Why Europe needs to invest in its defense institutions

Building an agile, flexible capacity across the defense ecosystem will be critical to the challenges ahead

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Foreword

The past six months have seen a fundamental shift in the European defense and security landscape as nations seek to counter growing global and regional threats and establish strategic autonomy.

Since January, European members of NATO have rapidly adopted new policies and rewritten legislation so that they can undertake an intensive increase in defense spending and equipment (from 2% to 5% of GDP by 2035).

The majority of that new spending will be invested in new weapons systems and frontline equipment but, to be truly effective and improve European security, the increased investment in equipment must also be bolstered by a new approach to defense and military preparedness.

Faced with systemic challenges, governments must rethink and reshape their entire defense and security sourcing and supply chain ecosystem. This will necessitate working closely with the private sector to enable more agile and flexible materiel procurement, development and production. It will involve shaping new data frameworks, systems and digital threads to maximize core organizational capabilities. And it will require a more flexible and open-minded philosophy to nurturing talent both from within the ranks of existing personnel and also wider society.

In this paper, we provide a blueprint for some of the ways governments can take action now.

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Europe's defense is being reshaped by a world where threats are no longer linear, alliances are less predictable, and adversaries exploit speed, ambiguity, and hybrid tactics to destabilize without formally declaring war. This has forced European governments to rethink their security assumptions and address their lack of strategic autonomy. Their immediate reaction has been to boost defense budgets – sometimes suspending or modifying fiscal rules to do so[1] – with a prime focus on investing in military equipment.

This is a crucial step and a real statement of intent. However, rearming is only one part of what is needed if Europe is to effectively respond to the threats it faces. That will require a comprehensive re-imagining of how defense ministries operate in this changed landscape. As well as bolstering arms and capabilities, Europe needs its defense institutions to develop and deploy the right people and materiel at the right time, strategically and with clear effect. Defense ministries can spend billions on advanced platforms, cyber tools and AI systems, but without the ability to adapt organizationally, those investments won't translate into operational advantage.

Organizational capability has been sorely neglected for years. Taking the "peace dividend", with constrained budgets and capability-cutting efficiencies, has meant many European defense institutions' ability to act responsively has been compromised. They have become rigidly focused on a diminishing number of legacy tasks – often misaligned with the demands of modern, multi-domain conflict. Simply put, they have lost the capacity, imagination, procedural knowledge and even culture to think differently and react to new, unexpected threats.

The battlefield is no longer the only front line. Strategic success now hinges on how defense institutions scale, adapt, and act – before the first shot is fired (See example 1). Developing these core organizational capacities within defense institutions requires a systemic approach that goes beyond digitization and automation of what exists today. The good news is that a well-focused investment of time, effort and technology can deliver tangible, even transformative results. Nevertheless, it will require leaders to embed innovation into the core of how defense institutions operate, making it a repeatable, scalable, mission-driven process that accelerates capability development, mobilizes talent, and strengthens collective resilience.

Where should European defense leaders start? Overleaf we've identified three areas where focused effort can unlock disproportionate gains in agility, readiness, and resilience.

Example 1. Organizational capabilities needed to achieve strategic objectives in 21st century defense

Strategic success requires defense institutions to have three organizational capabilities:

Scalable adaptability refers to the ability of an organization to rapidly scale, deploy and descale capabilities in response to emerging threats across diverse environments. It includes surging production of vital components, mobilizing talent and embracing agile procurement – especially from innovative and smaller enterprises. This capability is underpinned by a mindset that accepts the frictional costs of agility as necessary trade-offs compared to the inefficiencies of trying to own and operate all capabilities at once.

Strategic agility refers to the capacity to understand evolving threats, assess risks and costs swiftly, and make timely, empowered decisions across the organization. It demands a clear focus, decentralized decision-making, a culture that embraces calculated risk and integrated data systems that support agile responses. Technology must enable decision-makers at all levels, and organizational culture must prioritize skills, experience, and continuous learning over hierarchy.

Collective strength of defense refers to the ability to function as a coordinated whole across ministries, departments, allies, and society. It emphasizes genuine partnerships with suppliers and critical infrastructure providers, interoperable capabilities with allies, and public support for sustained investment. This strength is built on shared authority where beneficial, talent flows across sectors, and a holistic view of security that integrates economic, diplomatic, and societal dimensions.

1 Embrace and enable agile development of military capability

An effective defense institution must be able to rapidly scale (and descale) capabilities in response to emerging requirements and sustain them efficiently and effectively.

This is not the case in most of Europe and allied nations today. Many defense ministries offer their most important contracts to single or restricted bids from large incumbent suppliers, often through long, complex and opaque arrangements.[2] The frequent delays and cost overruns of this system are well documented (see example 2).[3] Even once procured, equipment availability rates and its operational impact can be undermined by management systems that are inherently risk averse, lack agility, and disempower military leaders.

It doesn't have to be this way. Over the past three and a half years in Ukraine, we have seen what is possible when the threat demands it (see Example 3 overleaf). Admittedly, the acute crisis of being at war allowed the Ukrainian government to directly override many of the procurement policies and financial controls to which the rest of Europe must continue to adhere. But the lessons are clear.

European defense institutions need to develop a fundamentally updated strategic sourcing model, one that can build deep, truly collaborative partnerships with the entire supplier ecosystem, including innovative technology SMEs and non-traditional defense companies. This requires flexible, mutually beneficial commercial engagement to enable rapid iteration of capabilities. Bringing partners into this ecosystem at speed and connecting them with users involves investment in information sharing, innovative thinking about funding mechanisms and a dedicated effort to simplify and optimize rules and processes that currently hinder agility.

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[2] The lack of transparency in Defence contracting makes it difficult to cite clear statistics – official procurement databases are estimated to cover on average only 20% of contracts by value. Estimates for negotiated award rates include around 50% for the UK (with an average length of 4.9 years), 70% for Poland and 93% for Lithuania.

[3] Rearming Europe: Challenges and Constraints – War on the Rocks

[4] One of the military's simplest procurement projects is being tied down by red tape | CBC News

Example 2. A case study in unagile military capability development

The Canadian Armed Forces' light utility vehicle program offers a revealing example of how well-intentioned processes can inadvertently hinder timely and cost-effective capability delivery. Originally conceived to replace aging fleets with modern, off-the-shelf light trucks, the program has spent over a decade in options analysis and requirements refinement. Despite the relative simplicity of the vehicles involved, the procurement timeline has stretched to an estimated 13 years, with costs now approaching C$1 billion – more than double initial projections.[4]

This outcome is not the result of negligence or lack of expertise. Rather, it reflects a broader systemic challenge: the tendency to over-engineer decision-making in pursuit of certainty and risk mitigation. Multiple layers of review, validation, and re-validation, while intended to ensure accountability, have created a cycle of delay and diminishing returns. In effect, agility was traded for procedural perfection. Several factors could have helped prevent this trajectory:

- Clearer alignment between operational need and procurement urgency: Light utility vehicles are not strategic platforms; they are enablers of daily operations. Treating them with the same rigor as complex weapons systems may have been disproportionate.

- Empowered decision-making at lower levels: Allowing program managers greater discretion within defined parameters could have accelerated timelines without compromising oversight.

- Adoption of commercial best practices: Leveraging proven off-the-shelf solutions with minimal customization would have reduced complexity and cost.

- Iterative acquisition models: Procuring in tranches, with feedback loops from early fielding, could have allowed for course correction without stalling the entire program.

Ultimately, the Canadian light utility vehicle program underscores the importance of balancing diligence with decisiveness. In an era where threats evolve rapidly and resources are finite, agility in capability development is not a luxury but a strategic imperative.

NATO nations have talked of addressing these issues for years – and there are some bright spots. A trial of procurement reforms in the UK, prioritizing iterative delivery, enabled the MOD to field the DragonFire laser weapon capability five years ahead of schedule, providing naval drone defense at just $13 per shot.[5] In the US, programs like the A-10 Warthog wing replacement demonstrated that investment in a shared 'digital thread' across the capability lifecycle – connecting users, prime and sub-contractors – can cut timelines, reduce costs and mitigate supply risk.[6]

Despite these best practice examples, we have not seen a change in the procurement performance across most programs. Why?

Our experience and analysis suggest a new systemic approach is required. This involves creating the technical platforms, data environments and digital cultures necessary to establish a digital thread across the acquisition and sustainment lifecycle. Equally critical, though, is an organizational approach that trusts its leaders to make decisions rapidly and work iteratively, and which empowers users and private-sector partners to drive capability together. This way, technology can work in harmony with process, policy and culture across a wide range of industry players and other government ministries.

Example 3. Ukraine: A case study in an ecosystem approach to agile military capability development

Facing a numerically and technologically superior adversary, Ukraine had urgent, rapidly evolving battlefield needs. New drone capabilities were being created by talented individuals acting alone or in small start-ups, but complex internal processes initially hampered the Ukrainian Ministry of Defence (MOD) ability to incorporate them into their order of battle.

The turning point only came when the MOD reorganized itself to actively foster a dynamic ecosystem – connecting front-line user feedback directly with a growing domestic drone industry and international partners. The MOD simplified procurement and certification, while the Ukrainian Digital Ministry created the Army of Drones initiative to help innovators be part of that process. A dedicated defense technology body streamlined capability development with the creation of Brave1, a digital innovation platform and marketplace to develop and fast-track new weapons that allows military personnel to directly choose what they need for their task, based on field performance.

The impact was transformative: Ukraine was able to quickly deploy, iterate and scale diverse drone capabilities, ultimately encompassing millions of units across dozens of types.

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[5] New procurement rules help rapid fitting of military laser to Royal Navy ships - GOV.UK

[6] It is estimated that this approach reduced the design and qualification time by around a year, resulted in a 60% reduction in sustainment engineering response time and reduced aircraft downtime from 2000 hours to 700 hours.

2 Fielding the right talent in the right place at the right time

Military capability is increasingly defined by technology, data, and influence, often wielded far from a traditional battlefield. The ability to field a full-time fighting force will remain important, as the war in Ukraine makes clear. Yet outside this core, militaries must become more adaptable if they are to move at the speed of the threat today. Turning the language of "right talent in the right place at the right time" into action requires a more flexible approach to developing existing personnel while also making smart use of reservists, veterans, and the entire national skills pool.

Europe's rigid military institutions currently are not fit for this purpose. Most still rely on a closed-loop system that recruits people aged 18-24 and expects them to learn and develop every skill they (and the organization) will need within their individual command structure. Worse, talented individuals often are locked into rigid, single specialisms, with little strategic management of skillsets or

room for growth. It's little surprise then that the Regular Force struggles to retain the people it needs,[7] a weakness that is exacerbated by the wider challenge of retaining technical skills across the defense ecosystem.[8] The fact that those skill gaps often are only discovered when defense leaders see ships unable to go to sea or planes unable to fly means any attempt at rectifying the problem comes too little too late.

Then there is the untapped potential of the Reserves and Veterans. In some cases, institutions may not even know the amount and type of talent they have at their disposal outside the Regular Force. In Germany, the Bundeswehr has reportedly lost contact with up to a million potential reservists because of stringent data protection laws. Even where the resource on hand is understood, Reserves are generally used only for discrete backfilling tasks, meaning their broader civilian expertise is lost and the potential

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[7] To take two examples, the Bundeswehr is well over 20,000 personnel short of its 2031 target of 203,300 active soldiers, while the UK Armed Forces face skills shortfalls in 116 "pinch points" from digital skills to welding.

[8] A recent survey of the European Defense ecosystem across 17 countries found that 72% of organisations report critical mismatches in the technical skills they need to deliver and support modern capabilities.

Example 4. How a skills-based approach can transform capability delivery

A skills-based approach to defense workforce management fundamentally shifts how operational capability is delivered by focusing on what people can do, rather than where they sit in the hierarchy or what their formal role is.

It enables rapid talent deployment by matching people to tasks based on their actual abilities – categorizing Regular, Reservists and Veterans based on skill relevance, not rank or time served. The modular force design is based on mission needs rather than rigid force structures, and predictive modelling informs recruitment, training, and career development needs.

For example, the Australian Defence Force's (ADF) Total Workforce System (TWS) is a tri-service framework that redefines service categories (SERCATS) to organize skill availability based on how much individuals are willing to give in terms of time and control over where and how they serve. The most recent ADF strategic review found that TWS has enhanced the ADF's operational agility by enabling more flexible use of Reserves – especially when it comes to crisis response – to improve talent retention and re-engagement, and lay the groundwork for more strategic, skills-based workforce planning.[10]

contributions of talented people remain untapped. Leaders that want to use reservists[9] in new ways are often stymied by their own internal bureaucracy. The result is an inefficient, unresponsive workforce ill-equipped for the speed and complexity of modern conflict.

There is a better model – one where defense institutions maintain an expert Regular core to focus on the unique business of fighting and winning in the field but surround and augment it with supporting layers of talent and skills accessed from the Reserves and the private sector. This way, skills and relevant experience can flow in and out of the institution, balancing a competitive market with strategic national security demands – as opposed to the non-competitive revolving door relationships that have existed for so long and often perpetuated the weaknesses of the military to adapt. With this new adaptable structure, defense institutions gain access to critical, in-demand skills without the non-regular personnel needing the full suite of military experience (see example 4).

A move toward a skills-based management system, underpinned by data and technology and applied across the national and regional defense workforce, will enable a far more efficient and effective fighting force. It starts with a full understanding of current forces' individual capabilities. Mapping who has the skillsets needed to deliver all military capability (not just mission-critical skills gaps) across divisions, services and agencies (and eventually across the Reserves and Industry) is foundational to resolving skill shortages. Without that data, there can be no analytics and without those insights, organizational plans will remain post-hoc and assumptions driven.

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[9] Bundeswehr Loses Contact with Nearly One Million Potential Reservists Due to Data Protection Laws - Berlin Today

[10] Strategic Review of the ADF Reserves

Once that ecosystem is established, organizations can use digital twin technology and AI-driven analytics to create a skills-first personnel management system that anticipates problems and identifies solutions across domains, services and even sectors. Such a system could help identify personnel with cyber, language, or technical expertise, for example, who may be underutilized in their current roles and then redeploy them to mission-critical units. It could also help defense leaders map skillsets across the force to future capability needs and allow militaries to proactively train personnel. This is not just a question of efficiency, but a foundational part of delivering operational success.

But deploying a systemic data-enabled approach involves both structural and cultural change. It requires creating flexible new pathways for those outside defense to serve. For those inside, many careers will look fundamentally different. There should be no more serving time in box-ticking roles to get promotion, since the organization will know how to make the most of each person's skills in the right job for it and them. This will require a more holistic and adaptable approach to career management. It will, in turn, demand changes in how the organization rewards critical skills, using flexible pay and non-financial incentives, prioritized toward those who contribute most to core needs.

Critically, European military leaders must change how they approach accessing talent. This requires a commitment to embrace a systemic approach to addressing skills gaps by uniting organizational processes, policies and culture. This doesn't mean a top-down, centrally controlled design of the workforce. Instead, the system must empower military leaders throughout the institution with the policy, budgetary and contractual freedom to let them find and integrate the best talent for the task, whether from Regular Forces, Reserves or Civilian Contractors. Ultimately, leaders who are empowered to address their workforce problems build and rebuild their teams in different, more effective ways – but only if they are given the financial and procedural freedom to do so.
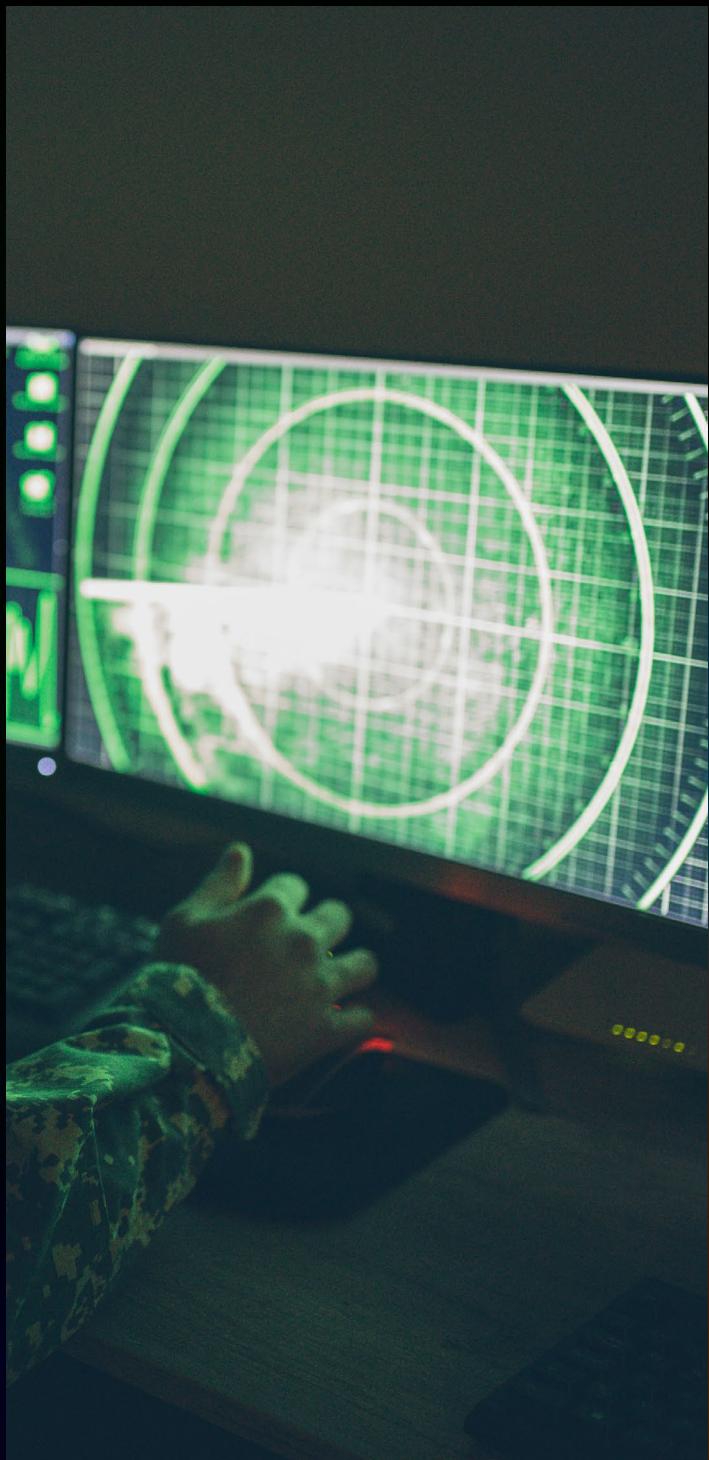
3 Establishing collective strength against hybrid, asymmetric threats

Many decades of relative peace across Europe have created a culture where national security has been viewed as a specialist area. But strategic defense is becoming increasingly complex, often stretching far beyond the scope of defense ministries. Hybrid threats deliberately blur the lines between peace and war, targeting the seams in a nation's social, economic, and political fabric. An effective response, therefore, cannot come from the military operating in a silo.

The nation's collective defense will be determined by the full power of the state, combined with the innovation and resources of the private sector to collectively defend against asymmetric and hybrid threats. The first step in meeting such challenges requires an understanding of the nation's assets. Only then can governments identify their core requirements for preparedness – whether that's stronger social cohesion, national skill availability, more effective land, air and sea logistics to mobilize for combat,[11]

better cybersecurity coordination or another part of the national fabric. Such a foundational exercise enables an assessment of vulnerabilities and appropriate resource allocation to anticipate the coordinated responses needed.

There must then be a tight linkage between the strategy for national security with that for national preparedness and resilience. At present, national security remains institutionally fragmented, with budgets and responsibilities siloed within different ministries – principally defense, interior, transport and energy. These often lack the culture, institutional incentives, and mechanisms for genuine collaboration. The private sector, meanwhile, which owns and operates most of the critical infrastructure now on the front line, is frequently treated as a contractor or a stakeholder to be consulted rather than as a genuine partner in a shared security mission. This creates dangerous vulnerabilities that can be targeted with plausible deniability by adversaries.

[11] Europe Would Struggle to Redeploy Tanks if War Were to Break Out, Needs €17 Billion to Fix Logistics | Defence Express

The lessons from the 2022 sabotage of the Nord Stream gas pipeline demonstrate why governments must stop treating resilience as a purely military task and instead build genuine partnerships with the private sector owners of critical infrastructure (see Example 5). The state's role must shift from central controller to agile enabler, empowering a trusted network of public and private actors with the information and authority to act decisively. This requires a new, tech-enabled framework for collaboration and an institutional hard-wiring of collective defense before the next crisis arrives.

Better defining defense institutions' role in the protection of vital national resources (beyond military assets) is a good place to start. This could include a review of existing defense assets and how they could be applied to national threat vectors impacting communities, infrastructure, or businesses. By clearly defining its own role and those of other ministries – in safeguarding vital national resources, defense institutions can shape strategic plans that apply military and non-military assets flexibly to evolving risks. Achieving cross-government alignment, with each department operating according to a unified vision that prioritizes both preparedness and resilience, is essential if this planning is to enhance real-world readiness.

This integrated posture must be underpinned by strategic partnerships with defense suppliers and critical asset service providers. These partnerships can then be enabled through interoperable data architecture and operational platforms, as well as standardized and streamlined processes that elevate holistic capability over marginal cost savings or competitive posturing. Shared sovereignty of regional assets with other country stakeholders can result in stronger joint outcomes without compromising control over vital interests.

To ensure that this integrated approach is effective, strengthening collective defense must be grounded not only in strategic partnerships and interoperable systems, but also in a society that is actively informed and engaged. By connecting government and industry efforts with transparent communication and public awareness, nations can foster a culture of resilience, where every sector of society is empowered and aligned in a common mission in the face of future crises.

Example 5. Nord Stream: a case study in agile multilateral, collective crisis response

Often it takes a crisis to force institutional change as the 2022 sabotage of the Nord Stream gas pipelines showed. The disruption cost tens of billions of euros and the continent's vulnerabilities were exposed.

In response, NATO demonstrated unprecedented institutional agility. Within five months, it had established a dual-hub architecture: a strategic Coordination Cell in Brussels to integrate policy and build partnerships with industry, and an operational Maritime Centre in Northwood, UK, for real-time monitoring and response.

The model's most innovative aspect is its network-centric approach, systematically integrating government, military, and private sector operators as equal partners. The return on this kind of investment in coordination can be immense. Analysis of similar maritime information sharing initiatives suggests a 30% reduction in threat is achievable, representing as much as a 40 to 1 cost-benefit return.[12]

The Nord Stream response illustrates how institutional agility and multilateral coordination can rapidly translate into operational resilience. But it also underscores a deeper imperative: defense institutions must evolve to strengthen the connective tissue between national, industrial, and allied capabilities.

[12] CISE benefits - European Commission

Steps to take now

Right now, Europe is setting aside funds to buy the world's finest Stradivarius violins for an orchestra that has only one piece of sheet music and only half the other instruments and players. But victory in this new era will be determined not just by equipment inventories, but by the agility, adaptability and collective strength of the entire national defense ecosystem. This requires a fundamental shift away from rigid, top-down control towards empowered institutions that can move at the pace of the threat today. Ultimately, making the most of new defense spending requires a fundamental change in how defense ministries operate.

It is, admittedly, a major undertaking. Still, there are some actions that defense institutions can take right now to help start the process of change:

To begin embracing agile military capability development, European defense leaders can:	■ Identify specific areas or topics where there is broad consensus that rules and regulations have gone too far and authorize radical experimentation in high priority areas with financial and policy top-cover from the most senior levels. ■ Mandate collaborative workspaces using a digital thread throughout the supply chain to connect users and their requirements with design, procurement and sustainment teams. This transparent data sharing will naturally accelerate prototyping, enhance lifecycle visibility and create bottom-up demand for collaboration. ■ Adapt institutional performance frameworks to reward empowered leadership, iterative delivery, and cross-functional collaboration – shifting the culture from risk avoidance and procedural compliance toward speed, experimentation, and operational impact.
To establish a skills-based approach to workforce management and begin fielding the right talent in the right place, at the right time, European defense leaders can:	■ Launch a comprehensive digital skills inventory, mapping every individual's core and adjacent competencies and matching these to current and anticipated operational requirements. If this is too ambitious, focus on one priority area first to demonstrate value. ■ Deploy advanced workforce analytics and digital twin tools to better define gaps, forecast future needs and support dynamic reassignment of personnel as mission requirements shift. Insights will demand action and support for change will build. ■ Design modular training and professional development programs that allow personnel to upskill and reskill rapidly, focusing on critical areas such as cyber, data, and next-generation technologies.
To strengthen collective defenses across national and regional assets against hybrid, asymmetric threats, European defense leaders can:	■ Jointly create operational frameworks that link military, civilian, and private sector stakeholders for coordinated planning, threat intelligence sharing, and contingency response, by starting with an area where everyone is most comfortable with radical transparency. ■ Standardize protocols for cross-border and cross-sector exercises to test resilience and improve interoperability in countering cyber, information, and unconventional attacks. ■ Invest in standardized and role-specific cybersecurity and threat awareness continuous learning to increase preparedness for defending against hybrid and asymmetric threat scenarios.

These changes are about making defense institutions fit for purpose in a constantly evolving security landscape. By focusing on what truly drives capability—agility, skills, and collective strength—defense leaders can mobilize and deliver where and when it's needed.

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