THE RESILIENCE AGENDA

MEETING EUROPE'S SECURITY, CLIMATE AND COMPETITIVENESS GOALS TOGETHER

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SYSTEMIQ

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European security, climate action and economic competitiveness are complementary and reinforce each other. We cannot choose one and drop the other.

Europe stands at a crossroads. Security is firmly back on the agenda. Russia's invasion of Ukraine in 2022 caught Europe off guard. The United States is steering European NATO members to prepare for their own defence and emphasised the NATO spending target of 5% of GDP in its National Security Strategy.[i] The war in Ukraine has underscored the possibility of a more assertive Russia, even if hostilities pause. Critical infrastructure and maritime zones are increasingly being targeted by hybrid warfare tactics. China is asserting its leverage over critical materials and clean technologies.

National security means resilience against all threats and credible deterrence. That requires adapting to the military threats of today, including hybrid warfare and autonomous, semi-autonomous and remote-controlled systems. Meanwhile, the security threat of climate change is becoming more tangible. The continent is warming twice as fast as the global average. Extreme weather events like floods and droughts bring the message home to European doorsteps, from Spain to Germany to Poland. Yet it is not only through extreme weather that Europe will be affected; climate change is driving insecurity globally, disrupting supply chains, increasing prices, and unsettling financial stability through complex, cascading impacts.

Europe needs to face these immediate security and climate challenges while dealing with the urgency of its declining competitiveness – the result of an incomplete single market, fragmented governance, high public spending, underinvestment, strategic dependencies, high energy costs and an ageing population. Fiscal pressures and borrowing costs for national governments are set to rise. Europe needs a strategic vision to foster political imagination, institutional agency and societal endurance to collectively face these challenges.

Hard security, climate action and economic competitiveness are often framed as mutually exclusive: "investing in security means less action on climate", "we cannot be competitive *and* decarbonize", or "rearmament is too expensive when we need to invest in domestic industry". These are false dichotomies. As former Finnish President and EU Special Advisor Sauli Niinistö pointed out, climate security, national security and a competitive economy are often complementary and reinforce each other.[ii] We cannot choose one and drop the other.

An "all-of-society resilience" approach can act as an overarching lens spanning security, climate and competitiveness. It can clearly set out the win-wins across these agendas, including through dual-use technologies and mutual reinforcement between defence, climate and economic effectiveness through strong value chains. The objective is supporting strategic autonomy rather than self-sufficiency.

If climate *change* is a security threat, then climate action supports peace and stability. In defence, immediate readiness for hostile acts has many complementarities with emergency response capabilities. As Europe pours billions into security spending, we have an opportunity to push innovative breakthroughs that build collective resilience in our defence, climate and competitiveness via material science, energy innovation and clean technologies. Strengthening our militaries and economies can break the same patterns that also drive climate change: wasteful, emissions-intensive resource extraction and consumption. Renewable energy sources, circular value chains and regenerative agriculture can provide more resilient outcomes for both European and planetary security.

This white paper outlines seven priorities for Europe across the resilience nexus of security, climate action and competitiveness. Not claiming to be complete, this strategic agenda sets out to spark discussion.

1 Expanded intelligence, foresight and analysis

The security context is rapidly evolving due to a complex mix of old and new drivers of insecurity, such as climate change, supply chain vulnerabilities and gaps in industrial and technological capacity. Expanded intelligence takes a broader view and builds new methodologies and capabilities to supply knowledge and insight. There is a strong human component to intelligence: analysts must interpret the data and policymakers can use this for their decisions. Both will learn and continuously improve in a volatile environment of new risks and imperfect data.

Operational intelligence.

For resilience to be effective against all threats, understanding what is happening in nearby theatres of conflict is essential, e.g., Ukraine and Gaza. Analysing the impact of technologies and how they are adapted informs resilience against multiple vectors. The impact of continuous Russian attacks on Ukrainian energy systems gives learnings for European energy security and how to deploy renewable, distributed power generation. Climate change also brings new instabilities and cascading risks. A mapping of local drivers, projecting impacts at a geographically specific level, and how they cascade across infrastructure and food systems to the economy, security and migration can guide better planning and prioritize investments with the highest resilience returns.

Industrial foresight.

Europe's defence, climate and economic resilience depend on stable techno-industrial foundations. Modern warfare is as much a race in disabling the counterpart's infrastructure, fuel logistics and technological capacity as it is about direct military tactics in the battlefield. Climate emergencies and economic shocks are indiscriminate in their targets, but lack of knowledge means we are flying blind. Assessing the industrial base of both military and civilian security and Europe's strategic dependencies on external pressures, is key to effective procurement and strategic autonomy in a tense geopolitical environment. Identifying critical infrastructure assets and other vulnerable nodal points is essential to take proactive rather than reactive measures for climate, economic and military emergencies.[iii]

Economic analysis.

Building resilience in the broader European economy presupposes a holistic understanding of the domestic value chains and global trade flows. Supply chains need to be mapped end-to-end to surface the underlying security vulnerabilities and dependencies. Novel approaches in economics can give policymakers more granular insights and tools to map vulnerabilities and choke points. Meso-economics looks at value chain dynamics that are not captured by micro- or macro-economics, highlighting risks from upstream and downstream linkages or cross-border trade patterns. Complexity economics can simulate economic reactions to external shocks or policy interventions (e.g., onshoring, circular materials, etc.) for improved decision-making, using bottom-up data sets or digital twins in combination with Artificial Intelligence (AI) and machine learning.[iv]

2 Multi-mission innovation

The lines between innovation in the military and civilian domains have always been blurred but ensuring that technological breakthroughs rapidly pay off in both requires systematic policy. Advancements in domestic manufacturing, circularity and product design across energy, materials and digital value chains can simultaneously enhance security, sustainability and competitiveness. Energy transition is a key opportunity with resilience dividends for Europe's climate security, defence readiness and economic competitiveness.

Shock resilience.

Keeping critical infrastructure for energy, transport and digital services prepared for shocks is essential, including as part of credible deterrence. Rail infrastructure is key to military mobility and enables reliable, clean transport of people and goods during peacetime. Electrified equipment can increase mission autonomy and reduce fuel supply chain and convoy vulnerability. Core military assets can provide immediate disaster relief, for example as facilities for remote power generation or water desalination. Localized micro-grids and smart flexibility can supply energy in both active battle and civil emergency scenes, and integrating energy storage can improve energy security. Situational awareness and early warning systems can provide "dual-use intelligence".

Dual-use innovation.

Industrial innovation can benefit defence readiness, climate action and economic competitiveness all at once. Using defence as the lead market and incentivizing wide adoption of multi-use innovation can create large markets for innovators and strengthen sectoral competitiveness and economic productivity. The electro-tech revolution of electrified equipment, batteries, grids and renewable power generation is already bringing down energy costs and vulnerabilities. Cleantech strengthens strategic autonomy and mitigates climate change, and the modularity of most components allows for iteration and steady decreases in cost.[v] Materials science breakthroughs (e.g. battery chemistry), lightweighting (e.g. metal casing) or 3D printing have civilian and military applications, such as spare part replacement, energy efficiency and stealth.[vi] Cutting red tape and removing other barriers to innovation can enable acceleration.

Resource productivity.

Energy transition, circularity, new product designs and novel value chains can all drastically lower critical resource inputs while creating significant value. For an inherently resource-poor continent like Europe, there are significant competitiveness advantages to *doing more with less*. The efficiency benefits of electrification and renewable technologies are just one example: heat pumps require up to four times less energy input for heating than gas boilers.[vii] Electrified, shared and micro-mobility can drastically lower energy and material needs, but will require more autonomy in material processing for batteries and grids.[viii] New circular technologies can reduce reliance on security-sensitive imports, including critical raw materials and rare earths, while delivering economic and environmental benefits. Simplifying permitting processes can accelerate the adoption of solutions that save costs.

3 Continental leverage

The ability to develop, procure and commercialize critical goods, technologies and services at scale across Europe unlocks powerful scale benefits and incentivizes companies to innovate and compete. Europe can gain significantly in defence readiness, techno-industrial prowess and broader economic resilience by moving to a "coordination by default" mindset. Security is traditionally associated with the nation-state, but the threats facing Europe require coordinated responses and shared capabilities. Cross-border market integration also enables cheaper and more diverse solutions at the frontier of innovation and productivity than national economies can.

Joint capabilities.

Defence capabilities developed, procured and deployed at the European level increase defence effectiveness, accelerate innovation and decrease costs. Next- generation capabilities in air defence, hypersonic weapons and digital-AI in particular benefit from a coordinated European approach. Joint procurement, European competition and long-term commitment are instrumental to European architecture for these capabilities. They can also enable dual use spin-offs and a boost to economic productivity more broadly. A common framework for financing can lower costs, possibly with joint Defence Bonds.[ix]

Industrial strategy.

The energy transition, circularity, digitization and novel defence markets can increase European competitiveness, but this requires targeted industrial policy support. Coordinating defence and industrial strategy at the European level, could provide sufficient guardrails to protect large-scale industrial transition and clean innovation against vested interests, and ensure continent-wide scale in R&D, manufacturing, and offtake markets. Promoting the adoption of critical low-emission technologies across domains is key to ensuring military effectiveness, climate resilience and broader economic productivity gains.[x]

European market.

The single market is still far from complete across key value chains, with energy and digital services offering significant potential for further integration. Strengthening the EU single market for energy will help alleviate immediate and long-term energy challenges, such as security of supply and affordability. Fragmented national support or uncoordinated responses to high energy prices risk jeopardizing the effective implementation of REPowerEU and the Clean Industrial Deal. Similarly, completing the digital single market built on a European sovereign technology stack and joint procurement can enable greater strategic autonomy by encouraging an innovative, competitive digital European economy.[xi]

4 Financial mobilisation

Europe needs to spend on its defence and security capabilities; on the upfront investment needs of the energy and circular transitions; and on the infrastructure to support resilience across its militaries, climate and economy. These can become positive-return investments for society at large. To meet these objectives, public procurement, private investment and public and private capital markets can work in positively reinforcing ways.

Public procurement.

Governments serve as lead markets in defence and other critical sectors, using their purchasing power and willingness to pay high upfront investment costs to bring high-cost technologies and services to market readiness. NATO's 5% of GDP spending target will cascade through Europe's industry, with an opportunity to link to desired industrial transformation with long-term benefits but high upfront barriers, including grid expansion and hard-to-abate industry. Investments can be funnelled directly towards energy, transport or digital infrastructure; or defence spending can be linked to supply chain criteria such as low-carbon steel or "made-in-Europe" content in batteries.[xii]

Capital markets.

Defence suppliers and innovators need to finance upfront capital expenditure. The Capital Markets and Banking Union initiatives of the EU can add depth and liquidity and unlock European savings to invest in domestic priorities onshore, rather than capital moving abroad. Environmental, Social & Governance criteria and other regulations can evolve in tandem to accommodate these investment needs in broad resilience, as security-centric portfolios remain off-limits in many investor mandates today. Introducing incentives that help move from a narrow "green" premium towards a broader "security" premium can unlock significant private capital for investments across defence, climate and economic resilience.[xiv]

Fiscal debt management.

Climate impacts are already putting pressure on public budgets, compounding demographic pressures, social spending and now any increased defence spending. This risks a snowball effect of deficits and interest payments that outpace economic and productivity growth. European procurement and investment is cheaper than national and can relieve budgetary pressure. The European Investment Bank (EIB) can provide concessional finance at scale for resilience investments to create financial head room. If designed carefully, Euro-bonds or EU-wide debt issuance can increase the depth and liquidity of sovereign debt markets and lower the cost of debt.[xv] This would also strengthen financial development towards a global euro, attracting further inward investment. The momentum around European defence can help build the political capital needed to make this a reality.[xvi, xvii]

5 European agency

Europe's ability to collectively act with strategic vision depends on the strength and flexibility of its institutions. Institutional agency is about ensuring that decision-making structures at the EU, national, and regional levels, as well as in NATO and other organizations beyond Europe, can respond coherently and timely to complex crises while respecting the continent's diversity of perspective and preference.

Harnessing diversity.

Europe has a layered institutional model that cuts across national, regional and transnational domains. This web of interlocking governance frameworks and institutions can slow Europe down, but it also provides diversity of perspective, strategic ambiguity and can constrain executive decision-making detached from real needs. Through institutional reforms Europe can leverage this diversity, grounded in historical and local context, to ensure that decision-making remains embedded in democratic buy-in.[xviii]

Bold leadership.

Europe could more assertively mobilize around coordinated actions for urgent topics and join forces to face security, climate and economic challenges together, combining national intent and resources. Simplification and cutting red tape across defence, cleantech and digital value chains already enjoy strong momentum. Intelligence, public spending and responses to shocks can be more effective when coordinated at the European level and channelled through institutions for supranational decision-making.[xix] Bold leadership can coexist with diversity through nimble coalitions of the willing to lead first, where consensus requires more time.

Coherence and consistency.

Europeans benefit from staying on course for single market integration to strengthen value chains and remain competitive. There are risks of member state competition with subsidy races, national favourites or even national self-reliance. Europe can build on past achievements in building common markets and join industry strategy with further economic integration.[xx] Coalitions of the willing can be a powerful tool to advance European integration where unanimity is not possible yet. In defence, moving towards a European market that includes the EU member states, the UK, Ukraine and other allies can accelerate rearmament, and hence deterrence.

6 Global outlook

Europe cannot do it alone. Security, climate and trade are each global commons where everybody wins through cooperative action and collective governance, and all parties lose when trust breaks down. Europe has no other option than to continue its support for an inclusive, equitable and rules-based international order, and at the same time responding more assertively when attacked and to reduce strategic vulnerabilities from international dependencies.

Trade hedges.

Global trade flows and supply chains risk insecurity through asymmetric dependencies or vulnerability to climate disruptions. The viability of 'Just in Time' supplies strategies is being tested in a new geopolitical risk environment. Europe can diversify suppliers, build strategic reserves (in food, raw materials and critical inputs), invest in substitutes and recycling technologies. Shifting from single-use feedstock to capital equipment and favouring resilient food producers can lower supply chain risks. Tactical, reciprocal on- and nearshoring in digital, energy and material sectors can strengthen security of supply without inhibiting value creation in its partner countries; e.g., through joint ventures with majority European ownership.[xxi] Trade hedges can be made proportionate, targeted, and time-bound.

Partnering up.

Europe can continue to find common ground with global partners to tackle challenges that originate beyond its shores, access the supplies it needs for resilience and collaborate around shared interests and needs. Multilateral convening and decision-making require broad consensus-building that fosters legitimacy and inclusive mandates. At the same time, multilateralism can be slow in acting on certain issues and dealing with urgent challenges. Coalitions of the willing can bring speed and accelerate impact, while inclusive "open door" clauses allow for expansion of membership towards a multilateral endgame.[xxii]

Resilience finance.

Beyond a commitment to the liberal international order, there is a powerful security argument to continue providing development, climate and humanitarian finance to emerging markets and developing economies. European security, readiness and competitiveness depend on stability in other regions, including for reliable supplies and trade. The EIB and many national financial institutions are well-equipped to step up their financing abroad with investments that support local stability and value creation via a "development and resilience" mandate. Support for multi-country catastrophe risk pools can complement insurance pools and prevent international financial instability. The EU Global Gateway can be a powerful channel that pays handsome dividends for Europe in green industrialization, competitiveness and climate security.[xxiii]

7 Societal preparedness

Security is usually framed in abstract (inter)national terms, losing sight of the human dimension. But humans are the core of any enduring notion of security. Security requires the support of individuals and of societies at large through a sense of agency and purpose, with judgement for ambiguous situations and with public cohesion. Human-centric security discourses can provide a critical buffer in times of societal upheaval and eroding trust in political institutions and decisions.

Protecting individuals.

Security needs to work for individuals, not just nations. Civilians are vulnerable to all shocks, irrespective of directly militarily hostile or climate-induced emergencies.[xxiv] That requires careful consideration of personal security across society as a whole, and with special attention to vulnerable demographics along gender, age, religious, ethnic and ability characteristics. Resilience against military, climate and economic shocks requires infrastructure that remains accessible and safe for the most vulnerable groups of society.

Human judgement.

Mechanized warfare, climate modelling, AI and other contemporary trends seem to imply that security and resilience will require dehumanized governance. It is important that human judgement and decision-making abilities remain embedded at the core. AI is incomplete and imperfect, which requires deliberation and experience to interpret. Decisions that impact human safety and trade-offs are never morally neutral and require human accountability (as AI decisions are prone to bias).[xxv] Governments, businesses and households need to grow accustomed to the qualitative dimensions of resilience rather than quantitative, purely cost-based decisions.

Social cohesion.

Individuals live in communities: local, regional, national, European and global in nature. Governments and militaries cannot guarantee readiness under all circumstances. Strengthening preparedness and building capacity at community level to respond, help and protect each other in case of emergency is critical for societal resilience. An *all-of-society resilience* approach, similar to existing "total defence" programmes, can be deployed not only to protect against military threats. It also has broad applications for climate shocks, supply chain disruptions and critical infrastructure attacks.[xxv] Narrative inclusiveness, civilian preparedness and institutional trust are key to social coherence in times of upheaval.

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No man is an island,
Entire of itself;
Every man is a piece
of the continent,
A part of the main.

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