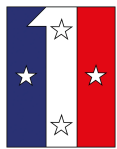




LAND FORCES 2045





Vauban Sessions 2026

The Vauban Sessions 2026 highlighted the tension between rapid technological acceleration and enduring human factors, emphasising the transition toward data-centric command architectures, the critical need to revive mass and logistics resilience in liberal democracies, and the operational mandate for multi-domain interoperability. Ultimately, the exchanges concluded that while the speed of innovation is radically shifting the character of the modern battlefield, land forces remain indispensable for terrain control, force protection, and the demonstration of political determination.

The 8th edition of the Vauban Sessions, held in Lille on May 20-21, focused on the theme of “Land Forces 2045”. The event was jointly organised by the **1 (FR) Corps** and **Forward Global**.

Held under the **high patronage and in presence of the French Army Chief of Staff**, it brought together senior leaders from NATO, the European Union, and national armed forces to discuss the future of land forces. Representatives from 20 NATO member states participated, including some 50 general officers, among them the Swedish Army Chief of Staff, reflecting the high-level engagement of the Vauban Sessions.

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The sessions were moderated in partnership with the **Atlantic Council** of the United States, the **Casimir Pulaski Foundation** (Poland), the **German Council on Foreign Relations (DGAP)**, the **International Centre for Defence and Security (ICDS, Estonia)**, and the **Royal United Services Institute (RUSI, United Kingdom)**.



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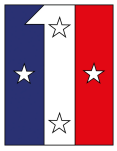


Destinus

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Transparency, attrition, and the return of mass

A central theme of the conference was the transformation of the battlefield into an increasingly “transparent” environment. The widespread deployment of low-cost, consumable technologies such as FPV drones, field sensors and loitering munitions, combined with multiplication of capacities of observation satellites, has dramatically increased the visibility of military activities by adversaries. Pervasive surveillance capabilities reduce the effectiveness of concealment and renders traditional concentrations of force more challenging. Large command posts, logistical hubs, and troop formations have become highly vulnerable to rapid detection and precision strikes, fundamentally altering how forces must operate and survive.

In response to these new parameters, HQs must adopt increasingly dispersed, mobile, adaptive, and structures while maintaining top and down contacts to assess situation, give orders and report. Survivability now depends on reducing signatures, decentralising operations, and integrating protective measures such as anti-drone systems and advanced camouflage technologies. In parallel, there is a

growing need to combine high-end, technologically sophisticated platforms with large numbers of low-cost, expendable systems. This hybrid approach reflects a shift toward affordability and scalability becoming as important as performance.


Another key issue was the re-emergence of mass as a critical factor in high-intensity conflict. Decades of post-Cold War restructuring led many European

militaries to prioritise “expeditionary” capabilities, often at the expense of depth, reserves, and logistical sustainability. However, recent conflicts have demonstrated that attrition remains a defining feature of warfare. Sustaining operations over time requires not only advanced systems but substantial stockpiles, robust logistics, and the capacity to regenerate forces.

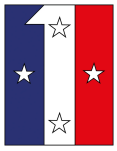
This need for mass is complicated by demographic realities, especially across Western societies. Declining birth rates, combined with a widening gap between civilian populations and military institutions, create significant challenges for recruitment and retention. The demand for highly skilled personnel in areas such as cyber operations, software development, and drone operations further intensifies competition with the private sector. In this context, some nations are exploring expanded reserve forces, volunteer programmes, and even reconsidering conscription models as potential solutions to maintain sufficient force levels.

From network-centric warfare to data-centric operations

One of the most defining evolutions highlighted during the Vauban Sessions is the transition from traditional network-centric military models to a fundamentally data-centric approach to warfare. In earlier frameworks, interoperability depended largely on shared communication systems and compatible infrastructure between allied forces. This imposed rigid constraints, often limiting cooperation to those operating within identical or closely aligned technological environments. Looking toward 2045, this paradigm is being replaced by a more flexible and adaptive model built around a



“Reserves at the end of the Cold War were based on conscription. It will need to be regenerated. It's a key challenge on the road to 2045”



decentralised “digital core,” where systems are no longer bound by closed architectures but instead designed to integrate dynamically across platforms, domains, and national boundaries.

This emerging model envisions an operational environment where sensors, platforms, and weapons systems are seamlessly interconnected through open architectures. Rather than relying on proprietary systems developed in isolation by large defence contractors, the focus is shifting toward modular ecosystems that allow rapid data exchange. In such a framework, information collected by any sensor can be transmitted, processed, and exploited by any available effector, dramatically shortening decision cycles. The concept of compressed targeting timelines—reduced to mere minutes—illustrates the operational advantage gained through this transformation, enabling faster, more precise responses in highly contested environments.

The growing integration of artificial intelligence is both a driver and a consequence of this data-centric shift. AI systems are increasingly capable of processing vast volumes of information across multiple domains, identifying patterns, and proposing actionable insights to commanders. However, despite rapid advances in software and algorithmic capabilities, physical automation—particularly in robotics—continues to face significant challenges, especially in complex

terrains such as urban environments. This creates an asymmetry in which digital systems evolve quickly, while physical platforms struggle to keep pace with the realities of the battlefield.

Crucially, the discussions emphasised that artificial intelligence must remain a support tool rather than a substitute for human judgment. While AI can enhance situational awareness and accelerate decision-making, responsibility for critical actions—especially those involving the use of force—must remain firmly with human operators. This balance reflects a broader concern about trust, accountability, and the ethical implications of increasingly autonomous systems. As warfare becomes more data-driven, the challenge will not only be technological integration but also ensuring that human control and understanding are preserved within increasingly complex systems.

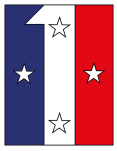
Human capacity and the limits of technology

The human dimension remains a central concern in the evolution of future military capabilities. While technological innovation offers significant advantages, it also introduces new forms of complexity which can overwhelm individual operators. One of the key insights from the discussions is that technology must be designed not only for performance but also for usability under extreme stress. Soldiers operating in high-threat environments cannot be expected to manage overly complex systems or process excessive amounts of information without risking cognitive overload.

This is particularly evident in the integration of autonomous and semi-autonomous systems. While robotic platforms and AI-driven tools can enhance operational effectiveness, they also require careful management to ensure that they support rather than burden human operators. The goal is not to replace soldiers with machines, but to augment their capabilities in a way that preserves clarity, control, and effectiveness in decision-making. This requires a careful balance between technological sophistication and operational streamlining.

“Tomorrow, the battle will be around data, the capability to reach data, analyse it, put it together, and act before your adversary does.”






The discussions also highlighted the importance of protecting both the physical and psychological resilience of personnel. In highly contested and persistent combat environments, soldiers face continuous stress, exposure, and risk. Innovations in force protection—such as improved defensive systems against drones, enhanced concealment technologies, and biometric monitoring—are therefore essential components of future force design. These measures aim not only to increase survivability but also to sustain operational effectiveness over prolonged periods.

At a broader level, the interaction between humans and machines is reshaping the nature of command itself. Future leaders will need to operate in environments where decisions must be made rapidly, often based on complex and partially automated data analysis. This requires new forms of training and education, emphasising critical thinking, technological literacy, and an understanding of the limitations of automated systems. The challenge is to ensure that commanders remain informed and responsible decision-makers, even as the tools at their disposal become more advanced and autonomous.

Interoperability, industry, and societal integration

Interoperability emerged as a non-negotiable requirement for future military operations. In an increasingly interconnected and multi-domain battlespace, the ability of allied forces to operate seamlessly together is essential for both deterrence and effectiveness. Yet interoperability is not only a matter of technical compatibility: its most basic foundation is language. In multinational headquarters,

the use of a foreign language as the common working language inevitably reduces communication to a lowest common denominator, slows cognitive processing, and ultimately affects the speed and quality of decisions. More broadly, interoperability also depends on shared doctrine, common understanding, and the ability to communicate clearly under pressure. While standardisation plays an important role, the discussions cautioned against excessive uniformity,



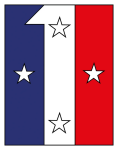
“Interoperability is no longer a technical ambition but an operational necessity.”

advocating instead for a balanced approach which preserves national flexibility while ensuring operational coherence.

Achieving this level of interoperability requires a fundamental shift in how military capabilities are developed and procured. Traditional acquisition models, often marked by long development cycles and rigid specifications, are ill-suited to an environment of rapid technology evolutions. Instead, there is a growing emphasis on iterative development, where systems can be continuously updated and improved through software and modular upgrades. This approach allows forces to adapt more quickly to changing threats and operational requirements.

The role of industry is central to this transformation. Effective collaboration between the military and the defence industrial base is essential to accelerate innovation and ensure relevance. This includes greater engagement with small and medium-sized enterprises, as well as non-defence technology sectors, which often operate at a faster pace than established defence contractors. Shorter feedback loops between users and developers are critical, enabling rapid experimentation, learning, and adaptation.

Beyond the military-industrial relationship, the discussions also underscored the importance of a broader “whole-of-society” approach to defence. Modern conflicts place demands not only on armed forces but also on economic systems, infrastructure, and political resilience. Secure supply chains,



access to critical materials, and the ability to scale production quickly are all strategic considerations. This integration of civilian and military capabilities reflects a recognition that long-term deterrence and defence depend on the strength and adaptability of society as a whole.

A related issue is culture, which shapes how forces respond in moments of tension and crisis. Different national cultures influence the way commanders perceive risk, interpret uncertainty, and make decisions under pressure. Likewise, differences in doctrine can create friction when national approaches must be reconciled into a common framework. Bringing national doctrines into a shared doctrine can improve coordination, but it can also entail a loss of reasoning depth, initiative, and operational flexibility if the common framework becomes too restrictive. The challenge is therefore not only to align structures and procedures, but also to preserve the intellectual and practical diversity that makes multinational forces effective.

Conclusion - Shaping the forces of 2045

The overarching message of the 2026 Vauban Sessions is that while no one can know exactly what the warfare of the future will look like, it will in large part be fought with the systems chosen today, and with doctrines, concepts, and units trained to apply them. Rather than focusing on a single model of warfare, military planners must prepare for a wide spectrum of scenarios, ranging from high-intensity conflict to hybrid and sub-threshold operations. Recent conflicts have shown that while technological disruptions can transform the tempo and conduct of operations, doctrine, organisation, and concepts of employment usually take much longer to adapt. This is why future forces must not only be technologically advanced, but also adaptable, resilient, and able to operate across multiple domains and contexts.

The transition to data-centric operations, the re-emergence of mass, the evolving relationship between humans and machines, and the need for industrial and societal integration all point toward a more complex and demanding strategic environment. Success will depend on the ability to balance innovation with practicality, speed with control, and technological advancement with human judgment. The forces of 2045 will not be defined by any single capability, but by their capacity to integrate diverse elements into a coherent and effective whole.

Preparing for the future is as much a political and societal challenge as it is a military one. It requires sustained commitment, adaptability, and a willingness to rethink established models in light of emerging realities. The discussions made clear that maintaining relevance in the decades to come will depend not only on anticipating change, but on building the structures, relationships, and mindset necessary to respond to it.

