

## CALL FOR EVIDENCE FOR AN IMPACT ASSESSMENT

This document aims to inform the public and stakeholders on the Commission's future legislative work so they can provide feedback on the Commission's understanding of the problem and possible solutions, and give us any relevant information that they may have, including on possible impacts of the different options.

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| <b>TITLE OF THE INITIATIVE</b>    | Advanced Materials Act                                                                                                                                                                                                                                                                                                                                              |
| <b>LEAD DG (RESPONSIBLE UNIT)</b> | RTD. E3-Industrial Transformation                                                                                                                                                                                                                                                                                                                                   |
| <b>LIKELY TYPE OF INITIATIVE</b>  | Legislative – Proposal for a Regulation of the European Parliament and of the Council                                                                                                                                                                                                                                                                               |
| <b>INDICATIVE TIMETABLE</b>       | Q4 2026                                                                                                                                                                                                                                                                                                                                                             |
| <b>ADDITIONAL INFORMATION</b>     | <a href="https://research-and-innovation.ec.europa.eu/research-area/industrial-research-and-innovation/chemicals-and-advanced-materials/advanced-materials-industrial-leadership_en">https://research-and-innovation.ec.europa.eu/research-area/industrial-research-and-innovation/chemicals-and-advanced-materials/advanced-materials-industrial-leadership_en</a> |

*This document is for information purposes only. It does not prejudice the final decision of the Commission on whether this initiative will be pursued or on its final content. All elements of the initiative described, including its timing, are subject to change.*

### A. Political context, problem definition and subsidiarity check

#### Political context

Advanced materials are defined, according to a [working definition by the OECD](#), as materials that are ‘rationally designed to have (i) new or enhanced properties, and/or (ii) targeted or enhanced structural features with the objective to achieve specific or improved functional performance. This includes both new emerging manufactured materials (high tech materials), and materials that are manufactured from traditional materials (low tech materials).’

Examples of advanced materials include bio-based materials with enhanced insulation and circularity capacity, recyclable carbon reinforced plastics for windmill blades or aerospace applications, sodium-ion based batteries with the potential to avoid the use of critical raw materials, such as lithium, and bio-based coatings replacing per- and polyfluoroalkyl substances (PFAs).

Advanced materials provide innovative solutions for a more efficient, sustainable and competitive industry, playing a key role in achieving the EU objectives of strengthening competitiveness and achieving climate neutrality by 2050, as outlined in the [Clean Industrial Deal](#). They also play a key role in areas such as space and defence, with enhanced properties in harsh environments, enabling the proper functioning of equipment and strategic infrastructure. The demand for advanced materials is therefore expected to increase significantly in the coming years, opening up innovation markets and investment opportunities in the EU. Support for advanced materials is envisaged in the Commission proposal for the next Multiannual Financial Framework, under the European Competitiveness Fund and Horizon Europe. With regard to current research and innovation (R&I), the partnership Innovative Advanced Materials for Europe was established in 2025 under Horizon Europe. President von der Leyen’s 2024-2029 [political guidelines](#) set the priorities of putting R&I at the heart of the EU economy, while strengthening the global competitiveness of EU industry, driving the green and digital transitions through innovation and investment in key technologies and continuing to work on the shift towards a more circular and resilient economy. In her [2025 State of the Union](#) address, she also stressed that ‘the future of clean tech will continue to be made in Europe, and for that, we also need to make sure that our industry has the materials here in Europe’.

The [mission letter](#) to Commissioner Zaharieva also announced the development of an **Advanced Materials Act** to support the R&I process through to manufacturing and deployment, given the increasing importance of and demand for advanced materials to support the competitiveness of EU industry, and for the twin green and digital transition.

The Advanced Materials Act will build on the February 2024 Communication on [Advanced Materials for Industrial Leadership](#), which aimed to align EU and Member State R&I priorities and objectives for advanced materials. It both complements, and is closely linked to, other recently adopted EU initiatives – such as the [Critical Raw Materials Act](#), the [Net-Zero Industry Act](#), the [AI Continent Action Plan](#), the [Strategy for European Life Sciences](#), the [EU Startup and Scaleup Strategy](#), the [EU Strategy on Research and Technology Infrastructures](#), the [Strategic Technologies for Europe Platform](#), the [Union of Skills](#), – and upcoming EU initiatives, such as the [European Innovation Act](#), the [Bioeconomy Strategy](#), the [EU Biotech Act](#), the [Circular Economy Act](#), the amendment of the [European Chips Act](#),

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| <p>the <a href="#">Cloud and AI Development Act</a> and the <a href="#">AI in Science Strategy</a>. Advanced materials are also included in the list of 10 critical technology areas for the EU's economic security in the <a href="#">Annex</a> to Commission Recommendation 2023/6689.</p> <p>The Advanced Materials Act will also contribute to <a href="#">simplification measures</a> and better implementation of EU policies and laws, making it easier and faster to do business and invest in Europe. It will revolutionise the EU advanced materials ecosystem by unlocking breakthrough innovations and accelerating the deployment of disruptive technologies to boost the competitiveness of EU industry.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <p><b>Problem the initiative aims to tackle</b></p> <p>The time from the discovery of new materials until their application in products and processes is typically more than 10 years. To fully reap the benefits of advanced materials and transform industry and people's lives, it is essential to considerably reduce this 'time to market', in line with the call in President von der Leyen's State of the Union speech for urgent action to support EU industry, from clean and digital tech to defence.</p> <p>The Advanced Materials Act will be instrumental for smarter production, by supporting investments in missing critical production capacities in the EU. It will address the stumbling blocks hindering EU's competitiveness, by tackling the following shortcomings in the development, production and uptake of advanced materials.</p> <ul style="list-style-type: none"> <li>• <b>Inefficient R&amp;I ecosystem in advanced materials:</b> The EU's global position in terms of industry-owned patents for advanced materials is weakening due to its inefficient R&amp;I ecosystem. This undermines its medium- to long-term competitiveness. The tech industry, particularly start-ups and small and medium-sized enterprises (SMEs), lacks access to shared research and technology facilities with specialised equipment to support the entire R&amp;I cycle of advanced materials, with digitalisation also lagging behind. The R&amp;I sector linked to advanced materials in the EU also struggles with a talent gap, as there is a high demand for researchers and innovators who possess both extensive technical knowledge and the ability to apply interdisciplinary approaches in order to develop sustainable and market-ready solutions.</li> <li>• <b>Lack of production capacity:</b> The EU fails to translate innovative ideas for advanced materials into new, marketable technologies, and to integrate those technologies into the industrial base, sometimes due to a cost competitive disadvantage. Having sufficient production capacity and infrastructure and a skilled workforce capable of developing and handling advanced materials that create novel functionalities, is a precondition for introducing advanced materials, and innovative products featuring advanced materials, into the market and avoiding dependencies on non-EU countries. The EU also lacks mechanisms that could stimulate the demand across the Single Market and that ensure the availability of advanced materials that play a crucial role in periods marred by supply disruption or geopolitical tensions.</li> <li>• <b>Lack of progress in advancing circularity, material efficiency and sustainability:</b> Without innovation leading to the introduction of circular advanced materials, the EU will not be able to create closed-loop production systems and support a sustainable and competitive industry. Closed-loop production and the recycling of advanced materials will make it possible to reduce costs and waste, while also addressing geopolitical dependencies and supply chain vulnerabilities of critical raw materials used in the sector.</li> <li>• <b>Lengthy approval procedures and regulatory burdens:</b> Regulatory procedures delay the adoption of advanced materials, hindering EU innovation and competitiveness. The EU and its Member States tend to have lengthy validation procedures, administrative requirements and sometimes complex implementation.</li> </ul> |
| <p><b>Basis for EU action (legal basis and subsidiarity check)</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <p><b>Legal basis</b></p> <p>The Advanced Materials Act is expected to be adopted on the basis of (i) Article 114 of the Treaty on the Functioning of the European Union (TFEU) on the adoption of measures to ensure the establishment and functioning of the internal market or (ii) Article 173(3) TFEU in support of actions taken in the Member States to ensure the conditions necessary for the competitiveness and innovation capacity of the EU and ensure the adjustment of industry to structural changes due to fast innovation cycles. Depending on the final scope of this initiative, other legal bases may be considered.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <p><b>Practical need for EU action</b></p> <p>The Advanced Materials Act will tackle challenges that are best addressed at EU level, with the aim of creating and supporting a competitive and sustainable industry. Within the framework of EU competitiveness policies, aimed at establishing a level playing field and preventing regulatory fragmentation, there is a need for specific measures to accelerate the seamless adoption of advanced materials across the single market. This will make innovative products uniformly accessible and adoptable, something that would be difficult to achieve through individual national efforts</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

alone. By introducing a coherent EU legislative framework, existing and future rules can be simplified, making it easier for researchers, startups, scaleups, SMEs, and mid-caps to access funding, collaborate across sectors and borders, and drive growth.

## **B. Objectives and policy options**

The primary objective of the Advanced Materials Act is to support innovation and deployment in advanced materials. Its regulatory framework will revolve around four specific objectives.

### **1. Increase EU R&I capacities and the uptake of advanced materials**

Boost R&I capacities, particularly for startups and scaleups, by facilitating financing, and streamlining procedures, by setting up strategic R&I projects; improve the digitalisation of the R&I process, by leveraging EU strengths in high-performance computing, AI and big data as accelerators by bringing together major national initiatives and building new capacity across the EU; and increase the industrial uptake of advanced materials by giving industry incentives to develop more sustainable products with better performance, thereby strengthening the EU's position as a global leader in the transition to a circular and low-carbon economy, while at the same time strengthening its competitiveness.

### **2. Increase production capacity and availability in the EU**

Secure supply chains, improve economic resilience (e.g. by reducing dependencies on critical raw materials) and minimise environmental impacts (e.g. by setting up strategic production and deployment projects, including cross-border ones); ensure the training and provision of a skilled workforce; develop investment capacities with Member States; and improve the use of patents by leveraging underutilised intellectual property to help researchers, startups and industries bring new products and services to the market. Additionally, to secure supply chains, policy options such as joint procurement or procurement on behalf of Member States, other measures to stimulate procurement, shortage prevention measures, stockpiling and/or export controls will be considered.

### **3. Improve circularity and sustainability**

Increase the reuse, remanufacture, repurposing and recycling of advanced materials by supporting mature technologies for a circular economy (e.g. disassembly, dismantling, sorting) and providing incentives to industry.

### **4. Exploit the potential for simplification, burden reduction and the acceleration of procedures**

Reduce regulatory barriers and administrative burdens associated with research in, and the production, uptake and use of, advanced materials, by streamlining regulatory and permitting procedures or setting up regulatory sandboxes, to promote innovation in advanced materials and reduce the time to market without undermining the achievement of environmental and safety objectives.

The Advanced Materials Act should establish a set of horizontal framework conditions that facilitate the development and market introduction of innovative advanced materials, and innovations driven by them, across all sectors, rather than introducing sector-specific innovation initiatives.

## **C. Likely impacts**

The initiative is expected to improve the conditions for researchers, innovators, investors and companies to develop, produce and use advanced materials in the EU, thereby contributing to faster economic growth in the single market and creating jobs.

In terms of economic impact, measures such as strategic projects will have the potential to improve EU business and industrial ecosystem as a whole and help to close the innovation gap between the EU and its global competitors. By addressing the entire value chain and strategic dependencies, the initiative will reduce risks affecting supply and contribute to the EU's technological sovereignty, strategic autonomy and economic security. By supporting digitalisation, it will also significantly accelerate the design, development and testing of new advanced materials, thereby reducing the time to market and R&I costs.

In terms of environmental impact, measures to improve the reuse, remanufacture, repurposing and recycling of advanced materials are expected to reduce such impacts and improve sustainability overall.

By facilitating the uptake of advanced materials, the initiative will have a positive impact on the diffusion of innovative products and technologies in the EU, thereby helping to improve the EU's social welfare and to create quality jobs.

## **D. Better regulation instruments**

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| <b>Impact assessment</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <p>An impact assessment will be done to support the preparation of this initiative and to inform the Commission's proposal. The assessment will build on the evidence obtained and the lessons learned from implementing the <a href="#">2024 Communication on Advanced Materials for Industrial Leadership</a>. This includes ongoing studies on (i) the production and use of advanced materials, (ii) mapping technology infrastructures, (iii) patent analysis and (iv) reducing critical raw materials dependencies with advanced materials innovation. The impact assessment will also document additional challenges advanced materials value chains face, and the potential impacts of the proposed policy options. In the impact assessment, the Commission will consider a range of policy measures to achieve the objectives listed above. Monitoring indicators will also be considered, to assess progress towards achieving the objectives.</p>                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Consultation strategy</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <p>A public consultation is planned for this initiative. Together with this call for evidence, it will give stakeholders an opportunity to share their views and submit relevant evidence. The consultation will last 12 weeks and will be available on the <a href="#">Have your say portal</a> in all EU official languages.</p> <p>Additional targeted consultations might address (i) Member States, (ii) representatives of industry, (iii) representatives of SMEs, (iv) representatives of the startup community, (v) representatives from higher education and research, including university incubators and business accelerators, and (vi) representatives of the financial sector and of the regulatory, standardisation, certification and procurement sectors. The targeted consultations will be used to collect views on and evidence of the expected impact of possible measures. The impact assessment will also draw on discussions with and feedback from the experts of the Technology Council for Advanced Materials.</p> <p>The consultation will be promoted on the DG RTD website, and the factual summary report of it will be published on the consultation page eight weeks after the consultation closes. A synopsis report with a summary of all consultation activities will also be prepared with the impact assessment report.</p> |
| <b>Why we are consulting?</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <p>The consultation will collect evidence, experience and views from stakeholders about the EU's R&amp;I ecosystem for advanced materials and how it could be improved to boost EU competitiveness. The results of the consultation will help the Commission to solve the problems identified on the basis of the evidence obtained and to take due consideration of the potential solutions when developing the initiative.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Target audience</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <p>The most relevant stakeholders are Member State authorities in charge of implementing or coordinating relevant policies such as policies related to R&amp;I or the manufacturing of new technologies, recycling or reprocessing and by individuals and businesses, including SMEs; representatives of industry associations and SME intermediaries, the startup community or the financial sector; members of academia and research institutions; representatives of research and technology infrastructure bodies; national authorities and public bodies; non-governmental organisations representing civil society, as well as other stakeholders, social partners, and EU and national consumer associations.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |