Call for evidence for the EU's Strategic Foresight Report 2026

Europe is navigating one of its most turbulent periods in decades geopolitically, technologically, and environmentally. Consequently, the EU's global leadership in areas such as technology and climate is under threat. Five years into the twin transition, policy frameworks remain fragmented – and with them, the EU's ability to shape its future. The rapid growth of artificial intelligence technologies is only an initial step, and their broader impact on work and society has yet to fully unfold. Over the coming decade, new waves of frontier technologies (Advanced AI, biotechnology, neurotechnology and climate intervention technologies) will bring sharper trade-offs, wider societal impacts, and higher geopolitical stakes.

Europe's underexploited leverage lies not in matching the technological output of the US or China, but in developing the governance capacity to steward complex systems before they bind the world into irreversible trajectories. This includes ensuring that elements of <u>intergenerational fairness</u> are embedded in foresight documents and across multiple technological and climate agendas. Europe's opportunity lies in positioning itself not as a competitor in technological races, but as a credible alternative.

The four leverage areas below are closely interconnected and show how this positioning translates into real strategic influence. Protective technologies depend on market access to secure critical inputs; governance infrastructure makes those technologies credible, verifiable, and trustworthy; and rapid response capacity ensures Europe can deploy both when crises arise. Combined, these levers define a pathway for Europe to become an indispensable enabler of multilateral cooperation on technologies that shape both present and future generations.

The four leverage areas for European strategic influence

There are four key leverage areas through which Europe can exert meaningful strategic influence, shaping outcomes in its neighborhood and globally by aligning its economic, political, technological, and security strengths toward shared long-term objectives.

- **Accelerating protective technologies ahead of risk-creating ones**
  Strategic innovation can shape the technologies which are developed, as well as the order in which they mature. By advancing safety-favouring technologies over risk-creating ones, Europe can reduce long-term harm while positioning itself as a leader in responsible innovation for current and future generations.
  This approach applies across domains: in biosecurity, investing in pathogen surveillance and broad-spectrum countermeasures before new threats emerge; in defence, developing counter-systems alongside offensive capabilities; and in climate policy, building adaptation infrastructure before impacts escalate. CFG has applied this approach in its <u>Strategic Innovation for European Security</u> project, which identifies ten high-upside technologies across biosecurity, defence, climate security, and AI trustworthiness.
  The project presents a concrete portfolio of protective technologies for the EU to advance, based on more than 40 expert interviews and assessed for safety impact, growth potential,

and the EU's capacity to accelerate progress. This lever remains underdeployed globally even though it plays to the EU's strengths in public investment, coordination, and regulatory legitimacy.

- **Using market access to secure technology and resource access**
  In the current geopolitical context, the EU Single Market remains one of the world's largest consumer markets. Access to the Single Market can be used as leverage to secure European access to critical technologies, resources, and infrastructure, rather than assuming that alliance ties or commercial relationships alone will guarantee supply. This principle applies across multiple tech domains: energy security, critical raw materials, pharmaceutical supply chains, and frontier technologies all involve dependencies that market access can help to negotiate.
  In the context of AI, the EU could attach conditions to access to frontier models and compute infrastructure, such as capability assurances or supply commitments. Scenario analysis in our policy paper Advanced AI: Possible Futures highlights the risks of assuming continued access: in futures where tensions with the US and China escalate, European access to frontier capabilities cannot be taken for granted, even within existing alliance structures. To mitigate these risks, the EU must proactively use its market power to secure access guarantees before crises emerge, rather than reacting once supply is already constrained.

- **Providing governance technologies as global public infrastructure**
  Europe may not lead in every frontier technology, but it can become indispensable by providing the infrastructure that makes international governance workable: verification mechanisms, standards bodies, neutral convening spaces, and technical capacity for monitoring and enforcement. Also, this approach can reframe Europe from a "rule-taker" into a "governance enabler."
  Instead of being seen as a source of constraints, Europe can position itself as the actor that makes international cooperation possible, particularly in the interest of future generations. Where fragmented rules are costly, firms and states tend to converge on shared standards. Europe's advantage lies not in building the most powerful systems, but in designing the frameworks that allow them to be monitored, verified, and governed.
  Our scenario analysis in Advanced AI: Possible Futures demonstrates that without robust verification mechanisms, international AI agreements remain vulnerable to breakdown and bad faith, as the critical aspects of AI development occur at the software level, hidden from external observation. Europe's investment in hardware-enabled verification could become the foundation for credible multilateral governance, particularly in scenarios where major powers seek cooperation but lack trust.

- **Building institutional and industrial capacity for rapid response**
  Strategic autonomy in fast-moving technological environments requires two forms of capacity that Europe has historically underinvested in: institutional agility to govern emerging technologies at the speed they develop, and industrial and defence capacity to produce at scale when crises demand it. Both represent bottlenecks that constrain European influence regardless of research excellence or policy ambitions.
  In institutional capacity, governance systems designed for slowly-changing environments struggle when technology shifts rapidly. Europe needs mechanisms for faster, adaptive decision-making that preserve democratic accountability while responding to month-scale rather than decade-scale change.

The European gap in industrial capacity became brutally conspicuous during the COVID-19 pandemic and after the outbreak of the war in Ukraine. Vaccines and diagnostics revealed manufacturing bottlenecks despite strong European research. Drones and counter-drone systems demonstrated that scaling speed matters more than individual unit performance. Biomanufacturing capacity for therapeutic and agricultural applications remains constrained.

At the same time, Europe should strengthen control over dual-use critical technologies through stricter export rules, closer coordination, and targeted investment, in order to balance innovation with security, prevent misuse, and enhance European defense readiness.

Hence, strategic autonomy should be understood as the ability to act under pressure in fast-changing technological environments, not simply as a mere regulatory control. Europe's advantage lies in combining adaptive decision-making with the capacity to execute - moving away from a model that reacts after crises toward one that invests in speed, flexibility, and preparedness as sources of power. In practice, influence comes from resilience and responsiveness: the ability to scale production, secure supply chains, and coordinate action when conditions deteriorate. Europe can amplify this capability by working with trusted partners such as the UK, Canada, Japan, South Korea, and India to pool, compute, coordinate supply chains, and develop shared production capacity—achieving scale and leverage that no single actor could secure alone.

A Case Study: From framework to practice: Solar Radiation Modification as test case

The four leverage points outlined above offer a framework for European strategic influence. But frameworks only matter if they can be applied to real, urgent challenges. Solar Radiation Modification (SRM) - and in particular Stratospheric Aerosol Injection (SAI)—is one such test case, showing why integrated governance capacity matters and how Europe can turn conceptual leverage into real influence.

SRM is where these leverage points come together - and where Europe's values-based leadership is especially important. In theory, SRM could reduce climate risks, but it could also create new geopolitical dangers: technological arms races, unilateral deployment with global consequences, or rising tensions as states blame one another for extreme weather. As with artificial intelligence, SRM could quickly become a tool of geopolitical *competition* rather than cooperation.

Therefore, developing strategic in-house knowledge on SRM is a necessary first step for the EU's strategic autonomy and security. The leadership gap at the international level also offers a crucial opportunity for the EU to step into and take on multilateral leadership. Leveraging its established role in climate diplomacy, the EU could reaffirm its capability of setting standards and coordinating coalitions of countries and actors in areas where other international mechanisms are absent - especially at times where the EU role in global politics is put in question.

Moreover, the EU value-based leadership on this issue could deepen relationships of trust and cooperation with both existing and new partners, reinforcing the Union's ongoing efforts to consolidate and develop economic and security partnerships. To this end, cooperation on SRM science, security and diplomacy could become an issue area around which the EU helps form a distinct third pole at the international level and an alternative to the two US and China-centred

spheres of influence. The SRM issue would naturally evoke shared value-based propositions and add depth to economic partnerships rooted in national interests.

However, the window for this leadership opportunity is rapidly closing. This technology is being shaped elsewhere. As the impacts of climate change intensify, and as SRM becomes increasingly attractive as a perceived "shortcut", major powers will be less likely to agree on cooperation that could constrain their actions. This dynamic has already come into play at the United Nations Environment Assembly (UNEA-6) in 2024[1]. Such urgency extends to SRM science, security and diplomacy. International norms for research - also including mechanisms for transparency and accountability - and infrastructures for collaborative scientific efforts should be established upfront, before any single country or private company invests heavily and triggers a "research race."[2] Coordinated international efforts to share and align scientific work would build the trust for countries to engage in international conversations while centering on shared and internationally-validated knowledge rather than deliberate misinformation and competitive posturing.

If the EU stays outside of the scientific and political conversation, it will have no say in whether SRM governance takes a collaborative path for the global common good or a competitive one driven by narrow national self-interest.

Narratives that Europe should promote at the global level

In terms of narratives, Europe should actively promote the following messages at the global level in order to support and reinforce the objectives outlined in the previous section.

- **The EU as a global standard setter for emerging technologies**
  The EU is uniquely positioned to demonstrate that technological progress succeeds when it is perceived as fair, beneficial, and shaped with society rather than imposed upon it. Past experiences implementing the European Green Deal have shown that backlash—or greenlash as the case may be—rarely stems from opposition to goals themselves, but from perceptions of unfairness and inadequate public engagement. When burdens are visible and local while benefits feel distant or concentrated, trust erodes and progress stalls. This principle applies across emerging technologies with global implications. Europe should position itself as the venue where critical governance discussions occur—particularly for advanced AI applications including AGI, where questions of safety, alignment, and equitable access remain largely unresolved at the international level. Similarly, biotechnology and neurotechnology present governance challenges that demand proactive multilateral frameworks before capabilities outpace oversight.
  Moreover, If the EU aspires to shape global guardrails for technologies like solar radiation modification (SRM), it must possess both value-based credibility and technical expertise to lead discussions in multilateral fora. An EU-wide coordinated public research effort on SRM could leverage Europe's strengths in climate and earth system science, satellite-based observation, and ethical governance frameworks. By grounding research in rigorous standards, transparency, and meaningful public engagement from the outset, the EU would

---

[1] In 2024, a Swiss-led proposal for a scientific assessment of SRM failed, highlighting a geopolitical deadlock. Most states take a precautionary approach, calling for broader governance and consideration of social, political, and cultural knowledge. In contrast, a smaller group, including the US and Saudi Arabia, prioritized "science first" before any steps towards international governance, focusing on biophysical climate effects and giving limited attention to humanities or Indigenous perspectives. See Solar geoengineering research faces geopolitical deadlock

[2] Olaf Corry, Duncan McLaren and Nikolaj Kornbech paper on "Scientific models versus power politics: How security expertise reframes solar geoengineering".

not only ensure responsibility within its borders but create a best-practice lighthouse that guides international research.

The current geopolitical climate strengthens this opportunity. The international leadership vacuum following the United States' withdrawal from the Paris Agreement, funding cuts to leading climate and environmental institutions, and emerging uncertainties around US science policy—creates strategic space for the EU to enhance its standing. Recent US climate science funding cuts also present opportunities to attract leading expertise to European institutions. By defining what constitutes "responsible and transparent" research at early stages, and engaging Global South partners through instruments like Horizon Europe and Global Gateway, the EU can actively shape global research standards and practices. This proactive approach ensures that research on transformative technologies aligns with European values of public-interest science, avoiding proprietary or purely commercial models.

- **Moving above and beyond the climate – competitiveness trade-off**
  A transition trap occurs when fragmented governance turns complementary goals into friction, with progress in one domain slowing advances in another. The EU must shift from treating technological competitiveness and climate action as separate—or opposing—priorities. Climate ambition, technological leadership, and security resilience must be treated as mutually reinforcing pillars of European competitiveness, not as constraints on one another.

  This applies across technology domains: pursuing AI growth at the expense of climate goals is self-defeating when energy costs and grid capacity become primary bottlenecks to scaling computing power. Expanding renewable energy is therefore essential not only for climate objectives but to unlock innovation-driven growth, reduce dependencies, and build resilience. Within the 2026 Commission Work Programme, the Energy Union governance revision offers a structural lever to embed this integration, creating shared decision-making frameworks where energy, climate, and technology infrastructure are assessed holistically rather than in isolation. The proposed Competitiveness Coordination Tool aims to align member state industrial policies—including AI infrastructure investments—with shared climate objectives, preventing subsidy competition that fragments both markets and climate ambition. For SRM and other planetary-scale technologies, avoiding the transition trap means ensuring that research protocols, climate observation infrastructure, ethical frameworks, and international coordination mechanisms develop together from the start. This prevents the emergence of competing national approaches that undermine both scientific credibility and diplomatic effectiveness.

- **Reliable and trusting democratic climate leader**
  The EU's leadership in international climate diplomacy, combined with its democratic governance model and technological capabilities, positions it as a credible convener on technologies with global effects.

  By addressing these dynamics early—building transparency, participation, and climate alignment into technology governance before infrastructure and investment paths lock in—Europe can show how technological leadership earns public trust. Rather than treating public consent as a constraint, the EU can demonstrate that legitimacy is a strategic asset: one that reduces conflict, enables responsible deployment, and sustains political support over time.

  Joint development of global norms, transparency standards, and risk-informed frameworks for

emerging technologies reinforces the importance of multilateralism and precaution. For example, given the geopolitical salience of AI, SRM, and biotechnology, the EU has unique opportunities through strategic scientific cooperation and science diplomacy to deepen partnerships with both traditional allies and emerging powers, offering a model where technological progress and democratic accountability advance together rather than in tension.

- **Intergenerational fairness as a core principle for foresight**
  From an intergenerational fairness perspective, the most consequential choices are those that lock in technological, energy, and security pathways that future generations cannot easily reverse or reshape. The 2025 Strategic Foresight Report has recognized this imperative, calling for frameworks on intergenerational fairness that mitigate complex overlapping vulnerabilities and enable Europeans to thrive over the long term.
  Decisions being taken now - between 2025 and 2027 -on data centre siting, grid expansion, AI infrastructure, neurotech applications, energy systems, and defence-relevant technologies will determine land use patterns, demand trajectories, emissions profiles, and strategic dependencies for decades, extending far beyond current political cycles and 2050 climate targets. These are not just investment choices but structural commitments that shape Europe's long-term resilience and security.
  The risk is not lack of ambition, but irreversible lock-in. When infrastructure is built without jointly assessing technological acceleration, climate constraints, and security requirements, future generations inherit the burden of reconciling incompatible systems—or the impossibility of doing so. A data center secured on a 30–year land lease and connected to fossil-dependent grid infrastructure may also become a strategic liability if energy supply disruptions or geopolitical tensions expose its vulnerabilities.
  Foresight, understood as an intergenerational practice, means asking not only whether choices advance current economic or short-term climate objectives, but whether they preserve future strategic autonomy and security. It means designing for reversibility where possible, building in adaptive capacity where irreversibility is unavoidable, and making trade-offs explicit so future decision-makers understand what was chosen and why. The EU's commitment to strategic foresight becomes meaningful only when it actively shapes decisions with multi-decadal consequences—integrating climate resilience, technological leadership, and defence readiness—treating 2050 not as an endpoint but as one moment in a continuum where today's choices continue to matter. Therefore, the 2026 Strategic Foresight Report should translate an intergenerational fairness approach into concrete, impact-driven guidance.