied operations. Interoperability is therefore fundamental.

Saab's AWR system uses a modular, open architecture designed to accommodate different sensors and changing configurations. Support for international standards enables warnings and reports to be exchanged with other forces, allowing information from different sources and units to contribute to a wider operational picture.

This also matters over the lifetime of the system. CBRN threats, sensors and operational requirements will continue to evolve. An open architecture allows capabilities to be adapted without rebuilding the entire system for each new requirement.

Taking CBRN reconnaissance forward

Information must be generated where the threat exists. Mobility is therefore a critical part of modern CBRN defence. Saab's CBRN Reconnaissance Vehicle Kit (CRVK) brings surveillance, reconnaissance, sampling and field analysis capabilities onto mobile platforms and can be integrated with both military and civilian vehicles.

The combination of vehicle mobility, sensors and connected CBRN information provide a way to move detection and analysis closer to deployed forces while feeding information back into the wider command structure. The Netherlands has already opted for a dedicated DIM armoured vehicle. However, the number of vehicles is insufficient to provide coverage across an entire mission area. Therefore, CBRN-sensors should be deployed across all types of units, ranging from Combat and Combat Support to Combat Service Support, as well as at selected command posts, to provide timely early warning.

Saab offers an excellent solution for this purpose through its sensor box, which can accommodate a range of different CBRN-sensors. The CBRN-data generated by these sensors can immediately be integrated into the previously mentioned AWR-system without operator intervention. This creates a comprehensive, area-wide CBRN warning and monitoring capability.

Train as part of the network

Technology alone does not create readiness. NATO's current approach puts training and exercising alongside equipment and planning as essential elements of CBRN defence. The Alliance's 2025 annual report specifically highlights focused training and exercises as part of strengthening Allied CBRN capabilities.

Saab's approach therefore extends from operational systems right through to training. This includes sampling and methodology training, as well as hardware and software training for AWR. Synthetic training can add realistic CBRN dispersion and contamination scenarios without exposing personnel to actual agents.

For the Dutch Army, integrating CBRN scenarios into the existing Mobile Combat Training Centre would take this further. Units could train against simulated chemical, biological or radiological threats as part of larger tactical scenarios, allowing CBRN defence to become part of routine operational training rather than remaining an isolated specialist discipline. Interoperability is not achieved simply because systems can exchange information. It must be trained, exercised and understood before a crisis begins.

A connected CBRN defence

The central challenge is no longer simply to field more detectors. It is to connect detection, identification, analysis, warning and decision-making across the force. For the Netherlands, that means linking individual protection, specialist DIM capability, mobile reconnaissance, command systems and training into one coherent approach. For NATO, it means ensuring that national capabilities can contribute to a common warning and reporting environment when Allied forces deploy together. The objective is ultimately simple: turn detection into shared understanding – and shared understanding into action before the threat can take effect.



Modular field hospital as an integrated **solution for mobile healthcare**

When it comes to the health of troops, only the best is good enough. The future, in this regard, lies in modular systems for mobile medical care. These flexible, integrated systems can be precisely tailored to the specific needs associated with Role 1, 2 and 3 hospitals, thereby maximising soldiers' chances of survival.

Field hospitals must meet a wide range of demands. Lightweight, compact hospitals can be deployed close to the frontline, and specially packaged variants can – if necessary – be dropped from helicopters or aircraft. Modern field hospitals must also be transportable to multiple locations in a very short time and be equipped with sufficient medical supplies once there. By employing modern camouflage techniques, the risk of detection is reduced and vulnerability decreases. Additional ballistic protection can also be provided.

Whereas in the past medical equipment – or even tents and containers – were often procured individually and managed by the armed forces themselves, there is now a greater need than ever for integrated solutions that, ideally, are interoperable. Erik Jonker at Saab Netherlands has observed these developments for years and explains: "Mobile medical care must offer more and more, while becoming increasingly flexible and mobile. That's only possible if you stop thinking in terms of individual products and start thinking in terms of integrated systems, where all possible uses are considered from the design stage onward. Moreover, innovation cycles for medical equipment are becoming shorter, meaning devices and instruments must be renewed and updated more frequently. The trend is clearly towards outsourcing."

Modern field hospital

In recent years, Saab has specialised in modular, all-inclusive solutions that provide the full spectrum of medical care from a single source – from planning, construction and the delivery of all medical equipment to complete logistics, storage and maintenance. Saab focuses in particular on military hospitals, where capacity is less important than performance. After all, the primary aim is stabilisation rather than long-term treatment.

The solution lies in a series of modules that can be assembled as needed to create mobile field hospitals of any size. Each module functions autonomously but can also be combined with others to form an interoperable whole – a feature of great importance. Jonker notes: "In international deployments, operations are usually conducted in close cooperation with other countries. Ideally, these hospitals should be compatible – but unfortunately that's not yet the case due to the lack of common standards. Saab is therefore strongly committed to promoting interoperability in the development of Deployable Healthcare (DHC) products. We hope that NSPA (NATO Support and Procurement Agency) will give even greater consideration to this factor in the future."



10-1-2 timeline

The various modules have been developed with NATO's 10-1-2 timeline in mind, a doctrine for medical treatment and evacuation. This rule provides a clear operational guideline:

- **Within 10 minutes:**
  first aid by medically trained personnel
- **Within 1 hour:**
  treatment by a military physician
- **Within 2 hours:**
  life- and limb-saving surgery

NATO also defines distinct roles for individual field hospitals and their associated requirements. Emergency care is delivered in Role 1 facilities. Saab's smallest solution (FRC, Forward Resuscitation Capacity) fits into just three rucksacks of 30 kilograms each. Rucksack 1 contains the tent, rucksack 2 the medical equipment and rucksack 3 medicines and dressings. Everything is packaged so that the medical team can remove items on site in the correct order. Saab also offers Role 2 and Role 3 field hospitals to enable specialist medical care in the theatre of operations. In addition, support for Strategic Evacuation (STRATEVAC) is provided to transfer seriously injured personnel to hospitals in the homeland.

"Alongside rapid action, the mobility of field hospitals is crucial to delivering the right care at the right time in the right place – especially where there is, as in Ukraine, more than one frontline. Logistics are also vital to ensure medicines, hygiene supplies and blood arrive on time. New concepts such as 'walking blood banks', where soldiers can donate blood on site for their comrades, support medical care in the combat zone," Jonker says.

To erect a field hospital quickly and efficiently, close collaboration between medical personnel and engineers is essential, and this must be considered during the design of mobile field hospitals. "For example, we work with a US company that makes operating tables that are not only extremely light but can also be assembled in one minute. Every minute saved here has the potential to save lives," says Erik Jonker.

Application in Australia

One of the largest field hospital projects in the world is being delivered by Saab to Australia. The customer is the Australian Defence Force, which has ordered 550 modules – ranging from pharmacy, intensive care and surgical units to radiology, CT scanners, psychiatric wards, and hygiene facilities for the entire medical area. This includes infrastructure such as water supply, showers and toilets, as well as staff and recreation areas. The Deployable Healthcare (DHC) team at Saab also manages logistics and works with more than 300 companies in the local defence supply chain and over 70 Australian SMEs.



With these 550 modules, nearly thirty military hospitals of various sizes can be assembled – including hospitals that meet NATO Role 3 requirements and can perform complex diagnostics and advanced surgical procedures. The modules are stored and maintained at the purpose-built Deployable Health Capability Support Centre in Queensland, ensuring they can be deployed at any time from the nearby Royal Australian Air Force Base in Amberley. Saab experts ensure that the equipment remains in excellent condition, is cleaned after each mission, repaired or updated as needed, and replaced where necessary. "Armed forces today simply lack the manpower and expertise to organise this logistics themselves," explains Amany Wahba, Sales Director Medical Solutions at Saab. "To deliver the Australian project, we employ not only numerous engineers but also ten to fifteen staff members who focus exclusively on supply chain management. For the armed forces, this results in an end-to-end solution that enables optimal medical performance."



Increased need for field hospitals

Beyond all the practical advantages, high-quality medical care in combat zones is also crucial for troop morale. Soldiers expect the best possible medical treatment if they are injured – and naturally, the latest technology is employed. The importance of innovation in healthcare will therefore inevitably continue to grow, along with the demand for advanced products and services that support medical personnel. Whether through video and telemedical assistance or intelligent systems that continuously monitor soldiers' vital functions and provide critical data during treatment, the trend is clear.

Experts agree: the need for fully equipped field hospitals will increase – not just any field hospitals, but integrated solutions from suppliers that enable the armed forces to focus fully on their core missions.



Revolutionising **Naval Training**

Modern naval forces face increasingly complex and diverse threats, ranging from drone swarms to asymmetric attacks at sea. To maintain operational readiness, realistic and adaptable training solutions are essential. Building on decades of development in live training systems, Saab has extended its proven GAMER technology into the maritime domain, enabling highly realistic, scalable, and interoperable training environments for naval operations.





For more than 30 years, Saab has been developing its training system continuously to meet new challenge, always with a focus on those factors that are crucial for truly effective training: realism, scalability, deployability, standardisation and interoperability. The GAMER system which is currently used by more than 35 nations in Europe and North America, including numerous NATO member states, relies on a combination of laser-based simulators, sophisticated ballistic modelling and geometric coupling technology to modelling highly realistic combat scenarios. It provides a safe training environment without using live ammunition, enabling naval forces to simulate complex engagements effectively. However, transitioning the system from land to sea involves evaluating how it will adapt to the unique maritime environment, such as salt-water exposure and potential maintenance needs. A dedicated community of GAMER nations – the 'Interoperability User Community' (IUC) – with its current 16 actively participating nations is also working on common requirements and standards that are incorporated into the development of new technologies in order to continuously develop co-operation within the alliance.

Accessibility

One of the key benefits of the Maritime Live Training system is its ability to conduct exercises close to port, eliminating the need for long-distance travel or airspace clearances to train forces and develop new tactics. By utilising laser systems, which require far fewer safety restrictions than live ammunition, naval forces can train conveniently near harbours, significantly increasing the frequency and accessibility of exercises. GAMER – for land as well as sea – features a range of interoperable software tools to support the entire training lifecycle: from planning and preparation to execution, control and evaluation. Components of the system include firing systems, target systems, communications infrastructure and Exercise Control systems (EXCON), all integrated to ensure seamless and realistic training experiences. Moreover, by strengthening interoperability and shared logistics, the system directly supports the Cooperative Support Initiative (COSI) – a multinational naval logistics and support framework that strengthens collaboration among NATO and partner navies.

Laser technology for realistic combat scenarios

The heart of Saab's Maritime Live Training is the innovative use of laser technology. While many live training systems use a single-path laser to simulate the firing of ammunition, Saab relies on the BT46 two-way laser technology which precisely models the speed, flight time and flight path of the ammunition and is currently the most accurate and realistic laser-based simulator system in the world. Each laser shot carries encoded data, including information about the ammunition type, calibre and impact characteristics, following the NATO-standard U-LEIS protocol. This detailed information ensures accurate simulations that mirror real-world combat conditions. The system integrates seamlessly with the ship's fire control systems, providing operators with identical feedback to what they would receive from real ammunition, making the training process extraordinarily realistic.

Multiple threat simulation

The Maritime Live Training system is particularly beneficial for preparing naval forces to face newer threats and challenges, such as drone swarms. By equipping both weapons and drones with laser detectors, naval forces can simulate drone attacks and assess the performance of their combat systems. This allows crews to refine anti-drone tactics, identify the best ammunition types and determine optimal engagement ranges. Moreover, the system is capable of simulating a wide range of threats, from small surface vessels to aerial drones as small as 50 centimetres in wingspan. With clever programming, a single drone can simulate multiple threats, enabling navies to conduct complex scenarios without needing to deploy a large number of physical assets. Saab's system extends beyond ship-based weapons, creating a complete training environment. Boarding teams, for example, can be equipped with personal laser detectors and small arms transmitters, with their locations tracked via GPS. This real-time tracking allows exercise controllers to monitor every participant's position during operations like boarding suspicious vessels, adding another layer of realism. For larger vessels, such as frigates, laser detectors can be strategically placed to protect vulnerable areas like the bridge, engine room or ammunition storage compartments. This simulates realistic vulnerability models, training crews to target enemy weak points while safeguarding their own.

A global solution for modern training needs

Building on the success of its land-based technology, Saab is finally bringing its advanced systems to the maritime sector. The U.S. Marine Corps has already adopted Saab's training technology, awarding a $37 million contract modification to expand their Marine Corps Training Instrumentation Systems (MCTIS). These will enhance the realism of training exercises for Marines, helping improve their battlefield performance and survivability. In addition, every GAMER system comes with the option of a comprehensive support package, to ensure that armed forces can concentrate on the essentials during these exercises. From the provision of spare parts, to the implementation of repairs and the management of resources, the entire exercise can be coordinated and controlled by Saab experts.

In the near future, Saab is planning to incorporate artificial intelligence and data analytic tools to enhance after-action reviews. Saab's new Maritime Live Training solution provides an invaluable tool to develop both tactical expertise and doctrinal approaches required for modern maritime warfare.

Autonomous Ocean Drone

Access. Adapt. Advance.

Seabed warfare is an integral aspect of today's conflicts, but only one part of the evolving underwater threat. Protecting national sovereignty, Exclusive Economic Zones (EEZs) and Critical national Infrastructure (CNI) requires defences that can operate further, longer and with greater adaptability than ever before.

Saab's Autonomous Ocean Drone, a Large Uncrewed Underwater Vehicle (LUUV), meets this challenge by combining more than a century of underwater expertise with advanced autonomous technologies. Built around modularity, autonomy and rapid adaptability, it is designed for today's missions while providing a foundation for the underwater capabilities of tomorrow.

Independent pier-side launches

The Autonomous Ocean Drone is designed to extend operational reach while reducing risk to personnel. Operating autonomously below the surface, it can undertake missions that require endurance, persistence and flexibility. Powered by Saab's Autonomous Ocean Core control system, the platform is designed to advance the development of autonomous underwater operations and enable collaboration with existing naval assets, including submarines.

Unstinting, unflinching and unhesitating

Protecting our way of life is a never-ending mission. The Autonomous Ocean Drone provides the endurance needed to maintain security in an increasingly contested underwater domain. It is designed to enhance situational awareness, support intelligence gathering and strengthen underwater capabilities. By operating in areas that may be difficult or unsuitable for crewed platforms, it can help build a more complete understanding of operational environments. Greater awareness supports better decisions, stronger protection and increased operational effectiveness.

Saab, FMV and the Swedish Armed Forces launch LUUV

The vision of an LUUV recently took an important step towards reality. Less than one year after contract award, Saab, the Swedish Defence Materiel Administration (FMV) and the Swedish Armed Forces successfully developed, built and launched an LUUV demonstrator. Following successful sea trials, the first phase of the programme has been completed, demonstrating how advanced underwater capabilities can rapidly move from concept to operational testing. The project is expected to support the continued development of software, sensors and autonomous functions, while contributing to future underwater capabilities.

Missions

Designed for versatility and future growth, the Autonomous Ocean Drone can support a range of underwater missions, including:

- Intelligence, Surveillance and Reconnaissance (ISR)
- Persistent underwater monitoring
- Deployment and support of underwater sensor capabilities
- Autonomous navigation and mission execution
- Operations alongside crewed naval platforms
- Development and evaluation of future underwater capabilities

As underwater threats continue to evolve, the Autonomous Ocean Drone combines endurance, adaptability and advanced autonomy to help safeguard the underwater domain, while laying the foundation for the next generation of underwater operations.



Combat Boat 90 CX

Distributed power made for reality

The new naval reality is constantly changing. So is Combat Boat 90. Connected. Coordinated. Collaborative. Versatile by design. From multi-domain situational awareness to over-the-horizon strike and short-range air defence, CB90 CX delivers combat power where it matters. Crewed when needed, uncrewed when possible. Multiple platforms, complementary capabilities, one connected force.

CB90 CX. Distributed power made for reality.

SAAB



Unleash the power of autonomy

Autonomous Ocean Core

The Autonomous Ocean Core is the future heart of unmanned operations for the Combat Boat 90 and other vessels.

AUTONOMOUS OCEAN CORE SAAB



The Autonomous Ocean Core control system equips small and medium-sized naval platforms with advanced autonomy for both military and civilian missions. Operators can easily enable un-crewed operation by inputting the vessel's parameters into the motion control function.

The system offers advanced obstacle and traffic detection, which not only increases the autonomy of the ship, but also ensures safety during operations in busy or dangerous waters. In addition, the control system manages vital ship systems such as pumps, rudders and lighting, and automates the response to emergency situations. For example, if water enters the hull, this is automatically detected and the pumps are activated, while fuel levels and fire safety are continuously monitored.

The control system of the Autonomous Ocean Core uses three different sources for location determination, which makes it possible to operate without GPS. This enables the vessels to operate in areas where GPS signals are disrupted. The system continuously calculates the optimal route and checks whether the vessel is following the planned course.

In addition, the system uses a fleet management function that allows multiple vessels to be managed and monitored simultaneously. The open and modular architecture of the Autonomous Ocean Core offers the flexibility to easily integrate new technologies and sub-systems, so that the system can continue to respond to technological developments in the future.

Autonomous Ocean Core on CB90

The CB90 has proven to be reliable in recent decades. The fast attack boat no longer holds any secrets for Saab's designers, it is also an easy-to-understand ship, with systems that are not too complex. In addition, the vessel offers sufficient space for placing weapons, sensor systems and being able to take drones. This means that Saab also sees the CB90 as an ideal platform to realise its plans for optionally crewed systems. Under the name Enforcer 3, Saab has a test and development platform for unmanned systems, based on the CB90. Saab expects that naval and amphibious operations in the future will be carried out by cooperating manned and unmanned vessels. The Enforcer 3 can be deployed both crewed, remotely or uncrewed.

Exploiting the benefits of unmanned systems

More and more tasks can be performed both crewed or uncrewed. Especially routine tasks or missions that are potentially dangerous, such as operations in bad weather conditions or in a conflict zone, are ideally suited for uncrewed vessels. They can then minimise the risks for the crew. CB90 enables flexible integration of crewed and autonomous units operating together in coordinated swarms.

These interconnected units provide a more complete tactical overview while reducing manpower requirements. During tests, Saab equipped the unmanned vessels with jammers to attract attention, allowing crewed units to remain undetected. This adaptable approach offers a safe, effective and scalable solution for a wide range of maritime operational challenges.

The Autonomous Ocean Core is the future heart of unmanned operations for the Combat Boat 90 and other vessels.

Modular with open architecture

One of the Enforcer's greatest advantages is its versatility, which comes from the open architecture of the Autonomous Ocean Core. This system is designed with flexibility in mind, allowing not only Saab itself but also third-party manufacturers to easily develop and integrate new systems. This approach promotes the ship's adaptability, allowing it to quickly respond to technological developments.

Saab also offers a wide range of systems to further expand the CB90's capabilities. For example, the Sea Giraffe 1X radar was added to one of the vessels, and an electro-optical infrared camera was installed in the mast. The plug-and-play design ensured a smooth integration process. In addition to these features, other options are also available, such as the Sirius Compact, a passive sensor for detecting radars, and the Trackfire Remote Weapon System.

Unmanned monitoring of maritime areas

The missions for which the autonomous CB90 has been developed are diverse and cover a wide range of operational tasks. One of the most promising applications is carrying out long-term intelligence and reconnaissance missions beyond the horizon. It can be used to detect so-called dark vessels, ships that have switched off their AIS signals. In addition, the uncrewed vessel is ideal for monitoring critical infrastructure, such as wind farms, where continuous surveillance is required.

Thanks to its autonomous capabilities, CB90 can independently navigate to such locations, accurately map the situation and then immediately move on to the next mission, without human intervention. This makes the vessel particularly suitable for long-term operations at great distances. CB90 can reach high speeds, which enables fast response times when necessary.



Electronic Warfare
Outsmarting threats for a safer world

In the world of warfare, where every second counts, gaining the upper hand in information is the key to victory. Saab, with over five decades of expertise in electronic warfare, stands at the forefront of this innovation. Saab's electronic warfare solutions include protection for naval vessels and submarines, as well as signals intelligence systems for passive interception and analysis of radar and communication signals, providing situational awareness for naval platforms.

Amidst the vast expanse of the sea, a new tool is emerging to give naval forces the edge they need: the Naval Laser Warning System (NLWS). The state-of-the-art NLWS is poised to contribute significantly to the frigate's situational awareness and self-protection capabilities. With rapid threat warning and threat classification, it enables the combat management system to employ effective countermeasures against the laser threats, contributing to our shared mission of keeping people and society safe.

In a fraction of a second

In mere milliseconds, the NLWS swiftly detects radar or laser signals, serving both to locate adversaries and protect our own forces and platforms. The system can identify various types of lasers – including beam lasers, designation lasers, rangefinders and powerful blinding lasers, comparing them with its extensive signature database. Additionally, new signals can seamlessly integrate into this database upon request.

While the mechanics of laser warning systems are intricate, their operation is straightforward: when a laser beam targets a platform, the system rapidly recognises the threat, providing critical data about the emitter almost instantaneously. Not only does it determine the type and origin of the signal, but it also calculates the direction from which it originates. Currently boasting an accuracy of 7.5 degrees, with ongoing efforts to achieve a remarkable 1-degree prediction, the system is continuously evolving. With the ability to process up to eight laser signals simultaneously, the NLWS is remarkably robust, experiencing only one known failure despite years of operation.

Naval Laser Warning Systems for Spanish Navy

Selected for the Spanish Navy's F110-class frigates, Saab's Naval Laser Warning System provides real-time situational awareness of laser-based threats and strengthens platform self-protection capabilities. The system delivers full hemispherical coverage and can be fully integrated with the ship's combat management and electronic warfare systems, enhancing survivability in increasingly complex threat environments.

Deception and defensive measures

The integration of NLWS with other interfaces enables automatic deception and countermeasures once an enemy signal is detected. For instance, the system can emit a massive cloud of smoke to obscure the view of the platform from guided missiles. Remarkably, most guided weapons self-destruct when unable to identify a target. Therefore, this deceptive manoeuvre not only evades the attack but also renders the attacker's weapons harmless.

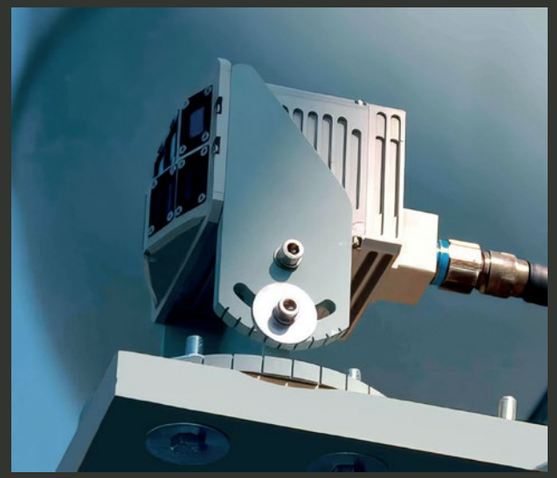
Enhancing situational awareness

Laser warning systems provide a critical advantage in situational awareness. Equipped with 16 sensors, the system offers comprehensive coverage. Even on a combat ship spanning 140 metres, only eight to ten sensors are required to achieve 360-degree observation. The compactness of the system is truly remarkable, fitting into just two suitcases. This portability allows for easy transport, installation and live demonstrations, making it exceptionally user-friendly, especially for military personnel unfamiliar with the system. Furthermore, this simplicity extends to training, as users can grasp all key functions within three days without any prerequisite knowledge. Moreover, the feedback from customers continuously informs the system's development, ensuring its effectiveness and adaptability in diverse operational scenarios.

Insights from other domains

As the threat landscape evolves, so too must the technology that counters it. Saab draws on its cross-domain expertise to enhance the performance of the Naval Laser Warning System. With each advancement, the system becomes even more indispensable to naval operations. Looking ahead, Saab envisions greater speed and efficiency in signal detection, ensuring that naval forces stay one step ahead of their adversaries. In an era where danger can emerge from any direction, a reliable 360-degree warning system is not just an asset – it is a necessity.

Saab also places strong emphasis on customer feedback and the unique operational challenges they face. A system is only as effective as its ability to meet the user's needs. In the vast expanse of the sea, where threats may arise from the shadows, the Naval Laser Warning System stands as a beacon of safety, guiding naval forces through the fog of war.



The strategic importance of **the seabed**

The report High Value of the North Sea, published by The Hague Centre for Strategic Studies, highlights the economic importance and vulnerabilities of critical undersea infrastructure. The incidents – particularly in the Baltic Sea – confirm growing concerns in this area. The aim of these sabotage operations is to undermine Western political and military support for partner countries and disrupt the energy independence of the Baltic states.

Sabotage of critical infrastructure – especially in areas that are strategic for energy security or focused on protecting supply lines beyond the Baltic Sea – are contingencies that will further escalate the hybrid conflict. Investments in deep-sea capabilities are now more necessary than ever to meet these threats today and tomorrow.

Up to 15% of global maritime trade passes through the Baltic Sea. The scenarios described represent a significant threat to national security and impede investment in offshore economic activities – for example, offshore wind farms, which are crucial to meeting the energy transition targets. This forces Western North Sea states to adopt a more alert, deterrent posture and to develop capabilities to defend against sabotage. That is no easy task: there are almost no environments in which more complex demands are placed on highly technical surveillance and security systems than the sea.

Underwater operations face numerous challenges, such as strong currents, temperature and pressure at depth, limited visibility and the peculiarities of underwater propagation. For a mission to succeed, therefore, powerful, robust and technically advanced solutions are required – ideally multifunctional systems that operate autonomously to minimise risk to personnel and reduce costs. France, the United Kingdom, Germany, Norway and Sweden are just some of the countries that have revised their seabed-warfare strategies in recent years and are now investing in state-of-the-art equipment, including systems from Saab.

Multiple measures are required

When it comes to hostile attacks beneath the sea surface, no single measure will suffice. Seabed warfare spans many disciplines, and only by deploying them together will the desired effect be achieved: First, physical protection can be provided by improving the design of cables and pipelines, for example through the use of stronger materials, protective layers and/or coatings or compounds that reduce the risk of detection and damage from anchors and trawl nets. Second, continuous underwater monitoring is needed, with sensor and nodal systems that can also take mitigating action, supported by operational visibility from existing sensor suites, AIS and satellite imagery to detect suspicious movements by surface vessels. Suspicious underwater activity – such as divers or the use of trawl nets – can be picked up by sensors such as acoustic arrays and by GPS trackers that alert to unauthorised movements nearby. Third, the real-time sensor data from all these sources must be fused into a situational picture and linked with intelligence. Those data then need to be analysed and correlated to detect anomalies,



Successful missions require powerful, robust, and high-tech solutions.

irregularities and suspicious patterns of behaviour. Ideally, this would be supported by AI-driven real-time reporting systems that can immediately warn of potential threats. That, in turn, enables rapid communication and action in the event of sabotage or damage, for example by motherships that must be capable of responding. Fourth, underwater drones and counter-sabotage armaments should be deployed and further developed – for instance, electromagnetic jamming or sonar pulses to disable hostile drones, or automated interception drones to neutralise suspicious objects. Finally, a technological infrastructure of physical cables or virtual zones could be established in which unauthorised objects are detected and denied access. This list alone demonstrates the complexity and diversity of the challenge.

International regulation and cooperation

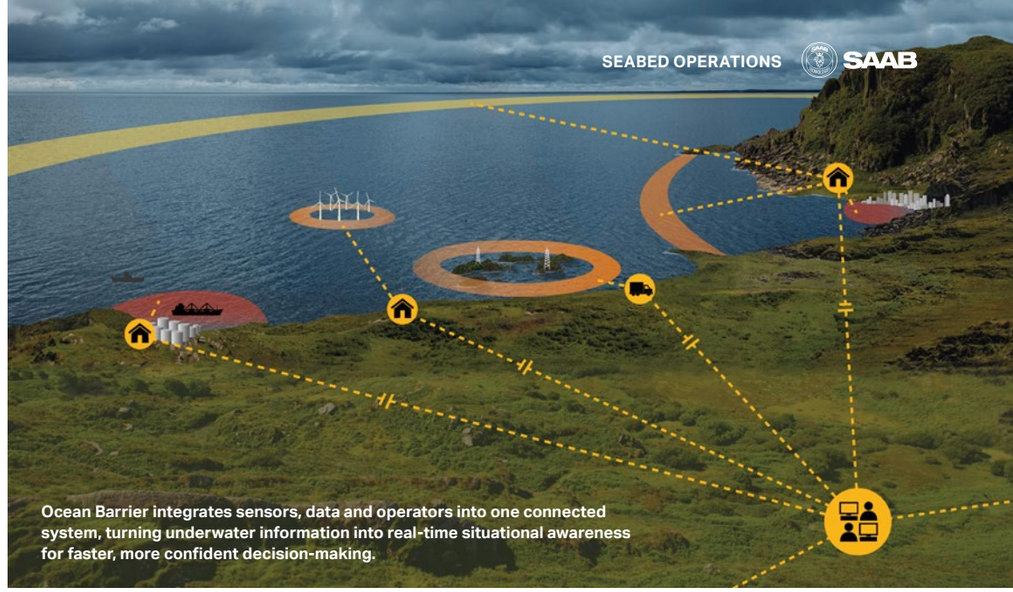
No single country can secure and protect the Baltic or the North Sea on its own. Western nations must therefore work together to safeguard cables and pipelines. They need to share information on high-risk areas and introduce regulations that prohibit anchoring in such zones, as well as keep shipping lanes free of cables – particularly along compulsory routes – to minimise the risk of damage. In addition, societies must strengthen their resilience against the disruptive consequences of such incidents. Clear lines of responsibility must also be established. At present, many different agencies at regional, national and international level are involved in protecting critical undersea infrastructure – including coastguards, navies, police, maritime law enforcement, and telecommunications organisations. This makes it more difficult to implement a coherent strategy. Stronger cooperation between nations, organisations and industry would be a major step forward in dividing up these complex tasks and ensuring coordinated action. In 2024, Norway and Germany launched a joint initiative to strengthen NATO's role in the protection of critical undersea infrastructure. Both countries proposed creating regional hubs for critical undersea infrastructure in various maritime zones within NATO's area of responsibility – such as the North Sea, the Baltic Sea, the Atlantic Ocean, and others. The idea is that each hub could then be managed by one or more allied nations. For instance, Norway has offered to establish a hub for critical undersea infrastructure in the High North, while Germany is ready and determined to assume responsibility for the Baltic Sea. In this way, Western nations can build a strong defensive line against attacks.

A matter of precision

Saab takes a comprehensive approach to critical undersea infrastructure, offering an extensive portfolio of sensors and both manned and unmanned platforms above and below the surface. Saab has supplied more than 900 vehicle systems worldwide – ranging from remotely operated vehicles (ROVs) for work, inspection and observation, to research ROVs, autonomous underwater vehicles (AUVs), and ROV accessories – and is one of the leading suppliers for both commercial and military applications. Through continuous innovation, the company has earned a reputation for handling complex tasks in some of the world's most demanding environments. In coastal areas, the Double Eagle family of systems, deployed by navies around the globe, is well suited to countering a wide variety of subsurface threats. The vehicles – Double Eagle Mk III, SAROV and MuMNS – can be launched from any type of vessel, from the shore, or from a dedicated platform, providing a safe, cost-effective and reliable solution for mine countermeasures (MCM) operations at depths of up to 500 metres. While the Double Eagle Mine Disposal System (MDS) is the leading solution for clearing unexploded mines, the versatile hybrid system Semi-Autonomous Remotely Operated Vehicle (SAROV) can be used both autonomously (as an AUV) for detection, classification and identification, and remotely (as an ROV) for mine disposal. Its robust design and modularity ensure outstanding performance and significant range and endurance. The Multi-Shot Mine Neutralisation System (MuMNS) represents a new generation of mine neutralisation and illumination. The ROV is highly efficient and manoeuvrable, offering a high degree of freedom, and is equipped with advanced sensors for precise mine identification. MuMNS speeds up operations and increases safety while reducing the cost of MCM missions. The system is designed to be operated by just two people, can easily be configured to meet the specific requirements of any mission, and consists of a vehicle, generator, pilot station, winch and power supply. It can be controlled from the surface via an onboard console on a support vessel or from a vehicle on deck.

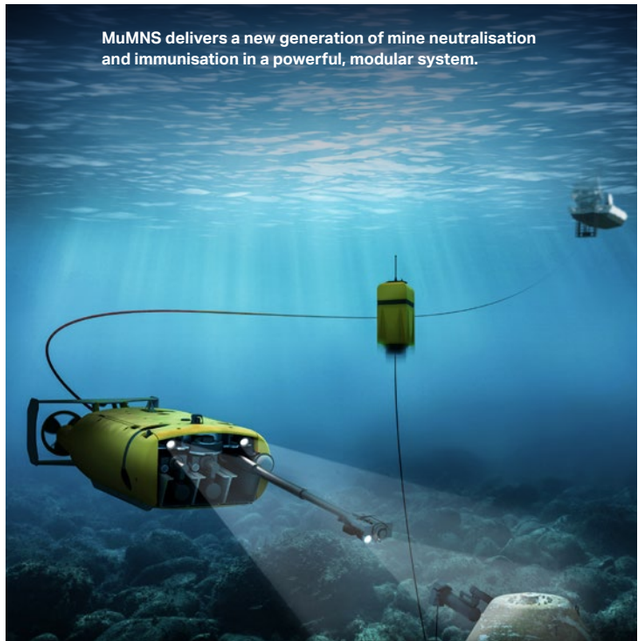


SAROV can be used both as an AUV for detection, classification and identification, and as a ROV for mine disposal.



Ocean Barrier integrates sensors, data and operators into one connected system, turning underwater information into real-time situational awareness for faster, more confident decision-making.

If an attack cannot be prevented, any damage must be repaired as quickly as possible. Critical undersea infrastructure also requires ongoing maintenance and repair. Sabertooth is a powerful and technologically advanced platform available in both single- and double-hull versions, combining Saab's military technology with commercial ROV/AUV capabilities. Thanks to its compact size, wireless operation and agility, the Sabertooth can move easily and safely in and around complex structures. This makes the vehicle ideal for offshore construction work and autonomous inspection, maintenance and repair (IMR) of subsea installations and tunnels. Sabertooth can operate independently from its docking unit, remaining there around the clock. When a 'garage' on the seabed is used, it can even function for up to six months without maintenance, eliminating the need for costly surface vessels. This hybrid AUV/ROV deep-sea vehicle, capable of "hovering," offers 360-degree manoeuvrability with six degrees of freedom, as well as interfaces to support a wide range of sensors and equipment.



MuMNS delivers a new generation of mine neutralisation and immunisation in a powerful, modular system.

Rising urgency

In 2023, the European Union and NATO established a joint task force for resilience and the protection of critical infrastructure to further develop and coordinate capabilities in the Baltic Sea. In March 2025, a NATO seminar on Seabed Security was held in The Hague, highlighting the role of naval forces in protecting critical undersea infrastructure. This represents a clear commitment to ensuring maritime security and safeguarding essential infrastructure. It also underscores the urgency and importance of these issues at an international level. Time is running short, however, and it is absolutely vital that a harmonised and coordinated approach is implemented as soon as possible. Cooperation among allies – combining technical, operational and legal measures – can reduce vulnerabilities and significantly minimise the risks along the seabed of the Baltic and other high-risk regions. Detecting and countering threats to critical undersea infrastructure requires advanced operations and comprehensive defence and security capabilities. Such capabilities must ensure constant, efficient and dependable protection through the deployment of new technical systems, optimised procedures and strategic foresight. To ensure a mission's success, powerful, robust and high-tech solutions are essential. Strong collaboration with industry is also essential to protect communication, energy and internet infrastructure.

Sea Giraffe AMB D

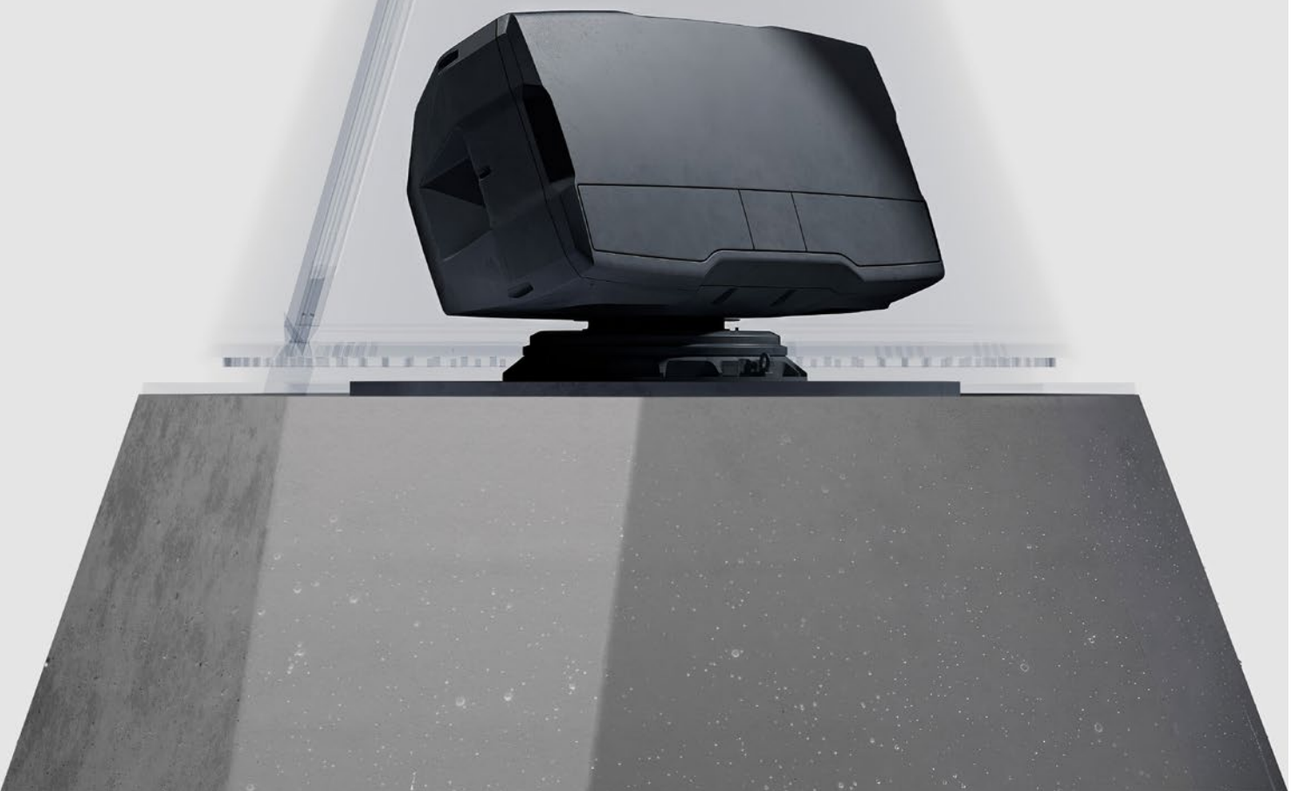
Situational Awareness for today's Maritime Operations

The maritime battlespace is becoming increasingly complex, with drones, missiles, electronic warfare and hybrid threats challenging forces across multiple domains. Maintaining the operational picture requires persistent surveillance, resilient sensors and reliable detection - even in contested electromagnetic environments.

Sea Giraffe AMB D addresses this challenge with medium-range 3D surveillance of aircraft, helicopters, drones, missiles and surface vessels. Its advanced signal processing and ECCM capabilities are designed to maintain an accurate operational picture despite clutter, interference and electronic countermeasures.

For today's maritime operations, detection is only part of the equation. The ability to integrate radar information with combat management, fire-control and wider C2 systems supports the shared situational awareness and interoperability required for multinational operations. NATO's current maritime strategy explicitly prioritises persistent maritime awareness, cross-domain C2 and the integration of emerging technologies.

In distributed, multi-domain operations, reliable sensors are the foundation of operational advantage.



AIRBORNE EARLY WARNING & CONTROL

Netherlands announces intention to procure GlobalEye

In September 2026, the Netherlands signed a Letter of Intent with Sweden for the acquisition of a Saab GlobalEye Early Warning and Control (AEW&C) aircraft.

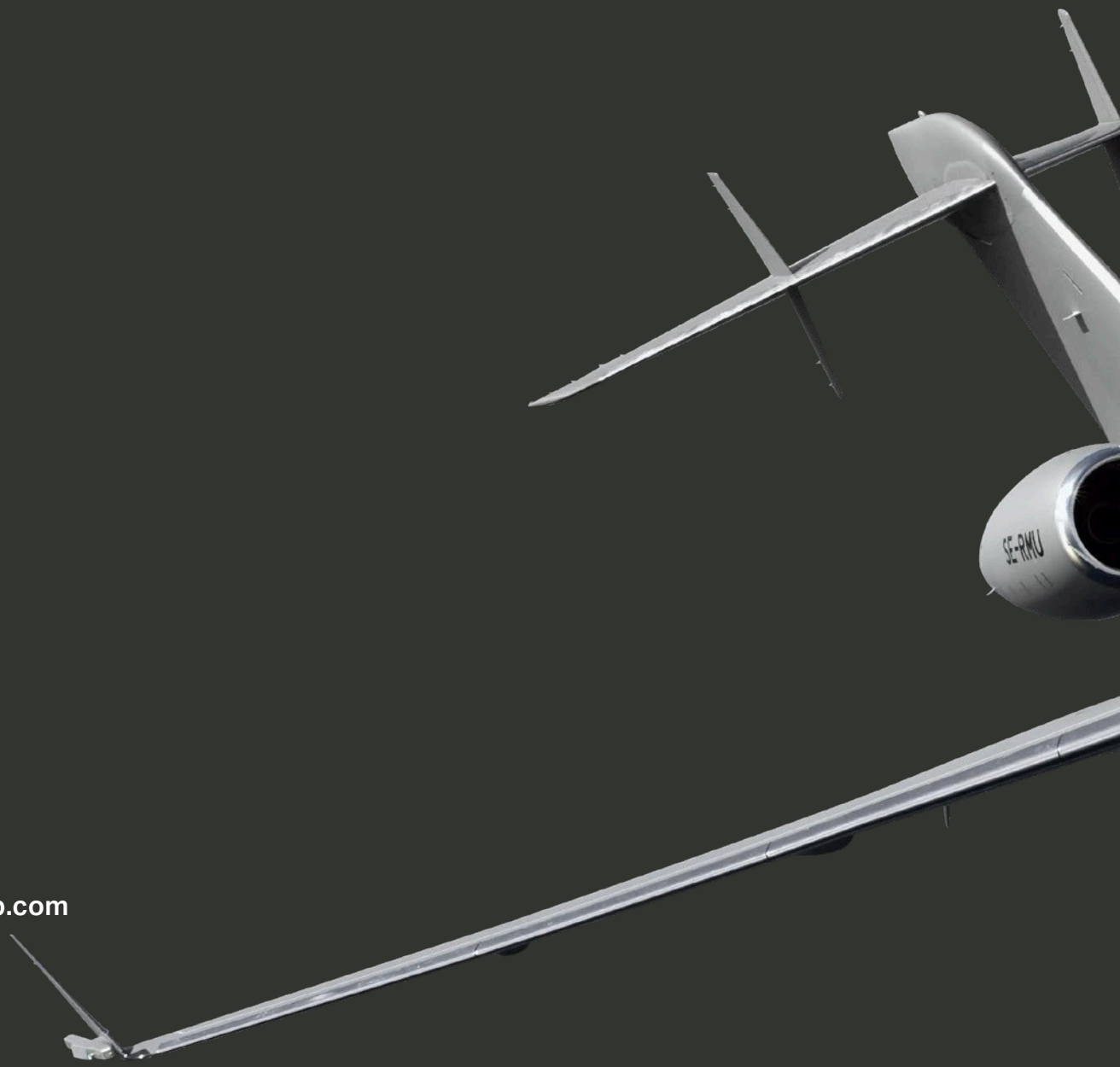
The system will provide enhanced situational awareness and early warning capabilities across multiple domains, while also strengthening NATO's ability to operate in an increasingly complex security environment. GlobalEye will enable the Netherlands to detect threats earlier, respond faster and strengthen both national and collective defence.

GlobalEye is an advanced multi-domain AEW&C solution with an array of active and passive sensors that provide long-range detection and identification of objects in the air, at sea and over land. By delivering real-time information to air forces, armies and navies, the system supports informed decision-making and effective coordination across the joint battlespace.

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